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H.R.6

Title: An Act to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes.

Sponsor: [Rep Rahall, Nick J., II](#) [WV-3] (introduced 1/12/2007) [Cosponsors](#) (198)

Related Bills: [H.RES.66](#), [H.RES.839](#), [H.RES.846](#), [H.RES.877](#), [H.R.453](#), [H.R.1721](#), [H.R.1933](#), [H.R.2635](#), [H.R.2701](#), [H.R.3221](#), [H.R.4773](#), [S.103](#), [S.193](#), [S.357](#), [S.962](#), [S.987](#), [S.992](#), [S.1321](#), [S.1419](#), [S.1656](#), [S.1657](#), [S.1771](#)

Latest Major Action: Became Public Law No: 110-140 [GPO: [Text](#), [PDF](#)]

Note: Omnibus energy legislation.

SUMMARY AS OF:

12/19/2007--Public Law. (There are 3 [other summaries](#))

Energy Independence and Security Act of 2007 – **Title I: Energy Security Through Improved Vehicle Fuel Economy - Subtitle A: Increased Corporate Average Fuel Economy Standards** - Ten-in-Ten Fuel Economy Act - (Sec. 102) Amends federal transportation law to instruct the Secretary of Transportation (Secretary in this title) to prescribe separate average fuel economy standards for passenger and for non-passenger automobiles for model years 2011-2030. Repeals the current requirement that the average fuel economy standard for passenger automobiles manufactured after model year 1984 be 27.5 miles per gallon. Incorporates 27.5 miles per gallon into a formula for determining the minimum standard for domestically manufactured passenger automobiles.

Requires the combined fuel economy average for model year 2020 to be at least 35 miles per gallon for the total fleet of passenger and non-passenger automobiles manufactured for sale in the United States for that model year. Requires the average fuel economy to be attained by each fleet of passenger and non-passenger automobiles manufactured for sale in the United States for model years 2021-2030 to be the maximum feasible standard for each fleet.

Directs the Secretary to study the fuel efficiency of work trucks and commercial medium-duty or heavy-duty on-highway vehicles to determine appropriate test procedures, methodologies, and metrics for measuring such efficiency.

(Sec. 104) Authorizes the Secretary to establish a corporate average fuel economy (CAFE) credit trading program that allows manufacturers whose automobiles exceed prescribed average fuel economy standards to earn credits to: (1) be sold to manufacturers whose automobiles fail to achieve such standards; or (2) apply them within that manufacturer's fleet to a compliance category of automobiles that fails to achieve such standards.

(Sec. 105) Instructs the Secretary to develop and implement a program to require manufacturers to: (1) label new automobiles sold in the United States with information and a rating system on an automobile's performance on the basis of criteria reflecting fuel economy and greenhouse gas and



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other emissions; and (2) include pertinent information in the owner's manual for vehicles capable of operating on alternative fuels.

Directs the Secretary to develop a consumer education program regarding: (1) the benefits of alternative fuel in automobiles; and (2) fuel savings that would be recognized from the purchase of vehicles equipped with thermal management technologies.

Directs the Secretary to require fuel tank labels for alternative fuel automobiles.

(Sec. 107) Directs the Secretary to execute an agreement with the National Academy of Sciences (NAS) to report to Congress an evaluation of: (1) vehicle fuel economy standards; and (2) medium-duty and heavy-duty truck fuel economy standards.

(Sec. 109) Replaces current requirements for the maximum model year increase in a manufacturer's average fuel economy attributable to dual fueled automobiles with requirements for a maximum model year fuel economy increase for alternative fuel automobiles.

Prescribes the maximum model year fuel economy increases for alternative fuel automobiles (extending the flexible fuel vehicle credit program) through model year 2019.

Modifies the formula for the dual fueled vehicle credit program to accommodate B20 biodiesel.

(Sec. 110) Requires the Administrator of the Environmental Protection Agency (EPA) every five years to reevaluate, and report to certain congressional committees on the accuracy of fuel economy labeling procedures.

(Sec. 111) Directs the Secretary to promulgate rules establishing a national tire fuel efficiency consumer information program for replacement tires designed for use on motor vehicles.

Sets forth a civil penalty for noncompliance with national tire fuel efficiency information program.

(Sec. 112) Instructs the Secretary of the Treasury to transfer to the Secretary of Transportation each fiscal year funds derived from civil penalties and other enforcement actions, half of which shall be used for administration and half of which shall be used to carry out a program to make grants to manufacturers for retooling, reequipping, or expanding existing manufacturing facilities in the United States to produce advanced technology vehicles and components.

(Sec. 113) Repeals provisions governing a manufacturer's exemption from the requirement of separate calculations of average fuel economy.

Subtitle B: Improved Vehicle Technology - (Sec. 131) Instructs the Secretary of Energy to establish a competitive grants program to: (1) encourage the use of plug-in electric drive vehicles or other emerging electric vehicle technologies by governmental and quasi-governmental entities and private or nonprofit entities; and (2) conduct qualified electric transportation projects.

Authorizes appropriations for the plug-in program for FY2008-FY2012 and for the electric transportation projects for FY2008-FY2013.

Directs the Secretary of Energy to develop a nationwide electric drive transportation technology education program, including a Dr. Andrew Frank Plug-in (hybrid) Electric Vehicle Competition to create or support related degree programs at institutions of higher education. Authorizes appropriations.

(Sec. 132) Amends the Energy Policy Act of 2005 to direct the Secretary of Energy to establish a program

to encourage domestic production and sales of efficient hybrid and advanced diesel vehicles and their components. Authorizes appropriations.

(Sec. 133) Amends the Energy Policy Act of 1992 to direct the Secretary of Energy to allocate credits for acquisition of specified electric vehicles and for investment in emerging related technology. Authorizes appropriations for FY2008-FY2013.

(Sec. 134) Amends the Energy Policy Act of 2005 to provide loan guarantees for fuel-efficient automobile parts manufacturers.

(Sec. 135) Directs the Secretary of Energy to establish a program to provide guarantees of loans by private institutions for the construction of facilities for the manufacture of advanced vehicle batteries and battery systems developed and produced in the United States, including advanced lithium ion batteries and hybrid electrical system and component manufacturers and software designers. Authorizes appropriations.

(Sec. 136) Directs the Secretary of Energy to provide facility funding awards to automobile manufacturers and component suppliers to pay up to 30% of the cost of: (1) modifying or establishing manufacturing facilities to produce qualifying advanced technology vehicles or components; and (2) engineering integration performed in the United States of qualifying vehicles and qualifying components.

Directs such Secretary to establish a program to provide up to \$25 billion in loans for the costs of such activities. Requires loan applicants to provide written assurances that laborers and mechanics employed by contractors or subcontractors during construction, alteration, or repair financed by such loan shall be paid wages at rates not less than those prevailing on similar construction in the locality.

Instructs the Secretary to use at least 10% of loan funds for awards to small automobile manufacturers and component suppliers.

Subtitle C: Federal Vehicle Fleets - (Sec. 141) Amends the Energy Policy Act of 1992 to prohibit a federal agency from acquiring a light duty motor vehicle or medium duty passenger vehicle that is not a low greenhouse gas emitting vehicle, unless certain circumstances exist, including alternative, most cost-effective agency measures to reduce petroleum consumption.

Instructs the EPA Administrator to issue guidance annually identifying the makes and model numbers of low greenhouse gas emitting vehicles.

(Sec. 142) Amends the Energy Policy and Conservation Act (EPCA) to instruct the Secretary of Energy to issue regulations requiring certain federal agency fleets to reduce petroleum consumption and increase alternative fuel consumption so that by October 1, 2015, and for each ensuing year, each federal agency achieves at least a 20% reduction in annual petroleum consumption and a 10% increase in annual alternative fuel consumption.

Title II: Energy Security Through Increased Production of Biofuels - Subtitle A: Renewable Fuel Standard - (Sec. 202) Amends the Clean Air Act to direct the EPA Administrator to revise regulations to ensure that domestic transportation fuel sold or introduced into commerce, on an annual average basis, contains a specified volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, and, in the case of renewable fuel produced from new facilities that commence construction after enactment of this Act, achieves at least a 20% reduction in lifecycle greenhouse gas emissions compared to certain baseline lifecycle greenhouse gas emissions.

Revises the applicable volumes of renewable fuel required for calendar years 2008 through 2012 gasoline sold or introduced into commerce in the United States (except in noncontiguous states or territories), on an annual average basis. Specifies such volumes for calendar years 2013 through 2022. Applies such applicable volumes to advanced biofuel, cellulosic biofuel, and biomass-based diesel for certain of these years.

Repeals the specification for the renewable fuel program that one gallon of cellulosic biomass ethanol or waste derived ethanol shall be considered to be the equivalent of 2.5 gallons of renewable fuel.

Authorizes the EPA Administrator to adjust to a lower percentage the 20%, 50%, and 60% reductions in lifecycle greenhouse gas emissions with respect to renewable fuel, biomass-based diesel, advanced biofuel, and cellulosic biofuel.

Authorizes the EPA Administrator to issue regulations providing for the generation of an appropriate amount of credits by any person that refines, blends, or imports additional renewable fuels.

(Sec. 203) Directs the Secretary of Energy to enter into an arrangement with the NAS to assess the impact of renewable fuel program requirements on each industry regarding production of feed grains, livestock, food, forest products, and energy.

(Sec. 204) Directs the EPA Administrator to assess and report to Congress on current and likely future impacts of such requirements on environmental issues, resource conservation issues, and the growth and use of cultivated invasive or noxious plants and their impacts on the environment and agriculture.

(Sec. 205) Requires retail diesel fuel pumps to be labeled in a manner detailing the percent of biomass-based diesel or biodiesel contained in the respective blend offered for sale.

Requires the Federal Trade Commission (FTC) to promulgate certain biodiesel labeling requirements.

(Sec. 206) Directs the EPA Administrator to study and report to Congress on the feasibility of issuing credits under the renewable fuel program to electric vehicles powered by electricity produced from renewable energy sources.

(Sec. 207) Directs the Secretary of Energy to establish a grant program to encourage the production of advanced biofuels. Authorizes appropriations for FY2008-FY2015.

(Sec. 208) Provides for integrated consideration of water quality in determinations on fuels and fuel additives.

(Sec. 209) Directs the EPA Administrator to: (1) study whether certain mandatory renewable fuel volumes will adversely impact air quality as a result of changes in vehicle and engine emissions of regulated air pollutants; and (2) promulgate fuel regulations to implement measures to mitigate adverse impacts on air quality resulting from such mandatory renewable volumes.

Subtitle B: Biofuels Research and Development - (Sec. 221) Requires the Secretary of Energy to report to Congress on research and development challenges inherent in increasing: (1) the proportion of diesel fuel sold in the United States that is biodiesel; and (2) transportation fuels sold in the United States with biogas or a blend of biogas and natural gas fuel.

Requires the Director of the National Institute of Standards and Technology (NIST) to make publicly available the physical property data and characterization of biodiesel.

(Sec. 223) Directs such Secretary to provide grants for research, development, demonstration, and commercial application (R&D) of biofuel production in states with low rates of ethanol production and of cellulosic biomass ethanol.

Authorizes appropriations for FY2008-FY2010.

(Sec. 224) Amends the Energy Policy Act of 2005 to direct such Secretary to establish R&D programs for:

(1) increased biorefinery energy efficiency; and (2) retrofit technologies to enable biorefineries that exclusively use corn grain or corn starch as a feedstock to produce ethanol to accept a range of biomass, including lignocellulosic feedstocks.

(Sec. 225) Directs the Secretary to study and report to Congress on: (1) whether optimizing flexible fueled vehicles to use E-85 fuel would increase the fuel efficiency of flexible fueled vehicles; (2) engine durability and performance associated with the use of biodiesel; and (3) methods of increasing the fuel efficiency of vehicles using biogas by optimizing natural gas vehicle systems that can operate on biogas, (including advancement of vehicle fuel systems and the combination of hybrid-electric and plug-in hybrid electric drive platforms with natural gas vehicle systems using biogas).

(Sec. 228) Directs the Secretary to: (1) report to certain congressional committees on the progress of research and development on the use of algae as a feedstock for biofuels production; (2) establish a biofuels and biorefinery information center; and (3) make cellulosic ethanol and biofuels research and development grants to ten eligible entities selected by the Secretary through a peer-reviewed competitive process.

(Sec. 231) Amends the Energy Policy Act of 2005 to increase the authorization of appropriations for renewable energy R&D.

(Sec. 232) Amends the Energy Policy Act of 2005 to: (1) direct the Secretary to establish a research, development, and demonstration program in environmental science; and (2) include among the goals of the DOE systems biology program technological development based on the biological functions of genomes, microbes, and plants that develop cellulosic and other feedstocks that are less resource and land intensive and that promote sustainable use of resources, including soil, water, energy, forests, and land, and ensure protection of air, water, and soil quality.

Amends the Biomass Research and Development Act of 2000 to encompass within the Biomass Research and Development Initiative: (1) improvement and development of analytical tools to facilitate the analysis of lifecycle energy and greenhouse gas emissions, including those related to direct and indirect land use changes, attributable to all potential biofuel feedstocks and production processes; (2) systematic evaluation of the impact of expanded biofuel production upon the environment, including forest lands, and upon the food supply for humans and animals; and (3) facilitation of small-scale production, local, and on-farm use of biofuels, including small-scale gasification technologies for biofuel production from cellulosic feedstocks.

(Sec. 233) Amends the Energy Policy Act of 2005 to direct the Secretary to establish at least seven bioenergy research centers to accelerate basic transformational research and development of biofuels, including biological processes.

(Sec. 234) Directs the Secretary to establish a competitive grant program, in a geographically diverse manner, for projects to conduct research and development of renewable energy technologies proposed by institutions of higher education. Authorizes appropriations.

Subtitle C: Biofuels Infrastructure - (Sec. 241) Amends the Petroleum Marketing Practices Act to prohibit franchise agreements that impose restrictions upon renewable fuel pump installations.

(Sec. 242) Instructs the Secretary of Energy to study and report to Congress on: (1) market penetration for flexible-fuel vehicles in use within certain geographic regions; (2) the feasibility of requiring motor fuel retailers to install E-85 compatible dispensers and related systems at retail fuel facilities in regions where flexible-fuel vehicle market penetration has reached 15% of motor vehicles; and (3) the feasibility of constructing dedicated ethanol pipelines.

(Sec. 244) Directs such Secretary to establish an infrastructure development grants program to assist

motor fuel dealers with installation, replacement, or conversion of motor fuel storage and dispensing infrastructure used exclusively to store and dispense renewable fuel blends (containing between 11% and 85% renewable fuel, or diesel fuel with at least 10% renewable fuel).

Directs such Secretary to contract with entities with demonstrated experience in assisting retail fueling stations in installing refueling systems and marketing renewable fuel blends nationally, for the provision of technical and marketing assistance to recipients.

Directs the Secretary to establish a competitive grant pilot program to governmental entities, Indian tribal governments, and metropolitan transportation authorities to establish refueling infrastructure corridors for renewable fuel blends. Authorizes appropriations for FY2008-FY2014.

(Sec. 245) Instructs the Secretary to study and report to Congress on the adequacy of railroad transportation of domestically-produced renewable fuel.

(Sec. 246) Requires each federal agency to install at least one renewable fuel pump at each federal fleet fueling center. Authorizes appropriations.

(Sec. 247) Amends the Clean Air Act to require the EPA Administrator to initiate a rulemaking establishing a series of uniform per gallon fuel standards for categories of fuels that contain biodiesel, unless the American Society for Testing and Materials has adopted a standard for diesel fuel containing 20% biodiesel.

(Sec. 248) Instructs the Secretary of Energy to implement a research, development, and demonstration program relating to existing transportation fuel distribution infrastructure and new alternative distribution infrastructure, with a focus upon physical and chemical properties of biofuels and efforts to prevent or mitigate against adverse impacts of those properties in designated areas.

Subtitle D: Environmental Safeguards - (Sec. 251) Amends the Clean Air Act regarding waivers for fuel or fuel additives to instruct the EPA Administrator to take final action to grant or deny an application within 270 days of its receipt.

Title III: Energy Savings Through Improved Standards for Appliance and Lighting - Subtitle A: Appliance Energy Efficiency - (Sec. 301) Amends EPCA to set forth amended efficiency standards and updated test procedures for class A external power supplies and appliances, including residential boilers.

(Sec. 305) Revises requirements for the amendment of standards. Prescribes requirements for the analysis of potential energy savings for certain industrial equipment (including air conditioning, heating, and related equipment), and subsequent mandatory establishment of uniform national product standards.

(Sec. 306) Sets forth requirements for regional and base national standards for furnaces (except boilers), central air conditioners, and heat pumps.

(Sec. 308) Prescribes requirements for expedited rulemaking to establish an energy or water conservation standard.

(Sec. 309) Prescribes requirements for final rules prescribing energy conservation standards for battery chargers, or a determination that no energy conservation standard is technically feasible and economically justified.

(Sec. 310) Requires test procedures and standards for all covered consumer products (other than automobiles) to include standby mode and off mode energy consumption.

(Sec. 311) Revises Energy Factors for home appliances, including dehumidifiers, residential clothes washers

and dishwashers, and refrigerators and freezers.

(Sec. 312) Establishes energy standards for walk-in coolers and freezers.

(Sec. 313) Revises the definition of electric motor, dividing it into subtypes I and II, and prescribes new energy efficiency standards for such motors.

(Sec. 314) Prescribes energy efficiency standards for single package vertical air conditioners and heat pumps.

(Sec. 315) Amends the Energy Policy Act of 2005 to: (1) expand R&D programs to include technologies to improve the energy efficiency of appliances and mechanical systems for buildings in cold climates, including combined heat and power units and increased use of renewable resources, including fuel; and (2) make eligible for special allocations any state whose energy efficient appliance rebate program provides rebates to residential consumers for the purchase of products with improved energy efficiency in a cold climate.

Subtitle B: Lighting Energy Efficiency - (Sec. 321) Amends EPCA to prescribe energy efficiency standards for general service incandescent lamps, rough service lamps, and other designated lamps.

Directs the Secretary of Energy to: (1) conduct and report to the FTC on an annual assessment of the market for general service lamps and compact fluorescent lamps; and (2) carry out a proactive national program of consumer awareness, information, and education about lamp labels and energy-efficient lighting choices. Authorizes appropriations for FY2009-FY2012.

Prohibits a manufacturer, distributor, retailer, or private labeler from distributing in commerce specified adapters for incandescent lamps.

Authorizes the Secretary to carry out a lighting technology research and development program. Authorizes appropriations for FY2008-FY2013.

Instructs the Secretary of Energy to report to Congress on: (1) federal measures to reduce or prevent release of mercury during the manufacture, transportation, storage, or disposal of light bulbs; (2) whether specified rulemaking deadlines will be met; (3) an NAS review of advanced solid state lighting R&D and the impact upon the types of lighting available to consumers of an energy conservation standard requiring a minimum of 45 lumens per watt for general service lighting; and (4) the time frame for commercialization of lighting to replace incandescent and halogen incandescent lamp technology.

(Sec. 322) Sets forth minimum energy efficiency standards for incandescent reflector lamps.

(Sec. 323) Amends federal law governing congressional approval of proposed public buildings projects to require the Administrator of General Services (GSA) to: (1) transmit to Congress an estimate of the future energy performance of the building or space and a specific description of the use of energy efficient and renewable energy systems, including photovoltaic systems; and (2) include, with respect to space to be leased, the minimum performance requirements for energy efficiency and renewable energy.

Sets forth requirements for the use of energy efficient lighting fixtures and bulbs in public building construction, alteration, and acquisition.

(Sec. 324) Amends EPCA to include within its regulatory oversight: (1) metal halide lamp fixtures; and (2) energy efficiency labeling for designated consumer electronic products.

Title IV: Energy Savings in Buildings and Industry - Subtitle A: Residential Building Efficiency -

(Sec. 411) Amends the Energy Conservation and Production Act (ECPA) to: (1) reauthorize the

weatherization assistance program through FY2012; and (2) authorize the Secretary of Energy to make funding available to local weatherization agencies for materials, benefits, and renewable and domestic energy technologies not covered by the weatherization assistance program for residential buildings.

(Sec. 412) Instructs such Secretary to: (1) study and report to Congress on renewable energy rebate programs; and (2) establish standards for energy efficiency in manufactured housing.

Subtitle B: High-Performance Commercial Buildings - (Sec. 421) Requires the Secretary of Energy to appoint a Director of Commercial High-Performance Green Buildings (Commercial Director) to: (1) establish and manage the Office of Commercial High-Performance Green Buildings; (2) coordinate activities with the Office of Federal High-Performance Green Buildings; (3) promote research and development of high-performance green buildings; (4) jointly establish with the Federal Director a national high-performance green building clearinghouse to provide high-performance green building information and disseminate research results; and (5) work with GSA and relevant federal agencies to ensure full coordination of high-performance green building information and activities.

Requires the Commercial Director to: (1) formally recognize groups that qualify as a high-performance green building partnership consortium; and (2) report to Congress on the status of high-performance green building initiatives and development of such initiatives at the state and local level.

(Sec. 422) Requires the Commercial Director to establish the Zero-Net-Energy Commercial Buildings Initiative to: (1) reduce the quantity of energy consumed by commercial buildings and achieve zero net energy commercial buildings in the United States; and (2) competitively select a consortium to develop and implement the initiative.

Authorizes appropriations for FY2008-FY2018.

Requires the Commercial Director and the Federal Director, in coordination with the Consortium, to implement public outreach to tell individuals and entities about the information and services available governmentwide.

Subtitle C: High-Performance Federal Buildings - (Sec. 431) Amends the National Energy Conservation Policy Act (NECPA), regarding energy and water efficiency in federal buildings, to set forth: (1) energy reduction goals for federal buildings for FY2006-FY2015; (2) require federal agencies to designate an energy manager to reduce facility energy use; (3) instruct the Secretary of Energy to develop criteria governing federal facilities with certain energy intensive operations; and (4) implementation procedures. Authorizes appropriations.

(Sec. 433) Amends ECPA to direct the Secretary of Energy to establish specified federal building energy efficiency performance standards.

(Sec. 434) Amends NECPA to require each federal agency to: (1) ensure that any large capital energy investment in an existing building that involves either replacement of installed equipment, or renovation, rehabilitation, expansion, or remodeling of existing space, employs the most energy efficient designs, systems, equipment, and controls that are lifecycle cost effective; and (2) report to the Director of the Office of Management and Budget (OMB) on development of a compliance review process for large capital energy improvements.

Directs OMB to evaluate and report to Congress on agency compliance.

Requires federal agencies to provide for equivalent metering of natural gas and steam by October 1, 2016, in accordance with guidelines established by the Secretary of Energy.

(Sec. 435) Prohibits a federal agency, three years after enactment of this Act, except in certain

circumstances, from contracting to lease space in a building that has not earned the Energy Star label in the most recent year.

(Sec. 436) Instructs the GSA to establish an Office of Federal High-Performance Green Buildings and to appoint a Federal Director to: (1) establish and manage such Office; (2) coordinate activities with the Office of Commercial High-Performance Green Buildings, and with the Secretary of Energy; and (3) ensure full coordination of high-performance green building information and activities within GSA and relevant agencies.

Requires the Federal Director to identify and provide to the Secretary a certification system most likely to encourage a comprehensive and environmentally-sound approach to certification of green buildings.

(Sec. 437) Directs the Comptroller General to audit the implementation of this Act.

(Sec. 438) Requires the sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 square feet to use site planning, design, construction, and maintenance strategies for the property to maintain or restore its predevelopment hydrology with regard to temperature, rate, volume, and duration of flow (storm water runoff).

(Sec. 439) Directs the GSA Administrator to establish a cost-effective technology acceleration program at GSA facilities, including review of: (1) current use of cost-effective lighting technologies and geothermal heat pumps; and (2) the availability of cost-effective lighting technologies and geothermal heat pumps to such facilities managers.

Requires the GSA Administrator to: (1) ensure designation for each GSA facility of a manager responsible for reducing facility energy use; and (2) submit to Congress a compliance plan that identifies the specific activities needed to achieve at least a 20% reduction in operational costs from 2003 levels at GSA facilities within five years after enactment of this Act. Authorizes appropriations.

(Sec. 440) Authorizes appropriations to carry out this subtitle for FY2008-FY2012.

(Sec. 441) Increases from 25 to 40 years the period, alternative to the expected life of a building's energy system, whose associated capital and operating expenses the Secretary of Energy is to use in establishing present value methods for estimating and comparing life cycle costs for federal buildings.

Subtitle D: Industrial Energy Efficiency - (Sec. 451) Amends EPCA to establish an industrial energy efficiency program under which the EPA Administrator shall establish a recoverable waste energy inventory program that involves: (1) an ongoing survey of major domestic industrial and large commercial combustion sources and their locations; and (2) a review of the quantity and quality of waste energy produced at such sources.

Requires the EPA Administrator to: (1) establish a Registry of Recoverable Waste Energy Sources, and sites on which the sources are located; and (2) publish a rule for establishing criteria for site inclusion.

Instructs the EPA Administrator to: (1) calculate the total quantities of potentially recoverable waste energy from sources at the sites, nationally and by state; and (2) make such quantities public, including greenhouse gas emissions savings that might be achieved with recovery of the waste energy from all sources and sites listed on the Registry.

Requires the EPA Administrator to notify owners or operators of recoverable waste energy sources and sites listed on the Registry before publishing the listing.

Authorizes appropriations for FY2008-FY2012.

Instructs the Secretary of Energy to establish a waste energy recovery incentive grant program to provide incentive grants to: (1) owners and operators of projects that successfully produce electricity or incremental useful thermal energy from waste energy recovery; (2) utilities purchasing or distributing the electricity; and (3) states that have achieved 80% or more of recoverable waste heat recovery opportunities.

Sets forth additional incentives for recovery, use, and prevention of industrial waste energy.

Redesignates the Combined Heat and Power Application Centers of DOE as Clean Energy Application Centers.

Instructs the Secretary of Energy to: (1) relocate administration of the Clean Energy Application Centers to the Office of Energy Efficiency and Renewable Energy within DOE; and (2) award grants to universities, research centers, and other institutions to ensure continued operations and effectiveness of eight Regional Clean Energy Application Centers in specified regions.

Authorizes appropriations for FY2008-FY2012.

(Sec. 452) Instructs the Secretary of Energy to establish a program to support, research, develop, and promote, in cooperation with energy-intensive industries and national industry trade associations representing the energy-intensive industries, the use of new materials processes, technologies, and techniques to optimize energy efficiency and the economic competitiveness of domestic industrial and commercial sectors.

Requires the Secretary to establish energy efficiency partnerships with eligible entities to improve the energy efficiency of equipment and processes used by energy-intensive industries.

Authorizes competitive grants to universities, individual inventors, and small companies for innovative technology research, development, and demonstrations.

Instructs such Secretary to fund institutions of higher education-based industrial research and assessment centers.

Authorizes appropriations for FY2008-FY2012 and ensuing fiscal years.

(Sec. 453) Directs the Secretary and the EPA Administrator to: (1) initiate a voluntary national information program for widely used data centers and data center equipment and facilities for which there is a potential for significant data center energy savings; and (2) designate jointly an information technology industry (data center efficiency) organization to consult with and coordinate the program.

Subtitle E: Healthy High-Performance Schools - (Sec. 461) Amends the Toxic Substances Control Act to authorize a grants award program to states for: (1) technical assistance for EPA programs for schools to address environmental issues (including the Tools for Schools Program and the Healthy School Environmental Assessment Tool); and (2) development and implementation of state school environmental health programs.

Instructs the EPA Administrator to: (1) issue voluntary school site selection guidelines; and (2) issue voluntary guidelines for use by states in developing and implementing environmental health program for schools. Authorizes appropriations for FY2009-FY2013.

(Sec. 462) Requires the EPA Administrator to arrange with the Secretaries of Education and of Energy to study how sustainable building features such as energy efficiency affect multiple perceived indoor environmental quality stressors on students in K-12 schools. Authorizes appropriations for FY2008-FY2013.

Subtitle F: Institutional Entities - (Sec. 471) Amends EPCA to instruct the Secretary of Energy to implement an information dissemination and technical assistance grants program to assist institutional entities in identifying, evaluating, designing, and implementing infrastructure projects in energy sustainability.

Directs the Secretary to award grants to institutional entities to: (1) improve energy efficiency on their grounds and facilities; and (2) engage in innovative energy sustainability projects.

Sets forth mandatory allocations to institutions of higher education with small endowments.

Instructs the Secretary to: (1) provide loans to institutional entities to implementing energy efficiency improvements and sustainable energy infrastructure; and (2) establish procedures for solicitation and evaluation of potential projects for grant and loan funding and administration of the grant and loan programs.

Authorizes appropriations for FY2009-FY2013.

Subtitle G: Public and Assisted Housing - (Sec. 481) Amends the Cranston-Gonzalez National Affordable Housing Act to substitute the 2006 International Energy Conservation Code for specified energy building codes, including the Council of American Building Officials Model Energy Code, 1992, as the measure for energy efficiency standards developed by the Secretary of Housing and Urban Development (HUD) and the Secretary of Agriculture for public and assisted housing.

Requires construction and rehabilitation of specified affordable housing to meet certain revised energy conservation requirements if the HUD and Agriculture Secretaries fail to amend their standards after such revision, as long as specified criteria are also met.

Subtitle H: General Provisions - (Sec. 491) Instructs the Federal Director and the Commercial Director to: (1) establish guidelines to implement a demonstration project to contribute to the research goals of the Office of Commercial High-Performance Green Buildings and the Office of Federal High-Performance Green Buildings; and (2) carry out demonstration projects related to green features of federal buildings and other facilities and supportive of research initiatives regarding high-performance green buildings generally.

Authorizes appropriations for FY2008-FY2012.

(Sec. 492) Requires the Federal Director to develop and implement a comprehensive indoor air quality program for federal facilities to ensure the safety of federal workers and facility occupants.

(Sec. 493) Amends the Clear Air Act to direct the EPA Administrator to establish a competitive grants program to assist local governments, with respect to local government buildings, to: (1) deploy cost-effective technologies and practices; and (2) achieve operational cost savings, through application of cost-effective technologies and practices. Authorizes appropriations for FY2007-FY2012.

(Sec. 494) Instructs the Federal Director, in coordination with the Commercial Director, to establish a Green Building Advisory Committee.

(Sec. 495) Directs the Secretary of Energy to establish an Advisory Committee on Energy Efficiency Finance to provide advice and recommendations on energy efficiency finance and investment issues, and to assist the energy community in identifying practical ways of lowering costs and increasing investments in energy efficiency technologies. Authorizes appropriations.

Title V: Energy Savings in Government and Public Institutions - Subtitle A: United States Capitol Complex - (Sec. 501) Authorizes the Architect of the Capitol (Architect) to: (1) conduct feasibility studies regarding construction of photovoltaic roofs for the Rayburn House Office Building and

the Hart Senate Office Building; and (2) construct a fuel tank and pumping system for E-85 fuel at or within close proximity to the Capitol Grounds Fuel Station. Authorizes appropriations.

(Sec. 503) Directs the Architect to: (1) include energy efficiency and conservation measures, greenhouse gas emission reduction measures, and other appropriate environmental measures in the Capitol Complex Master Plan; (2) operate steam boilers and the chiller plant at the Capitol Power Plant in the most energy efficient manner possible to minimize carbon emissions and operating costs; and (3) evaluate and correct the accuracy of the meters at the Plant.

(Sec. 505) Directs the Architect to conduct a feasibility study evaluating the available methods to capture, store, and use carbon dioxide emitted from the Capitol Power Plant as a result of burning fossil fuels.

Authorizes the Architect to conduct demonstration projects to capture and store or use carbon dioxide emitted from the Capitol Power Plant as a result of burning fossil fuels, if the feasibility study determines that such a project is technologically feasible and economically justified. Authorizes appropriations.

Subtitle B: Energy Savings Performance Contracting - (Sec. 511) Amends NECPA with respect to the authority of federal agencies to enter into energy savings performance contracts to repeal the requirement that, 30 days before the award of any such contract containing a clause setting forth a cancellation ceiling in excess of \$10 million, the agency head notify the appropriate authorizing and appropriating committees of Congress.

(Sec. 512) Authorizes a federal agency, in carrying out such a contract, to use any combination of appropriated funds and private financing under an energy savings performance contract.

(Sec. 513) Prohibits a federal agency in connection with promotion of long-term energy savings performance contracts from: (1) establishing an agency policy that limits the maximum multiyear contract to a period shorter than 25 years; or (2) limiting the total amount of obligations under such contracts or other private financing of energy savings measures.

Sets forth measurement and verification requirements for private financing.

Requires each federal agency to modify indefinite delivery and quantity energy savings performance contracts to conform to certain amendments made by this Act (including other indefinite delivery and indefinite quantity contracts using private financing).

(Sec. 514) Repeals the termination date for authority to enter into new energy savings performance contracts (thus making such authority permanent).

(Sec. 516) Modifies the federal agency utility incentive program to repeal the requirement that 50% of water and energy cost savings realized by an agency shall remain available for expenditure for additional energy efficiency measures.

(Sec. 517) Instructs the Secretary of Energy to create and administer in the Federal Energy Management Program (FEMA) a training program for federal contract negotiation and contract management personnel to: (1) negotiate energy savings performance contracts; (2) conclude effective and timely contracts for energy efficiency services; and (3) review federal contracts for potential energy efficiency opportunities and contract implications.

(Sec. 518) Instructs the Secretaries of Energy and of Defense to jointly study and report to Congress and the President on the potential for energy savings performance contracts to reduce energy consumption and provide energy and cost savings in nonbuilding applications.

Subtitle C: Energy Efficiency in Federal Agencies - (Sec. 521) Instructs the GSA Administrator to install a photovoltaic system, as set forth in the Sun Wall Design Project, for the headquarters building of the DOE headquarters building (the Forrestal Building) in Washington, DC.

(Sec. 522) Proscribes, as of January 1, 2009, purchases or installment of general service incandescent lamps in a Coast Guard facility, except in specified circumstances.

(Sec. 523) Amends ECPA to direct the Secretary of Energy to establish revised federal building energy efficiency performance standards that require, if lifecycle cost-effective, at least 30% of the hot water demand for each new federal building or federal building undergoing a major renovation to be met through the installation and use of solar hot water heaters.

(Sec. 524) Amends NECPA to require that purchases of federally procured appliances with standby power comply with specified power wattage.

(Sec. 526) Prohibits a federal agency from entering into a contract for procurement of an alternative or synthetic fuel, including a fuel produced from nonconventional petroleum sources, for any mobility-related use (other than for research or testing), unless the contract specifies that the lifecycle greenhouse gas emissions associated with the production and combustion of the fuel supplied under the contract must, on an ongoing basis, be less than or equal to such emissions from the equivalent conventional fuel produced from conventional petroleum sources.

(Sec. 527) Requires a federal agency subject to this Act to submit annually to the Director of the Office of Management and Budget (OMB) a government efficiency status report on: (1) its compliance with this Act; (2) implementation of initiatives to improve energy efficiency, reduce energy costs, and greenhouse gas emissions; and (3) taxpayer savings resulting from improvements required by this Act.

(Sec. 528) Requires OMB to submit an annual government efficiency report to certain congressional committees containing: (1) a summary of the government efficiency information reported by federal agencies; and (2) an evaluation and recommendations on the overall progress of the federal government toward compliance with this Act.

Directs OMB to describe individual agency compliance with this Act in any annual energy scorecard.

(Sec. 529) Directs the Federal Energy Regulatory Commission (FERC) to: (1) conduct a National Assessment of Electricity Sector Demand Response; and (2) develop a National Action Plan on Demand Response. Authorizes appropriations for FY2008-FY2010.

Subtitle D: Energy Efficiency of Public Institutions - (Sec. 531) Amends EPCA to authorize appropriations for state energy programs for FY2009-FY2012.

(Sec. 532) Amends the Public Utility Regulatory Policies Act of 1978 (PURPA) to require each electric utility to: (1) integrate energy efficiency resources into utility, state, and regional plans; (2) adopt policies establishing cost-effective energy efficiency as a priority resource; and (3) implement rate design modifications to promote energy efficiency investments.

Requires a natural gas utility to: (1) integrate energy efficiency resources into its plans and planning processes; (2) adopt policies that establish energy efficiency as a priority resource in such plans and processes; and (3) implement rate design modifications to promote energy efficiency investments.

Subtitle E: Energy Efficiency and Conservation Block Grants - (Sec. 542) Instructs the Secretary of Energy to establish the Energy Efficiency and Conservation Block Grant Program to assist eligible entities in implementing strategies that: (1) reduce their fossil fuel emissions and total energy use; and (2) improve energy efficiency in the transportation, building, and other appropriate sectors.

(Sec. 543) Sets forth: (1) fund allocation and use requirements with respect to local governmental units, states, Indian tribes and competitive grants; and (2) grant recipient requirements.

(Sec. 548) Authorizes appropriations for FY2008-FY2012.

Title VI: Accelerated Research and Development - Subtitle A: Solar Energy - Solar Energy Research and Advancement Act of 2007 - (Sec. 602) Directs the Secretary of Energy to establish a research and development program to provide lower cost and more viable thermal energy storage technologies to enable the shifting of electric power loads on demand and extend the operating time of concentrating solar power electric generating plants. Authorizes appropriations for FY2008-FY2012.

(Sec. 603) Requires the Secretary to study and report to Congress on methods to: (1) integrate concentrating solar power and utility-scale photovoltaic systems into regional electricity transmission systems; (2) identify new transmission or transmission upgrades needed to bring electricity from high concentrating solar power resource areas to growing electric power load centers; and (3) reduce the amount of water consumed by concentrating solar power systems.

(Sec. 604) Directs the Secretary to establish: (1) in the Office of Solar Energy Technologies a competitive grant program to create and strengthen solar industry workforce training and internship programs in installation, operation, and maintenance of solar energy products; (2) a research and development program to assist in demonstration and commercial application of direct solar renewable energy sources to provide alternatives to traditional power generation for lighting and illumination, including light pipe technology; (3) a research, development, and demonstration program to promote less costly and more reliable decentralized distributed solar-powered air conditioning for individuals and businesses; and (4) a grant program for states to demonstrate advanced photovoltaic technology.

Authorizes appropriations for all these programs for FY2008-FY2012.

Subtitle B: Geothermal Energy - Advanced Geothermal Energy Research and Development Act of 2007 - (Sec. 613) Instructs the Secretary of Energy with grants to support research, development, demonstration, and commercial application programs to expand geothermal energy production from hydrothermal systems, including programs for: (1) development of advanced hydrothermal resource tools; (2) field demonstration of industry coupled exploratory drilling; (3) components and systems capable of withstanding extreme geothermal environments to develop geothermal reservoirs and geothermal energy; (4) geothermal reservoir performance modeling; (5) mitigation of potential adverse environmental impacts of geothermal energy development; (6) enhanced geothermal systems technologies; (7) enhanced geothermal systems reservoir stimulation; and (8) geothermal energy production from oil and gas fields and production and recovery of energy from geopressed resources.

(Sec. 618) Instructs the Secretary to award to an institution of higher education (or consortium) a grant to establish a Center for Geothermal Technology Transfer (Center) to serve as information clearinghouse for the geothermal industry on best practices to develop and utilize geothermal resources.

(Sec. 619) Directs the Secretary to expand DOE's GeoPowering the West program, renamed "GeoPowering America," to extend its geothermal technology transfer activities throughout the United States. Continues to base the program in the DOE office in Golden, Colorado.

(Sec. 620) Directs the Secretary to seek to award grant funding, on a competitive basis, to an institution of higher education for a geothermal-powered energy generation facility on the institution's campus to provide electricity and space heating.

(Sec. 621) Directs the Secretary to study and report to specified congressional committees on advanced concepts and technologies to maximize geothermal resources.

(Sec. 623) Authorizes appropriations for FY2008-FY2012 for all these programs, including for the Intermountain West Geothermal Consortium.

(Sec. 624) Directs the Secretary, in coordination with other federal and multilateral agencies (including the U. S. Agency for International Development (USAID)) to support international collaborative efforts to promote the research, development, and deployment of geothermal technologies used to develop hydrothermal and enhanced geothermal system resources, in partnership with the African Rift Geothermal Development Facility, Australia, China, France, the Republic of Iceland, India, Japan, and the United Kingdom. Authorizes appropriations for FY2008-FY2012.

(Sec. 625) Directs the Secretary to make grants to governmental and private-sector entities for specified geothermal energy projects in high-cost regions. Authorizes appropriations.

Subtitle C: Marine and Hydrokinetic Renewable Energy Technologies - Marine and Hydrokinetic Renewable Energy Research and Development Act - (Sec. 633) Directs the Secretary to: (1) establish a research, development, demonstration, and commercial application program to expand marine and hydrokinetic renewable energy; and (2) award grants to institutions of higher education to establish National Marine Renewable Energy Research, Development, and Demonstration Centers.

(Sec. 636) Authorizes appropriations for FY2008-FY2012.

Subtitle D: Energy Storage for Transportation and Electric Power - United States Energy Storage Competitiveness Act of 2007 - (Sec. 641) Instructs the Secretary to: (1) implement a research, development, and demonstration program for energy storage systems for electric drive vehicles, stationary applications, and electricity transmission and distribution; and (2) establish an Energy Storage Advisory Council.

Requires the Council, in conjunction with the Secretary, to develop a five-year plan for integrating basic and applied research so that the United States retains a globally competitive domestic energy storage industry.

Directs the Secretary to: (1) conduct basic and applied research programs for such systems; and (2) establish up to four Energy Storage Research Centers to translate basic research into applied technologies to advance U.S. global competitiveness in such energy storage systems.

Directs the Secretary to implement programs of: (1) new demonstrations of advanced energy storage systems; (2) electric drive vehicle energy storage technology demonstrations; and (3) research, development, and demonstration of secondary applications of energy storage devices following service in electric drive vehicles, and technologies and processes for final recycling and disposal of such devices.

Instructs the Secretary to offer to arrange with the NAS to assess DOE performance in implementing such directives.

Subtitle E: Miscellaneous Provisions - (Sec. 651) Directs the Secretary to establish a lightweight material research, development, and demonstration program to determine ways to reduce motor vehicle weight to improve fuel efficiency without compromising passenger safety. Authorizes appropriations for FY2008-FY2012.

Requires the Secretary to: (1) evaluate for Congress the state of technological advancement of advanced insulation, and the projected amount of cost savings generated by implementing advanced insulation into covered refrigeration units; and (2) establish an advanced insulation demonstration program if that would generate an economically justifiable amount of cost savings. Authorizes appropriations for FY2009-FY2014.

(Sec. 653) Amends the Energy Policy Act of 2005 to modify technical criteria for the Clean Coal Power Initiative with respect to milestones for coal gasification projects for the year 2020.

(Sec. 654) Directs the Secretary to implement a program to award cash prizes (H-Prizes) competitively to advance research, development, demonstration, and commercial application in technologies for the production, storage, distribution, and utilization of hydrogen energy. Authorizes appropriations for FY2008-FY2017.

(Sec. 655) Instructs the Secretary to establish and award Bright Tomorrow Lighting Prizes for solid state lighting, including a 60-Watt Incandescent Replacement Lamp Prize (\$10 million), a Parabolic Aluminized Reflector (PAR) Type 38 Halogen Replacement Lamp Prize (\$5 million), and a Twenty-First Century Lamp Prize (\$5 million).

Requires federal procurement of solid-state-light packages as soon as practicable after successful awards of the first two prizes in order to replace the use of 60-watt incandescent lamps and PAR 38 halogen lamps in federal government buildings.

Establishes in the Treasury a Bright Tomorrow Lighting permanent fund to award prizes without fiscal year limitation. Authorizes appropriations.

(Sec. 656) Directs the Secretary to implement the Renewable Energy Innovation Manufacturing Partnership Program to make assistance awards to carry out research, development, and demonstration relating to the manufacturing of renewable energy technologies.

Expresses the sense of Congress that the Secretary should ensure that small businesses engaged in renewable manufacturing are given priority consideration for such assistance awards.

Authorizes appropriations for FY2008-FY2013.

Title VII: Carbon Capture and Sequestration - Subtitle A: Carbon Capture and Sequestration Research, Development, and Demonstration - Department of Energy Carbon Capture and Sequestration Research, Development, and Demonstration Act of 2007 - (Sec. 701) Amends the Energy Policy Act of 2005 to: (1) rename the ten-year carbon capture research and development program the carbon capture and sequestration research, development, and demonstration program; and (2) add to program objectives the expediting and carrying out of large-scale testing of carbon sequestration systems in a range of geologic formations that will provide information on the cost and feasibility of deployment of sequestration technologies.

Directs the Secretary of Energy to carry out fundamental science and engineering research to develop and document the performance of new approaches to capture and sequester or use carbon dioxide to lead to an overall reduction of carbon dioxide emissions.

Requires the Secretary to promote regional carbon sequestration partnerships to conduct geologic sequestration tests involving carbon dioxide injection and monitoring, mitigation, and verification operations in a variety of candidate geologic settings.

Instructs the Secretary to: (1) conduct at least seven initial large-scale sequestration tests for geologic containment of carbon dioxide to collect and validate information on the cost and feasibility of commercial deployment of technologies for geologic containment of carbon dioxide; (2) give preference to proposals from partnerships among industrial, academic, and government entities in making certain competitive awards; and (3) require recipients to provide assurances that all laborers and mechanics employed by contractors and subcontractors in the construction, repair, or alteration of new or existing facilities performed in order to carry out a demonstration or commercial application activity authorized under this subsection shall be paid wages at rates not less than those prevailing on

similar construction in the locality.

Authorizes appropriations for FY2008-FY2012.

(Sec. 703) Directs the Secretary to demonstrate technologies for the large-scale capture of carbon dioxide from industrial sources of carbon dioxide. Authorizes appropriations for FY2009-FY2013.

(Sec. 704) Instructs the Secretary to arrange for an NAS review and oversight of the carbon capture and sequestration research, development, and demonstration program under this subtitle.

(Sec. 705) Requires the Secretary to arrange with NAS for a study to develop an interdisciplinary program in geology, engineering, hydrology, environmental science, and related disciplines that will support the nation's capability to capture and sequester carbon dioxide from anthropogenic sources. Authorizes appropriations for FY2008.

Directs the Secretary to establish a program of competitive grants to colleges and universities for: (1) newly designated faculty positions in integrated geologic carbon sequestration science programs; and (2) internships for graduate students in geologic sequestration science.

(Sec. 706) Subjects the injection and geologic sequestration of carbon dioxide under this Act to the requirements of the Safe Drinking Water Act, including those relating to protection of underground sources of drinking water.

(Sec. 707) Requires the EPA Administrator to conduct a research program to address public health, safety, and environmental impacts that may be associated with capture, injection, and sequestration of greenhouse gases in geologic reservoirs.

Authorizes appropriations.

(Sec. 708) Instructs the Secretary to: (1) establish a university based research and development program to study carbon capture and sequestration using the various types of coal; and (2) give special consideration to rural or agricultural based institutions in areas that have regional sources of coal and that offer interdisciplinary programs in environmental science to study carbon capture and sequestration. Authorizes appropriations.

Subtitle B: Carbon Capture and Sequestration Assessment and Framework - (Sec. 711) Instructs the Secretary of the Interior to: (1) develop a methodology for conducting a national assessment of capacity for carbon dioxide; (2) conduct such assessment; and (3) implement a drilling program to supplement the geological data relevant to determining sequestration capacity of carbon dioxide in geological sequestration formations. Authorizes appropriations for FY2008-FY2012.

(Sec. 712) Directs the Secretary of the Interior to complete a national assessment of: (1) the quantity of carbon stored in and released from terrestrial ecosystems, including from man-caused and natural fires; and (2) the annual flux of covered greenhouse gases in and out of terrestrial ecosystems.

Prescribes methodology development and implementation procedures. Requires development of adaptation or mitigation strategies to enhance carbon sequestration in each terrestrial ecosystem, reduce greenhouse gas emissions, and adapt to climate change.

Authorizes appropriations for FY2008-FY2012.

(Sec. 713) Amends the Energy Policy Act of 2005 to instruct the Secretary of the Interior, acting through the Bureau of Land Management, to maintain records and an inventory regarding the quantity of carbon

dioxide stored within federal mineral leaseholds.

(Sec. 714) Directs such Secretary to report to certain congressional committees on a recommended framework for managing geological carbon sequestration activities on public land.

Title VIII: Improved Management of Energy Policy - Subtitle A: Management Improvements -

(Sec. 801) Directs the Secretary of Energy, acting through the Assistant Secretary for Energy Efficiency and Renewable Energy, to conduct a national media campaign to: (1) increase energy efficiency throughout the domestic economy over ten years; (2) promote the national security benefits associated with increased energy efficiency; and (3) decrease domestic oil consumption in the United States. Authorizes appropriations for FY2008-FY2012.

(Sec. 802) Amends the Alaska Natural Gas Pipeline Act to authorize the Federal Coordinator for Alaska Natural Gas Transportation Projects to make certain personnel appointments and perform other administrative functions pertaining to temporary services, fees, charges, commissions, and the use of funds.

(Sec. 803) Directs the Secretary of Energy to use specified authorized funds to make grants to implement renewable energy construction grants involving Alaska small hydroelectric power. Authorizes appropriations.

(Sec. 804) Directs the Administrator of the Energy Information Administration (Administrator) on an ongoing basis to: (1) review, analyze, and report biannually to the Secretary on refinery outages to determine whether the scheduling of a refinery outage may nationally or regionally substantially affect the price or supply of any refined petroleum product; and (2) specifically alert the Secretary regarding any refinery outage that may substantially affect such price or supply.

Requires the Secretary, based upon such alert, to inform refinery operators regarding planned refinery outages in order to reduce the quantity of refinery capacity that is out of service.

(Sec. 805) Instructs such Administrator to establish, and submit to Congress along with an assessment of state-level data needs, a five-year plan to enhance the quality and scope of the data collection necessary to ensure the scope, accuracy, and timeliness of the information needed for efficient functioning of energy markets and related financial operations. Authorizes appropriations for FY2008-FY2012 and subsequent fiscal years.

(Sec. 806) Expresses the sense of Congress that it is the goal of the United States that, by January 1, 2025, the agricultural, forestry, and working land of the United States should: (1) provide from renewable resources at least 25% of the total energy consumed in the United States; and (2) continue to produce safe, abundant, and affordable food, feed, and fiber.

(Sec. 807) Instructs the Secretary of the Interior to complete, report to certain congressional committees on, and update every 10 years a comprehensive nationwide geothermal resource assessment that examines the full range of domestic geothermal resources.

Authorizes appropriations for FY2008-FY2022.

Subtitle B: Prohibitions on Market Manipulation and False Information - (Sec. 811)

Prohibits contravention of Federal Trade Commission (FTC) rules with respect to: (1) market manipulation in connection with the purchase or sale at wholesale of crude oil gasoline or petroleum distillates; and (2) the knowing and intentional reporting false information to a federal department or agency regarding the wholesale price of such distillates.

(Sec. 813) Grants the FTC enforcement authority, including imposition of civil penalties.

Title IX: International Energy Programs - Subtitle A: Assistance to Promote Clean and Efficient Energy Technologies in Foreign Countries - (Sec. 911) Directs the Administrator of USAID to support policies and programs in developing countries that promote clean and efficient energy technologies. Authorizes appropriations for FY2008-FY2012.

(Sec. 912) Instructs the Secretary of Commerce to: (1) direct the United States and Foreign Commercial Service to expand or create a corps of the Foreign Commercial Service officers to promote U. S. exports in clean and efficient energy technologies and to build the capacity of government officials in India, China, and other countries to become more familiar with available technologies; and (2) direct the International Trade Administration to expand or create trade missions to encourage private sector trade and investment in clean and efficient energy technologies. Authorizes appropriations for FY2008-FY2012.

(Sec. 914) Expresses the sense of Congress that the Overseas Private Investment Corporation (OPIC) should promote greater investment in clean and efficient energy technologies by: (1) proactively reaching out to U.S. companies interested in investing in clean and efficient energy technologies in countries that are significant contributors to global greenhouse gas emissions; (2) giving preferential treatment to the evaluation and awarding of projects that involve the investment or utilization of clean and efficient energy technologies; and (3) providing greater flexibility in supporting projects that involve the investment or utilization of clean and efficient energy technologies, including financing, insurance, and other assistance.

(Sec. 915) Instructs the Director of the Trade and Development Agency to establish and promote policies that: (1) seek opportunities to fund projects that involve clean and efficient energy technologies, including in trade capacity building and capital investment projects; (2) advance utilization of such technologies, particularly to countries that have the potential for significant reduction in greenhouse gas emissions; and (3) recruit individuals with expertise or experience in such energy technologies to identify and evaluate opportunities for projects that involve such technologies.

(Sec. 916) Directs the President to establish a Task Force on International Cooperation for Clean and Efficient Energy Technologies.

Requires the Task Force to: (1) establish an Interagency Working Group on the Export of Clean and Efficient Energy Technologies (Working Group); and (2) develop and report to the President and certain congressional committees on a strategy to promote clean and efficient energy technologies in developing countries.

Requires the Working Group to establish an Interagency Center on the Export of Clean and Efficient Energy Technologies.

Authorizes appropriations for FY2008-FY2020.

(Sec. 917) Directs the Secretary of Energy, in implementing the "Agreement between the Department of Energy of the United States of America and the Ministry of Energy and Infrastructure of Israel Concerning Energy Cooperation" (February 1, 1996), to establish: (1) a grant program to support research, development, and commercialization of renewable energy or energy efficiency; and (2) an advisory board to monitor the grants program and provide periodic performance reviews.

Directs the Secretary to use certain authorized appropriations to carry out this section.

Subtitle B: International Clean Energy Foundation - (Sec. 922) Establishes in the executive branch the International Clean Energy Foundation, as a government corporation, to serve long-term foreign policy and energy security goals of reducing global greenhouse gas emissions.

(Sec. 923) Requires the Foundation to: (1) make grants to promote projects outside of the United States that serve as models of how to reduce significantly the emissions of global greenhouse gases through clean

and efficient energy technologies, processes, and services; (2) seek contributions from foreign governments and private organizations to supplement appropriations; (3) harness global expertise through collaborative partnerships with foreign governments and domestic and foreign private actors; (4) create a repository of information on best practices and lessons learned on the utilization and implementation of clean and efficient energy technologies and processes; and (5) promote the use of American-made clean and efficient energy technologies, processes, and services.

(Sec. 927) Authorizes appropriations for FY2009-FY2013.

Subtitle C: Miscellaneous Provisions - (Sec. 931) Urges the Secretary of State to ensure that energy security is integrated into the core mission of the Department of State.

Establishes a Coordinator for International Energy Affairs within the Office of the Secretary of State. Authorizes appropriations.

Instructs the Secretary of State to report to certain congressional committees on the following: (1) Department of State personnel who are dedicated to energy matters and are stationed at embassies and consulates in countries that are major energy producers or consumers; (2) the need for federal energy specialist personnel in U.S. diplomatic missions; and (3) recommendations for increasing energy expertise within U.S. embassies among foreign service officers, and options for assigning to such embassies energy attaches from the National Laboratories or other agencies within DOE.

Authorizes the Secretary of Energy to arrange with the Secretary of State to assign personnel from DOE or its National Laboratories to serve as dedicated advisors on energy matters in United States diplomatic missions.

(Sec. 932) Amends the National Security Act of 1947 to add the Secretary of Energy to the National Security Council.

(Sec. 933) Requires the President to report annually to Congress on national energy security strategy in both classified and unclassified form.

(Sec. 934) Provides for allocation of the contingent costs associated with participation by the United States in the international nuclear liability compensation system established by the Convention on Supplementary Compensation for Nuclear Damage, done at Vienna on September 12, 1997, with respect to: (1) a covered Price-Anderson incident at a nuclear energy project in the United States; and (2) a covered incident outside the United States that is not a Price-Anderson incident.

Requires the use of specified funds available under the Atomic Energy Act of 1954 (Price-Anderson Act) to cover contingent costs resulting from any Price-Anderson incident covered under such Act.

Requires each nuclear supplier to participate in a retrospective risk pooling program to cover contingent costs resulting from certain covered incidents outside the United States that are not Price-Anderson incidents.

Instructs the Secretary of Energy to make available to nuclear suppliers and their insurers information to support voluntary establishment and maintenance of private insurance against any risk for which nuclear suppliers may be required to pay deferred payments under this Act.

(Sec. 935) States it is U.S. policy to: (1) increase energy security by promoting anti-corruption initiatives in oil and natural gas rich countries; and (2) promote global energy security through promotion of programs such as the Extractive Industries Transparency Initiative (EITI) that seek to instill transparency and accountability into extractive industries resource payments.

Expresses the sense of Congress that the United States should further global energy security and

promote democratic development in resource-rich foreign countries by: (1) encouraging further participation in the EITI by eligible countries and companies; and (2) promoting the efficacy of the EITI program by ensuring a robust and candid review mechanism.

Authorizes appropriations for U.S. contributions to the EITI Multi-Donor Trust Fund.

Title X: Green Jobs - Green Jobs Act of 2007 - (Sec. 1002) Amends the Workforce Investment Act of 1998 to direct the Secretary of Labor (Secretary in this title) to establish an energy efficiency and renewable energy worker training program.

Requires the Secretary, acting through the Bureau of Labor Statistics, to collect and analyze labor market data to track workforce trends resulting from energy-related initiatives under this title.

Directs the Secretary to award competitive National Energy Training Partnerships Grants to enable certain entities to implement training that leads to economic self-sufficiency (Pathways Out of Poverty Demonstration Program) and develop an energy efficiency and renewable energy industries workforce.

Requires the Secretary to award competitive grants to enable states to administer: (1) state labor market research, information, and labor exchange research programs; and (2) certain renewable energy and energy efficiency workforce development programs.

Authorizes appropriations.

Title XI: Energy Transportation and Infrastructure - Subtitle A: Department of Transportation - (Sec. 1101) Amends federal transportation law to establish the Office of Climate Change and Environment (Office) within the Department of Transportation (DOT).

Requires such Office to: (1) plan, coordinate, and implement department-wide research, strategies, and actions under DOT authority to reduce transportation-related energy use and mitigate the effects of climate change; (2) establish a clearinghouse of solutions, including cost-effective congestion reduction approaches, to achieve such reduction and mitigation; and (3) coordinate its activities with the U. S. Global Change Research Program.

Requires the Office to: (1) examine the impact of the nation's transportation system upon climate change and the fuel efficiency savings and clean air impacts of major transportation projects; (2) identify solutions to reduce air pollution and transportation-related energy use and mitigate the effects of climate change; and (3) examine potential fuel savings resulting from changes in the current transportation system and the use of intelligent transportation systems that help businesses and consumers to plan their travel and avoid delays (including Web-based real-time transit information systems, congestion information systems, carpool information systems, parking information systems, freight route management systems, and traffic management systems).

Instructs the Secretary of Transportation to report to certain congressional committees on the results of such examination.

Authorizes appropriations for FY2008-FY2011.

Subtitle B: Railroads - (Sec. 1111) Instructs the Secretary of Transportation to implement a competitive grant program for railroad carriers and state and local governments to: (1) assist purchases of hybrid or other energy-efficient locomotives, including hybrid switch and generator-set locomotives; and (2) demonstrate the extent to which such locomotives increase fuel economy, reduce emissions, and lower costs of operation.

Sets the federal share of such program at a maximum 80%.

(Sec. 1112) Amends federal transportation law to instruct the Secretary of Transportation to establish capital grants for class II and class III railroads to implement track capital projects. Requires a report to certain congressional committees on whether the program: (1) helps promote a reduction in fuel use associated with freight transportation; and (2) demonstrates innovative technologies for increased fuel economy, reduced greenhouse gas emissions, and lowered operation costs.

Authorizes appropriations for FY2008-FY2011.

Subtitle C: Marine Transportation - (Sec. 1121) Amends federal maritime transportation law to direct the Secretary of Transportation to: (1) establish a short sea transportation program and designate short sea transportation projects to mitigate landside congestion; (2) designate short sea transportation routes as extensions of the surface transportation system to focus public and private efforts to use the waterways to relieve landside congestion along coastal corridors; (3) develop strategies to encourage the use of short sea transportation for passengers and cargo; (4) enter into memorandums of understanding with the heads of other federal entities to transport federally owned or generated cargo using designated short sea transportation projects; and (5) establish a board to identify and seek solutions to impediments hindering effective use of short sea transportation.

Subtitle D: Highways - (Sec. 1131) Sets the federal share for federal highway congestion mitigation and air quality (CMAQ) improvement projects or programs at a minimum of 80% but, at state discretion, up to 100% of project costs.

(Sec. 1132) Sets forth a formula for the distribution of FY2008 or FY2009 rescissions of certain unobligated balances appropriated from the Highway Trust Fund.

(Sec. 1133) Expresses the sense of Congress that, in constructing new roadways or rehabilitating existing facilities, state and local governments should consider policies designed to accommodate all users, including motorists, pedestrians, cyclists, transit riders, and people of all ages and abilities.

Title XII: Small Business Energy Programs - (Sec. 1201) Amends the Small Business Act to direct the Administrator of the Small Business Administration (SBA) to: (1) make an Express Loan for purchasing a renewable energy system or carrying out an energy efficiency project for a small business concern; and (2) establish a pilot program reducing fees for specified energy efficiency loans.

(Sec. 1203) Directs the SBA Administrator to: (1) promulgate final rules establishing the government-wide consumer education program authorized by EPCA to encourage the conservation of energy in the use of consumer products; (2) develop and coordinate establishment of another government-wide small business energy efficiency program, building on the Energy Star for Small Business Program; and (3) develop a strategy to educate, encourage, and assist small business concerns in adopting energy efficient building fixtures and equipment.

Requires the SBA Administrator to establish a Small Business Energy Efficiency Program (Small Business Sustainability Initiative) to provide energy efficiency assistance to small business concerns through small business development centers. Authorizes appropriations.

Instructs the the SBA Administrator to conduct a pilot program to provide information regarding telecommuting to small business concerns and to encourage them to offer telecommuting options to employees. Authorizes appropriations.

Amends the Small Business Act to instruct the SBA Administrator to ensure that certain federal departments and agencies give high priority to small business concerns that participate in or conduct energy efficiency or renewable energy system research and development projects.

(Sec. 1204) Amends the Small Business Act of 1958 to include among eligibility criteria for SBA loans to state and local development companies: (1) reduction of energy consumption by at least 10%; (2) increased use of sustainable design, including designs that reduce the use of greenhouse gas emitting fossil fuels, or low-impact design to produce buildings that reduce the use of nonrenewable resources and minimize environmental impact; or (3) plant, equipment and process upgrades of renewable energy sources such as the small-scale production of energy for individual buildings or communities consumption (commonly known as micropower, or renewable fuels producers including biodiesel and ethanol producers).

Allows a loan of up to \$4 million for plant acquisition, construction, conversion, and expansion for each project that: (1) reduces the borrower's energy consumption by at least 10%; or (2) generates renewable energy or renewable fuels.

(Sec. 1205) Permits certain small business investment companies to issue Energy Saving debentures.

(Sec. 1206) Prescribes formulae for calculating the maximum amount of outstanding leverage, as well as the maximum aggregate amount of such leverage, authorized for a licensed small business investment company.

Excludes the amount of the cost basis of any Energy Saving qualified investment in a smaller enterprise (up to 33% of the company's private capital) after enactment of this Act.

Limits the Energy Saving qualified investment in any one entity to a maximum of 20% of the company's private capital.

(Sec. 1207) Instructs the SBA Administrator to establish and administer a Renewable Fuel Capital Investment Program (RFCI) to: (1) promote the research, development, manufacture, production, and bringing to market of goods, products, or services that generate or support the production of renewable energy by encouraging venture capital investments in smaller enterprises primarily engaged such activities; and (2) establish a venture capital program to address unmet equity investment needs of smaller enterprises engaged in such activities.

Authorizes the SBA Administrator to: (1) guarantee timely payment of principal and interest on debentures issued by any RFCI company; (2) charge fees to reduce the cost of SBA purchases and guarantees of such debentures; (3) issue and guarantee trust certificates representing ownership of all or part of such debentures; and (4) make grants and supplemental grants to RFCI companies to provide operational assistance to smaller enterprises financed, or expected to be financed, by such companies or other entities.

Permits bank investment in an RFCI company.

Authorizes appropriations for FY2008-FY2009.

Title XIII: Smart Grid - (Sec. 1301) Declares it is the policy of the United States to support modernization of the nation's electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve specified characteristics of a Smart Grid.

(Sec. 1302) Instructs the Secretary of Energy to: (1) report periodically to Congress on smart grid deployments nationwide and any regulatory or government barriers to continued deployment; and (2) establish a Smart Grid Advisory Committee.

(Sec. 1303) Directs the Assistant Secretary of the Office of Electricity Delivery and Energy Reliability

to establish a Smart Grid Task Force to insure awareness, coordination and integration of the diverse activities of the Office and elsewhere in the federal government related to smart-grid technologies and practices.

(Sec. 1304) Directs the Secretary of Energy to implement a program that includes: (1) developing advanced techniques for measuring peak load reductions and energy-efficiency savings from smart metering, demand response, distributed generation, and electricity storage systems; (2) investigating means for demand response, distributed generation, and storage to provide ancillary services; and (3) conducting research to advance the use of wide-area measurement and control networks, including data mining, visualization, advanced computing, and secure and dependable communications in a highly-distributed environment.

Directs such Secretary to: (1) establish a smart grid regional demonstration initiative composed of demonstration projects specifically focused on advanced technologies for use in power grid sensing, communications, analysis, and power flow control; and (2) implement smart grid demonstration projects in up to five electricity control areas, including at least one rural area in which the majority of generation and transmission assets are controlled by a tax-exempt entity.

(Sec. 1305) Confers upon the Director of the National Institute of Standards and Technology (NIST) primary responsibility to coordinate development of a framework that includes protocols and model standards for information management to achieve interoperability of smart grid devices and systems.

(Sec. 1306) Requires the Secretary to: (1) establish a Smart Grid Investment Matching Grant Program to provide reimbursement of 20% of qualifying Smart Grid investments; and (2) establish and publish in the Federal Register procedures by which applicants who have made qualifying Smart Grid investments can seek and obtain reimbursement of one-fifth of their documented expenditures.

(Sec. 1307) Amends PURPA to require: (1) each state to consider requiring that, before undertaking investments in nonadvanced grid technologies, an electric utility of the state demonstrate that it has considered an investment in a qualified smart grid system based on specified factors; and (2) all electricity purchasers to be provided direct access to information from their electricity provider.

(Sec. 1308) Instructs the Secretary to study and report to Congress on: (1) laws and regulations affecting the siting of privately owned electric distribution wires on and across public rights-of-way; and (2) a quantitative assessment and determination of the existing and potential impacts of the deployment of Smart Grid systems on improving the security of the nation's electricity infrastructure and operating capability.

Title XIV: Pool and Spa Safety - Virginia Graeme Baker Pool and Spa Safety Act - (Sec. 1404) Treats the requirements of this Act as a consumer product safety rule issued by the Consumer Product Safety Commission (Commission) under the Consumer Product Safety Act.

Requires each swimming pool or spa drain cover manufactured, distributed, or entered into commerce in the United States to conform to specified entrapment protection standards, or any successor standard regulating such swimming pool or drain cover.

(Sec. 1405) Directs the Commission to establish a state swimming pool safety grant program. Authorizes appropriations for FY2009-FY2010.

(Sec. 1406) Sets forth minimum state law requirements a state must meet to be eligible for a grant.

(Sec. 1407) Directs the Commission to implement a public education program on methods to prevent drowning and entrapment in swimming pools and spas. Authorizes appropriations for FY2008-FY2012.

Title XV: Revenue Provisions - (Sec. 1501) Amends the Internal Revenue Code to extend: (1) through calendar year 2008 the 0.2% Federal Unemployment Tax Act (FUTA) surtax payable by employers;

and (2) from five to seven years the amortization period for geological and geophysical expenditures by certain major integrated oil companies.

Title XVI: Effective Date - Makes the effective date of this Act one day after its enactment.