

## **JOINT STAFF**

### **SECTION-BY-SECTION ANALYSIS FOR MANAGER'S AMENDMENT TO S. 2012**

#### *Section 1. Short title; Table of contents*

Section 1 provides a short title and table of contents.

#### *Section 2. Definitions*

Section 2 defines key terms.

### **TITLE I--EFFICIENCY**

#### **SUBTITLE A--BUILDINGS**

#### *Section 1001. Greater energy efficiency in building codes*

Section 1001(a) amends section 303 of the Energy Conservation and Production Act (ECPA) to add certain definitions; section 1001(b) amends section 304 of ECPA to require that the Secretary of Energy encourage and support the adoption of building energy codes by States, local governments, or Indian tribes that meet or exceed model building energy codes; section 1001(d) amends section 307 of ECPA to require that the Secretary of Energy support the updating of model building energy codes.

#### *Section 1002. Budget-neutral demonstration program for energy and water conservation improvements at multifamily residential units*

Section 1002 directs the Secretary of Housing and Urban Development (HUD) to conduct a pilot project that demonstrates the use of budget-neutral, performance-based agreements for energy or water conservation improvements in HUD multifamily housing.

#### *Section 1003. Coordination of energy retrofitting assistance for schools*

Section 1003 directs the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) to coordinate and disseminate information on existing Federal programs that may be used to help initiate, develop, and finance energy efficiency, renewable energy, and energy retrofitting projects for schools.

#### *Section 1004. Energy efficiency retrofit pilot program*

Section 1004 directs the Secretary of Energy to establish a pilot program to award grants for the purpose of retrofitting nonprofit buildings, including hospitals, youth centers, and faith-based organizations, with energy-efficiency improvements.

#### *Section 1005. Utility energy service contracts*

Section 1005 amends section 546 of the National Energy Conservation Policy Act (NECPA) to extend the maximum potential contract period of utility energy service contracts from 10 to 25 years.

*Section 1006. Use of energy and water efficiency measures in Federal buildings*

Section 1006 amends contracting authority and reporting in NECPA to encourage Federal agencies to enter into energy savings performance contracts and utility energy service contracts to implement energy and water conservation measures at Federal buildings. Section 1006(g) specifies that the term 'federal building' does not include a dam, reservoir, or hydropower facility owned or operated by a Federal agency.

*Section 1007. Building training and assessment centers*

Section 1007 directs the Secretary of Energy to provide grants to institutions of higher education and Tribal Colleges or Universities to establish building training and assessment centers.

*Section 1008. Career skills training*

Section 1008 directs the Secretary of Energy to provide grants to eligible entities to cover a portion of the cost of career skills training programs that lead to students receiving an industry-related certification for the installation of energy efficient building technologies.

*Section 1009. Energy-efficient and energy-saving information technologies*

Section 1009 amends section 543 of NECPA by adding a section that directs the Director of the Office of Management and Budget (OMB) to collaborate with each Federal agency to develop an implementation strategy for the maintenance, purchase, and use of energy-efficient and energy-saving information technologies.

*Section 1010. Availability of funds for design updates*

Section 1010 amends section 3307 of title 40 of the U.S. Code to allow the Administrator of General Services to use appropriated funds to update the design of a building for which the design has been substantially completed but on which construction has not begun to meet applicable Federal building energy efficiency standards.

*Section 1011. Energy efficient data centers*

Section 1011 amends section 453 of the Energy Independence and Security Act (EISA) of 2007 to update the Voluntary National Information Program. The section requires the development of a metric for data center energy efficiency, and the Secretary of Energy and Director of OMB to maintain a data center energy practitioner program and an open data initiative for Federal data center energy usage.

*Section 1012. Weatherization Assistance Program*

Section 1012(a) amends section 422 of ECPA to reauthorize the Weatherization Assistance Program. Subsection (b) adds a new section 414C to ECPA to require the Secretary of Energy to provide competitive grants to nonprofit organizations with a record of making energy efficient improvements to conduct housing energy retrofits for low-income persons.

*Section 1013. Reauthorization of State energy program*

Section 1013 amends section 365(f) of Energy Policy Conservation Act (EPCA) to reauthorize the State Energy Program.

*Section 1014. Smart building acceleration*

Section 1014 directs the Secretary of Energy to establish the 'Federal Smart Building Program' to demonstrate the costs and benefits of implementing smart building technology and to undertake research and development to address barriers to the integration of such technology.

*Section 1015. Repeal of fossil phase-out*

Section 1015 amends section 305(a)(3) of ECPA to repeal the requirement that new Federal buildings and Federal buildings undergoing major renovations phase out fossil fuel-generated energy consumption by 2030.

*Section 1016. Federal building energy efficiency performance standards*

Section 1016(a) amends section 303 of ECPA to expand the scope of building energy efficiency performance standards for new federal buildings to include major renovations. Subsection (b) amends section 305(a)(3) of ECPA to require the Secretary of Energy to establish more stringent revised Federal building energy efficiency performance standards for new Federal buildings and Federal buildings with major renovations unless demonstrated not to be lifecycle cost effective.

*Section 1017. Codification of Executive Order*

Section 1017 directs the head of each Federal agency to reduce their building energy intensity by 2.5 percent per year for fiscal years 2016 through 2025.

*Section 1018. Certification for green buildings*

Section 1018 amends section 305 of ECPA to direct the Secretary of Energy to determine which certification systems for green commercial and residential buildings are the most likely to encourage a comprehensive and environmentally sound approach to the certification of green buildings.

*Section 1019. High performance green federal buildings*

Section 1019 amends section 436(h) of EISA 2007 to require the Federal Director of the Office of Federal High-Performance Green Buildings within the General Services Administration to

identify and provide to the Secretary of Energy with a list of certification systems most likely to encourage a comprehensive and environmentally sound approach to certification of green buildings.

*Section 1020. Evaluation of potentially duplicative green building programs within Department of Energy*

Section 1020 requires the Secretary of Energy to evaluate potentially duplicative green building programs within the DOE, and to determine if there are ways to eliminate overlap, improve coordination, and increase their effectiveness.

*Section 1021. Study and report of energy savings benefits of operational efficiency programs and services*

Section 1021 requires the DOE to conduct a study that results in a report to quantify the energy savings benefits of operational efficiency programs and services for commercial, institutional, industrial, and governmental entities.

## **SUBTITLE B--APPLIANCES**

*Section 1101. Extended product system rebate program*

Section 1101 directs the Secretary of Energy to establish a rebate program to encourage the replacement of energy inefficient electric motors.

*Section 1102. Energy efficient transformer rebate program*

Section 1102 directs the Secretary of Energy to establish a rebate program to encourage the replacement of energy inefficient transformers.

*Section 1103. Standards for certain furnaces*

Section 1103 amends section 325(f)(4) of EPCA to make any action regarding a final rule contingent upon a determination by an advisory group convened by the Secretary of Energy regarding whether a nationwide requirement for a condensing furnace efficiency standard is technically feasible and economically justified.

*Section 1104. Third-party certification under Energy Star program*

Section 1104 amends section 324A of EPCA by directing the Administrator to revise the certification requirements for Energy Star program partners that manufacture consumer electronic products and have complied with all program requirements for at least 18 months.

*Section 1105. Energy conservation standards for commercial refrigeration equipment*

Section 1105 postpones the implementation of new DOE energy efficiency standards for specific types of commercial refrigerators that conflict with new regulations from the Environmental Protection Agency (EPA) that phase out the use of certain refrigerants. This delay allows affected manufacturers time to redesign their refrigerators to meet requirements from both agencies.

*Section 1106. Voluntary verification programs for air conditioning, furnace, boiler, heat pump, and water heater products*

Section 1106 amends section 326(b) of EPCA to require DOE to recognize certain qualified voluntary, independent certification programs for energy conservation standards for air conditioning, furnace, boiler, heat pump, and water heater products, and to rely on these programs to verify the performance rating of these products, provide annual reports of all test results, and maintain a publicly available list of all certified models.

## **SUBTITLE C--MANUFACTURING**

*Section 1201. Manufacturing energy efficiency*

Section 1201 amends section 452 of EISA 2007 to add the 'Future of Industry Program' and 'Sustainable Manufacturing Initiative.' These programs direct Industrial Assessment Centers to coordinate with other Federal manufacturing programs, National Laboratories, and energy service and technology providers, and direct DOE's Office of EERE to provide onsite technical assessments to manufacturers seeking efficiency opportunities.

*Section 1202. Leveraging existing Federal agency programs to assist small and medium manufacturers*

Section 1202 directs the Secretary of Energy to expand the scope of technologies covered by the Industrial Assessment Centers of the Department to include smart manufacturing technologies and practices and equip the Centers' Directors with tools and training to provide technical assistance in smart manufacturing to manufactures.

*Section 1203. Leveraging smart manufacturing infrastructure at National Laboratories*

Section 1203 directs the Secretary of Energy to study and implement ways for small and medium manufacturers to access the high-performance computing facilities at National Laboratories.

## **SUBTITLE D--VEHICLES**

*Section 1301. Short title*

Section 1301 provides a short title for the subtitle.

*Section 1302. Objectives*

Section 1302 lays out the objectives of the subtitle.

*Section 1303. Coordination and nonduplication*

Section 1303 requires the Secretary of Energy to ensure, to the maximum extent practicable, that the activities authorized by this subtitle are not duplicative of other programs.

*Section 1304. Authorization of appropriations*

Section 1304 authorizes appropriations through Fiscal Year 2020 for the DOE's vehicle technologies program.

*Section 1305. Reporting*

Section 1305 requires annual reports through Fiscal Year 2020 for the DOE's vehicle technologies program.

**PART I--VEHICLE RESEARCH AND DEVELOPMENT**

*Section 1306. Program*

Section 1306 authorizes a program of basic and applied research, development, engineering, demonstration, and commercial application activities for materials, technologies, and processes that could reduce petroleum use in passenger and commercial vehicles.

*Section 1307. Manufacturing*

Section 1307 authorizes a program of research, development, engineering, demonstration, and commercial application for advanced vehicle manufacturing technologies and practices.

**PART II--MEDIUM- AND HEAVY-DUTY COMMERCIAL AND TRANSIT VEHICLES**

*Section 1308. Program*

Section 1308 authorizes a program of cooperative research, development, demonstration, and commercial application activities on advanced technologies for medium- to heavy-duty commercial, vocational, recreational, and transit vehicles.

*Section 1309. Class 8 truck and trailer systems demonstration*

Section 1309 authorizes a program to demonstrate the integration of multiple advanced technologies on Class 8 truck and trailer platforms.

*Section 1310. Technology testing and metrics*

Section 1310 directs the Secretary of Energy to develop standard testing procedures for evaluating the performance of advanced heavy vehicle technologies.

*Section 1311. Nonroad systems pilot program*

Section 1311 authorizes a pilot program of research, development, demonstration, and commercial application for technologies to improve total machine or system efficiency for nonroad mobile equipment.

**PART III--ADMINISTRATION**

*Section 1312. Repeal of existing authorities.*

Section 1312 repeals a number of provisions within the U.S. Code that are no longer necessary as a result of this subtitle.

**SUBTITLE E—SHORT TITLE**

*Section 1401. Short Title.*

Section 1401 provides a short title for Title I.

**TITLE II--INFRASTRUCTURE**

**SUBTITLE A--CYBERSECURITY**

*Section 2001. Cybersecurity threats*

Section 2001 adds a new section, 224, to the Federal Power Act (FPA). The new section 224(b) provides the Secretary of Energy with emergency authority to protect the bulk-power system (BPS) from cybersecurity threats. The new section 224(c) specifies the duration of the emergency authority. The new section 224(d) directs the Federal Energy Regulatory Commission (FERC or Commission) to adopt regulations to permit entities subject to an emergency order under this section to seek recovery of prudently-incurred costs required to implement actions ordered by the Secretary, to designate critical electric infrastructure information (CEII), to prohibit the unauthorized disclosure of CEII, and to ensure there are appropriate sanctions in place for the knowing and willful disclosure of such protected information by FERC personnel or agents of the Commission. The new subsection 224(d)(1) protects CEII from disclosure under federal or state sunshine laws.

*Section 2002. Enhanced grid security*

Section 2002 codifies the DOE as the Sector-Specific Agency for cybersecurity for the energy sector and specifies the DOE's duties with regard to that role. Directs the Secretary to carry out a cybersecurity-related research, development, and demonstration program; perform pilot

demonstration projects for new technologies; and develop workforce curricula for energy sector-related cybersecurity.

## **SUBTITLE B--STRATEGIC PETROLEUM RESERVE**

### *Section 2101. Strategic Petroleum Reserve modernization*

Section 2101(a) reaffirms the strategic importance of the SPR. Section 2101(b) restricts the uses of funds raised from any drawdown to purposes directly related to either the operation of the Reserve or projects that enhance U.S. energy security. Section 2101(c) amends the definition of 'related facility' to include terminals.

## **SUBTITLE C--TRADE**

### *Section 2201. Action on applications to export liquefied natural gas*

Section 2201(a) requires the Secretary of Energy to issue a final decision, approving or disapproving, any application to export natural gas to countries that do not have free trade agreements with the United States no later than 45 days after the FERC or Maritime Administration has concluded the review required by the National Environmental Policy Act of 1969 (NEPA). Section 2201(c)(1) grants, to the U.S. Court of Appeals for the District of Columbia Circuit or the circuit in which the liquefied natural gas export facility will be located, original and exclusive jurisdiction over any civil action for the review of an order issued by the Secretary of Energy with respect to such an application or the Secretary's failure to issue a final decision on such an application. Section 2201(c)(3) provides for expedited consideration of civil actions brought under the section, and, in the case of covered applications. Section 2201(c)(4) provides for the transfer of petitions for review upon the motion of an applicant.

### *Section 2202. Public disclosure of liquefied natural gas export destinations*

Section 2202 amends section 3 of the Natural Gas Act to require DOE to collect data on exports of liquefied natural gas, and to require that this data be made public.

### *Section 2203. Energy data collaboration*

Section 2203 requires the Energy Information Administration (EIA) to collaborate with Mexican and Canadian officials to improve the collection of cross-border energy data and provide periodic updates to the Congressional committees of jurisdiction.

## **SUBTITLE D--ELECTRICITY AND ENERGY STORAGE**

### *Section 2301. Grid storage program*

Section 2301 directs the Secretary of Energy to conduct a research, development, and demonstration program for electric grid energy storage to address challenges identified in the 2013 DOE Strategic Plan for Grid Energy Storage.



*Section 2302. Electric system grid architecture, scenario development, and modeling*

Section 2302 requires the Secretary of Energy to establish a collaborative process to develop model grid architecture and a set of future scenarios for the electric system to examine the impacts of different combinations of resources and then determine whether the creation of any additional standards for ensuring the interoperability of the grid system and associated communications networks are required.

*Section 2303. Technology demonstration on the distribution system*

Section 2303 directs the Secretary of Energy to establish a grant program to carry out eligible projects related to the modernization of the electric grid and requires the development of a cybersecurity plan and the performance of privacy risk analysis for those projects.

*Section 2304. Hybrid micro-grid systems for isolated and resilient communities*

Section 2304 requires the Secretary of Energy to establish a program to promote the development of hybrid micro-grid systems for isolated communities and micro-grid systems to increase the resilience of critical infrastructure.

*Section 2305. Voluntary model pathways*

Section 2305 requires the Secretary of Energy to initiate development of voluntary model pathways for modernizing the electric grid through a collaborative public-private effort to facilitate certain objectives, and establishes a Steering Committee to facilitate the development.

*Section 2306. Performance metrics for electricity infrastructure providers*

Section 2306 requires the Secretary of Energy to submit to Congress within two years after enactment a report that includes an evaluation of the performance of the electric grid in light of metrics to be developed and a description of the costs and benefits associated with certain evaluated scenarios developed under section 2302.

*Section 2307. State and regional distribution planning*

Section 2307(a) requires the Secretary of Energy, upon the request of the State, to partner with States and regional organizations to facilitate development of State and regional electric distribution plans by conducting a resource assessment and developing open source tools for planning and operations. Section 2307(c) authorizes the Secretary to provide technical assistance to States and others.

*Section 2308. Authorization of appropriations*

Section 2308 provides an authorization of appropriations to carry out sections 2302 through 2307.

*Section 2309. Electric transmission infrastructure permitting*

Section 2309(a) codifies the Interagency Rapid Response Team for Transmission to improve the efficiency of electric transmitting infrastructure permitting. Section 2309(b) establishes the position of Transmission Ombudsperson within Council on Environmental Quality (CEQ) to resolve delays and complaints related to the electric transmission infrastructure permitting process. Section 2309(c) ensures the continuity of existing use and occupancy right-of-ways granted across public lands or National Forest System land (including vegetation management agreements, where applicable) for the transmission of electric energy by any Federal department or agency by providing for agreements between such Federal entities and the Secretaries of the Interior or Agriculture.

*Section 2310. Report by transmission organizations on distributed energy resources and micro-grid systems*

Section 2310 requires Transmission Organizations to submit a report to FERC within six months identifying barriers to the deployment of distributed energy systems and micro-grid systems, as well as potential changes to the operational requirements for, or the charges associated with, the interconnection of these resources to the Transmission Organization.

*Section 2311. Net metering study guidance*

Section 2311 amends Title 18 of the Energy Policy Act (EPACT) of 2005 and requires the Secretary of Energy to issue guidance on criteria for net metering studies conducted by the DOE and directs the DOE to undertake a study of net energy metering.

**SUBTITLE E--COMPUTING**

*Section 2401. Exascale computer research program*

Section 2401 requires the Secretary of Energy to conduct a research program, and establish two or more National Lab partnerships with industry and institutes of higher education, to develop two or more exascale computing systems at DOE.

**TITLE III--SUPPLY**

**SUBTITLE A--RENEWABLES**

**PART I--HYDROELECTRIC**

*Section 3001. Hydropower regulatory improvements*

Section 3001 amends the FPA by designating the FERC as the lead agency to set a binding schedule and coordinate all needed federal authorizations in order to address hydropower permitting backlogs; authorizes the Chairman of the CEQ to resolve any interagency disputes to ensure timely participation and decision-making by the resource agencies; makes improvements

to the trial-type hearing process established in EPACT 2005, including requiring the FERC's existing Administration Law Judges to preside over the hearings; and requires FERC to maintain an official consolidated record of a licensing proceeding and directs the Commission to establish a voluntary pilot program to consider a region-wide approach to hydropower licensing.

*Section 3002. Hydroelectric production incentives and efficiency improvements*

Section 3002 extends the incentives for hydroelectric production and efficiency improvements contained in EPACT 2005 through Fiscal Year 2025.

*Section 3003. Extension of time for a Federal Energy Regulatory Commission project involving Clark Canyon Dam*

Section 3003 reinstates the FERC hydropower license for Clark Canyon Dam in Montana and extends the project start time for construction for three years.

*Section 3004. Extension of time for a Federal Energy Regulatory Commission project involving Gibson Dam*

Section 3004 authorizes the FERC to extend the project start time for construction of the Gibson Dam in Montana for six years.

## **PART II--GEOTHERMAL**

### **SUBPART A--GEOTHERMAL ENERGY**

*Section 3005. National goals for production and site identification*

Section 3005 provides a Sense of Congress for geothermal energy urging the Secretary of Interior to 'significantly increase' geothermal production from federal lands, while asking the U.S. Geological Survey (USGS) to identify sites capable of producing 50,000 megawatts of geothermal power using the full range of available technologies, within 10 years.

*Section 3006. Priority areas for development on Federal land*

Section 3006 directs the Bureau of Land Management (BLM) to identify high priority areas for geothermal development and to facilitate required leasing and development.

*Section 3007. Facilitation of coproduction of geothermal energy on oil and gas leases*

Section 3007 amends section 4(b) of the Geothermal Steam Act (GSA) of 1970 to allow geothermal development by co-production of electricity from oil and gas leases on federal lands using geothermal technologies.

*Section 3008. Noncompetitive leasing of adjoining areas for development of geothermal resources*

Section 3008 amends section 4(b) of the GSA 1970 to set up a noncompetitive leasing process where existing geothermal leaseholders on federal lands can move to lease adjoining lands administratively without rebidding. The amended section 4(b) sets the fair market value per acre that must be paid to gain such leases, sets minimum and maximum lease prices, lists the standards that must be met by lessees to gain lands, and limits the amount of land that can be acquired without competitive bids.

*Section 3009. Large-scale geothermal energy*

Section 3009 adds a new section 616A to EISA 2007 to authorize the Secretary of Energy to conduct additional types of research involving geothermal energy technologies. The new section defines the specific types of research that may be conducted, details how entities can apply for grants to conduct demonstration projects, and authorizes research into the environmental impacts of such technologies.

*Section 3010. Report to Congress*

Section 3010 requires the Secretary of Energy to report to Congress within three years on the progress made by research into geothermal technologies and requires an additional report every five years thereafter.

*Section 3011. Authorization of appropriations*

Section 3011 provides an authorization of appropriations for Subpart A of Part II of Title III.

**SUBPART B--GEOTHERMAL EXPLORATION**

*Section 3012. Geothermal exploration test projects*

Section 3012 adds a new section 30 to GSA 1970 to allow for the use of a categorical exclusion to NEPA to permit geothermal exploration test wells to be drilled. The new section limits when the exclusion can be in place by acreage and environmental impacts and requires complete restoration of any site within three years, allows the relevant Secretary to deny any exclusion based on 'extraordinary circumstances' as defined by existing regulations, and includes review and public notice provisions.

**PART III--MARINE HYDROKINETIC**

*Section 3013. Definition of marine and hydrokinetic renewable energy*

Section 3013 amends section 632 of EISA 2007 to revise the definition of marine hydrokinetic energy, broadening it beyond only electrical energy.

*Section 3014. Marine and hydrokinetic renewable energy research and development.*

Section 3014 amends both EPACT 2005 and EISA 2007 to revise DOE's authorizations for research, development, and demonstration programs and commercial application efforts involving marine hydrokinetic technology to cover current, tidal, wave, and thermal technologies. The amendments define allowable research areas, coordinate research, and allow for support of in-water demonstrations of technologies and for partnerships with international entities, research centers, and businesses.

*Section 3015. National Marine Renewable Energy Research, Development, and Demonstration Centers*

Section 3015 amends EISA 2007 to authorize the National Marine Renewable Energy Research, Development and Demonstration Centers to participate in demonstration projects, support in-water testing, support arrays of technology devices, and serve as information clearinghouses.

*Section 3016. Authorization of appropriations*

Section 3016 amends EISA 2007 to reauthorize federal funding for marine hydrokinetic research.

## **PART IV--BIOMASS**

*Section 3017. Bio-power*

Section 3017 amends section 9008 of the Farm Security and Rural Investment Act of 2002 to: provide research assistance for the development of woody biomass heat and bio-power projects; expands the authority of the Biomass Research and Development Board to consider woody biomass heat and bio-power projects and authorizes grants to support innovation and market development of woody biomass heat and bio-power systems; requires the Secretaries of Agriculture and Energy to set up two working groups to collaborate on project implementation and to share best practices; establishes a low-interest loan program in the Department of Agriculture's Rural Development Office to support the construction of residential, commercial or institutional and industrial woody biomass heat and bio-power systems; and permits loans for woody biomass heat residential, commercial or institutional, and industrial wood energy systems to be made under the Energy Efficiency and Conservation Loan Program under section 2 of the Rural Electrification Act of 1936.

## **SUBTITLE B--OIL AND GAS**

*Section 3101. Amendments to the Methane Hydrate Research and Development Act of 2000*

Section 3101 amends and reauthorizes the Methane Hydrate Research and Development Act of 2000. The amendments authorize basic and applied research to identify, explore, assess, and develop methane hydrate as a commercially viable source of energy and to identify the environmental, health, and safety impacts of such development; authorizes the identification of methane hydrate concentrations in the Gulf of Mexico and Atlantic Basin; authorizes basic and applied research, expanded education and training programs in methane hydrate resource

research, and long-term environmental monitoring and research programs into the effects of the production of methane hydrate reservoirs.

*Section 3102. Liquefied natural gas study*

Section 3102 requires the Secretary of Energy submit within 1 year of enactment a study on the regional economic impacts, including on the manufacturing sector and other issues, of exporting liquefied natural gas. Requires the Secretary to consult the National Association of Regulatory Utility Commissioners and the National Association of State Energy Officials.

*Section 3103. FERC process coordination with respect to regulatory approval of gas projects*

Section 3103 designates the FERC as the lead agency for all Federal authorizations and NEPA compliance related to natural gas transportation; expresses the sense of Congress that all such authorizations should be issued no later than 90 days after applications are deemed complete, and directs FERC to establish an interagency schedule and to refer all interagency disputes to the CEQ for prompt resolution; directs the Commission to maintain consolidated records of all relevant proceedings, and requires other agencies to defer to FERC and to undertake concurrent reviews if possible; requires any agency that does not adhere to the schedule to notify Congress and the FERC of its failure and provide a plan to rectify; and requires the FERC to make publicly available the updated schedule for each application with points of contact, expected date of completion, and explanations of delay.

*Section 3104. Pilot program*

Section 3104 requires the BLM to establish a single-state, 3-year-long pilot program to streamline drilling permits in spacing units wherein the Federal Government does not own or hold more than 25 percent of the subsurface minerals and does not own or hold surface area. Subsection (c) authorizes funding for 10 full-time equivalents and requires a report to Congress after four years.

**SUBTITLE C--HELIUM**

*Section 3201. Rights to helium*

Section 3201(b) requires the expedited completion of environmental reviews for helium-related projects. Section 3201(c) amends the Mineral Leasing Act to repeal the Federal government's reservation of the first right to helium located on leased lands. Section 3201(d) provides the first right of refusal to explore for helium on leased lands to the lessee.

**SUBTITLE D--CRITICAL MINERALS**

*Section 3301. Definitions*

Section 3301 defines key terms used in the subtitle.

### *Section 3302. Policy*

Section 3302 amends section 3 of the National Materials and Minerals Policy, Research and Development Act of 1980 to modernize the congressional declaration of federal mineral policies.

### *Section 3303. Critical mineral designations*

Section 3303 requires the Secretary of the Interior, acting through the Director of the USGS, to establish a methodology for the designation of critical minerals based on the potential for supply disruptions and the importance of their use; and requires the list of critical minerals to be reviewed and updated at least every three years.

### *Section 3304. Resource assessment*

Section 3304 requires the Secretary of the Interior, in coordination with State geological surveys, to identify and quantify critical mineral resources throughout the United States within four years; and requires a report on the status of geological surveying for any mineral on which the United States is more than 25 percent import dependent, but which is not designated as a critical mineral.

### *Section 3305. Permitting*

Section 3305 outlines a series of performance improvements and reporting requirements to reduce delays in the federal permitting process for mines that will produce critical minerals. Section 3305(c) requires the development of a performance metric to evaluate progress made in improving permitting efficiency. Section 3305(e) directs OMB to include mining projects on the Federal Infrastructure Projects Permitting Dashboard. Section 3305(f) requires a report from the Small Business Administration on regulations affecting the critical minerals industry.

### *Section 3306. Federal Register process*

Section 3306 requires Federal Register notices to be completed within 45 days, prepared at the organization level of the agency, and transmitted from the office in which the documents or meetings are held or the activity is initiated.

### *Section 3307. Recycling, efficiency, and alternatives*

Section 3307 directs the Secretary of Energy to conduct a program of research and development to promote the efficient production, use, and recycling of critical minerals throughout the supply chain, and to develop alternatives to critical minerals that do not occur in significant abundance in the United States.

### *Section 3308. Analysis and forecasting*

Section 3308 directs the Secretary of the Interior, in consultation with the EIA, to establish a forecasting capability for critical mineral reliance, production, price, recycling, and related factors; requires a new 'Annual Critical Minerals Outlook;' and protects proprietary data.

*Section 3309. Education and workforce*

Section 3309 provides for a workforce assessment, curriculum development, and programs related to critical minerals at institutions of higher education.

*Section 3310. National geological and geophysical data preservation program*

Section 3310 reauthorizes the program created by section 351 of EPACT 2005.

*Section 3311. Administration*

Section 3311 repeals the National Critical Materials Act of 1984, makes conforming amendments, and provides two savings clauses related to the effect of the critical minerals subtitle.

*Section 3312. Authorization of appropriations*

Section 3312 provides an authorization of appropriations for subtitle D.

## **SUBTITLE E--COAL**

*Section 3401. Fossil energy*

Section 3401 amends section 961(a) of EPACT 2005 to include improvement of conversion, use, and storage of carbon dioxide produced from fossil fuels as an objective in the research, development, demonstration, and commercial application programs for fossil energy at the DOE.

*Section 3402. Establishment of coal technology program*

Section 3402 repeals the existing EPACT 2005 coal programs, and establishes a new coal technology program, which includes programs for research and development, large-scale pilot projects, and demonstration projects. The program objectives are reliable power, conversion efficiencies, carbon capture and storage, reduction of emissions, and water discharge management. The amendment authorizes \$610 million annually from 2017-2020, and \$560 million for 2021.

## **SUBTITLE F--NUCLEAR**

*Section 3501. Report on fusion and fission reactor prototypes*



Section 3501 requires a report on fusion and fission reactor prototypes. Requires DOE to submit a report to Congress that assesses its capability to host privately-funded fusion and fission reactor prototypes at DOE-owned sites.

*Section 3502. Next generation nuclear plant project*

Section 3502 removes the requirement that the project be built in a specific state.

**SUBTITLE G--WORKFORCE DEVELOPMENT**

*Section 3601. 21st Century Energy Workforce Advisory Board*

Section 3601 establishes the 21st Century Energy Workforce Advisory Board at DOE to develop a strategy for the support and development of a skilled workforce, including underrepresented populations, to meet current and future energy sector needs.

*Section 3602. Energy workforce pilot grant program*

Section 3602 establishes a four year pilot program to award competitive grants for job training programs that lead to an industry-recognized credential.

**SUBTITLE H--RECYCLING**

*Section 3701. Recycled carbon fiber*

Section 3701 directs the Secretary of Energy to conduct a comprehensive study on the recycling of carbon fiber and production waste carbon fiber. Upon completion of the study, directs the Secretary to develop a recycled carbon fiber demonstration project.

*Section 3702. Energy generation and regulatory relief study regarding recovery and conversion of nonrecycled mixed plastics*

Section 3702 requires the Secretary of Energy to conduct a study to determine a cost-effective system to convert plastics into material that can be used to generate electric energy, fuels, or chemical feedstocks.

*Section 3703. Eligible projects*

Section 3703 excludes projects that use commonly recycled paper from being eligible for the Title XVII DOE loan guarantee program created by EPACT 2005.

**TITLE IV--ACCOUNTABILITY**

**SUBTITLE A--LOAN PROGRAMS**

*Section 4001. Terms and conditions for incentives for innovative technologies*

Section 4001(a) amends section 1702 of EPACT 2005 to require that borrowers pay no less than 25 percent of the cost of the credit subsidy for a guarantee and directs the Secretary of Energy to provide an estimate or range for the expected cost starting in Fiscal Year 2020. Section 4001(b) amends section 1702 of EPACT 2005 to clarify and reaffirm the current prohibition on subordination of debt. Section 4001(c) increases the transparency of the section 1703 loan guarantee program by establishing a process for the borrower to request the status of their application directly from DOE. Section 4001(d) repeals the temporary loan program under section 1705 of EPACT 2005.

*Section 4002. State loan eligibility*

Section 4002 amends section 1701 of EPACT 2005 to clarify eligibility for State energy financing institutions and establishes terms and conditions for their participation in the Section 1703 loan guarantee program and clarifies that DOE may not use amounts appropriated prior to enactment of this act for the cost of the loan guarantees to state energy financing institutions.

*Section 4003. GAO Study on fossil loan guarantee incentive program*

Section 4003 directs the Comptroller General of the United States to conduct a report on the effectiveness of DOE's advanced fossil loan guarantee program and other incentive programs for advanced fossil energy at the Department.

*Section 4004. Program eligibility for vessels*

Section 4004 authorizes projects for the reequipping, expanding, or establishing of a manufacturing facility in the United States to produce vessels to be eligible for the Advanced Technology Vehicles Manufacturing (ATVM) program established by section 136 of EISA 2007. Section 4004 also prohibits the use of any existing credit subsidy and requires either new appropriations or borrowers to self-pay the credit subsidy associated with projects made eligible under the section.

*Section 4005. Additional reforms*

Section 4005 directs the DOE to issue a rule that specifies energy efficiency improvement standards for the manufacturing, retrofitting, or repowering of vessels made eligible for the ATVM program, and provides the DOE, consistent with its authority under the section 1703 loan guarantee program, authority to charge fees for the ATVM program, including the ability to charge closing fees.

*Section 4006. Department of Energy Indian energy education planning and management assistance program*

Section 4006 reauthorizes the Indian Energy Education Planning and Management Assistance Program first created by the Energy Policy Act of 1992. It makes grants to Indian tribes for energy education, research and development, planning and management needs. It extends the current authorization for such grants from 2016 through 2021.

## **SUBTITLE B--ENERGY-WATER NEXUS**

### *Section 4101. Nexus of energy and water for sustainability*

Section 4101 directs the Secretary of Energy and the Secretary of the Interior to establish an Interagency Coordination Committee, co-chaired by the Secretaries of Energy and the Interior, to identify all relevant energy-water nexus activities across the federal government; enhance the coordination of research and development activities among agencies; gather and disseminate data to enable better practices; explore relevant public-private collaboration; issue a report on the feasibility of establishing an energy-water center of excellence at the National Laboratories, and develop a research and development plan for energy-water nexus related programs. It also directs the Secretaries to establish the Nexus of Energy and Water Sustainability (NEWS) office to provide leadership and administrative support functions for the Interagency Coordination Committee.

### *Section 4102. Smart energy and water efficiency pilot program*

Section 4102 amends Title IX of EPACT 2005 to establish a Smart Energy and Water Efficiency Pilot Program at DOE to provide grants to eligible utilities, municipalities, water districts as well as Indian tribes and Alaska Native villages.

## **SUBTITLE C--INNOVATION**

### *Section 4201. America COMPETES programs*

Section 4201(a) amends section 971(b) of EPACT 2005 to authorize the DOE's Office of Science to carry out research, development, demonstration, and commercial applications activities. Subsection (b) reauthorizes the Advanced Research Projects Agency--Energy (ARPA-E) and provides additional protection for program participants' proprietary information.

### *Section 4202. Inclusion of early stage technology demonstration in authorized technology transfer activities*

Section 4202 amends section 1001 of EPACT 2005 to allow directors of National Laboratories to use technology transfer funds to carry out early stage and pre-commercial technology demonstration activities, to remove technology barriers that limit private sector interest, and to demonstrate potential commercial applications of any research and technologies arising from National Laboratory activities.

### *Section 4203. Supporting access of small business concerns to National Laboratories*

Section 4203 requires the Secretary of Energy to create a website relating to National Laboratory programs available to small business concerns in order to facilitate access to the National Laboratories and the promotion of technology transfer of innovative energy technologies.

### *Section 4204. Microlab technology commercialization*

Section 4204 allows the Secretary of Energy, in collaboration with the directors of the National Laboratories, to establish a microlab program. Section 4204(d) authorizes appropriations of \$50 million for fiscal year 2016.

## **SUBTITLE D--GRID RELIABILITY**

### *Section 4301. Bulk-power system reliability impact statement*

Section 4301 amends section 215 of the FPA to require regional reliability entities to submit to Congress and FERC within six months after enactment, and every three years thereafter, a report that describes the state of and prospects for electric reliability within the region. With respect to major federal rules that may significantly affect the reliable operation of the bulk power system, the regional reliability entities shall submit to FERC, for transmittal to the agency issuing the rule, a statement on the impact of the proposed rule on the reliable operation of the bulk power system--a Reliability Impact Statement (RIS). The Agency issuing the rule shall consider the RIS and include a detailed response in the final rule.

### *Section 4302. Report by transmission organizations on diversity of supply*

Section 4302 requires Transmission Organizations to submit a report to the FERC within six months that identifies, describes, and evaluates the electric capacity resources available to the Transmission Organization; assesses the current and projected state of reliability; and assesses whether and to what extent the market rules of the Transmission Organization meet a series of criteria related to wholesale electric prices, diversity of generation, and availability of self-supply of electric capacity resources by public power entities.

## **SUBTITLE E--MANAGEMENT**

### *Section 4401. Federal land management*

Section 4401 authorizes the Secretary of the Interior to establish a 'cadastre,' or computerized inventory of buildings and other real property (land), including associated infrastructure such as roads and utility systems and pipelines, collected from surveys, maps, charts and inventories that will be stored as digital data. Section 4401(b)(1)(C) authorizes the Secretary to enter into discussions with other federal agencies to utilize the data inventory system to keep track of their holdings, and authorizes the development of cost-sharing agreements so that states, local governments, and Indian tribes may also utilize the inventory system. Section(b)(4) outlines the coordination involved in collecting and creating the geographical (data) information system that will store the inventories. Section 4401(c) requires that the information be kept in a graphically geo-enabled and searchable format available to the public on the Internet, provided that the identity of any buildings and facilities that would impair or jeopardize national security or homeland defense are withheld from public disclosure. Section 4401(d) clarifies that nothing in the provision requires any new appraisals or assessments of federal assets for any purpose.

### *Section 4402. Quadrennial Energy Review*

Section 4402 amends section 801 of the DOE Organization Act to require the President to establish a Quadrennial Energy Review (QER) Task Force comprising high-level agency officials. Requires this task force to conduct a DOE-supported review of national energy policy every four years.

*Section 4403. State oversight of oil and gas programs*

Section 4403 adds a new section requiring the Secretary of the Interior to establish a program through which the BLM and a State, upon the request of the Governor of the State, can enter into a memorandum of understanding to consider the costs and benefits of creating consistent rules and processes governing oil and gas production activities on federal lands in the State.

*Section 4404. Under Secretary for Science and Energy*

Section 4404 makes conforming amendments to the DOE Organization Act and other relevant acts to reflect the current title for this position.

## **SUBTITLE F--MARKETS**

*Section 4501. Enhanced information on critical energy supplies*

Section 4501 amends section 205 of the DOE Organization Act to require EIA, in cooperation with the Commodity Futures Trade Commission (CFTC), to collect data on physical oil inventories and other physical oil assets owned by the 50 largest traders of oil contracts as determined by the CFTC. The new section 205 (p) establishes a Financial Market Analysis Office within EIA.

*Section 4502. Working Group on Energy Markets*

Section 4502 establishes a Working Group on Energy Markets composed of high-level agency officials chaired by the Secretary of Energy. The Working Group shall investigate the effects of financial investment in energy commodities and issue recommendations to the President and Congress if necessary.

*Section 4503. Study of regulatory framework for energy markets*

Section 4503 requires the Working Group on Energy Markets to conduct a study about the pricing of crude oil and refined products and to provide to the Congressional committees of jurisdiction recommendations concerning Federal oversight and regulatory action related to transparency and excessive speculation.

## **SUBTITLE G--AFFORDABILITY**

*Section 4601. E-prize competition pilot program*

Section 4601 amends section 1008 of EPACT 2005 to add an E-prize Competition Pilot Program. The new section 1008(g)(2)(A) requires the Secretary of Energy to establish an e-prize competition or challenge pilot program to implement sustainable community and regional energy solutions that seek to reduce energy costs through increased efficiency, conservation, or technology innovation in high-cost regions. The new section 1008(g)(2)(B) provides for a prize purse to be awarded by the Secretary, in amounts determined by the Secretary, through one or more competitions or challenges.

## **SUBTITLE H--CODE MAINTENANCE**

*Section 4701. Repeal of off-highway motor vehicles study*

Section 4701 repeals an outdated study.

*Section 4702. Repeal of methanol study*

Section 4702 repeals an outdated study.

*Section 4703. Repeal of authorization of appropriations provision*

Section 4703 repeals expired authorizations.

*Section 4704. Repeal of residential energy efficiency standards study*

Section 4704 repeals an outdated study.

*Section 4705. Repeal of weatherization study*

Section 4705 repeals an outdated study.

*Section 4706. Repeal of report to Congress*

Section 4706 repeals an outdated report.

*Section 4707. Repeal of report by General Services Administration*

Section 4707 repeals an outdated report.

*Section 4708. Repeal of intergovernmental energy management planning and coordination workshops*

Section 4708 repeals an outdated requirement for intergovernmental workshops.

*Section 4709. Repeal of Inspector General audit survey and President's Council on Integrity and Efficiency report to Congress*

Section 4709 repeals an outdated Inspector General audit and an outdated report.

*Section 4710. Repeal of procurement and identification of energy efficient products programs*

Section 4710 repeals an outdated program at DOE.

*Section 4711. Repeal of national action plan for demand response*

Section 4711 repeals an outdated report and an expired authorization.

*Section 4712. Repeal of national coal policy study*

Section 4712 repeals an outdated study.

*Section 4713. Repeal of study on compliance problem of small electric utility systems*

Section 4713 repeals an outdated study.

*Section 4714. Repeal of study of socioeconomic impacts of increased coal production and other energy development*

Section 4714 repeals an outdated study.

*Section 4715. Repeal of study of the use of petroleum and natural gas in combustors*

Section 4715 repeals an outdated study.

*Section 4716. Repeal of submission of reports*

Section 4716 repeals outdated reporting requirements.

*Section 4717. Repeal of electric utility conservation plan*

Section 4717 repeals an outdated requirement for electric utilities to submit a plan to Congress.

*Section 4718. Emergency Energy Conservation repeals*

Section 4718 repeals outdated findings and requirements for minimum purchases of gasoline and associated fines in the event of a violation.

*Section 4719. Energy Security Act repeals*

Section 4719 repeals outdated provisions related to biomass and the use of gasohol in federal motor vehicles.

*Section 4720. Nuclear Safety Research, Development, and Demonstration Act of 1980 repeal.*

Section 4720 repeals outdated studies.

*Section 4721. Elimination and consolidation of certain America COMPETES programs*

Section 4721 repeals unused or outdated America COMPETES program authorities and consolidates other duplicative authorities.

*Section 4722. Repeal of the state utility regulatory assistance*

Section 4722 repeals an outdated grant program.

*Section 4723. Repeal of survey of energy saving potential*

Section 4723 repeals outdated reports to the President and Congress.

*Section 4724. Repeal of photovoltaic energy program*

Section 4724 repeals an outdated photovoltaic energy commercialization program for the accelerated procurement and installation of photovoltaic solar electric systems for electric production in Federal facilities.

*Section 4725. Repeal of energy auditor training and certification*

Section 4725 repeals an outdated grant program for training and certification of individuals to conduct energy audits.

*Section 4726. Repeal of authorization of appropriations*

Section 4726 repeals expired authorization of appropriations.

*Section 4727. Repeal of Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989.*

Section 4727 repeals an outdated research program.

*Section 4728. Repeal of Hydrogen Research, Development, and Demonstration Program.*

Section 4728 repeals an outdated research program.

*Section 4729. Repeal of Study on Alternative Fuel Use in Nonroad Vehicles and Engines.*

Section 4729 repeals an outdated study.

*Section 4730. Repeal of Low Interest Loan Program for Small Business Fleet Purchases.*

Section 4730 repeals an outdated low interest loan program.



*Section 4731. Repeal of Technical and Policy Analysis for Replacement Fuel Demand and Supply Information.*

Section 4731 repeals an outdated requirement for technical and policy analysis.

*Section 4732. Repeal of 1992 Report on Climate Change.*

Section 4732 repeals an outdated report.

*Section 4733. Repeal of Director of Climate Protector Establishment.*

*Section 4734. Repeal of 1994 Report on Global Climate Change Emissions.*

Section 4734 repeals an outdated report.

*Section 4735. Repeal of Telecommuting Study.*

Section 4735 repeals an outdated study.

*Section 4736. Repeal of Advanced Buildings for 2005 Program.*

Section 4736 repeals an outdated advanced buildings program.

*Section 4737. Repeal of Energy Research, Development, Demonstration, and Commercial Application Advisory Board.*

Section 4737 repeals an outdated advisory board.

*Section 4738. Repeal of Study on Use of Energy Futures for Fuel Purchase.*

Section 4738 repeals an outdated study.

*Section 4739. Repeal of Energy Subsidy Study.*

Section 4739 repeals an outdated study.

## **TITLE V--LAND AND WATER CONSERVATION FUND REAUTHORIZATION**

*Section 5001. National Park Service Maintenance and Revitalization Conservation Fund*

Section 5001 establishes a National Park Service Critical Maintenance and Revitalization Conservation Fund to address high-priority deferred maintenance needs of the National Park Service with a prohibition on the use of funds for land acquisition.

*Section 5002. Land and Water Conservation Fund*

Section 5002 permanently reauthorizes the Land and Water Conservation Fund (LWCF). Specifies the way in which funds may be allocated; adding two new set-asides: one for hunting, fishing, or other recreational purposes and another for recreation and conservation programs important to states. In making federal land acquisitions, the Secretaries shall consider conservation easements and are required to take into account certain considerations in determining which land or interests in land to acquire.

*Section 5003. Historic Preservation Fund*

Section 5003 permanently reauthorizes the Historic Preservation Fund.