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Energy Policy: The Continuing Debate

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SUMMARY

On July 31, 2003, the Senate, facing obstacles to passage of its comprehensive energy bill (S. 14), substituted the energy legislation the Senate had passed and sent to conference in the 107th Congress. Principals are sorting out the implications of this unanticipated development; there are identical or similar provisions in both S. 14 and the substitute measure that the Senate passed as H.R. 6, but there are also significant differences.

Amendments passed on the floor to S. 14 do not figure into the legislation passed by the Senate, including the electricity amendment — crafted over a number of months — which was on the floor when the Senate made its startling decision. However, the Republican managers of the energy legislation noted that the bill will be rewritten in conference. Among the issues waiting to be addressed in the Senate at the time of passage of H.R. 6 were climate change, clean air, Indian energy development, and hydroelectric relicensing, among other issues. There are climate change provisions in the version of H.R. 6 adopted by the Senate.

On April 11, 2003, the House passed its version of H.R. 6 (247-175). The bill includes several provisions that were part of comprehensive, but not enacted, energy legislation (H.R. 4) debated during the 107th Congress. These provisions touch upon energy efficiency and conservation, clean coal technology, and reauthorization of the Price-Anderson Act nuclear liability system. The bill passed by the House would also provide roughly $18 billion in energy tax incentives.

Unlike H.R. 4 in the 107th Congress, the House version of H.R. 6 includes an electricity title that would partly repeal the Public Utility Holding Company Act, would prospectively repeal the mandatory purchase requirement under the Public Utility Regulatory Policies Act, and would create an electric reliability organization. Both the House and Senate bills would authorize construction of a natural gas pipeline from the Alaskan North Slope to the lower 48 states, but would allow the Federal Energy Regulatory Commission (FERC), which must issue a certificate of convenience and necessity for construction of the pipeline, to do so only for a southern route through Alaska, a route to which conferees on H.R. 4 had informally agreed. The Senate version of H.R. 6 would also authorize up to $10 billion in loan guarantees for construction of the pipelines. The House bill would also authorize exploration, development, and production of oil in the Arctic National Wildlife Refuge (ANWR). The Senate version of H.R. 6 does not include language to allow drilling in ANWR.

Both the House and Senate versions of H.R. 6 include provisions for the National Highway Traffic Safety Administration (NHTSA) to initiate a rulemaking on corporate average fuel economy (CAFE). The Senate bill would require electric utilities to provide a minimum percentage of power from renewable sources; the House bill has no such provision. The House bill has no climate change provisions. Both bills would require greater use of ethanol in motor vehicle fuel.

(For a summary of the House bill, see CRS Report RL32009, *Omnibus Energy Legislation: Summary of H.R. 6 Non-tax Provisions*.)

MOST RECENT DEVELOPMENTS

On July 31, 2003, the Senate, facing obstacles to passage of its comprehensive energy bill (S. 14), substituted the energy legislation the Senate had passed and sent to conference in the 107th Congress. Principals are sorting out the implications of this unanticipated development; there are identical or similar provisions in both S. 14 and the substitute measure that the Senate passed as H.R. 6, but there are also significant differences. Both the House and Senate energy bills would provide for an extension of the Price-Anderson nuclear liability program, and the bills either encourage or require the National Highway Traffic Safety Administration (NHTSA) to initiate a rulemaking to establish new corporate average fuel economy (CAFE) standards. Both versions of H.R. 6 would authorize construction of an Alaskan natural gas pipeline. However, the Senate bill would require electric utilities to provide a minimum percentage of power from renewable sources; the House bill has no such provision. The Senate bill authorizes R&D on global climate change; the House bill has no climate change provisions.

On April 11, 2003, the House passed comprehensive energy legislation, H.R. 6 (247-175). Unlike comprehensive energy legislation (H.R. 4) debated in the 107th Congress, H.R. 6 includes a section on electricity which has stirred some controversy. In contrast to the Senate version of the bill, H.R. 6 would provide authorization for exploration and development of the Arctic National Wildlife Refuge (ANWR). (For a summary of the House bill, see CRS Report RL32009, *Omnibus Energy Legislation: Summary of H.R. 6 Non-tax Provisions*.)

BACKGROUND AND ANALYSIS

Since the Arab oil embargo in 1973-74, policymakers periodically have focused on energy policy. Most of the periods when energy policy has been the object of major legislative initiatives have been when uncertainty about the security of future energy supply has triggered a sharp increase in the price of energy. The current focus on energy policy was triggered by a rise in oil prices that began in the late spring of 1999. Rising prices during the winter of 2002-2003 had many underlying causes, including anticipation of the war with Iraq, and a general strike in Venezuela that began in late 2002 and curtailed as much as 1.5-1.6 million barrels per day of crude and product imports to the United States. Crude oil inventory in the United States fell sharply to make up for the shortfall from Venezuela. Refined product inventories also fell as a consequence of cold winter weather that has placed particular pressure on heating oil inventories.

Prices softened to roughly $28 barrel (bbl) amid optimism about the course of the war with Iraq, the resumption of some production from Venezuela in February 2003, and a boost in oil production by Saudi Arabia to make up for tight supply in world markets. With the end of military options in Iraq with minimum damage to Iraqi oil fields, prices fell back to the mid-$20 range and OPEC — in anticipation of the resumption of oil exports from Iraq — tightened quotas to forestall a glut in oil supply later in 2003. U.S. crude and product stocks have stabilized, but are not significantly being rebuilt. Refiners have shifted over to the production of gasoline to meet summer demand; however, an unexpected decline of more than 3 million barrels in gasoline stocks for the week ended May 23, 2003, startled markets.

For the week ended June 6, 2003, gasoline and distillate inventories grew, but a decline in crude imports and crude stocks pushed oil price futures over $32/bbl. Crude contract prices were ranging between $26/bbl and $27/bbl as of early August.

Refiners will need to further replenish crude and product inventories while satisfying current demand, and it is not clear how long this may require. As of the beginning of August, crude oil stocks are 27% below year-ago levels. Depending upon gasoline demand during the last weeks of the summer (traditionally a time of strong demand for gasoline) and temperatures during the winter of 2003-2004, it could take several more months for crude supply, crude and product inventories, and demand to be restored to some balance. Build of distillate stocks has been above average, but stocks overall remain low — 16% lower than a year ago, as of early August.

Gasoline and diesel prices ranged roughly 14 cents higher than year-earlier levels as of the beginning of August. However, after the end of the winter heating season, calls from constituents for short-term relief diminished. The sorts of policies being debated in the 108th Congress will be long-term in nature. (For an expanded background discussion about energy policy, see CRS Report RL31720, *Energy Policy: Historical Overview, Conceptual Framework, and Continuing Issues*. For a review of short-term energy policy options to address a supply disruption and high energy prices, see CRS Report RL31676, *Middle East Oil Disruption: Potential Severity and Policy Options*.)

Several energy bills were reported from House committees on April 2, 2003. The House Energy and Commerce Committee reported energy legislation (H.R. 1644) by a vote of 36-17. The House Science Committee marked up legislation (H.R. 238) that would provide $30 billion for DOE research and development (R&D) programs during fiscal years 2004-2007. The House Committee on Resources reported a bill, H.R. 39 (32-14), that would authorize exploration, development and production of oil in ANWR. On April 3, 2003, the House Ways and Means Committee passed (24-12) H.R. 1531, the Energy Policy Tax Act of 2003. The House bills were merged into H.R. 6, introduced on April 7, 2003, and the House passed H.R. 6, as amended, on April 11, 2003.

The House bill includes several provisions that were part of comprehensive, but not enacted, energy legislation (H.R. 4) debated during the 107th Congress. These provisions touch upon energy efficiency and conservation, and clean coal technology. A separate bill in the 107th Congress would have reauthorized the Price-Anderson Act nuclear liability system; language to do so has been incorporated into H.R. 6. The bill passed by the House would also provide roughly $15.5 billion in net energy tax incentives.

H.R. 6 also addresses a number of controversial issues left unresolved by the 107th Congress. It includes an electricity title that would, in part, repeal the Public Utility Holding Company Act, would prospectively repeal the mandatory purchase requirement under the Public Utility Regulatory Policies Act, and would create an electric reliability organization. H.R. 6 would also establish a renewable fuels standard of 2.7 billion gallons by 2005 and 5 billion gallons by 2015.

The House version of H.R. 6 will go to conference with the Senate version, passed on July 31 (84-14). The Senate debate had begun in May, and the Senate was working to pass a bill prior to the August recess. However, when the debate on S. 14 became mired and

passage appeared unlikely, Senate Minority Leader Daschle suggested that the body pass the comprehensive energy legislation that the Senate had sent to conference in the 107th Congress. After several hours of discussion off the floor, both parties agreed to this proposal, and the text of the Senate version of last year's H.R. 4 was inserted into H.R. 6. (A summary of the debate on the unpassed S. 14 appears at the end of this issue brief.)

The implications of this unanticipated development are being sorted out. There are identical or similar provisions in both S. 14 and the substitute measure that the Senate passed as H.R. 6, but there are also significant differences. Both the House and Senate energy bills would provide for an extension of the Price-Anderson nuclear liability program, and the bills either encourage or require the National Highway Traffic Safety Administration (NHTSA) to initiate a rulemaking to establish new corporate average fuel economy (CAFE) standards. Both versions of H.R. 6 would authorize construction of an Alaskan natural gas pipeline. However, the Senate bill would require electric utilities to provide a minimum percentage of power from renewable sources; the House bill has no such provision. The Senate bill authorizes R&D on global climate change; the House bill has no climate change provisions.

Some of the major energy issues receiving attention during the 108th Congress are discussed briefly below.

The Arctic National Wildlife Refuge (ANWR). Domestic oil production continues to fall. Some argue that the nation should be seizing the opportunity to develop the oil and natural gas resources that remain untapped. The potential Alaskan resources are high on this list, and the debate over whether or not to open ANWR for leasing continues after more than a decade.

On April 2, 2003, the House Committee on Resources reported H.R. 39 (32-14), which would authorize exploration, development and production of oil in ANWR. This language was included in the omnibus energy bill, H.R. 6, passed by the House on April 11, 2003. An amendment was agreed to (226-202) on the floor of the House to limit the surface acreage covered by production and support facilities to 2,000 acres. Opponents of development in ANWR expressed concern that the 2,000 acres would not be contiguous, and would disturb several locals within the Refuge and not just a solitary area.

Language was initially included in both the House and Senate budget resolutions that would promote leasing in ANWR. The Senate budget resolution instructed the Senate Energy and Natural Resources Committee to report legislation that would raise $2.1 billion in leasing from ANWR, but this language was subsequently dropped. The House budget resolution does not name ANWR, but instructed the House Resources Committee to raise more than $1.1 billion in revenues during the period 2004-2013.

Proponents of exploring ANWR point to advances in exploration and drilling technology and methods that have significantly reduced the extent of surface disturbance. While opponents concede this may be so, they argue that these advances are limited to exploration and extraction, and that considerable risk to the environment remains during the production and transportation phases. Opponents also suggest that the risks are not worth bearing, especially if the resources in ANWR turn out to be at the lower range of estimates, providing only an additional 300,000 barrels per day (b/d) of supply. Some respond to this argument by noting that the nation has experienced periods of tight supply when even an

additional few hundred thousand barrels of crude oil per day would have made for significantly lower prices at the pump, and for home heating oil. It should be noted that there are some environmentalists for whom any weighing of risks and benefits are pointless because, citing the area's pristine character, they 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 providing that revenues from bonus bids for leases in ANWR would be available 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).

The FY2003 omnibus appropriations bill, P.L. 108-7, did not include any language on ANWR, nor did S. 14, or last year's H.R. 4, passed once again by the Senate. There were no plans to introduce an ANWR amendment on the Senate floor during the debate. However, given that the House bill does include provisions for ANWR, it is likely that this issue will arise in the conference. (For additional information, see CRS Issue Brief IB10111, *The Arctic National Wildlife Refuge: Controversies for the 108th Congress*.)

Other Non-Tax Energy Production Initiatives. The Department of the Interior has estimated that roughly a quarter of oil resources, and less than one-fifth of gas resources, have been developed on Indian lands. H.R. 6, as passed by the House, includes a controversial provision that would allow Indian tribes to enter into agreements with energy developers without obtaining prior approval from the Department of the Interior, but only if DOI has already approved the tribe's regulations governing such energy agreements. The provision also absolves the United States from any liabilities for tribal losses stemming from such an agreement. The Senate has similar language, as did S. 14.

Critics of the proposal argued that this could enable tribes to initiate projects without going through the environmental review required by the National Environmental Policy Act (NEPA). The Senate defeated an amendment to strengthen an environmental review process for development of energy projects on Indian lands (52-47). The Senate version of H.R. 6 would establish a broader program than the House version, including the establishment of an Office of Indian Energy Policy and Programs. Among other provisions, the Senate bill would require the Secretary of Energy to report on "barriers to the development of renewable energy" resources on tribal lands.

Alaska currently holds 30 trillion cubic feet of undeveloped proven natural gas reserves, about 18% of total U.S. reserves. Because these reserves are located on Alaska's North Slope, they have not been developed due to the very high cost of building and operating the transportation infrastructure to reach distant markets. There also was debate during the 107th Congress over whether construction of a natural gas pipeline to carry gas to the lower 48 states would require loan guarantees and other incentives and over the most desirable route for the pipeline. The energy legislation, H.R. 6, passed by the House on April 11, 2003, would authorize construction of a natural gas pipeline from the Alaskan North Slope to the lower 48 states, but would allow the Federal Energy Regulatory Commission (FERC) — which must issue a certificate of convenience and necessity for construction of the pipeline — to consider only the southern route through Alaska to which conferees on omnibus energy legislation had agreed in the last Congress (H.R. 4). The Senate bill authorizes the same pipeline, but also includes loan guarantees of up to $10 billion for construction.

General concern that natural gas supply will remain tight, and that prices will remain high, spurred the Senate to adopt an amendment in S. 14 that would require the Secretary of Energy to conduct a study on natural gas supply and demand.

Energy Tax Policy. Policymakers often explore whether the tax system can be used to help boost declining domestic production of oil and gas, and promote alternatives to traditional fuels. Omnibus energy legislation (H.R. 6) passed in the House on April 11, 2003, would provide about $18 billion in energy tax incentives. The legislation includes less than $100 million in general tax increases and was about $3 billion greater than S. 597, the Energy Tax Incentives Act of 2003, reported from the Senate Finance Committee (SFC) on April 2, 2003 by a vote of 18-2 — and later designated as S. 1149.

However, the version of H.R. 6 passed by the Senate on July 31, 2003, includes the tax provisions enacted in the Senate's comprehensive bill, H.R. 4, passed in 2002. The committee version of S. 1149 was similar to the energy tax incentives included in the Senate's version of H.R. 4.

The provisions passed by the House in H.R. 6 are substantially scaled down from the House energy tax provisions in H.R. 4, which included about $33 billion in energy tax cuts over 10 years. The relative weights among the three categories — fossil fuel production, energy efficiency, and alternative/renewable fuels are the same as last year's bills, but the absolute amounts of the cuts are much smaller. The House bill does not include clean coal tax cuts, while the Senate legislation does. As the Senate never addressed energy tax issues during the debate on S. 14, it is one of the issues that will be taken up in conference. (For more information see CRS Report RL31828, *The Energy Tax Incentives Act of 2003 (S. 597): Summary of Provisions*.)

Electricity Restructuring. 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.

There were no electricity provisions in the version of omnibus energy legislation (H.R. 4) passed by the House in the 107th Congress, and the conferees on H.R. 4 were unable to resolve differences between proposals on electric utility restructuring submitted by staff to the conference committee. On March 13, 2003, Representative Tauzin, chairman of the House Energy and Commerce Committee, insisted to Republican colleagues that they support inclusion of an electricity section in any comprehensive legislation the committee reported. Tauzin expressed his opinion that the absence of a House position on electricity in the House version of H.R. 4 in the previous Congress had hobbled the work of the conferees and contributed to their inability to finish a bill before the 107th Congress adjourned.

H.R. 6, the omnibus energy legislation passed by the House on April 11, 2003, does include a section on electricity. Title VI of 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, allow transmission owners that do not belong

to a regional transmission organization to preferentially serve native load customers, 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, H.R. 6 would repeal 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. H.R. 6 would establish market transparency rules, explicitly prohibit round-trip trading, and significantly increase criminal penalties under the Federal Power Act.

Electricity is among the issues that Senate committee staff addressed during the July 4 recess and thereafter. On July 23, 2003, Senator Domenici announced that "bipartisan" agreement had been reached on a comprehensive electricity amendment that he would offer as an amendment to S. 14. This amendment was on the Senate floor when agreement was reached to send last year's energy bill to conference with H.R. 6. Its electricity section would give FERC additional review authority over certain electric utility mergers; 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; 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].)

Nuclear Energy. 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 House version of H.R. 6 would reauthorize the Price-Anderson Act through August 1, 2017. The Senate version of H.R. 6 would extend it until 2012 for new reactors and indefinitely for DOE 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).

The House version of H.R. 6 would authorize appropriations for DOE research on nuclear technology, including advanced reactors, spent fuel treatment and reprocessing, improved operation of existing reactors, and university nuclear science and engineering. DOE's spent fuel treatment and reprocessing research is particularly controversial. Supporters contend that reprocessing could provide additional energy and reduce nuclear waste hazards, but opponents counter that plutonium extracted from spent fuel during reprocessing could be used for weapons. (For details, see CRS Issue Brief IB88090, Nuclear Energy Policy.)

The energy bill first debated by the Senate, S. 14, would have authorized federal loan guarantees and power purchase agreements to aid construction of six or seven reactors that would add up to 8,400 megawatts to the current nuclear generation capacity of 98,000 megawatts. On June 10, 2003, an amendment to strike the federal nuclear assistance from the bill narrowly failed (48-50). The version of H.R. 6 ultimately passed by the Senate makes no provision for construction of nuclear power plants. (For more details, see CRS Report RS21536, *Potential Cost of Nuclear Power Plant Construction Assistance in S. 14*.)

Another provision that was included in S. 14, but is not part of the Senate-passed version of H. 6, is an authorization of $1.3 billion for the construction of a nuclear-hydrogen cogeneration project at the Idaho National Engineering and Environmental Laboratory. The purpose would be to explore production of hydrogen fuel from nuclear energy. Currently, natural gas is the main source for hydrogen fuel. There is no provision for this in the House version of H.R. 6.

Fuel Economy. Energy problems can be addressed on both the supply and demand side; at issue since the Arab oil embargo in the mid-1970s is what balance should be struck between policies affecting supply and demand. One of the first initiatives designed to have a significant effect on supply 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).

The 107th Congress lifted a prohibition on expenditure of appropriated funds by the National Highway Traffic Safety Administration (NHTSA) to undertake CAFE rulemakings. Subsequently, on April 1, 2003, NHTSA issued a final rule to boost the CAFE of light-duty trucks by 1.5 mpg by 2007. The rule sets the interim standards at 21.0 mpg for model year (MY)2005, 21.6 mpg for MY2006, and 22.2 for MY2007, and is the first increase in CAFE since MY1996.

This rulemaking has not quelled interest in CAFE. H.R. 6, the omnibus energy bill passed in the House on April 11, 2003, would authorize appropriations to NHTSA to conduct rulemakings, and would require a study on the feasibility and effects of reducing fuel use by automobiles. During markup in the House Committee on Energy and Commerce, an amendment by Representative Markey to require reductions of 5% in automotive fuel usage by 2010 and an additional 5% by 2015 was defeated (14-38). An amendment offered on the floor of the House to include only the 5% savings by 2010 was defeated (162-268) as well.

Currently, light truck fuel economy standards do not apply to vehicles above 8,500 pounds gross vehicle weight (GVW). Senator Feinstein has introduced legislation (S. 225) that, among other provisions, would expand the applicability of fuel economy standards to vehicles up to 10,000 pounds GVW. In the Senate Energy and Natural Resources Committee, an amendment to require light trucks and sport utility vehicles (SUVs) to achieve a CAFE of 27.5 mpg by MY2011 was defeated (15-7).

CAFE amendments were among the first order of business as the Senate resumed debate on July 24, 2003. The Senate's decision to approve the previous year's energy bill partly reinforces what happened during debate on S. 14. An amendment to S. 14 proposed by

Senator Durbin that would have raised CAFE to 40 mpg by 2014 for passenger vehicles and redefined sport utility vehicles to remove them from the light-truck category was defeated. An amendment introduced by Senators Durbin and Levin, identical to one passed by the Senate (62-38) last year in H.R. 4, essentially authorizing NHTSA to determine by rule appropriate standards, as provided in current law, was approved.

However, the Senate version of H.R. 6 retains an amendment that was approved on the Senate floor in 2002. The Senate language — originally passed before the latest NHTSA rulemaking — would require NHTSA to issue new CAFE standards, except for "pickup trucks." This provision would roll back the standard for pickup trucks to 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.

Some had hailed as an alternative to tightening CAFE an amendment to S. 14 proposed by Senator Landrieu that was agreed to (99-1) by the Senate on June 9. The provision would have required the Administration to develop a plan to reduce U.S. oil consumption by 1 million barrels by 2013 from projected consumption levels. The amendment did not create any new authorities. Rather, it would have given the Administration the latitude to use currently existing authorities, including CAFE. Opponents of an increase in CAFE especially embraced the amendment because it required a significant reduction in petroleum consumption without necessarily using CAFE as one of the levers. However, with both the House and Senate encouraging, or requiring, a rulemaking on CAFE from NHTSA, it appears likely that CAFE will be retained in any final bill reported from conference. (For additional information, see CRS Issue Brief IB90122, *Automobile and Light Truck Fuel Economy: The Cafe Standards*.)

The President's Hydrogen Fuel Initiative. In his State of the Union Address on January 28, 2003, President Bush announced a new $720 million research and development (R&D) initiative for hydrogen as a transportation fuel. This program, the Hydrogen Fuel Initiative, is intended to complement the FreedomCAR initiative, which focuses on cooperative vehicle research between the federal government, universities, and private industry. While these two partnerships have different goals, they do share in common the goal of producing by 2010 hydrogen-fueled engine systems that achieve double to triple the efficiency of today's conventional engines at a cost competitive with conventional engines. The Administration's FY2004 budget request would increase overall funding for research into hydrogen fuel, fuel cells, and vehicle technologies by about 30%. Some of this increase would be offset by funding reductions in other programs, but the majority will be new funding. H.R. 6 as passed by the House includes language that would authorize the President's requested level of funding for the program in FY2004; the President's request was for an additional $720 million over a period of five years from levels authorized for FY2003. An amendment in the House Science Committee to boost the funding level even more was defeated. However, the House Appropriations Committee elected to reduce hydrogen funding in the Energy and Water Appropriations bill (H.R. 2754) to $20 million below the President's request. The Senate Appropriations Committee agreed to fully fund the President's hydrogen request for FY2004.

The Senate version of H.R. 6 would require the production of 100,000 hydrogen-fueled cars by 2010 and 2.5 million vehicles by 2020 and annually thereafter. However, the Senate version does not authorize the President's requested funding increase for hydrogen.

Critics of the Administration suggest that the hydrogen program is intended to forestall any attempts to significantly raise vehicle CAFE standards, and that it relieves the automotive industry of assuming more initiative in pursuing technological innovations. On the other hand, some will argue that it is appropriate for government to become involved in the development of technologies that are too costly to draw private sector investment. At issue for these policymakers will be whether or not the federal initiative and level of funding is aggressive enough. (For additional information, see CRS Report RS21442, *Hydrogen and Fuel Cell R&D: FreedomCAR and the President's Hydrogen Fuel Initiative*.)

Renewable Energy and Fuels. One of the most controversial provisions of the energy legislation debated during the 107th Congress was the establishment of a renewable fuel standard (RFS) intended to increase the use of ethanol. Toward that end, the legislation also proposed the elimination of methyl tertiary butyl ether (MTBE). 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.

H.R. 6 as passed by the House 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.

The House version of H.R. 6 would eliminate the current 2% oxygenate mandate for reformulated gasoline, but would not ban MTBE outright. As passed by the House, and like the Senate-passed version, H.R. 6 includes the controversial "safe harbor" provision that would exempt producers from liability for damages resulting from the use of renewables, such as contamination of water supply. The House version of H.R. 6 would also extend this protection to MTBE. Those opposed to an outright ban of MTBE argue that marketers should be allowed to choose to use ethanol in markets that are closest to storage and blending facilities, and that the key problem is not MTBE, but underground storage tanks that leak. (For additional information, please see CRS Issue Brief IB10041, *Renewable Energy: Tax Credit, Budget and Electricity Production Issues*.)

Energy Efficiency and Conservation. Both the House- and Senate-passed versions of H.R. 6 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. The House and Senate versions also 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. In these respects, the provisions in S. 14 as it reached the Senate floor, and H.R. 6 as passed by the Senate, were similar. As one point of difference, S. 14 would have also legislated a standard for medium base compact fluorescent lamps (CFLs). This provision is not in the Senate version of H.R. 6. However, in another point of difference, the Senate-passed version of H.R. 6 would direct DOE to "amend" the energy efficiency standard for central air conditioners and heat pumps.

The House and Senate versions of H.R. 6 would set goals for further energy efficiency in federal buildings. Although the baseline years and associated coverage periods have different dates, the provisions in the House and Senate versions of H.R. 6 are nearly identical, setting progressive annual 2% reductions over a 10-year period that end with a 20% reduction from baseline. Both bills would also call for DOE to review results by the end of the 10-year period and recommend further goals for building energy savings for an additional decade. S. 14 had closely similar provisions.

Since the late 1970s, there have been some tax incentives to promote fuel switching and alternative fuels as a way to conserve gasoline and reduce oil import dependence. In contrast, tax incentives for energy efficiency and for electricity conservation have been rare, and generally short-lived. The House- and Senate-passed versions of H.R. 6 propose some modest new tax incentives for energy efficiency. Most of the provisions are similar in nature, but there are some differences in standards, percentage caps, and dollar caps. They cover new homes, existing homes, and combined heat and power (CHP). Also, both bills have tax incentives for alternative fuel vehicles and equipment. As one point of difference, the House-passed version of H.R. 6 has a provision for fuel cell power plants that is not in the Senate-passed version. As another point of difference, the Senate version of H.R. 6 would provide a tax credit for manufacturers of certain appliances that exceed federal standards, and would create a tax deduction for efficient commercial buildings. These two provisions do not appear in the House-passed version. (For additional information, see CRS Issue Brief IB10020, *Budget, Oil Conservation and Electricity Conservation Issues*.)

An Overview of the Senate Debate on S. 14. On April 30, 2003, the Senate Energy and Natural Resources Committee ordered reported its own comprehensive energy legislation (13-10) (S. 14). It included a narrowly approved electricity section that would, among other provisions, "remand for reconsideration" a controversial proposal from FERC called standard market design (SMD), which would provide for the standardization of access and management of electricity transmission lines. The committee rejected a proposed amendment to require light trucks and sport utility vehicles (SUVs) to meet the same CAFE standards as passenger automobiles. The Senate bill would also have provided federal support for the construction of nuclear power plants and provided loan guarantees for construction of an Alaskan natural gas pipeline. Unlike the House bill, the Senate legislation did not include a renewable fuels standard and did not include language to open up the Arctic National Wildlife Refuge to leasing.

General debate began on the Senate floor during the week of May 5, 2003, and the bill remained on the floor until June 12. Before debate was suspended in June, a unanimous consent agreement was reached to limit the number of amendments. During the interim period, negotiators tried to pare the nearly 400 proposed amendments to a manageable level. Senate staffers suggested that roughly three-fourths of these amendments were "second tier" and that about 70-100 amendments awaited disposition.

During the week of June 2, 2003, the Senate added a renewable fuels standard to S. 14 that would require refiners to blend at least 5 billion gallons annually of ethanol by 2012, a doubling of current U.S. ethanol production. Votes on June 3, 2003, decisively defeated amendments that would have allowed states to opt in to any renewable fuels program (34-62) and permitted the EPA Administrator to waive the ethanol mandate for states that already meet Clean Air Act standards (34-61). An amendment to exempt states on the East and West

Coast and the Rocky Mountains from the ethanol mandate was defeated (69-26) on June 5, 2003. Also defeated was an amendment to drop language referred to as the "safe harbor provision" that extends a product liability waiver to ethanol producers (57-38). On June 5, 2003, the Senate also agreed by unanimous consent to an amendment to increase the funding authorization for the Low Income Home Energy Assistance Program (LIHEAP) to $3.4 billion annually through FY2006.

When debate resumed on June 9, the Senate agreed to an amendment proposed by Senator Landrieu that would require the Administration to develop a plan to reduce U.S. oil consumption by 1 million barrels daily by 2013 from projected consumption levels. The amendment would not have created any new authorities, but gave the Administration the latitude to use any authorities, or combination of authorities, currently at its disposal to achieve the reduction.

On June 10, the Senate narrowly (48-50) defeated an amendment to drop language in S. 14 to authorize federal assistance for the construction of nuclear power plants. An amendment by Senator Dorgan that would require the production of 100,000 hydrogen-fueled cars by 2010 and 2.5 million vehicles by 2020 and annually thereafter was passed on June 10 (67-32). On June 11, the Senate voted to require a report from the Secretary of Energy on supply and demand for natural gas. A motion to table an amendment by Senator Feinstein to institute new controls in energy trading and markets passed (55-44). An amendment to establish an environmental review process for development of energy projects on Indian lands was defeated (52-47).

The Senate bill would also have required an inventory and analysis of oil and natural gas resources that may lie underneath the Outer Continental Shelf (OCS). Opponents of the survey argue that it is a veiled attempt to begin a process of ending the moratorium on development of the Florida and California OCS. An amendment proposed by Senator Graham to drop the language requiring the inventory was defeated (44-54).

S. 14 did not include an RFS. However, on June 5, 2003, the Senate agreed (67-29) to an amendment to establish a renewable fuels standard that would require refiners to blend at least 5 billion gallons annually of ethanol by 2012, a doubling of current U.S. ethanol production. A number of second-degree amendments were defeated by significant margins. Votes on June 3, 2003, decisively defeated second-degree amendments that would have allowed states to opt in to any renewable fuels program (34-62) and permitted the EPA Administrator to waive the ethanol mandate for states that already meet Clean Air Act standards (34-61). An amendment to exempt states on the East and West Coast and the Rocky Mountains from the ethanol mandate was defeated (69-26) on June 5, 2003. Also defeated was an amendment to drop language referred to as the "safe harbor provision" that extends a product liability waiver to ethanol producers (57-38). The Senate accepted an amendment to broaden the ethanol program to include agricultural residues and waste products as feedstocks for ethanol production.

Debate resumed on S. 14 on July 24, 2003. Amendments pertaining to corporate average fuel economy (CAFE) were among the first order of business. The Senate agreed to an amendment that would have required the National Highway Traffic Safety Administration (NHTSA) to complete a CAFE rulemarking for both cars and light trucks by 2006. The next major piece of business was electricity. On July 23, 2003, Senator Domenici

had announced that "bipartisan" agreement had been reached on a comprehensive electricity amendment that he offered as an amendment to S. 14. Several amendments to the electricity substitute were defeated just before the Senate debate stalled. It was at this point that Senator Daschle proposed that the Senate go back to, and pass, the energy bill (H.R. 4) agreed to during 2002. Both parties conferred off the floor, and during the evening of July 31, the Senate agreed (86-14) to substitute last year's H.R. 4 in the text of H.R. 6. The bill will go to conference.

A bill reported from the Senate Committee on Finance, S. 597, later designated as S. 1149, would have provided $15.5 billion in net energy tax incentives. However, the version of H.R. 6 passed by the Senate on July 31 includes the tax provisions included in H.R. 4 from 2002.

LEGISLATION

H.R. 6 (Tauzin)

To enhance energy conservation and research and development, to provide for security and diversity in the energy supply for the American people, and for other purposes. Incorporates H.R. 39, H.R. 238, H.R. 1531, and H.R. 1644. Introduced April 7, 2003; referred to several committees. Passed by the House, April 11, 2003. Senate version passed July 31, 2003 (84-14).

H.R. 39 (Young)

Arctic Coastal Plain Domestic Energy Security Act of 2001. Declares that it is the policy of the United States to permit exploration, development, production, and transportation of oil and gas resources in a designated area of the Coastal Plain Study Area of the Arctic National Wildlife Refuge. Introduced January 3, 2003; referred to Committee on Resources. Reported from the Committee on Resources April 2, 2003.

H.R. 238 (Boehlert)

Energy Research, Development, Demonstration and Commercial Application Act of 2003. Authorizes programs in energy efficiency, distributed energy and electric energy systems, renewable energy, fossil energy, and nuclear energy. Introduced January 8, 2003; referred to Committee on Science and Committee on Resources' Subcommittee on Energy and Mineral Resources.

H.R. 1531 (McCrery)

Energy Tax Policy Act of 2003.To amend the Internal Revenue Code of 1986 to enhance energy conservation and to provide for reliability and diversity in the energy supply for the American people, and for other purposes. Introduced April 1, 2003; referred to Committee on Ways and Means. Ordered to be reported (24-12) April 3, 2003, H.Rept. 108-67.

H.R. 1644 (Barton)

Energy Policy Act of 2003. To enhance energy conservation and research and development, to provide for security and diversity in the energy supply for the American people, and for other purposes. Introduced April 7, 2003. Reported from Committee, H.Rept. 108-65.

S. 14 (Domenici)

A bill to enhance the energy security of the United States, and for other purposes. Introduced April 30, 2003; Chairman's Mark reported May 6, S.Rept. 108-43. For technical reasons, the Senate report read to accompany S. 1005; however, the debate referred only to S. 14. On July 31, 2003, the Senate suspended debate on S. 14, and substituted in H.R. 6 the text of the energy bill the Senate had passed in 2002 (H.R. 4).

S. 225 (Feinstein)

Amends title 49, United States Code, to require phased increases in the fuel efficiency standards applicable to light trucks; to require fuel economy standards for automobiles up to 10,000 pounds gross vehicle weight; to increase the fuel economy of the Federal fleet of vehicles, and for other purposes. Introduced January 30, 2003; referred to Committee on Commerce, Science, and Transportation.

S. 385 (Daschle)

Amends the Clean Air Act to eliminate methyl tertiary butyl ether (MTBE) from the United States fuel supply, to increase production and use of renewable fuel, and for other purposes. Introduced February 13, 2003; referred to Committee on Environment and Public Works.

S. 421 (Cantwell), H.R. 671 (Bono)

Reauthorizes and revises the Renewable Energy Production Incentive program, and for other purposes. House bill introduced February 11, 2003; referred to Committee on Energy and Commerce. Senate bill introduced February 14, 2003; referred to Committee on Energy and Natural Resources.

S. 424 (Bingaman)

Tribal Energy Self-Sufficiency Act. To establish, reauthorize and improve energy programs relating to Indian tribes. Introduced February 14, 2003; referred to Committee on Indian Affairs.

S. 1149 (Grassley)

Energy Tax Incentives Act of 2003. Provides a number of tax credits and incentives to increase the production of oil and gas, and institute or extend tax credits to promote biomass, biodiesel and wind energy. Reported from the Committee on Finance April 2, 2003 (S.Rept. 108-54). When first considered by the committee, the bill was S. 597.