

Summary of the Energy Policy Act of 2005

The National Regulatory Research Institute

September 2005

Joe McGarvey
Research Associate

Mike Murphy
Graduate Research Associate

EXECUTIVE SUMMARY

This document presents a section by section summary of selected titles of the Energy Policy Act of 2005, excepting Title XII on electricity, for which the NRRI produced a separate and more detailed summary (Report# 05-09). The titles summarized here are those that the authors deem to have the greatest relevance and interest for state public utility commissions. Title I addresses energy efficiency. Title II deals with renewable energy. The document also covers the natural gas provisions of Title III along with several miscellaneous oil and gas issues, including provisions regarding the outer continental shelf. Title IV deals with coal and Title VI addresses nuclear power. Title IX contains the research and development provisions. Title XIV contains the provisions on national energy self-sufficiency. Titles XVI and XVII address climate change and incentives for innovative technologies, respectively.

Contents

Title I: Energy Efficiency	2	Title IX: Research and Development	21
Title II: Renewable Energy	6	Title XIV: Miscellaneous	31
Title III: Oil and Gas - Commerce	9	Title XVI: Climate Change	32
Title IV: Coal	13	Title XVII: Incentives for Innovative Technologies	33
Title VI: Nuclear Matters	16		

TITLE I: ENERGY EFFICIENCY

Subtitle A: Federal Programs

Section 101

Energy and water saving measures in congressional buildings. Directs the Architect of the Capitol to develop and implement a cost-effective energy conservation and management plan for all facilities administered by Congress.

Section 102

Energy management requirements. Amends the National Energy Conservation Policy Act (NECPA) to set a timetable to reduce energy usage in federal buildings by 20 percent by 2015. Agencies may retain any water or energy cost savings for energy or water efficiency projects.

Section 103

Energy use measurement and accountability. Requires metering or submetering of electricity usage in all federal buildings by 2012.

Section 104

Procurement of energy efficient products. Requires executive agencies to purchase energy efficient products, including Energy Star products and Federal Energy Management Program (FEMP) products, unless doing so would not be cost-effective or no efficient product is available.

Section 105

Energy savings performance contracts. Extends until 2016 Section 801(c) of NECPA, providing federal agencies the

authority to use energy savings performance contracts.

Section 106

Voluntary commitments to reduce industrial energy intensity. Authorizes the Secretary of Energy (the Secretary) to enter into voluntary agreements with firms in industrial sectors that consume significant amounts of energy-intensive industries to reduce the energy intensity of their production activities, with the goal of a 2.5 percent annual reduction in energy intensity for each year from 2007-2016. Requires the Secretary to recognize and publicize the achievements of participants in such voluntary agreements.

Section 107

Advanced building efficiency testbed. Instructs the Secretary to establish a university-based advanced building efficiency testbed demonstration program for advanced engineering systems, components, and materials to enable innovations in building technologies. Authorizes appropriations of \$6 million annually for Fiscal Years 2006-2008.

Section 108

Increased use of recovered mineral component in federally funded projects involving procurement of cement or concrete. Amends the Solid Waste Disposal Act to require the Secretaries of Transportation and Energy to give priority to the greater use of, and to conduct a study on, the use of recovered mineral content (e.g., coal combustion ash and industrial byproducts) in the production of cement or concrete in federally funded projects and, thereafter, establish additional procurement requirements if appropriate.

Section 109

Federal building performance standards. Directs the Secretary to establish revised federal building energy efficiency performance standards meeting specified requirements, including energy consumption levels at least 30 percent below current standard.

Section 110

Daylight savings. Amends the Uniform Time Act of 1966 to extend standard daylight time from March to November (currently from April to October). Requires the Secretary to report to Congress on the impact of this extension upon energy consumption in the United States.

Section 111

Enhancing energy efficiency in management of federal lands. Requires the Secretaries of Interior, Commerce and Agriculture to seek to:

- Incorporate energy efficient technologies in public and administrative buildings associated with management of the National Park System, National Wildlife Refuge System, National Forest System, National Marine Sanctuaries System and other public lands and resources they manage
- Use energy efficient motor vehicles, including those equipped with biodiesel or hybrid engine technologies, in the management of such systems and lands.

Subtitle B: Energy Assistance and State Programs

Section 121

Low income energy assistance programs. Extend the low-income home energy assistance program (LIHEAP) through Fiscal Year 2007. Sets LIHEAP funding authorization at \$5.1 billion, up from \$2 billion Fiscal Year 2004. Authorizes the states to purchase renewable fuels, including biomass, to implement LIHEAP.

Section 122

Weatherization assistance. Extends the weatherization assistance program through 2008. Authorizes \$500 million for 2005, \$600 million for 2007, and \$700 million for 2008.

Section 123

State energy programs. Amends the NECPA to increase from 10 percent to 25 percent mandatory state energy efficiency goals in calendar year 2012 as compared to calendar year 1990. Authorizes \$100 million for Fiscal Years 2006-2007 and \$125 million for Fiscal Year 2008.

Section 124

Energy efficient appliance rebate program. Prescribes guidelines for:

- A state energy efficient appliance rebate program
- Federal grants to the states for energy efficient public buildings
- For a low income community energy efficiency pilot program

Authorizes \$50 million annually for Fiscal Years 2006-2010.

Section 125

Energy efficient public buildings. Authorizes \$30 million annually (Fiscal Years 2006-2010) for grants to state energy conservation agencies to assist local governments to construct or renovate energy efficient buildings.

Section 126

Low income community energy efficiency pilot program. Authorizes \$20 million annually (Fiscal Years 2006-2008) for competitive grants to local government, Indian tribes, or community groups to improve energy efficiency in low income communities.

Section 127

State technologies advancement collaborative. Directs the Secretary to establish the “state technologies advancement collaborative,” a cooperative program with the states for research, development, and deployment of energy efficiency technologies in which there is a common federal and state interest. The collaborative will establish multi-state projects to be awarded competitively.

Section 128

State building energy efficiency codes incentives. Amends the NECPA to provide additional funding to states that have adopted and are implementing statewide both residential and commercial building energy efficiency codes. Authorizes \$25 million annually for Fiscal Years 2006-2010 and such sums as necessary thereafter.

Subtitle C: Energy Efficient Products**Section 131**

Energy Star program. Amends the NECPA to establish a voluntary program at the Department of Energy (DOE) and the Environmental Protection Agency (EPA) to identify and promote energy-efficient products and buildings (Energy Star Program). Directs the Secretary to establish qualifying efficiency levels for clothes washers and dryers.

Section 132

Heating, ventilation and air conditioning maintenance consumer education program. Directs the Secretary to conduct a program to educate consumers and small businesses on energy savings possible from properly maintained heating, cooling, and ventilating systems.

Section 133

Public energy education program. Directs the Secretary to convene a conference of energy production and distribution stakeholders, with the goal of establishing an energy and efficiency public education program.

Section 134

Energy efficiency public information initiative. Directs the Secretary to conduct an advertising program to educate the public on the benefits and methods of reducing energy consumption; authorizes \$90 million annually for Fiscal Years 2006-2010.

Section 135

Energy efficiency standards for additional products. Directs the Secretary of energy to prescribe testing requirements and energy conservation standards for certain commercial products, including dehumidifiers, fluorescent lights, ceiling fans, vending machines, traffic signals, and distribution transformers.

Section 136

Energy conservation standards for commercial equipment. Establishes energy conservation standards and testing procedures for commercial package air conditioning and heating equipment, commercial refrigerators and freezers, commercial ice makers, and commercial clothes washers.

Section 137

Energy labeling. Directs the Federal Trade Commission (FTC) to consider the effectiveness of the current consumer products labeling program. Directs the FTC to issue a rule on labeling for the electricity usage of ceiling fans within 18 months of enactment.

Section 138

Intermittent escalator study. Directs the Administrator of General Services to conduct a study and report to Congress within one year on the potential energy savings from the use of intermittent escalators.

Section 139

Energy efficient electric and natural gas utilities study. Directs the Secretary, in consultation with the National Association of Regulatory Utility Commissioners and the National Association of State Energy Officials, to conduct a study of state

and regional policies to reduce energy consumption carried out by regulated and nonregulated utilities. In conducting the study, the Secretary shall consider performance standards for achieving energy use and demand reduction targets, funding sources, infrastructure planning approaches and infrastructure improvements, the costs and benefits of consumer education programs, and methods of encouraging utilities to implement energy efficiency programs. The study shall be submitted to Congress within one year of enactment.

Section 140

Energy efficiency pilot program. Authorizes \$5 million annually for Fiscal Years 2006-2010 for the Secretary to establish a pilot program to provide assistance to three to seven states for energy efficiency pilot programs, reducing electricity or natural gas by at least .75 percent.

Section 141

Report on failure to comply with deadlines for new or revised energy conservation standards. Requires the Secretary to report to Congress within six months of enactment, and every six months after that, on each new or revised energy or water conservation standard which the Secretary has failed to issue in accordance with the Energy Policy and Conservation Act.

Subtitle D: Public Housing**Section 151**

Public housing capital fund. Amends the United States Housing Act of 1937 to include among the capital and management activities for which assistance may be made available to public housing agencies from the public housing capital fund

- The improvement of energy and water-use efficiency by certain energy and water conserving fixtures and fittings
- Integrated utility management and capital planning to maximize energy conservation and efficiency measures.

Section 152

Energy-efficient appliances. Requires a public housing agency to purchase energy-efficient appliances designated as Energy Star products or FEMP products unless it is not cost-effective to do so.

Section 153

Energy efficiency standards. Amends the Cranston-Gonzales National Affordable Housing Act with respect to energy efficiency standards in the rehabilitation or construction of public housing.

Section 154

Energy strategy for the U.S. Department of Housing and Development (HUD). Requires the Secretary of HUD to report to Congress on development and implementation of an integrated energy strategy to reduce utility expenses through cost-effective energy conservation and efficiency measures and energy efficient design and construction of public and assisted housing.

TITLE II: RENEWABLE ENERGY

Subtitle A: General Provisions

Section 201

Assessment of renewable energy resources. Calls on the Secretary to report annually on the available assessments of renewable energy resources within the United States and to undertake new assessments as necessary.

Section 202

Renewable energy production incentive. This section amends the Energy Policy Act of 1992 (the Act) by adding a provision directing the Secretary to assign 60 percent of the appropriated funds to facilities using solar, wind, ocean, geothermal, or closed-loop biomass to generate electricity if there are insufficient appropriations to make full payments for all qualified facilities. Landfill gas, livestock methane, and ocean energy are added as qualified renewable energy facilities. The amendment also calls for extending the authority of the Act and authorizing appropriations through 2026.

Section 203

Federal purchase requirement. Mandates minimum percentages of renewable energy the federal government must purchase, the amount increasing incrementally to at least 7.5 percent in 2013.

Section 204

Use of photovoltaic (PV) energy in public buildings. This section authorizes a program to install PV solar electric systems in public buildings. The stated purpose

is to promote a commercially viable PV industry and to reduce the consumption of fossil fuels. A goal of installing solar energy systems in 20,000 government buildings by 2010 is set.

Section 205

Biobased fuels. This section amends the Farm Security and Rural Investment Act of 2002 by adding to the federal procurement preference for biobased products a provision that includes “such items that comply with the regulations issued under Section 103 of Public Law 100-556” (degradable plastic ring containers).

Section 206

Renewable energy security. Amend the Energy Conservation and Production Act to among other things establish a program providing rebates of up to 25 percent or \$3000 to consumers for the installation of renewable energy systems in a house or small business.

Section 207

Installation of photovoltaic system. Calls for installation of a PV system in the DOE headquarters building.

Section 208

Sugar cane ethanol program. Requires the Act to establish a sugar cane ethanol program, which shall be limited to sugar producers and the production of ethanol in Florida, Hawaii, Louisiana and Texas. The House bill originally appropriated \$8 million; the Act increases the amount to \$36 million.

Section 209

Rural and remote community electrification grants. This section was not included

in either the House or Senate bills. Authorized the appropriation of \$20 million per annum from 2006-2012 to provide grants for increasing the energy efficiency, siting, or upgrading of the transmission and distribution lines serving rural areas, and for modernizing electric generation facilities that serve rural areas. Preference shall be given to renewable energy facilities.

Section 210

Grants to improve the commercial value of forest biomass for electric energy, useful heat, transportation fuels and other commercial purposes. Authorizes appropriations for grants to owners of eligible biomass operations. Also provides appropriations for grants to persons in eligible communities to offset the costs of research and development of proposals to improve biomass utilization.

Section 211

Sense of Congress regarding generation capacity of electricity from renewable energy resources on public lands. This section was not included in either the House or the Senate bills. It is a resolution calling for at least 10,000 megawatts of electricity generation from non-hydro-power renewable energy projects located on public lands within ten years.

Subtitle B: Geothermal Energy

Sections 221-237

These sections are a revised version of the one found in the Senate bill. They amend the Geothermal Steam Act of 1970. The amendments provide for the revision of competitive lease sale requirements. Instructs the Secretary of Interior to accept nominations from qualified persons; to hold competitive lease sales every other

year; and to offer noncompetitive leasing on tracts for which no competitive bids have been received. Another section would authorize pooling of geothermal leases. The Secretaries of Interior and Agriculture are instructed to identify areas in the National Forest System with geothermal potential, and to establish administrative procedures for lease applications. An Intermountain West Geothermal Consortium is established as a regional association of institutions and government agencies. The consortium will be hosted and managed by Boise State University.

Subtitle C: Hydroelectric

Section 241

The hydroelectric sections are a combination of provisions from both the House and Senate bills. This section would amend the Federal Power Act (FPA) to allow certain alternative conditions proposed by an applicant for a hydroelectric license or for an alternative fishway.

Section 242

Hydroelectric production incentives. Calls for incentive payments for qualified hydroelectric facilities for a period of ten years. For any facility, the amount shall be 1.8 cents per KWh, but no facility may receive more than \$750,000 in one year.

Section 243

Hydroelectric efficiency improvement. This section authorizes incentive payments of up to \$750,000 for capital improvements of existing dams that are directly related to improving efficiency by at least 3 percent.

Section 244

Alaska state jurisdiction over small hydroelectric projects. This section allows the state of Alaska to decline to adopt the recommendations of the Fish and Wildlife Service under subsection (a)(3)(c) of the FPA. Therefore, Alaska continues to have permitting authority over small hydro projects even if the condition of protecting fish and other wildlife is not met.

Section 245

Flint Creek hydroelectric project. The time limit for the permit of Project 12107 in Montana is extended for three years. The fees for the project are set at \$25,000 per year or less.

Subtitle D: Insular Energy

Section 251

Insular areas energy security. This section calls for the development of energy plans for insular areas (islands in the Caribbean and Pacific) to address the issue of energy infrastructure, with particular emphasis on the damage caused by typhoons and hurricanes. Also calls for a plan to increase the use of renewable energy, including coconut oil fuel and water vapor condensation for the production of potable water. An annual appropriation of \$6 million is authorized. Federal grants shall not exceed 75 percent of the cost for any project.

Section 252

Projects enhancing insular energy independence. This section calls for a feasibility study of a project to significantly reduce the dependence of an insular area on imported fossil fuels, or to provide needed distributed generation to an insular area.

TITLE III: OIL AND GAS – COMMERCE

Subtitle B: Natural Gas

Section 311

Exportation or importation of natural gas. Amends the Natural Gas Act (NGA) to establish that the Federal Energy Regulatory Commission (FERC) has exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of liquefied natural gas (LNG) facilities. Following the filing of an application concerning an LNG facility, FERC shall set the matter for hearing, giving reasonable notice to all interested parties, including the state commission, then issue or deny the appropriate order. Prior to 2015, FERC shall not:

- Deny an application solely because the applicant intends to use the facility for gas supplied by the applicant or an affiliate
- Require the facility to offer service to other customers besides the applicant
- Regulate the rates, charges, terms, or conditions of service of the facility
- Require filings with the commission related to rates, charges, terms, or conditions of service.

An order issued for a liquefied natural gas (LNG) import facility that also serves other customers on an open access basis shall not subsidize the expansion capacity, degrade service, or unduly discriminate against the terms and conditions of service for existing customers.

Requires FERC to consult with the Secretary of Defense on facilities that may affect military installations, and shall obtain the concurrence of the Secretary before authorization of a facility that affects military installation.

Requires FERC to consult with the state agency designated by the Governor of a state regarding state and local safety considerations. The state agency may provide an advisory report within 30 days of the filing of an application with FERC. FERC shall review and respond to the issues raised by the state agency before issuing an order. The state agency may conduct safety inspections of operational facilities upon written notice to FERC.

All orders authorizing an LNG terminal shall require the terminal operator to develop an emergency response plan in consultation with the U.S. Coast Guard and state and local agencies to be approved by FERC before final approval to begin construction. The plan shall include a cost-sharing plan to reimburse state and local agencies for direct costs related to providing safety and security for the terminal and vessels in proximity.

Section 312

New natural gas storage facilities. Amends the Natural Gas Act to provide that FERC may allow a natural gas company to provide storage services at market-based rates for new storage capacity related to a specific facility even if the company is unable to demonstrate that the company lacks market power provided that FERC finds that:

- Market-based rates are in the public interest and necessary to encourage the construction of new storage capacity in areas lacking capacity
- Customers are adequately protected -- FERC shall ensure that reasonable terms and conditions are in place. FERC shall periodically review (but not more than triennially) whether such market-based rates continue to be just, reasonable, and no unduly discriminatory or preferential.

Section 313

Process coordination, hearings and rules of procedure. Amends the NGA regarding hearings, rules and procedures. The FERC shall act as the lead agency for coordinating all applicable federal authorizations with respect to an application for authorization or for a certificate of public convenience and necessity. FERC shall establish a schedule for all federal authorizations, and all federal and state agencies with jurisdiction over natural gas shall cooperate with FERC and comply with the deadlines set by FERC. If a federal or state agency has failed to act by the deadline established by the FERC regarding permits required under federal law (other than the Coastal Zone Management Act of 1972 (CZMA)), the applicant may appeal to the U.S. Court of Appeals for the District of Columbia under expedited consideration.

Section 314

Penalties. Increases penalties for criminal and civil violations under the NGA and the Natural Gas Policy Act of 1978.

Section 315

Market manipulation. Amends the NGA to prohibit market manipulation in connection with the purchase or sale of natural gas or natural gas transportation services.

Section 316

Natural gas market transparency rules. Directs FERC to facilitate price transparency in markets for the sale or transportation of natural gas. Permits FERC to issue rules to provide information about the availability and price of gas sold interstate and at wholesale. FERC shall consider the adequacy of price transparency

provided from existing publications and if those sources do not provide adequate transparency, the FERC may establish an electronic information system. In determining the information to obtain from market participants and the time that it should be made available, FERC shall seek to avoid anti-competitive effects of untimely public disclosure of transaction specific information. This section does not affect the jurisdiction of the Commodity Futures Trading Commission (CFTC), and FERC is directed to conclude a memorandum of understanding with the CFTC to coordinate information requests that cross jurisdictions. FERC shall not use the reporting requirements as a condition of access to interstate pipeline transportation.

Section 317

Federal-state liquefied natural gas forums. Instructs the Secretary to convene at least three forums on LNG involving the Secretaries of Transportation, Homeland Security, FERC and the Governors of coastal states, with the intention of:

- Fostering dialogue among federal, state, and local officials, industry representatives, independent experts and the general public on the role of LNG in the country's energy supply, siting and permitting processes, and safety and environmental requirements
- Developing best practices for addressing LNG issues. Authorizes such appropriations as necessary

Section 318

Prohibition of trading and serving by certain individuals. Amends the NGA to allow a district court to prohibit anyone who has been found in violation of the act from acting as an officer or director of a natural gas company or engaging in the

buying and selling of gas or transmission services subject to FERC jurisdiction.

Subtitle C: Production

Section 321

Outer Continental Shelf (OCS) provisions. Amends the OCS Lands Act to specify that it is oil and gas “from any source” for which the Secretary shall prescribe regulations on the subsurface storage of gas or oil as part of administering leases of outer continental shelf land. Amends the Deepwater Port Act to include varieties of LNG in the definition of natural gas.

Subtitle E: Production Incentives

Section 357

Comprehensive inventory of OCS oil and natural gas reserves. Directs the Secretary of Interior to conduct an inventory and analysis of oil and natural gas resources beneath the waters of the outer continental shelf including how legislative, regulatory or administrative processes restrict the development of identified resources. The report shall be updated at least every five years.

Subtitle G: Miscellaneous

Section 381

Deadline for decision on appeals of consistency determination under the CZMA. Amends the CZMA to require the Secretary to close the record within 160 days of publishing a notice of appeal regarding a consistency determination under the act. The Secretary may stay the closing for no more than 60 days. The Secretary must issue a decision with 60 days of the closure of the record; the Secretary may

alternatively issue an explanation of why a decision cannot be reached within 60 days, followed by a decision within an additional 15 days.

Section 382

Appeals relating to offshore mineral development. Regarding any federal agency appeal or review under the CZMA authorizing an energy project, the lead federal permitting agency shall cooperate with other federal and state agencies to maintain a consolidated record of all the agencies’ decisions.

Section 383

Royalty payments under leases under the OCS Lands Act. Establishes that lessees in Louisiana who are owed compensation under the Oil Pollution Act of 1990 may withhold payment on royalties owed to the United States under the OCS Land Act, providing that the lessee pays to the state 44 cents for every dollar of royalties withheld.

Section 384

Coastal impact assistance program. Defines a “producing state” as a coastal state that has a coastal seaward boundary within 300 nautical miles of the geographic center of a leased tract within any are of the outer Continental shelf.

Directs the Secretary to disburse to producing states and their political subdivisions \$250 million for each of Fiscal Years 2007-2010. The allocation to a particular state will reflect the proportion of the qualified OCS revenues generated off its coastline relative to total OCS revenues. Thirty-five percent of each state’s revenue will go to the coastal political subdivisions in that state.

By July 1, 2008, the Governor of a producing state must submit a coastal impact assistance plan, which the Secretary must approve before disbursing any funds. The plan must detail how both the state and political subdivisions will use the funds; such uses may only be for any of the following purposes:

- Protection of coastal areas, including wetlands
- Mitigation of damage to fish, wildlife, or natural resources
- Planning assistance and administrative costs
- Implementation of a federally approved marine, coastal, or comprehensive conservation management plan
- Onshore infrastructure and public service needs intended to mitigate the impact of OCS activities. No more than 23 percent of the funds may be used for purposes (3) and (5).

Section 385

Study of availability of skilled workers. Directs the Secretary to arrange with the National Academy of Sciences to conduct a report within two years on the availability of skilled workers in the oil, gas, and mineral industries.

Section 386

Great Lakes oil and gas drilling ban. Prohibits new federal or state permits or leases for new oil and gas drilling in or under the Great Lakes.

Section 387

Federal coalbed methane regulation. Provides that any state on the list of affected states for the resolution of coalbed methane ownership questions under the Act shall be removed from the list of affected

states within three years of enactment if the state takes action for removal from the list as originally specified in the Act.

Section 388

Alternate energy-related uses on the OCS. Amends the OCS to permit the Secretary, in consultation with the Coast Guard and other relevant federal departments and agencies, to grant a lease, easement, or right-of-way for activities that support the oil and gas exploration, development, production, storage, or transportation, unless prohibited by a moratorium. Directs the Secretary to establish payments from the leases, and arrange for payment of 27 percent of revenues received among states that have a coastline within 15 miles of the project. The Secretary shall coordinate and consult with the Governor of any affected state. This section does not apply to lands within the National Park, Wildlife Refuge, Marine Sanctuary Systems or any National Monument. This section does not alter the claim of any state over any submerged lands.

Section 389

Oil Spill Recovery Institute. Amends the Oil Pollution Act of 1990 to change the date of termination of funding for the Oil Spill Recovery Institute in Cordova, Alaska from Sept. 30, 2012 to one year after the Secretary certifies that oil and gas production has ceased in Alaska.

Section 390

National Environmental Policy Act of 1969 (NEPA) Review. Describes the activities for which there shall be a rebuttable presumption that the use of a categorical exclusion under the NEPA would apply if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas. The activities include:

The National Regulatory Research Institute

- Individual surface disturbances of less than 5 acres if the total surface disturbance on the lease does not exceed 150 acres and a site specific analysis prepared pursuant to NEPA has been previously completed
- Drilling an oil or gas well at a site where drilling had occurred in the prior five years
- Drilling where a land use plan prepared pursuant to NEPA within the prior five years foresaw drilling as a reasonable activity
- Placement of a pipeline in a right-of-way corridor approved in the prior five years
- Maintenance of a minor activity

Subtitle H: Refinery Revitalization

Section 391

Findings and definitions.

Section 392

Federal-state regulatory coordination and assistance. Specifies that the Administrator of the Act to enter into a refinery permitting cooperative agreement with a state upon request of the Governor. The agreements would identify steps and timelines to streamline the federal and state permits for a new refinery and coordinate consideration of refinery permit applications to the extent practicable. The Administrator is authorized to accept consolidated applications for all Act permits, coordinate with other Federal agencies on permits, provide financial assistance to states for hiring personnel for the consideration of refinery permits, and provide technical, legal, or other permitting assistance to states.

TITLE IV: COAL

Subtitle A: Clean Coal Power Initiative

Section 401

Authorization of appropriations. Authorizes \$200 million for each year during the period from 2006-2014 to be appropriated for the Clean Coal Power Initiative. Both the House and the Senate bills included this provision, but the Senate version proposed appropriations only through 2012.

Section 402

Project criteria. To be eligible to receive funding under this subtitle, projects must advance efficiency, environmental performance, and cost competitiveness well beyond the level of technologies currently in commercial use. It calls for at least 80 percent of the funds to be spent on coal gasification projects that meet certain technical criteria, including reductions in sulfur dioxide, nitrogen oxides, and mercury emissions. The percentage of funding for coal gasification came out of the Senate bill; the House bill called for 60 percent. Priority is to be given to projects that include the capture of carbon dioxide or the reduction of the demand for natural gas. A data protection provision for demonstration projects is included.

Section 403

Report. Biennial reports through 2014 are to be made to Congress describing the technical milestones and status of each project.

Section 404

Clean coal centers of excellence. The DOE is charged with awarding competi-

tive grants to universities for the establishment of centers of excellence for energy systems of the future.

Subtitle B: Clean Power Projects

Section 411

Integrated coal/renewable energy system. Authorizes loan guarantees to an integrated coal gasification combined-cycle technology (IGCC) plant in the Upper Great Plains.

Section 412

Loan to place Alaska clean coal technology facility in service. Authorizes up to \$80 million for the Alaska Healy Plant to revert from a clean coal facility to a typical coal burning plant.

Section 413

Western integrated coal gasification demonstration project. Instructs DOE to carry out an IGCC project in a western state at an elevation of over 4,000 feet that produces energy from coal mined in the Western United States. The project shall be capable of removing and sequestering CO₂ emissions.

Section 414

Coal gasification. DOE is authorized to provide loan guarantees for an IGCC plant with a capacity of at least 400 megawatts that produces power at competitive rates in deregulated energy generation markets without receiving subsidies from ratepayers.

Section 415

Petroleum coke gasification. This section authorizes loan guarantees for at least 5 petroleum coke gasification projects.

Section 416

Electron scrubbing demonstrations. Mandates that \$5 million be appropriated for a project initiated through the Chicago Operations Office.

Section 417

Transportation fuels from Illinois basin coal. This section directs DOE to carry out a program to evaluate the commercial and technical viability of advanced technologies for the production of Fischer-Tropsch and other fuels manufactured from Illinois Basin Coal. To carry this out, support is to be given to the Southern Illinois University Coal Research Center, the University of Kentucky Center for Applied Energy Research and the Energy Center at Purdue University. In addition, the DOE shall construct a gasification products test center. To carry out these provisions, \$85 million is authorized to be appropriated for Fiscal Years 2006-2010.

Subtitle C: Coal and Related Programs

Section 421

Amendment of the Energy Policy Act of 1992. Amends the Act by inserting Title XXXI—Clean Air Coal Program. The congressional intent stated in proposed Title XXXI is to:

- Promote national energy policy and energy security, diversity, and economic competitiveness benefits that result from the increased use of coal

- Mitigate financial risks, reduce the cost, and increase the marketplace acceptance of the new clean coal generation and pollution control equipment and processes
- Facilitate the environmental performance of clean coal generation

For projects that facilitate the production and generation of coal-based power through deployment of clean coal electric generating equipment and processes that, compared to those currently in operation, would improve energy efficiency or environmental performance, and are not yet cost effective, \$250 million is authorized to be appropriated for 2007; \$350 million for 2008; \$400 million for 2009-2012; and \$300 million for 2013. For the utilization of existing coal-based electricity generation plants that deploy advanced air pollution control equipment and processes, and are designed to voluntarily enhance environmental performance above current applicable Clean Air Act standards, \$300 million is authorized to be appropriated for 2007; \$100 million for 2008; \$40 million for 2009; \$30 million for 2010 and \$30 million for 2011.

Subtitle D: Federal Coal Leases

Section 431

Short title. "Coal Leasing Amendments Act of 2005."

Section 432

Repeal of the 160-acre limitation for coal leases. Amends the Mineral Leasing Act (MLA) increase the maximum size of coal leases to 960 acres. When this was proposed in the Senate bill, the maximum acreage was 320.

Section 433

Approval of logical mining units. This section amends the MLA to allow for leases of more than 40 years.

Section 434

Payment of advance royalties under coal leases. This section amends the manner in which advance royalties are computed. They should now be computed according to the average price in the spot market. The aggregate number of years during the period of any lease for which advance royalties may be accepted in lieu of the condition of continued operation shall not exceed 20 years.

Section 435

Elimination of deadline for submission of coal lease operation and reclamation plan. The three-year deadline is cancelled.

Section 436

Amendment relating to financial assurances with respect to bonus bids. This section comes from Title XXI of the House bill. The MLA is amended to remove the requirement of a surety bond to guarantee payment of deferred bonus bid installments.

Section 437

Inventory requirement. This section also comes from Title XXI of the House bill. It calls for an assessment within two years of coal resources on federal lands that are available for development.

Section 438

Application of amendments. The amendments made by this subtitle apply to any

coal lease issued on, before, or after the enactment of this Act.

TITLE VI: NUCLEAR MATTERS

Subtitle A: Price-Anderson Act Amendments

Section 601

Short title - Price-Anderson Amendments Act of 2005.

Section 602

Extension of indemnification authority. Amends the Atomic Energy Act of 1954 (AEA) to modify and extend indemnification authority and liability limits for Nuclear Regulatory Commission (NRC) licensees, the DOE contractors, and for nonprofit educational institutions until Dec. 31, 2025.

Section 603

Maximum assessment. Raises the maximum assessments to a licensee following any nuclear accident from \$63 million to \$95.8 million, with no more than \$15 million in one year.

Section 604

Department liability limit. Indemnifies the DOE contractors for \$10 billion above the amount of financial protection required to be provided by the contractors in the event of a nuclear accident arising out of contracted activities.

Section 605

Incidents outside of the United States. Raises the amount of indemnification for

the DOE contractors for incidents outside the United States from \$100-500 million.

Section 606

Reports. Directs the Secretary to report to Congress in 2021 about the need to continue or modify the Price-Anderson Act.

Section 607

Inflation adjustment. Sets standards for inflation adjustments to liability levels in the act.

Section 608

Treatment of modular reactors. Treats a combined group of modular reactors as a single reactor for indemnification purposes.

Section 609

Applicability. Establishes that the liability increases in sections 603, 604, 605 do not apply before the date of enactment of the act.

Section 610

Civil penalties. Repeals the mandate that the Secretary determine by rule whether nonprofit educational institutions should receive automatic remission of any civil monetary penalties for violation of DOE safety regulations. Repeals the exemption from liability for such penalties for specific universities, corporations, and their subcontractors or suppliers. Limits the total amount of civil penalties incurred within any one-year period by a not-for-profit contractor, subcontractor, or supplier to the total amount of fees paid within any one-year period under the contract under which a violation occurs.

Subtitle B: General Nuclear Matters

Section 621

Licenses. Amends the AEA to specify that the 40 year lifetime for a commercial nuclear facility license (as under current law) begins upon the authorization to commence operations.

Section 622

Scholarship and fellowship programs. Permits the NRC to establish a program to award (a) scholarships to undergraduate students, and (b) fellowships to graduate students who study in areas with skills deemed to be a critical. The students must be U.S. citizens and agree to be employed by the NRC for a minimum period not more than three times the period for which assistance was provided.

Section 623

Cost recovery. Clarifies NRC recovery of license fees from other government agencies.

Section 624

Elimination of pension offset for certain rehired federal retirees. Authorizes the NRC to exempt from the federal civil service pension offset an annuitant who was formerly a NRC employee and is hired as consultant to the NRC if there is exceptional difficulty in recruiting a qualified employee or when a temporary emergency hiring need exists.

Section 625

Antitrust review. Waives application of federal antitrust law to applications for a

license to construct or operate a nuclear power utilization or production facility.

Section 626

Decommissioning. States that a general duty of the NRC is to ensure that sufficient funds will be available for the decommissioning of certain licensed production or utilization facilities.

Section 627

Limitation on legal fee reimbursement. Prohibits DOE from reimbursing any contractor or subcontractor for any legal fees or expenses incurred with respect to a complaint following an adverse determination or final judgment unless the determination or final judgment is reversed upon further review.

Section 628

Decommissioning pilot program. Directs the Secretary to establish a decommissioning pilot program at a reactor in northwest Arkansas, and authorizes \$16 million.

Section 629

Whistleblower protection. Amends the Energy Reorganization Act of 1974 to extend whistleblower protections to federal employees of either the DOE or the NRC, including all contractor and subcontractor employees. Permits whistleblower complaints to be brought directly to the U.S. District Court for de novo review if the Secretary of Labor fails to issue a final decision within one year after the filing of the complaint.

Section 630

Medical isotope production. Sets conditions under which the NRC may issue an export license for highly enriched ura-

nium for medical isotope production. Directs the Secretary to commission a study by the National Academy of Sciences on medical isotopes, including the potential to use sources other than highly enriched uranium.

Section 631

Safe disposal of greater-than-Class-C (GTCC) radioactive waste. Directs the Secretary to:

- Designate an office within DOE charged with responsibility for developing a new or using an existing facility for safely disposing of all low-level radioactive waste (GTCC)
- Develop a comprehensive plan for permanent disposal of GTCC waste, including plans for a disposal facility. Before making a final decision on disposal, the Secretary shall report to Congress on the alternatives under consideration.

Section 632

Prohibition of nuclear exports to countries that sponsor terrorism. Amends the AEA to prohibit nuclear exports to countries that sponsor terrorism. Authorizes the President to waive such prohibition under certain circumstances.

Section 633

Employee benefits. Instructs the Secretary to take action necessary to ensure continued eligibility to participate in or transfer into certain pension or health care benefit plans for employees at the Portsmouth, Ohio or the Paducah, Kentucky, Gaseous Diffusion Plant.

Section 634

Demonstration hydrogen production. Directs the Secretary to establish two projects in geographically diverse locations to

demonstrate the commercial production of hydrogen at existing nuclear power plants. Authorizes not more than \$100 million for the purposes of carrying out this section.

Section 635

Prohibition on assumption of liability for certain foreign incidents. Prohibits assumption of liability by the U.S. Government for incidents connected to the design, construction, or operation of a nuclear facility in foreign countries listed as state sponsors of terrorism. This section does not apply to incidents occurring from approved missions to secure nuclear materials for safety or nonproliferation purposes.

Section 636

Authorizes appropriations of such sums as necessary to carry out this subtitle.

Section 637

NRC user fees and annual charges. Establishes that the NRC should seek to collect fees from its licensees equal to approximately 90 percent of its budgetary authority for Fiscal Year 2005 and each year thereafter. Expands the list of items that the NRC should withhold from its fee calculations to include amounts appropriated to the NRC for

- The monitoring of DOE nuclear waste disposal
- Homeland security activities

Section 638

Standby support for certain nuclear plant delays. Permits the Secretary to enter into contracts with a person who has applied for or been granted a combined construction and operation license of an advanced nuclear facility. The contracts would

cover a total of 6 reactors consisting of no more than 3 different designs.

The contracts would require the Secretary to use appropriated amounts to cover delay costs incurred from failure of the NRC to comply with review and approval schedules or litigation that delays full-power operations. Such costs do not include those arising from normal business risks, events within the control of the sponsor, or failure of the sponsor to take actions required by law or regulation. The Secretary would cover: (a) 100 percent of the covered delay costs for the first two reactors, but not more than \$500 million per contract; (b) 50 percent of the covered delay costs for the next 4 reactors after 180 days of delay, and not more than \$250 million per contract.

Covered costs include: (a) principal or interests on any debt obligation for an advanced nuclear facility; (b) the difference between the fair market price for power purchased to meet contracted supply agreements and the contractual price of power from the facility subject to delay. Requires the Secretary to issue a notice of final rulemaking regulating the contracts within one year of enactment. Authorizes such sums as necessary.

Section 639

Conflicts of interest relating to contracts and other arrangements. Permits the NRC to enter into a contract with the DOE or the operator of a DOE facility with a conflict of interest if the NRC determines that the conflict cannot be mitigated and adequate justification exists to proceed with the contract.

Subtitle C: Next Generation Nuclear Plant Project

Section 641

Project establishment. Directs the Secretary to establish a project to design and construct a prototype nuclear plant with a reactor to produce electricity, hydrogen, or both.

Section 642

Project management. Designates the Idaho National Engineering and Environmental Laboratory as the lead laboratory and siting location for the project.

Section 643

Project organization. State that the project shall involve development and testing of high-temperature hydrogen production techniques, energy conversion technology, nuclear fuel, materials, and reactor and plant design. Specifies the phases of the project.

Section 644

NRC. Instructs the Secretary to seek the active participation of the NRC and submit a licensing strategy within three years of enactment.

Section 645

Project timelines and authorization of appropriations. Sets target date of 2011 for completion of first project phase, the selection of the technology to be used and initial design parameters. Authorizes \$1.25 billion for the period Fiscal Years 2006-2015 and such sums as necessary from Fiscal Years 2016-2021.

Subtitle D: Nuclear Security

Section 651

Nuclear facility and materials security. Directs NRC to conduct security evaluations at each licensed facility at least once every three years, including force-on-force exercises. Requires NRC to initiate a rulemaking within 90 days to revise the design basis threats employed by NRC; this rulemaking shall be completed within 18 months of the notice. Requires NRC to appoint a federal security coordinator whose responsibilities would include coordinating security measures among private security forces of nuclear facilities and communicating with other federal, state and local authorities concerning threats. Directs NRC to issue regulations within one year establishing a mandatory tracking system for radiation sources in the United States. Requires a National Academy of Sciences study to identify lower radiation alternatives to current industrial, research and commercial uses. Establishes a task force on radiation source protection and security. Requires NRC within 18 months of enactment to issue a final rulemaking regarding the treatment of accelerator-produced and other radioactive material (e.g., from commercial, medical or research activity) as byproduct material requiring disposal at an appropriate licensed facility.

Section 652

Fingerprinting and criminal history record checks. Amends the AEA Act to direct the NRC to require fingerprinting for criminal history record checks for individuals permitted unescorted access to a utilization facility, radioactive material, other property subject to its regulations, or certain information on safeguards.

Section 653

Use of firearms by security personnel. Authorizes the NRC to authorize the use of firearms by security personnel of NRC licensees and certificate holders.

Section 654

Unauthorized introduction of dangerous weapons. Includes facilities licensed by the NRC among those in which the NRC may prohibit the unauthorized use of dangerous weapons.

Section 655

Sabotage of nuclear facilities, fuel or designated material. Specifies additional kinds of nuclear facilities for which sabotage will incur certain federal criminal penalties. Increases such penalties, including imprisonment for up to life without parole.

Section 656

Secure transfer of nuclear materials. Directs the NRC to establish a system to ensure that specified nuclear materials are accompanied by a manifest (describing the type and amount of such materials) when transferred or received in the United States by any party pursuant to an import or export license. Requires each individual receiving or accompanying the transfer of such materials to be subject to a security background check conducted by appropriate federal entities.

Section 657

Department of Homeland Security (DHS) consultation. Requires the NRC to consult with the DHS concerning the potential vulnerabilities of the proposed facility's location to terrorist attack before issuing a utilization facility license.

TITLE IX: RESEARCH AND DEVELOPMENT

Section 901

Short Title – Energy Research, Development, Demonstration and Commercial Application Act of 2005

Section 902

Goals. Directs the Secretary to publish measurable cost and performance goals with each annual budget submission in the areas of:

- Energy efficiency for buildings, industries and vehicles
- Electric generation, transmission and storage
- Renewable energy technologies
- Fossil energy
- Nuclear energy

Section 903

Definitions.

Subtitle A: Energy Efficiency

Section 911

Energy efficiency. Authorizes and allocates appropriations for this subtitle of \$783 million for Fiscal Year 2006, \$865 million for Fiscal Year 2007 and \$952 million for Fiscal Year 2008. Authorizes \$50 million annually for Fiscal Years 2010-2013 to carry out Section 912.

Section 912

Next generation lighting initiative. Directs the Secretary to carry out a Next Generation Lighting Initiative to support activities related to advanced solid-state lighting technologies based on white

light emitting diodes. The Secretary shall award grants to carry out development, demonstration, and commercial application. The Secretary shall assemble an Industry Alliance composed of private for-profit firms to assess progress made under the program.

Section 913

National building performance initiative. Instructs the Director of the Office of Science and Technology Policy to establish an interagency group to develop, with the assistance of an advisory committee, a National Building Performance Initiative. Within one year, the group will submit to Congress a plan to coordinate federal, state and voluntary private sector efforts to reduce the costs of building construction, renovation, operation, and maintenance. The plan shall include research, development, demonstration, and commercial application for:

- New construction and retrofitting to improve the energy efficiency and environmental performance of buildings
- Technology to allow energy efficient automated operation of buildings

Section 914

Building standards. Directs the Secretary to enter into an agreement with the National Institute of Building Sciences to

- Assess current voluntary standards for energy efficient “high performance” buildings
- Establish a grant and technical assistance program to support voluntary standards

Section 915

Secondary electric vehicle battery program. Directs the Secretary to establish and conduct a research, development, demonstration and commercial application program for the secondary use of vehicle batteries.

Section 916

Energy Efficiency Science Initiative. Directs the Secretary to establish an Energy Efficiency Science Initiative to award competitive grants for energy efficiency research.

Section 917

Advanced energy efficiency technology transfer centers. Directs the Secretary to provide grants to establish advanced energy technology transfer centers at non-profit institutions, state and local governments or universities to encourage the demonstration commercial application of advanced energy methods and technologies. The Secretary shall establish an advisory committee

Subtitle B: Distributed Energy and Electric Energy Systems

Section 921

Distributed energy and electric energy systems. Authorizes appropriations for the distributed and electric energy activities in this subtitle of \$240 million for Fiscal Year 2006, \$255 million for Fiscal Year 2007 and \$273 million for Fiscal Year 2008. Of these amounts, \$20 million shall be available for Fiscal Years 2007-2008 for Micro-Cogeneration Technology in Section 923 and \$2 million for Fiscal Year 2007 for High Voltage Transmission Lines in Section 925(g). Authorizes such

sums as necessary for the Policy Delivery Research Initiative (in Section 925e) in Fiscal Years 2007-2009.

Section 922

High power density industry program. Directs the Secretary to conduct programs of research, development, demonstration, and commercial application to improve the energy efficiency of high power density facilities, including data centers, server farms, and telecommunications facilities.

Section 923

Micro-cogeneration energy technology. Directs the Secretary to make competitive, merit-based grants to consortia for the development of micro-cogeneration energy technology.

Section 924

Distributed energy technology demonstration programs. Permits the Secretary to provide financial assistance to consortia for demonstrations to increase the use of distributed energy in highly energy intensive commercial applications. Directs the Secretary to establish a university-based research, development, and demonstration program to develop working models of small scale portable power devices.

Section 925

Electric transmission and distribution programs. Directs the Secretary to:

- Conduct a research, development, and demonstration program for electric transmission and distribution, including the optimization of flow through existing lines and the use of advance metering and grid design

- Report to Congress within one year on a five-year plan produced in consultation with state and local agencies, industry, and other organizations
- Establish a Power Delivery Research Initiative to develop power delivery using high temperature superconductivity
- Establish an initiative to develop software for managing transmission and distribution grids in a competitive market

Subtitle C: Renewable Energy

Section 931

This section sets out programs of renewable energy research for DOE to carry out. The objectives of these programs are to:

- Increase the conversion efficiency of renewable energy through improved technologies
- Decrease the cost of renewable energy generation and delivery
- Promote diversity of energy supply
- Decrease dependence on foreign oil
- Improve energy security
- Decrease the environmental impact of energy
- Increase the export of renewable generation equipment.

The programs include:

- Solar energy
- Wind energy
- Geothermal
- Hydropower
- Miscellaneous projects such as ocean energy and the cogeneration of hydrogen and electricity

A total of \$2.2 million is authorized to be appropriated for Fiscal Years 2007-2009. This section calls for rural demonstration

projects that assist in delivering electricity to rural and remote locations including advanced wind power combined with coal gasification, biomass, and geothermal energy systems.

Section 932

Bioenergy program. This section combines a biomass program and a lignocellulosic feedstock program. Calls on DOE to conduct a program of research, development, demonstration, and commercial application for bioenergy, including

- Biopower energy systems
- Biofuels
- Bioproducts
- Integrated biorefineries
- Cross-cutting research and development in feedstocks
- Economic analysis

Instructs DOE to carry out an integrated biorefinery demonstration program and a university biodiesel program.

Section 933

Low-cost renewable hydrogen and infrastructure for vehicle propulsion. This section differs from the Senate version, which had proposed ethanol as an intermediate fuel. The final version instructs DOE to carry out a demonstration program to determine the feasibility of using hydrogen propulsion in light-weight vehicles and the integration of the associated hydrogen production infrastructure using off-the-shelf components. DOE should also identify universities that have expertise in alternative fuel vehicles and that can test a hydrogen passenger vehicle using hydrogen produced from water using only solar energy within two years.

Section 934

Concentrating solar power research program. DOE shall conduct a program of research and development to evaluate the potential for concentrating solar power for hydrogen production, including cogeneration for both hydrogen and electricity. A report is due to Congress within 5 years.

Section 935

Renewable energy in public buildings. The Capitol Complex plan was dropped. In its place is a demonstration project for solar and other renewable energy sources in state or local government buildings.

Subtitle D: Agricultural Biomass and Development Programs**Section 941**

Biomass research and development. This section amends the Biomass Research and Development Act of 2000. The term biobased fuel is added, meaning any transportation fuel produced from biomass. The term “industrial products” is replaced by “fuels and biobased products.” The amount of funding is changed to \$200 million annually. This section also calls for the establishment of a program focused on the economic production and use of hydrogen from biofuels, with emphasis in the rural electrical generation sectors. Specifically, the electrical generation objectives are to develop low cost gasification equipment to convert biomass into hydrogen at regional rural cooperatives, or at businesses owned by farmers, close to agricultural operations to minimize the cost of biomass transportation to large central gasification plants. Other goals include determination of the economic return of biomass crops, to evaluate crop yield and long term soil sustainability,

and to demonstrate the use of a portion of the hydrogen in agricultural vehicles to reduce imported fossil fuels and to lessen environmental impacts. \$5 million is authorized to be appropriated to carry out this section.

Section 942

Production incentives for cellulosic biofuels. The purpose of this section is to accelerate deployment and commercialization of biofuels, and to deliver the first 1 billion gallons by 2015. The intent is to ensure that biofuels become cost competitive with fossil fuels, and to ensure that small producers are full participants. An incentive program is called for. Production incentives should be awarded as set payments per gallon until initiation of the first reverse auction. Awards are limited to a per gallon amount that declines over the lifetime of the program. Not more than 25 percent of the funds from any reverse auction should go to any one project. Funding is capped at \$100 million per year and \$1 billion over the lifetime of the project. The amount of appropriations for this section is \$250 million.

Section 943

Procurement of biobased products. Calls for the establishment in the Capitol Complex a program of public education regarding use by the architect of the Capitol of biobased products. The Capitol Complex is to become a showcase for the existence and benefits of biobased products.

Section 944

Small business bioproduct marketing and certification grants. This section directs the Department of Agriculture to make available on a competitive basis grants to eligible entities for biobased product marketing and certification. Grants made

under this section are limited to \$100,000. For 2006, \$1 million is authorized to be appropriated, with such sums as are necessary in subsequent years.

Section 945

Regional bioeconomy development grants. This section directs the Department of Agriculture to make available on a competitive basis grants to eligible entities to support and promote the growth and development of the regional bioeconomy. Grants made under this section are limited to \$500,000. For 2006, \$1 million is authorized to be appropriated, with such sums as are necessary in subsequent years.

Section 946

Preprocessing and harvesting demonstration grants. This section directs the Department of Agriculture to make available on a competitive basis to enterprises owned by agricultural producers, for the purposes of demonstrating cost effective, cellulosic biomass innovations in the preprocessing of feedstocks, or one-pass or other efficient multiple crop harvesting techniques. For each year from 2006-2010, \$5 million is authorized to be appropriated.

Section 947

Education and outreach. Calls on the Department of Agriculture or a private contractor to develop a program of education and outreach on biobased fuels and products. For each year from 2006-2010, \$1 million is authorized to be appropriated.

Section 948

Reports.

Subtitle E: Nuclear Energy

Section 951

Nuclear energy. Authorizes and allocates appropriations for:

- Research programs included in this subtitle in the amounts of \$330 million for Fiscal Year 2007, \$355 million for Fiscal Year 2008 and \$495 million for Fiscal Year 2009
- Nuclear infrastructure support included in Section 942 in the amounts of \$135 million in Fiscal Year 2007, \$140 million in Fiscal Year 2008 and \$145 million in Fiscal Year 2009

Section 952

Nuclear energy research programs. Directs the Secretary to carry out:

- A nuclear energy research initiative for research into nuclear energy
- A nuclear energy systems support program to address safety, security, and productivity issues at existing plants
- A nuclear power 2010 program, involving university, industry, and National Laboratory participation in evaluation of advanced reactor design and nuclear fuel cycles
- A generation IV nuclear energy systems initiative to develop an overall technology plan to evaluate the most promising candidates for commercial electric generation from fission reactor technology
- Research into how to produce large quantities of hydrogen

Section 953

Advanced fuel cycle initiative. Directs the Secretary to conduct a research, development, demonstration and commercial application program to evaluate

nuclear fuel recycling or transmutation technologies which are proliferation-resistant and minimize environmental and public health and safety impacts.

Section 954

University nuclear science and engineering support. Requires the Secretary to conduct a program to invest in human resources and infrastructure in the nuclear sciences and related fields, including funding for projects at university reactors and undergraduate, graduate, and faculty fellowships to spend time at the National Laboratories.

Section 955

DOE civilian nuclear infrastructure and facilities. Directs the Secretary to develop an inventory of nuclear facilities at the National Laboratories along with a list and proposed budget for improvements at the labs. Directs the Secretary to develop a comprehensive plan for the facilities at the Idaho National Laboratory according to prescribed guidelines.

Section 956

Security of nuclear facilities. Directs the Secretary to conduct a research and development program on technologies for increasing the safety of nuclear facilities from natural phenomena and deliberate attacks.

Section 957

Alternatives to industrial radioactive sources. Directs the Secretary to report to Congress within a year on:

- The results of a survey of current and possible methods of disposing of radioactive sources

- Establish a research and development program to develop alternatives that are safer than current methods

Subtitle F: Fossil Energy

Section 961

Fossil energy. Authorizes and allocates appropriations for this subtitle of \$611 million for Fiscal Year 2007, \$626 million for Fiscal Year 2008 and \$641 million for Fiscal Year 2009.

Section 962

Coal and related technologies program. Directs the Secretary to:

- * Conduct a research, development, demonstration, and commercial application program on coal, including gasification, carbon capture and sequestration, and advanced combustion systems
- * Test and develop technologies to control and remove mercury emissions from coal mined in the Powder River Basin and Fort Union Lignite
- * Conduct a research, development, demonstration and commercial application program fuel cells for modular power systems

Section 963

Carbon capture research and development program. Directs the Secretary to conduct a research, development, demonstration, and commercial application program to develop carbon dioxide capture technologies and combustion systems for use in new and current coal units. Authorizes \$25 million for Fiscal Year 2006, \$30 million for Fiscal Year 2007 and \$35 million for Fiscal Year 2008.

Section 964

Research and development for coal mining technologies. Directs the Secretary to conduct a research and development program on coal mining technologies, including how to minimize contaminants, demonstrate coal bed imaging and analysis technology, and develop horizontal drilling techniques.

Section 965

Oil and gas research programs. Directs the Secretary to:

- Conduct programs of research, development, demonstration and commercial application on oil and gas
- Report to Congress every two years on natural gas and oil reserves in federal and state waters off of the coasts of Louisiana, Texas, Alabama and Mississippi
- Establish a Clean Power and Energy Research Consortium to conduct research development, demonstration, and commercial application on gas turbines, reducing emissions from power generation, promoting conservation, effective use of alternative and renewable energy, advanced materials for oil and gas exploration and education on energy issues

Section 966

Low-volume oil and gas reservoir research program. Directs the Secretary to conduct a research, development, demonstration and commercial application program to increase production from marginal wells and reservoirs, including awarding grants to an organization of states to conduct an annual study.

Section 967

Complex well technology testing facility. Directs the Secretary to establish a Complex Well Technology Testing Facility at the Rocky Mountain Oilfield Testing Center to increase the range of extended drilling technologies.

Section 968

Methane hydrate research. Amends the Methane Hydrate Research Act of 2000. Directs the Secretary to conduct a program of research and development on methane hydrates, including competitive grants. Authorizes appropriations for this section for Fiscal Years 2006-2010, increasing from \$15 million in Fiscal Year 2006 to \$50 million in 2010.

Subtitle G: Science

Section 971

Science. This section instructs the DOE to conduct programs of research, development, demonstration, and commercial application in high energy physics, nuclear physics, biological and environmental research, basic energy sciences, advanced scientific computing research, and fusion energy. For Fiscal Year 2007, \$4.153 billion is authorized to be appropriated; for Fiscal Year 2008, \$4.586 billion and \$5.2 billion for Fiscal Year 2009.

Section 972

Fusion energy sciences program. This section declares a policy of research and development to provide for the scientific, engineering, and commercial infrastructure necessary to ensure the United States is competitive in providing fusion energy, including demonstrating electric power or hydrogen production at the earliest possible date. Calls for the United States

participation in the international burning plasma fusion research project ITER.

Section 973

Catalysis research program. Directs DOE to support a program of research and development in catalysis science.

Section 974

Hydrogen. Instructs DOE to conduct a program of fundamental research and development in support of programs authorized under Title VIII. The programs should support methods of generating hydrogen without the use of natural gas.

Section 975

Solid state lighting. The DOE shall conduct a program of fundamental research on solid state lighting in support of the next generation lighting initiative carried out under §912.

Section 976

Advanced scientific computing for energy missions. This section calls on the DOE to conduct advanced scientific computing research that includes activities related to applied mathematics and activities authorized by the High-End Computing Revitalization Act of 2004.

Section 977

Systems biology program. This section is a modified version of the Genomes to Life Program set out in the Senate bill. The DOE is directed to carry out a program of research, development, and demonstration in microbial and plant systems biology, protein science, and computational biology. The goals are to support the energy, national security, and environmental missions of the DOE. In particular, to

facilitate the production of fuels including hydrogen to convert carbon dioxide to organic carbon and to detoxify soils and water. In carrying out the program under this section, DOE is prohibited from conducting biomedical research.

Section 978

Fission and fusion energy materials research program. DOE is instructed to establish a research and development program on material science issues presented by advanced fission reactors and the fusion energy program.

Section 979

Energy and water supplies. The DOE is directed to establish this program to study energy-related issues associated with water resources and municipal waterworks and supply issues related to energy production. Program areas are to include arsenic removal, desalination, and planning, analysis, and modeling of energy and water supply and demand.

Section 980

Spallation neutron source. DOE is directed to develop an operational plan for the Spallation Neutron Source Facility to ensure that the facility is employed to the full capacity in support of the study of advanced materials and nanoscience. A lifetime project appropriation of \$1,411,700,000 is authorized.

Section 981

Rare isotope accelerator. A maximum of \$1.1 billion is authorized to be appropriated to DOE to construct and operate a rare isotope accelerator.

Section 982

Office of Scientific and Technical Information. The DOE shall maintain publicly available collections of scientific and technical information.

Section 983

Science and engineering education pilot program. The DOE shall award a grant to a Southeastern U.S. consortium of major universities that currently advances science and education by partnering with national laboratories to establish a regional pilot program of its SEEK-16 program.

Section 984

Energy research fellowships. Sets up postdoctoral fellowship and senior research fellowship programs in energy research.

Section 984A

Science and technology scholarship program. Sets up a scholarship program to recruit and prepare students to work at the DOE and National Laboratories.

Subtitle H: International Cooperation**Section 985**

Western Hemisphere energy cooperation. Directs the Secretary to carry out a program to promote cooperation on energy issues with countries in the Western Hemisphere, including evaluating new technologies, resolving technical issues, developing new policies, and training policymakers. Authorizes appropriations of \$10 million for Fiscal Year 2007, \$13 million for Fiscal Year 2008 and \$16 million for Fiscal Year 2009.

Section 986

Cooperation between United States and Israel. Directs the Secretary to report on the ways that the United States and Israel have cooperated, and plan to cooperate, under a 1996 agreement between the two countries concerning energy cooperation.

Section 986A

International energy training. Directs the Secretary, in consultation with the Secretaries of Commerce, Interior, State and FERC, to coordinate training and outreach efforts for international commercial energy markets in countries with developing and restructuring economies. Authorizes appropriations of \$1.5 million annually for Fiscal Years 2007-2010.

Subtitle I: Research Administration and Operations**Section 987**

Availability of funds. Specifies that any funds appropriated to the DOE under this act shall remain available until expended.

Sections 988-990

Prescribes guidelines for DOE research and operations that include:

- Cost sharing
- Merit-based review of proposals
- External technical review of departmental programs

Section 991

National Laboratory designation. Prohibits the Secretary from designating as a national laboratory any but specified laboratories.

Section 992

Report on equal employment opportunity practices. Directs the Secretary to report to Congress on the equal employment opportunity practices at national laboratories.

Section 993

Strategy and plan for science and energy facilities and infrastructure. Requires the Secretary to develop and implement a strategy for infrastructure and facilities supported primarily from the Office of Science and the applied programs at each national laboratory and DOE research facility.

Section 994

Strategic research portfolio analysis and coordination plan. Directs the Secretary to develop a coordination plan to improve coordination and collaboration in research, development, demonstration and commercial application activities across DOE organizational boundaries.

Section 995

Competitive award of management contracts. Specifies that none of the money appropriated by this title may be used to award a management and operating contract to specified national laboratories unless the contract is competitively awarded or the Secretary grants a waiver accompanied by an explanatory report to Congress.

Section 996

Western Michigan demonstration project. Directs the Administrator of EPA to conduct a demonstration project to address the effect of transported ozone and ozone precursors in Southwestern Michigan.

Section 997

Arctic engineering research center. Directs the Secretary of Transportation to provide annual grants to establish and operate a research center at the University of Alaska Fairbanks to develop improved cold-weather construction methods for roads, bridges, buildings and other infrastructure. Authorizes appropriations \$3 million annually for Fiscal Years 2006-2011 to be provided to the university research center.

Section 998

Barrow geophysical research facility. Directs the Secretaries of Energy and Interior, the Administrator of the EPA and the Director of the National Science Foundation to establish a joint research facility in Barrow, Alaska to support scientific research activities in the Arctic. Authorizes \$61 million dollars to build and support the facility.

Subtitle J: Ultra-deepwater and Unconventional Natural Gas and Other Petroleum Resources**Section 999A**

Program authority. Directs the Secretary to implement a program of research and commercial application of technologies for ultra-deepwater and unconventional natural gas and other petroleum resource exploration and production. Limits activities to areas in the territorial waters of the United States not under an OCS moratorium and only with the approval of appropriate federal or state land management agency or private owner.

Section 999B

Ultra-deepwater and unconventional natural gas and other petroleum research and development program. Confers upon the Secretary ultimate responsibility and oversight of all aspects of such a program. The Secretary shall select and work with a corporation that is structured as a consortium to issue project solicitations and make project awards related to (a) ultra-deepwater resources (b) unconventional resources (c) small producers. The consortium may include corporations, trade associations, universities, National Laboratories, or other research institutions.

Section 999C

Establishes additional requirements for awards under the program.

Section 999D

Advisory committees. Establishes the following advisory committees:

- The Ultra-Deepwater Advisory Committee
- The Unconventional Resources Technology Advisory Committee

Section 999E

Limits on participation. Limits awards to those recipients whose participation would be in the economic interest of the United States and is organized under U.S. laws or has a parent company organized under the laws of a country that affords appropriate treatments to U.S.-owned entities.

Section 999F

Sunset. Terminates the authority for this program at the end of Fiscal Year 2014.

Section 999G

Definitions.

Section 999H

Funding. Establishes the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Fund, and prescribes procedural guidelines for the deposit into it of certain excess federal royalty receipts. Authorizes \$100 million annually for Fiscal Years 2007-2016.

TITLE XIV: MISCELLANEOUS

Subtitle B: Set America Free**Section 1421**

Short Title - Set America Free Act of 2005 or the SAFE Act

Section 1422

Purpose. The purpose of the subtitle is to establish the United States Commission on North American Energy Freedom (NAEF) to make recommendations and report to Congress and the President on a coordinated and comprehensive North American energy policy that will achieve energy self-sufficiency by 2025 within the contiguous area of Canada, Mexico and the United States.

Section 1423

NAEF. Establishes the NAEF and states that it shall consist of 16 members appointed by the President, with an advisory panel of scientific and technical experts. Directs the NAEF to report to the President and Congress within 12 months of enactment with its recommendations

regarding North American energy self-sufficiency.

Section 1424

Directs the President to submit to Congress, within 90 days after receiving and considering the NAEF's report, a statement of proposals to implement or respond to its recommendations for a coordinated, comprehensive, and long-range national policy to achieve North American energy freedom by 2025.

TITLE XVI: CLIMATE CHANGE

Subtitle A: National Climate Change Technology Deployment

Section 1601

Greenhouse gas intensity reducing technology strategies. This section creates an organizational structure within the federal government to deal with climate change technology by amending the EPA to add provisions to establish a Climate Change Technology Advisory Committee and a Committee on Climate Change Technology. The language of the provision on the Climate Change Technology Committee was changed from "shall establish" in the Senate bill to "may establish." The effect of this change is that it is no longer compulsory for DOE to establish such a committee. Several other proposals of the Senate bill were dropped, such as the establishment of a Climate Change Board. This section also calls for the development of recommendations for the removal of barriers to the commercialization and deployment of greenhouse gas intensity reducing technology and practices. It also allows DOE to support demonstration projects that:

- Reduce greenhouse gas intensity
- Maximize return on federal investment
- Demonstrate distinct roles in public-private partnerships
- Produce a large-scale reduction of greenhouse gas intensity
- Support a diversified portfolio

These criteria differ from those in the Senate bill, which included projects relating to coal gasification and liquefaction, carbon sequestration, cogeneration, advanced nuclear power, lower emission transportation, renewable energy, and transmission upgrades. Appropriations are authorized, but not any specific amount.

Subtitle B: Climate Change Technology Deployment in Developing Countries

Section 1611

Climate change technology deployment in developing countries. This section calls for amending the Global Environmental Protection Assistance Act of 1989 by inserting provisions calling on the Department of State to report on, and engage in projects in developing countries.

The Senate resolution (Section 1612 of the Senate version of H.R. 6) stating that mandatory steps will be required to slow or stop the growth of greenhouse gas emissions into the atmosphere, and that it is the sense of the Senate that Congress should enact a comprehensive and effective national program of mandatory, market-based limits and incentives on emissions of greenhouse gases that slow, stop, and reverse the growth of such emissions was left out.

TITLE XVII: INCENTIVES FOR INNOVATIVE TECHNOLOGIES

Section 1701

Definitions.

Section 1702

Terms and conditions. Provides for loan guarantees for projects under this section, and specifically excludes the Alaska Natural Gas Pipeline (Division C of Public Law 108-324) from the projects eligible for consideration under this title.

Section 1703

Eligible projects. This section defines eligible projects as those that avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and that employ new or improved technologies. A list of eligible project categories is provided:

- Renewable energy systems
- Advanced fossil fuel technology (including coal gasification)
- Hydrogen fuel cells
- Advanced nuclear facilities
- Carbon capture and sequestration practices and technologies, including terrestrial sequestration
- Efficient electrical generation, transmission, and distribution technologies
- Efficient end use technologies
- Production facilities for fuel efficient vehicles
- Pollution control equipment
- Gasoline refineries

Specific criteria are set out for gasification projects. IGCC projects must gener-

ate electricity, have a design capable of capturing carbon dioxide, have an assured revenue stream, and be approved by the relevant state public utility commission. Industrial gasification projects and petroleum coke gasification projects are also eligible.

Section 1704

Authorization of appropriations. Authorizes such sums as necessary to provide the cost of the loan guarantees under this title.

The National Regulatory Research Institute

1080 Carmack Road
Columbus, Ohio 43210-1002
Phone: 614-292-9404
Fax: 614-292-7196
www.nrri.ohio-state.edu

This report was prepared by the National Regulatory Research Institute (NRRI) with funding provided by the member commissions of the National Association of Regulatory Utility Commissioners (NARUC). The views and opinions of the authors do not necessarily express or reflect the views, opinions or policies of the NRRI, NARUC or NARUC member commissions.