

**American Energy Innovation Act**  
**Section-by-Section Summary**

**Title I – Empowering and Protecting Consumers**

***Subtitle A – Access to Consumer Energy Information***

**Sec. 1001 – Consumer Access to Electric Energy Information**

This bill would direct the Department of Energy to encourage and support the adoption of policies to allow electricity consumers access to their own electricity data.

***Subtitle B – Unfair Trade Practices Prohibition in Distributed Generation***

**Sec. 1011 – Investigation of Distributed Generation**

The Federal Trade Commission would be required to conduct an investigation to determine if interconnection practices are impeding the use of distributed generation. It would require the FTC to report on interconnection practices that substantially injures electric consumers and violates public policies promoting distributed generation. The bill also would require the Federal Trade Commission to determine whether any interconnection practices constitute an unfair trade practice.

***Subtitle C – Enhanced Grid Security***

**Sec. 1021 – Cybersecurity Threats (Emergency Authority)**

This section provides the Secretary of Energy with emergency authority to protect the bulk power system from cybersecurity threats. This section specifies the duration of such emergency authority, and directs the Federal Energy Regulatory Commission (FERC) to adopt regulations to permit entities subject to an emergency order under this section to seek recovery of costs required to implement actions ordered by the Secretary.

**Sec. 1022 – Enhanced Grid Security**

This section designates the Department of Energy as the lead sector-specific agency for cyber for the energy sector.

It creates a program at the Department of Energy to develop advanced cyber applications and technologies for the energy sector to identify and mitigate vulnerabilities, advance security of third party control systems and applications, use the grid architecture to assess risks to the energy sector, perform pilot demonstration projects with the energy sector, and develop workforce curricula to train energy sector related cyber experts. \$65 million is authorized to be appropriated for each of fiscal years 2017-2025.

It creates a program at the Department of Energy to identify and test vulnerabilities of supply chain products, and to develop procurement guidelines for energy sector supply chain components. \$15 million is authorized to be appropriated for each of fiscal years 2017-2025.

It creates a program at the Department of Energy to enhance and test emergency response capabilities of the Department of Energy, the coordination of the Department of Energy with other agencies, the national labs, and private industry. This program would expand cooperation of the Department of Energy with the intelligence community, enhance the Department of Energy's tools to monitor the energy sector, expand industry participation in information sharing, and provide technical assistance to small utilities for assessing cyber maturity level. \$10 million is authorized to be appropriated for each of fiscal years 2017-2025.

It creates a program at the Department of Energy to secure energy networks and applications, including electric, natural gas, and oil exploration, transmission, and delivery. \$10 million is authorized to be appropriated for each of fiscal years 2017-2025.

It leverages existing Department of Energy programs to link together with National labs, electric utilities, manufacturers to carry out cybersecurity programs.

It directs the Department of Energy to perform a study to determine how to expand membership in the Electricity Sector Information Sharing and Analysis Center.

#### ***Subtitle D – Capacity Markets Study***

##### **Sec. 1031 – Government Accountability Office Capacity Markets Study**

This bill would require the Government Accountability Office to study the outcomes of capacity markets in regional electricity markets (in the Midwest, Northeast, Texas, and California) on electricity prices, consumers in general, and new power generation construction.

#### ***Subtitle E – Severe Fuel Supply Emergency Response***

##### **Sec. 1041 – Severe Coal Supply Emergency Response**

This legislation would establish consultation and coordination protocols for the Secretary of Energy, Surface Transportation Board, and the Federal Energy Regulatory Commission to address the federal response to severe coal supply emergencies, which are defined as coal shortages reported to the Department of Energy by electric utilities.

#### ***Subtitle F – Energy Markets***

##### **Sec. 1051 – Enhanced Information on Critical Energy Supplies**

This section would strengthen the Energy Information Administration's ability to collect data on the physical holdings of the fifty largest oil traders and on the commercial storage capacity for

oil and natural gas in the United States. The bill requires the Energy Information Administration to work in cooperation with the Commodity Futures Trading Commission.

It also formally establishes a Financial Market Analysis Office within the Energy Information Administration to study and report on the financial aspects of the energy markets. The office would identify if any additional resources are needed to more fully integrate financial market information into the Energy Information Administration's analyses and forecasts.

#### **Sec. 1052 – Working Group on Energy Markets**

This section would establish an interagency working group that would include the Secretary of Energy, the Secretary of the Treasury, the Chairman of the Federal Energy Regulatory Commission, the Chairman of Federal Trade Commission, the Chairman of the Securities and Exchange Commission, the Chairman of Commodity Futures Trading Commission and the Energy Information Administrator. The purpose of the group would be to investigate the effects of increased financial investment in energy on U.S. energy prices and security, to recommend to the president and Congress any legislation necessary to prevent excessive speculation and minimize the impacts of such speculation in energy commodity markets, and to review energy security implications of developments in international energy markets.

#### **Sec. 1053 – Study on Regulatory Framework for Energy Markets**

The working group shall conduct a study identify the factors that affect the pricing of crude oil and refined petroleum products, including an examination of the effects of market speculation on prices. The group would also review the sufficiency of statutory authority relating to oversight and regulation of energy markets. The study would examine price formation of crude oil and refined petroleum products, relevant international regulatory regimes and the degree to which changes in energy market transparency, liquidity and structure have influenced or driven abuse manipulation, excessive speculation or inefficient price formation.

The study would then be reported to Congress within a year and include recommendations from the working group.

Such sums as needed would be authorized to carry out this section.

#### ***Subtitle G – Transmission***

#### **Sec. 1061 – Report by Transmission Organizations on distributed energy resources and microgrid**

This section requires the Federal Energy Regulatory Commission to require each regional transmission organization (RTO) to submit a report to the Commission 6 months after the date of enactment that evaluates the characteristics, potential, barriers to deployment, and potential changes to operational requirements related to distributed energy resources and micro-grid systems.

## **Sec. 1062 – Net Meeting study guidance**

This section requires the Department of Energy to establish guidance for any studies it conducts on the benefits and costs associated with net metering policies. Net metering policies allow electric power customers with distributed generation resources, often rooftop solar, to receive payments from their utility for any excess power delivered back to the grid.

## **Title II – Modernizing Infrastructure**

### ***Subtitle A – Quadrennial Energy Review Recommendations***

#### **Sec. 2001 – Natural Gas Distribution System Improvements**

This section would develop a grant program at the Department of Energy to provide financial assistance to states to incentivize cost-effective improvements in safety and environmental performance of natural gas distribution systems. \$3.5 billion for fiscal years 2016 through 2019 would be authorized.

#### **Sec. 2002 – Strategy for Mitigating the Risks Associated with the Loss or Disruption of Power from Large Power Transformers**

This section would provide authorization for the Department of Energy to lead an initiative to mitigate the risks associated with the loss of large power transformers. The Department of Energy would lead the initiative in coordination with the Department of Homeland Security, other federal agencies, state agencies, and industry. The Secretary of Energy would be required to submit a report to Congress with recommendations and an implementation plan.

#### **Sec. 2003 – Consolidation of Release Authorities**

This section would amend the authority for release of fuel from the Northeast Home Heating Oil Reserve and from the Northeast Gasoline Supply Reserve so that they are aligned and properly suited to the purpose of a product reserve, as opposed to a crude oil reserve.

#### **Sec. 2004 – Modernization of Strategic Petroleum Reserve Release Authorities**

This provision would update the Strategic Petroleum Reserve (SPR) release authorities to allow the SPR to be used more effectively in case of energy supply emergencies.

#### **Sec. 2005 – Optimization of Emergency Response Capability of Strategic Petroleum Reserve**

This provision would direct the Department of Energy to analyze the appropriate size and configuration of the SPR and after carrying out detailed engineering studies, make infrastructure investments in the SPR and its distribution systems to optimize the SPR's ability to protect the U.S. economy in an energy supply emergency. \$2 billion would be authorized for fiscal year 2016 through 2019.

## ***Subtitle B – Grid Modernization***

### **Sec. 2011 - Definitions**

### **Sec. 2012 - Grid Storage Program**

This section would authorize a Department of Energy research, development, and demonstration program focused exclusively on grid-scale storage, such as the emergence of a new general purpose element of the grid that combines power electronics, advanced optimizing controls, and storage. Technical assistance to states may be provided by the Secretary of Energy for grid storage. The program is authorized at \$500 million over 10 years.

### **Sec. 2013 – Technology Demonstration and the Distribution System**

This section would authorize a Department of Energy demonstration grant program focused on integrating and managing advanced grid technology and services such as smart meters, rooftop solar, electric vehicles, grid storage, micro-grids, transactive energy, and demand response, including a focus on distribution-level components of the grid. Each project funded under the program would be required to include a cybersecurity plan.

### **Sec. 2014 – Micro-Grid Systems for Isolated and Resilient Communities**

This section would establish a demonstration program at the Department of Energy for the development of micro-grids to enhance the resilience of critical infrastructure and would direct collaboration with relevant stakeholders including: government, tribes, states, universities, and the private sector.

### **Sec. 2015 – Electric System Grid Architecture, Scenario Development, and Modeling**

This section would authorize the Department of Energy to develop and provide to states and other energy planners and regulators a set of analytical tools to help guide modernization of the grid.

### **Sec. 2016 – Voluntary Model Pathways**

This section would authorize the Department of Energy to develop detailed illustrative policies that state and regional planners and regulators could adopt to modernize the grid. It would create a steering committee to facilitate the development of these pathways and would authorize the Department of Energy to provide technical and financial assistance.

### **Sec. 2017 – Performance Metrics for Electricity Infrastructure Providers**

This section would authorize the Department of Energy activities intended for use by state and regional planners and regulators. The Department would develop “off-the-shelf” metrics for how to consider and establish valuations for the services provided by advanced grid technology, including electric vehicles, microgrids, and advanced control systems.

## **Sec. 2018 – Distribution Planning**

This section would authorize the Department of Energy to develop open-source distribution planning tools and provide technical assistance to states and regional organizations to develop distribution plans to modernize the grid.

## **Sec. 2019 – Authorization of Appropriations**

The program in sections 2013 through 2018 would be authorized at \$2 billion over 10 years.

## **Sec. 2019 – States Consideration of Resilience**

This section would require utilities and regulatory commissions to consider investments in grid resilience, defined as the ability of the electric grid to adapt to changing conditions and withstand and rapidly recover from disruptions, under the “must-consider” provisions of section 111(d) of the Public Utility Regulatory Policies Act.

### ***Subtitle C – Advanced Manufacturing***

## **Sec. 2021 – Advanced Manufacturing Office**

This section would codify the Advanced Manufacturing Office at the Department of Energy to carry out basic and applied research in energy efficient processes and materials, use new technology or reuse existing processes to achieve efficiency, improve workforce development, and enable domestic manufacturing competitiveness. It authorizes participation with industry as well as directs coordination with other agencies.

## **Sec. 2022 – National Advanced Manufacturing Plan**

The Secretary of Energy would enter into an agreement with the National Academies to develop a national plan for smart and advanced manufacturing. The plan would then be updated every 2 years and submit to Congress a status of implementation. \$25 million in appropriations would be authorized for the study.

## **Sec. 2023 – Advanced Manufacturing Supply Chain Report**

The Secretary of Energy would enter into an agreement with the National Academy of Sciences to develop a report to evaluate the supply chain for advanced manufacturing technologies. The report would include a study the impact of trade on supply chains, how supply chains have changed over the last 25 years, and include recommendations to increase manufacturing competitiveness.

## **Sec. 2024 – Leveraging Existing Agency Programs to Assist Small and Medium Manufacturers**

The Advanced Manufacturing Office would be directed to collaborate with universities and national labs to provide assistance to small and medium manufacturers for implementing smart manufacturing technologies. The Industrial Assessment Centers at the Department of Energy would also be expanded to include technical assistance for smart manufacturing.

## **Sec. 2025 – Advanced Manufacturing Innovation Hubs**

This section would direct the Secretary of Energy to make awards through a competitive grant program for establishing and operating Advanced Manufacturing Innovation Hubs to conduct research, development, and commercial application of advanced manufacturing technologies. Consortia composed of at least two qualifying entities would be eligible to apply to become a hub. The awards made to a hub would be for a period of 5 years and then be subject to review. Best in class technologies in each hub would be eligible for technical assistance in applying for financing from government loan programs including: USDA Rural Energy loans, Small Business Administration loans, and CDFI financing. \$300 million would be authorized for the development of advanced manufacturing hubs.

## **Sec. 2026 – Advanced Materials Prize Competition**

The Secretary of Energy would establish a prize competition to develop advanced materials technology that reduces energy costs of carbon dioxide emissions by at least 20 percent. Up to 5 prizes of \$2 million each would be awarded. In selection the winners, a competition board would evaluate the technology on the amount of energy or carbon dioxide savings, commercial applications, potential for private sector investment, and potential for transform or establish a new industry. \$10 million would be authorized for this program.

## **Sec. 2027 – Pilot Program with Original Equipment Manufacturers and Public Utilities**

This section would direct the Advanced Manufacturing Office to collaborate with original equipment manufacturers and public utilities to develop a pilot program to work with small and medium manufacturers to assess and provide assistance and best practices for implementing energy savings for manufacturing technology.

### ***Subtitle D – Building Better Trucks***

## **Sec. 2031 – Advanced Technology Vehicles Manufacturing Incentive Program**

This legislation would expand the definition of vehicle to allow for Advanced Technology Vehicles Manufacturing (ATVM) loans to be used for the manufacture of medium- or heavy-duty trucks and qualifying components that reduce consumption of conventional motor fuel by

10 percent or greater. The Secretary of Energy would also be directed to charge additional fees to cover administrative expenses of the loan program.

### ***Subtitle E – Vehicle Innovation***

#### **Sec. 2041 – Findings**

#### **Sec. 2042 – Objectives**

The objectives of this subtitle are to develop technologies that improve fuel efficiency and reduce vehicle emissions and reliance on petroleum-based fuels in the U.S., support domestic R&D and manufacturing of advanced vehicles, enable vehicles to move larger volumes of goods and more passengers with less energy and emissions, develop cost-effective technologies for widespread use across various sectors, increase consumer choice, ensure balance and diversity in federal investment, and strengthen public-private partnerships.

#### **Sec. 2043 – Vehicle Research and Development Program**

This section lists the various activities that the Department of Energy will include in advanced vehicle R&D, engineering, demonstration and commercial activities in order to reach the objectives. These activities include: electrification of vehicles, engine efficiency, weight reduction, and thermal management of battery systems.

The Vehicles Office is also directed to coordinate with both the automotive industry, as well as other offices in the Department of Energy. Grants awarded under this section would be awarded to manufacturers who provide the greatest amounts of fuel savings and increase in employment.

The Secretary would also be directed to conduct research into vehicle sensing and communications technology, as well as innovative vehicle manufacturing for batteries and fuel cells.

#### **Sec. 2044 – Medium- and Heavy-Duty Commercial and Transit Vehicles Program**

This section would direct the Department of Energy to carry out a research and development program for medium- and heavy-duty vehicles. The Department of Energy would also be directed to conduct a competitive grant program to demonstrate the integration of technologies on Class 8 truck and trailer platforms with a goal of improving freight efficiency by 50 percent. The Department of Energy would be directed to carry out a program for non-road mobile equipment, including agricultural, construction, sea and air.

#### **Sec. 2045 – Authorization of Appropriations**

This section would authorize \$313,567,000 for fiscal year 2016 and then increase 4 percent each year to fiscal year 2020.

### ***Subtitle F – Carbon Fiber Recycling***

#### **Sec. 2051 – Recycled Carbon Fiber Study**

This legislation would direct the Department of Energy to conduct a study on the technology and energy savings of using recycled carbon fiber and scrap waste carbon fiber. The study would consider: the quantity of recycled carbon fiber to make its use viable, market barriers, financial incentives, potential energy savings, economic benefits, workforce skills needed, and how U.S. Department of Energy can leverage industry partnerships.

#### **Sec. 2052 – Carbon Fiber Recycling Demonstration Project**

The section would direct the Department of Energy to consult with the aviation and automotive industries and existing programs of the Advanced Manufacturing Office to develop a carbon fiber recycling demonstration project.

#### **Sec. 2053 – Authorization of Appropriations**

\$10 million would be authorized for this study and demonstration project.

### ***Subtitle G – Job Creation through Energy Efficient Manufacturing***

#### **Sec. 2061 – Purpose**

The purpose of this subtitle is to encourage widespread deployment of energy efficiency in manufacturing through the establishment of a Financing Energy Efficient Manufacturing Program.

#### **Sec. 2062 – Definitions**

#### **Sec. 2063 – Financing Energy Efficient Manufacturing Program**

This section would establish a Financing Energy Efficient Manufacturing Program that would provide competitive grants to states to fund new or expanded industrial energy efficiency financing programs. All laborers and mechanics employed on projects funded through this program would be subject to Davis-Bacon compliance.

#### **Section 2064 – Authorization of Appropriations**

\$250 million would be authorized for the Financing Energy Efficient Manufacturing Program. Funds provided to states under this section would be provided to the office within the state that is responsible for developing the state energy plan.

### ***Subtitle H – 21st Century Energy Workforce***

#### **Sec. 2101 – Findings**

## **Sec. 2102 – Definitions**

## **Sec. 2103 – National Center of Excellence for the 21st Century Workforce**

The section would establish a 21st Century Energy Workforce Advisory Board. The board would support the design and replication of energy curriculum and workforce training to be implemented in the states. The board would be required to include representation from organized labor, the clean and traditional energy industry, academia, and workforce development. After one year, the board would be required to produce a report on a model energy curriculum.

## **Sec. 2104 – Energy Workforce Pilot Grant Program**

This legislation would establish a competitive workforce grant pilot program at the U.S. Department of Energy. The grant program would be open to public and non-profit applicants and priority would be given to applications that provide job training through a community college or registered apprenticeship program that provides students with an industry recognized credential upon successful completion. Grant awards would not exceed \$1 million and be required to be leveraged with a funding match from non-federal source. Grant applications that prioritize workforce training for veterans, tribes, and provide career support services would be given additional consideration. The Secretary of Energy would be required to report to Congress an annual report on the activities carried out under the program and best practices. \$20,000,000 would be authorized for each of fiscal years 2016 through 2019.

### ***Subtitle I – Solar Installations***

## **Sec. 2111 – Loan and Grant Program for Solar Installations in Low-Income and Underserved Areas**

This section would establish a program at the Department of Energy to provide loans and grants to eligible households for residential solar installations in underserved area with little solar deployment, including the construction of community solar facilities. This section also provides authorizations for job training for solar installation to help with widespread adoption of solar technology. \$200 million would be authorized for each of the fiscal years 2016 through 2030.

### ***Subtitle J – Local Energy Supply and Resiliency***

## **Sec. 2121 – Definitions**

## **Sec. 2122 – Distributed Energy Loan Program**

This section would establish a loan program, which will help states, tribes, utilities, and universities deploy projects that recover or produce useful thermal energy from waste heat or renewable thermal energy sources, generate electricity locally, distribute electricity in microgrids, distribute thermal energy, or transfer thermal energy to building heating and cooling systems. Such sums as necessary would be authorized to carry out this section.

## **Sec. 2123 – Technical Assistance and Grant Program**

This section would establish a grant program to provide technical assistance for identifying, evaluating, planning and designing distributed energy systems. This program helps for-profit and nonprofit entities identify opportunities, assess feasibility, overcome barriers to project implementation, conduct financial assessments, and perform the required engineering. The grants would be issued on a competitive basis with priority given to grants that facilitate the use of renewable energy, strengthen energy infrastructure, or improve the feasibility of microgrids. \$250 million for fiscal years 2016 through 2020 would be authorized.

### *Subtitle K – Geothermal Energy Opportunities*

## **Sec. 2131 – National Goals for Production and Site Identification**

This section expresses the Sense of Congress that within 10 years the Secretary of the Interior should seek to approve a significant increase in geothermal energy capacity on public lands.

It also expresses the sense that the Director of the Geological Survey and the Secretary of Energy should identify sites capable of producing 50,000 megawatts of geothermal power.

## **Sec. 2132 – Priority Areas for Development on Federal Land**

The Director of the Bureau of Land Management shall identify high priority areas for new geothermal development

## **Sec. 2133 – Facilitation of Coproduction of Geothermal Energy on Oil and Gas Leases**

The section allows for oil and gas leaseholders to coproduce geothermal energy without going through an additional competitive lease process.

## **Sec. 2134 – Cost-Shared Exploration**

This section establishes a competitive, cost-shared grant program administered by the Department of Energy. Grants would be awarded to private developers to explore and document new geothermal resources in the United States and develop new tools and methods for geothermal resource identification and extraction. Preference would be given to applicants proposing a variety of settings. The data from all exploratory wells from the grant program would be required to be shared with the Department of Energy and the Department of the Interior for inclusion into public geothermal resource maps.

## **Sec. 2135 – Use of Geothermal Lease Revenues**

This section would use any revenue from new geothermal leases to be spent on approving new geothermal capacity on federal lands and identifying sites capable of producing geothermal power as set forth in Section 2011. This section would also allow the Secretary of Energy to

authorize the expenditure or transfer of funds that are necessary to other cooperating federal agencies.

### **Sec. 2136– Noncompetitive Leasing of Adjoining Areas for Development of Geothermal Resources**

This section would authorize noncompetitive leasing for geothermal on federal lands adjoining lands already producing geothermal energy, reducing the ability of speculative bidders to lock up the perimeter of reservoirs.

### **Sec. 2137 – Large-Scale Geothermal Energy**

This section would authorize a research, development, and deployment program specifically for large scale (defined as 10 megawatts) space or process heating using direct heat from geothermal resources or heat pumps.

### **Sec. 2138 – Report to Congress**

Three years after the date of enactment and every 5 years after, the Secretary of Energy and Secretary of the Interior shall provide to Congress a report on the progress of reaching the goals in Section 2101.

### **Section 2139 – Authorization of Appropriations**

Such sums as necessary would be authorized to carry out this subtitle.

### ***Subtitle L – Clean Coal Technology Research***

### **Sec. 2141 – Fossil Energy**

This section would expand the research, development, and deployment objectives of the Department of Energy's Office of Fossil Energy by adding an explicit objective to improve the conversion, use, and storage of carbon dioxide from coal and other fossil fuels.

### ***Subtitle M– Long-Term Contracts***

### **Sec. 2151 – Contracts for Federal Purchases of Energy**

This section would authorize the federal government to enter into up to 30-year contracts for the acquisition of renewable energy or energy from cogeneration facilities. 90 days after enactment, the Secretary shall publish a standardized energy purchase agreement that agencies may use to acquire renewable energy or energy from cogeneration facilities.

The Secretary shall also provide technical assistance to agencies for implementing these contracts.

***Subtitle N – Promoting Renewable Energy with Shared Solar***

**Sec. 2161 – Provision of Interconnection Service and Net Bill Service for Community Solar**

This section amends Section 111(d) of the Public Utility Regulatory Policies Act (PURPA) to allow community solar projects up to 2 megawatts in size to be connected to their power distribution system. The bill allows the electricity produced by the community solar facility to be credited directly to each of the consumers that owns a share of the system.

***Subtitle O – Report on Low and No Carbon Technologies***

**Sec. 2171 – Report**

One year before the date of on which the new tax provisions in this legislation are set to expire, the Secretary shall submit to Congress a report on if a continuation of the credits in needed to reach the carbon goal in Sec. 3001. The report would consider new technologies and regional differences, as well as other incentives.

***Subtitle P – Loan Programs***

**Sec. 2181 – Terms and Conditions for Innovative Technologies**

The section would amend the Department of Energy Section 17 loan programs by ensuring borrowers pay for at least 25 percent of any appropriated credit subsidy, would require the Department of Energy to provide an estimate for the expected credit subsidy cost to the borrower. It would also reaffirm a prohibition on subordinating debt, establish a process for borrowers to receive information on the status of their application, and repeals the temporary loan program under Section 17 of EPACT 2005.

**Sec. 2182 – Department of Energy Loan Program Reform**

The section would allow state financing entities to obtain loan guarantees through the DOE loan programs. The state financing entity could then lend to projects in their state. Importantly, while other applicants to DOE's 1703 loan program only qualify if their project is innovative, this section allows state financing entities to lend to technologies and projects that are not innovative, but still avoid, reduce or sequester air pollutants or greenhouse gasses. This change opens the program to a host of non-innovative, but still efficient, clean, or renewable projects that otherwise have had difficulty obtaining financing. In lending to a state entity, DOE must still follow all other requirements of the 1703 program, including providing a guarantee of only 80 percent of the project cost to the state.

The section does not include any additional authorization of appropriations, nor does it provide any additional loan guarantee authority. All loan guarantees must be made under the remaining \$24 billion in 1703 authority

## **Title III – Cutting Pollution and Waste**

### ***Subtitle A – Carbon Savings Goal***

#### **Sec. 3001 – Carbon Savings Goal**

This section would state the policy of the United States to reduce its greenhouse gas emissions by at least 2 percent each year through 2025 and the United States should use its leadership to address climate change by securing commitments from other major carbon emitting countries to meet their own carbon pollution reduction targets.

### ***Subtitle B – American Energy Efficiency***

#### **Sec. 3011 – Energy Efficiency Resource Standard for retail electricity and natural gas suppliers**

This section would set parameters for a national energy efficiency resource standard (EERS) that would be administered by each state. The Department of Energy would be required to issue a rule to implement the EERS within one year of passage of this legislation.

Under this national EERS, retail electric and gas utilities would need to reduce their energy use by 1 percent in 2017. The standard would increase each year and require a 20 percent reduction by 2030. After 2030, the Department of Energy would then be required to issue new standards for the next 10 years. States that exceed the standards for a given year would be able to apply the additional savings to future years.

Electricity and natural gas retailers would be required to submit a report to the Department of Energy to verify that performance standards have been met. Fines would be issued to retailers that are non-compliant. The Department of Energy would also review implementation plans of each state every 2 years. States would also be allowed to issue more stringent energy efficiency requirements.

### ***Subtitle C – Energy Efficiency Retrofit Program***

#### **Sec. 3021 – Energy Efficiency Retrofit Program**

This section would establish a pilot program at the Department of Energy to award grants for retrofitting non-profit buildings with energy efficiency improvements. Applicants would be given priority based on energy savings, cost-effectiveness, financial need, and matching funds. Grants issued would be required to be matched by at least 50 percent from non-federal funds. Grants would not exceed 50 percent of the energy efficiency improvement and \$200,000.

\$10 million for each fiscal year 2016 through 2020 would be authorized.

*Subtitle D – Weatherization Enhancement and Local Energy Efficiency Investment and Accountability*

**Sec. 3031 – Findings**

**Sec. 3032 – Reauthorization of Weatherization Assistance Program**

This section would reauthorize the Weatherization Assistance Program from 2016 through 2020 with an authorization level of \$450 million for each fiscal year.

**Sec. 3033 – Grants for New, Self-Sustaining, Low Income, Single Family, and Multifamily Housing Energy Retrofit Model Programs to Eligible Multi-state Housing and Energy Nonprofit Organizations**

The section would direct the Department of Energy to make competitive grants to non-profits to help low-income homes make energy efficient improvements and retrofits. The grants could be used for energy efficiency audits, retrofits, materials and supplies, organizational capacity, management and administration, oversight and monitoring, quality control, data collection, and technical assistance.

If more than \$225 million is provided for the Weatherization Assistance Program in a fiscal year, the maximum grant would be \$5 million. If less than \$225 million is provided Weatherization Assistance Program, the maximum grant would be \$1.5 million.

The Secretary of Energy would be required to submit to Congress an annual report on the program and savings produced.

The Secretary would be authorized to use funding from the Weatherization Assistance Program to carry out the grant program for fiscal years 2016 through 2020. It would authorize 2 percent of the WAP program funding if the WAP program is less than \$225 million; 5 percent if the amount for WAP is more than \$225 million, but less than \$260 million; 10 percent if the amount is more than \$260 million, but less than \$400 million and 20 percent if the WAP program is funded at \$400 million or more.

**Sec. 3034 – Standards Program**

This section sets out standards for accreditation for contractors using Weatherization Assistance Program funds. Volunteers do not need to be accredited. This section also directs the Secretary of Energy to use training and technical assistance funds to help with the certifications required for contractors.

**Sec. 3035 – Reauthorization of State Energy Program**

This section would reauthorize the State Energy Program for fiscal years 2016 through 2020 at \$75 million for each fiscal year.

## *Subtitle E – Utility Energy Service Contracts Improvement*

### **Sec. 3041 – Findings**

### **Sec. 3042 – Utility Energy Service Contracts**

This section would allow a federal agency to enter into a utility energy service contact for up to 25 years. The contract shall include requirements for measurement, verification, and guarantees of savings.

## *Subtitle F – State Residential Building Energy Efficiency Loan Pilot Program*

### **Sec. 3051 – State Residential Building Energy Efficiency Loan Pilot Program**

This section establishes a program to provide loans to a state, territory, or tribal organization for establishing or expanding programs to providing financing for energy efficiency upgrades to residential buildings. The Secretary of Energy would be required to consult with stakeholders in establishing the program.

In selecting eligible applications to receive loans, the Secretary shall ensure: innovative and established energy efficiency upgrades are supported, upgrades are conducted with best practices, regional diversity, energy advisor programs, and participation by low-income families. Applications would be evaluated on: reduction in energy use, creditworthiness, consumer friendliness of repayment system, best practices, availability of matching funds, and coordination with other programs. Loans terms would not exceed 35 years and the interest rate would be comparable to Treasury securities of similar maturity. There would be no penalty for early repayment and all funds not used must be returned to the Treasury.

Loans recipients would use funds to establish or expand energy financing programs for energy efficiency upgrades for residential buildings. The financing program would be administered by the state or program entity or combination of both. Funds could be used for credit enhancement, revolving loan funds, or any other program that helps meet energy efficiency upgrades. Applications would be able to use their funds to provide technical assistance. Interest rates charged to homeowners must be fixed and not exceed interest rate paid by the entity to the Treasury.

Eligible entities who receive loans would be required to submit a report to the Secretary regarding loan performance. The Secretary would then be required to report to Congress on the performance of the program.

The Secretary is authorized a total of \$100 million to carry out the program, including: \$25 million to the Secretary for administrative and financial support costs; \$37.5 million for energy advisor programs, and \$37.5 million for State administrative costs.

### *Subtitle G – Smart Energy and Water Efficiency*

#### **Sec. 3061 – Smart Energy and Water Efficiency Pilot Program**

This section would establish a pilot program for municipalities, utilities, water district, or any other authority that provides water, wastewater, or water reuse services, to demonstrate novel and innovative technology-based solutions to increase the energy efficiency and water conservation in water, wastewater, and water reuse systems.

Three to five grants would be authorized to be issued under the program. The selection criteria for the program include: energy and cost savings, the novelty of the technology, the degree to which the project integrates next-generation sensors, software, analytics, and management tools, cost-effectiveness, and if the project can be completed in five years. The projects will be evaluated on these goals and the results will be reported to Congress.

The Secretary of Energy would be required to provide technical assistance and make available best practices. The funding of not less than \$7.5 million is to come from the amounts made available to the Secretary.

### *Subtitle H – Regional Energy Partnerships*

#### **Sec. 3071 – Definitions**

#### **Sec. 3072 – Regional Energy Partnerships**

This bill would help develop regional energy partnerships to coordinate and promote national, regional, and state energy goals, especially goals focused on advancing resilient energy systems to mitigate risks and prepare for emerging energy challenges.

Technical Assistance may be provided through the Departments of Energy and the Interior for the development and improvement of regional energy strategies; investment in energy infrastructure, technical capacity and workforce development; structural transformation of the financial, regulatory, legal and institutional systems that govern energy planning, production, and delivery; and public-private partnerships for the implementation of regional energy strategies and plans.

The Secretaries of Energy and the Interior would be authorized to enter into cooperative agreements between the parties involved in a region. Staff with technical and regulatory issue experience appropriate for the cooperative agreements will be assigned to the cooperative agreements to assist the parties in developing and implementing a regional energy strategy and building local capacity to make the region self-sustaining at the end of the cooperative agreement.

The comprehensive frameworks built under the cooperative agreements would take into account all factors, including energy efficiency, supply, storage and delivery, regulatory policies, and

market mechanisms. Grant awards would be allowed to use to capitalize green banks or loan guarantees or for building facilities or funding capital projects.

States and Indian tribes that have entered into cooperative agreements would be eligible to receive grants to conduct technical analyses, resource studies, and energy system baselines, convene and educate stakeholders on emerging energy issues, build decision support and planning tools, and improve communication between and participation of stakeholders.

### **Sec. 3073 – Authorization of Appropriations**

The authorization for the program would be \$250 million to remain available until expended, including: \$120 million for up to 6 base grants of up to \$20 million for each cooperative agreement; \$100 million for bonus grants of up to \$5 million for each partner in selected cooperative agreements; and \$30 million for staffing and to share best practices identified by parties under the cooperative agreements. Funding would be awarded to State Energy Offices.

### ***Subtitle I – Energy Productivity Innovation Challenge***

#### **Sec. 3081 – Definitions**

#### **Sec. 3082 – Phase 1: Initial Allocation of Grants to States**

This section would require the Secretary of Energy to invite states to participate in an electric and thermal energy productivity challenge to attempt to double electric and thermal energy productivity by January 1, 2030. Up to 25 states would be eligible to receive grants of between \$500,000 and \$1.75 million by submitting a revised state energy conservation plan that demonstrates how the state intends to increase its electric and thermal energy productivity. These plans must include: establishing a statewide energy use and potential resources baseline for 2010, describing how energy savings will be monitored and inflation adjusted, stating how the plan will achieve its energy savings and demand reduction goals, describing how non-federal energy efficiency investments will be leveraged with federal funding, and assuring that the plan will not cause cost shifting among utility customer classes or adverse impacts to low-income populations.

The Secretary of Energy would then rank state applications based on their plans and other factors, such as geographic diversity, to determine the amount of funding they will receive to initiate their plans. The states may use these grants to expand policies and programs that advance energy efficiency, retrofits for public and private buildings, residential retrofits, and efficiency in the electric utility sector.

#### **Sec. 3083 – Phase 2: Subsequent Allocation of Grants to States**

Under this section, no later than 18 months after receiving a grant under Phase 1, each state may report to the Secretary on their performance and how additional funds would support the proposed efforts.

The Secretary would then select up to six states to receive not more than \$15 million in additional funds to carry out their further plans. The grants would be awarded based on performance of the state under the Phase 1 grant, potential of program, geographic diversity, amount of non-federal matching funds, plans for continuation after grant, inclusion of diverse groups.

#### **Sec. 3084 – Allocation of Grants to Indian Tribes**

This section would create a similar grant program for Indian tribes to submit plans to participate in an electric and thermal energy productivity challenge. An individual tribe would not be able to receive more than 20 percent of the total amount available for the program.

#### **Sec. 3085 – Administration**

The Secretary of Energy would consult with the National Research Council to evaluate performance and effectiveness of the program.

Grants made to states would work in coordination with the State Energy Conservation Programs. A grant shall not be provided to a state if the amount of funding provided to all state grantees under the base formula for the fiscal year under Part D of Title III of the Energy Policy and Conservation Act is less than \$50 million.

#### **Sec. 3086 – Authorization of Appropriations**

This section would authorize \$100 million for the period of fiscal years 2016 and 2017. 30 percent shall be used for Phase 1 grants, 61 percent for Phase 2 grants, 4 percent for Indian Tribal grants, and 5 percent for the Secretary of Energy for carrying out this program.

#### ***Subtitle J – Smart Buildings***

#### **Sec. 3091 – Definitions**

This section would require the Secretary of Energy to conduct a survey of privately-owned smart buildings across the nation, including commercial buildings and buildings owned by nonprofit organizations and institutions of higher education. The Secretary shall then select at least one building each from an appropriate range of building sizes and types surveyed. These buildings will be evaluated by the Secretary for costs and benefits, and an assessment of which advanced building technologies are the most cost-effective and show the most promise for increasing building energy savings, increasing service performance to the buildings' occupants, and reducing environmental impacts.

It would establish a program to implement smart building technology at one or more buildings under each of several federal agencies to demonstrate the costs and benefits of smart buildings and evaluate the cost and benefits of these buildings.

As part of the Better Buildings Challenge, this section would establish a smart building accelerator to demonstrate policies and approaches that accelerate the transition to smart buildings.

It also would require the Secretary to conduct research and development focused on eliminating barriers to the integration of advanced building technologies and accelerating the transition to smart buildings. The bill includes a list of required research areas, including: physical components, reducing the cost of key components, improving data management, and business models.

The Secretary of Energy would be required to submit to Congress within 18 months after passage of this legislation a report on the buildings surveyed and recommendations to accelerate the transition to smart buildings.

### ***Subtitle K – Energy Study***

#### **Sec. 3101 – Energy Information Study**

This bill would require the Secretary of Energy, within two years of enactment, to submit to Congress a study on the impact of state and local performance benchmarking and disclosure policies for commercial and multifamily buildings and programs, and on programs and systems in which utilities provide aggregated information regarding whole building energy consumption and usage information to the owners of multitenant commercial, residential, and mixed-use buildings. The study must also identify best practice policy approaches that have resulted in the greatest improvements in building energy efficiency. Additionally, the study must consider the compliance rates and benefits and costs of the policies and programs on building owners, tenants, utilities, and other parties; and other factors.

#### **Sec. 3102 – Grants to Utilities**

This section would allow the Secretary to make competitive awards to utilities, utility regulators, and utility partners to develop and implement effective and promising programs to provide aggregated whole building energy consumption information to multitenant building owners.

\$5 million for each fiscal year 2016 through 2020 would be authorized for this program.

#### **Sec. 3103 – Grants to States and Units of Local Government**

The section would allow the Secretary of Energy to make competitive awards to states and local governments to develop and implement effective and promising benchmarking and disclosure policies for commercial and multifamily buildings.

\$5 million for each fiscal year 2016 through 2020 would be authorized for this program.

### **Sec. 3104 – Input from Stakeholders**

The Secretary of Energy shall seek input from stakeholders on these programs.

### **Sec. 3105 – Report**

Two years after enactment and every two years after, the Secretary of Energy shall submit a report to Congress on the progress of these programs.

### ***Subtitle L – Alternative Fueled Vehicles***

#### **Sec. 3111 – Alternative Fueled Vehicle Fleets and Infrastructure**

This section would expand the authorization for the federal government to use Energy Saving Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC) to support the purchase of alternative fueled vehicles and developing the fueling or charging infrastructure required to support such vehicles.

### ***Subtitle M – Outer Continental Shelf***

#### **Sec. 3121 – Repeal of Outer Continental Shelf Deep Water and Deep Gas Royalty Relief**

This section would repeal Sections 344 and 345 of the Energy Policy Act of 2005.

The Secretary of the Interior would not be required to provide for royalty relief in the lease sale terms with the first lease sale held after the date of enactment of this legislation for which a final notice of sale has not been published.

#### **Sec. 3122 – Disposition of Qualified Outer Continental Shelf Revenues from 181 Area, 181 South Area, and 2002 – 2007 Planning Areas of Gulf of Mexico**

This section would repeal Section 105 of the Gulf of Mexico Energy Security Act (GOMESA) and direct 87.5 percent of outer continental shelf (OCS) drilling revenue to go to the general fund of the U.S. Treasury and 12.5 percent to the Land and Water Conservation Fund.

Any amount received by the United States as rentals or royalties from OCS leases under GOMESA would be used for deficit reduction.

### ***Subtitle N – Venting and Flaring of Gas***

#### **Sec. 3131 – Regulations to Prevent or Minimize Venting and Flaring of Gas**

This section would require the Secretary of the Interior to issue regulations within 180 days after enactment to prevent or minimize venting and flaring of gases in oil and natural gas production on onshore and offshore federal land, and to promote the capture and beneficial use of gases that might otherwise be flared during oil and natural gas production.

This section would also require royalties to be paid on natural gas that is vented and flared.

### **Sec. 3132 – Assessment of Venting and Flaring of Gas in Production Operations in United States**

This section would require a Government Accountability Office report within 18 months of enactment to assess venting and flaring operations on federal land onshore and offshore, including an estimate of the volume of gas vented or flared each year.

### **Sec. 3133 – Regulations**

The Secretary of the Interior would issue regulations to define vent, venting, flare, and flaring for the purposes of this subtitle.

### ***Subtitle O – Production Incentive Fee***

#### **Sec. 3151 – Production Incentive Fee**

This section would direct the Secretary of the Interior to issue regulations to establish a per-acre fee for wells that produce oil and/or natural gas less than 90 days annually.

For onshore land, the fee would be \$4 per acre for each of the first three years, \$6 per acre for the fourth year, \$8 per acre for the fifth year and each year after.

For offshore land, the fee would be \$4 per acre for the third, fourth, and fifth years of the lease, \$6 per acre in the sixth year of the lease, \$8 per acre for the seventh year and each year after.

The revenue received would fund the Department of the Interior oil and natural gas inspections, permitting and enforcement. The Secretary of the Interior may also issue regulations to prevent evasion of fees.

### ***Subtitle P- Reauthorization of Desalination Act***

#### **Sec. 3151 – Reauthorization of Desalination Act**

This section would reauthorize and amend the Water Desalination Act of 1996 to: (1) prioritize federal research and development funding on reducing the energy consumption, costs, and environmental impacts of desalination and associated technologies; and (2) prioritize demonstration projects in drought stricken communities. To support these activities, the bill authorizes \$10 million a year between fiscal years 2016 and 2020. This section also directs the White House Office of Science and Technology Policy to develop a coordinated strategic plan for desalination R&D across the federal government. The section further directs the Administrator of the Environmental Protection Agency to develop a program to provide federal financial assistance to support the design of desalination facilities and authorizes \$10 million a year to be appropriated between 2016 and 2020. Finally, the section directs the Secretary of the

Navy to submit a report to Congress on the application of desalination technology for defense and national security purposes.

#### **Sec. 3152 –Promoting Water Efficiency With Watersense**

This section establishes a “WaterSense Program” within the Environmental Protection Agency to promote water efficient products, buildings, landscapes, facilities, processes, and services to be used with the EPA Energy Star label if appropriate. The bill authorizes \$5 million a year to be appropriated to support this effort.

#### **Sec. 3153 Increasing Opportunities for Agricultural Conservation**

This section directs the Department of Interior to enter into voluntary agreements with public water agencies and entities that receive water from Bureau of Reclamation projects to implement water conservation programs.

#### **Sec. 3154 Support for Innovative Water Supply and Conservation Technologies**

This section authorizes the Administrator of the Environmental Protection Agency to award grants on a competitive basis to local entities, non profits, business, and tribes to finance research and development to promote the development of innovative water supply and conservation technologies.

### **Title IV – Investing in Research and Development**

#### **Sec. 4001 – Basic Research**

This section would authorize basic research at the Department of Energy at \$15 billion for each fiscal year from 2016 through 2020.

#### **Sec. 4002 – Advanced Research Projects Agency- Energy**

This section would authorize the Advanced Research Project Agency- Energy (ARPA-E) at \$1 billion for each fiscal year from 2016 through 2020.

This section would also direct ARPA-E to coordinate with national labs and other Department of Energy programs. It would also direct ARPA-E to not provide funding for a project unless it demonstrates sufficient attempts to secure private financing or indicates the project is not independently commercially viable.

## **Title V – Investing in Clean Energy**

### ***Subtitle A – Clean Energy Tax Reform***

#### **Secs. 5001 and 5002 – Clean Electricity Production and Investment Credits**

**Current Law:** There are several different incentives for the production of clean electricity, including the section 45 production tax credit and section 48 investment tax credit, along with provisions for accelerated depreciation, tax-favored bonds, and allocated credits. This patchwork of incentives features several temporary provisions with differing rules and expirations, provides different incentive levels for technologies with similar emission profiles, and omits several new and emerging technologies.

**Proposal:** The bill creates a performance-based incentive that would be neutral and flexible between clean electricity technologies. Taxpayers are able to choose between an investment tax credit (ITC) and a production tax credit (PTC), which are scaled based on the carbon emissions of the electricity generated – measured as grams of carbon dioxide equivalents (CO<sub>2e</sub>) emitted per kilowatt hour (KWh) generated. Power plants that emit at least 25 percent less carbon than the current nationwide average begin qualifying for a small incentive, which increases for power plants that are progressively cleaner. Zero emission facilities qualify for the maximum credits – a 2.3 cents per KWh hour PTC or a 30 percent ITC. The PTC is available for the 10 years after a facility is placed in service.

For combined heat and power systems (CHP), the emissions rate is calculated using both electrical and useful thermal energy. Under the proposal, the British thermal units (BTUs) of useful thermal energy in a CHP system are converted to kilowatt hours using the facility's heat rate (the number of BTUs required to generate 1 KWh). These converted KWhs are also accounted for as production for purposes of the PTC.

Power plants placed in service before January 1, 2018 that add energy storage technology or carbon capture are able to claim the maximum 30 percent ITC for those investments, which can enhance grid stability and reduce the emissions of current fossil fuel power plants. Storage technologies include hydroelectric pumped storage, thermal energy storage, fuel cells, and batteries, among others.

Homeowners wishing to install onsite generation – including rooftop solar or small wind turbines – are eligible for an investment tax credit under the proposal. This credit is calculated in the same manner as the ITC for business taxpayers, up to a maximum of 30 percent of the installation cost for zero emitting distributed generation. Labor and other installation costs are included for purposes of the credit for homeowners.

Carbon emission rates are determined by the Treasury Department and Environmental Protection Agency (EPA), which are directed to create safe harbor emission rates for similar technologies. The legislation simplifies the task for these agencies by allowing similar technologies (no more than 10% emissions profile difference) to be grouped together. The credits are set to phase out when emission targets are achieved: when EPA and the Department of Energy (DOE) certify that

the electric power sector emits 28 percent less carbon than 2005 levels, the incentives will be phased out over five years. Facilities will be able to claim a credit at 75 percent value in the first year, then 50 percent, then 25 percent, and then 0 percent.

### **Sec. 5003-5010 – Temporary Extensions of Current Law**

To provide transition relief, the legislation would extend through December 31, 2017, current expired and expiring clean energy provisions, including the current production tax credit (PTC) and investment tax credit (ITC). These extensions also include a reauthorization of the Sec. 48C advanced energy manufacturing credit with a \$5 billion allocation.

### ***Subtitle B – Clean Fuel Tax Credits***

#### **Sec. 5011 – Clean Fuel Production Credit**

**Current Law:** Under current law, there are numerous incentives for various alternative fuels and fuel mixtures, including income and excise tax credits ranging from \$0.50 to \$1.01. These credits are for a few specified types of fuels, including natural gas and propane, hydrogen, cellulosic biofuels, and biodiesel. These incentives are largely temporary and are currently expired.

**Proposal:** The bill creates a technology-neutral incentive for the domestic production of renewable transportation fuels. The level of the incentive depends on the lifecycle carbon emissions of a given fuel. Lifecycle emissions take into account the “well to wheel” emissions profile, from production of the feedstock for the fuel through to its use in a vehicle. Fuels begin receiving incentives if their lifecycle emissions are at least 25 percent less than the U.S. nationwide average in 2015. Zero and net-negative emission fuels qualify for the maximum incentive of \$1.00 per energy equivalent of a gallon of gasoline. Qualifying production is restricted to production in the United States of fuel that is used or sold.

The bill provides a 10 year production credit for facilities that are placed in service on or after January 1, 2018. Facilities placed in service prior to January 1, 2018 would be able to qualify for a 10 year credit stream beginning on January 1, 2018.

The Treasury Department and the EPA are required to establish safe harbors for fuels that are produced using similar feedstocks and production pathways. The legislation simplifies the task for these agencies by allowing similar technologies (no more than 10% emissions profile difference) to be grouped together. For emerging fuels that are produced using feedstocks or pathways that have not been previously reviewed, Treasury and EPA are directed to offer provisional guidance for credit rates no later than one year after a taxpayer requests approval of the pathway. Final guidance is required no later than two years after request.

### **Sec. 5012 – Temporary Extensions of Current Law**

To provide transition relief and time for administrative coordination between the Treasury Department, Environmental Protection Agency, and Department of energy, the proposal provides

an extension, through December 31, 2017, of current expired and expiring clean energy provisions.

### ***Subtitle C- Energy Efficiency Investments***

#### **Secs. 5021-5022 – Energy Efficient Homes Credit**

**Current Law:** Under current law there are three major incentives for residential energy efficiency. One provides incentives to contractors for new homes that are at least 50 percent more efficient than 2003 International Energy Conservation Code standards, and two others provide incentives to homeowners for various improvements to their homes. These provisions provide incentives for specific types of improvement, using standards that are largely out of date. All of these provisions are also temporary and are either expired or expiring in the next two years.

**Proposal:** The bill creates performance-based incentives for new and existing homes. The credits are based on the overall level of energy reduction. For new residences, buildings that are at least 25 percent more efficient than the 2012 International Energy Conservation Code baseline receive a minimum \$1,500 tax credit. More efficient homes receive a larger credit, up to a maximum of \$3,000. The credit is provided to the contractor who builds and sells the residence.

Homeowners looking to pursue deep energy retrofits can qualify for a \$1,750 credit if they achieve a 20 percent energy reduction. Greater efficiency gains receive larger credit amounts, up to a maximum of \$6,500. The energy reduction is measured based on third-party modelers who are certified by the Treasury Department and the Department of Energy. The reduction is based on the energy use of the residence prior the retrofits as compared to the energy use modeled after the retrofits are placed in service. Onsite electrical and thermal generation from microturbines, fuel cells, or other distributed generation sources, like rooftop solar panels, along with residential energy storage, can be taken into account for purposes of calculating energy reduction. However, the provision includes an anti-double-dip clause whereby taxpayers cannot claim both the clean electricity incentive previously mentioned and the energy home incentive on the same investment.

#### **Secs. 5023 - 5024 – Energy Efficient Commercial Buildings Credit**

**Current Law:** Under current law, there is one major incentive for energy efficiency in commercial buildings, the section 179D energy efficient commercial buildings deduction, which provides a per square foot tax deduction for certain energy efficient building components. There is no incentive for commercial building retrofits. This provision expired on December 31, 2014.

**Proposal:** The bill creates a performance-based incentive for increased energy conservation in new commercial buildings and for retrofits of commercial buildings. Buildings reaching minimum conservation thresholds receive a small deduction, which increases for more efficient buildings. Non-taxed entities, including federal, state, local, and tribal governments, and non-profits, are allowed to allocate deductions to the taxpayer primarily responsible for designing the efficiency improvements.

New commercial buildings that are at least 25 percent more efficient than ASHRAE 90.1-2013 standards can receive a \$1.00 per square foot tax deduction, which increases with larger efficiency gains, up to a maximum of \$4.75 per square foot. Retrofitted commercial buildings can qualify for a \$1.25 per square foot deduction for a 20 percent reduction in energy use – greater energy reductions qualify for larger incentives, up to a maximum of \$9.25 per square foot.

The energy reduction from retrofits is measured based on third-party modelers who are certified by the Treasury Department and the Department of Energy. The reduction is based on the energy use prior to the retrofits as compared to the energy use modeled after the retrofits are placed in service. Onsite electrical and thermal generation from microturbines, fuel cells, or other distributed generation sources, like rooftop solar panels, along with energy storage, can be taken into account for purposes of calculating energy reduction

#### ***Subtitle D – Clean Energy Bonds***

##### ***Sec. 5031- Clean Energy Bonds***

Under current law, certain clean and renewable energy facilities and conservation improvements can qualify for tax-preferred debt instruments. These instruments include Qualified Energy Conservation Bonds, Clean Renewable Energy Bonds, tax-exempt bonds for public power providers, and tax-exempt private activity bonds for certain green buildings, among others.

Building on current law, the bill creates a tax credit bond for facilities producing clean electricity or clean transportation fuels. The credit is worth 28 percent of the interest on the bond. The instrument is available to state, local, and tribal governments, in addition to public power providers and electric cooperatives. These entities have the option of offering the bond as a tax credit bond, or of electing to offer the bond with a direct pay option, where the Treasury Department reimburses the bond issuer at a rate of 28 percent of the interest cost.

The bonds are available for any clean electricity or fuel facility that is at least 50 percent below the baseline established for the clean electricity and clean fuel credits (below 186 g CO<sub>2</sub> per KWh or 38.5 kg CO<sub>2</sub> per mmBtu, respectively). Clean Energy Bonds are subject to the same issuance and arbitrage rules as tax credit bonds under current law.

#### ***Subtitle E – Treatment of Tar Sands under Excise Taxes***

##### ***Sec. 5041 – Clarification of Oil Sands as Crude Oil for Excise Tax Purposes***

Under current law, crude oil is subject to an 8 cent per barrel excise tax, which is used to fund the Oil Spill Liability Trust Fund. However, under the current definition of crude oil, oil derived from tar sands is exempt from the excise tax.

The bill expands the definition of crude oil to include oil derived from tar sands.

## ***Subtitle F – Closing Big Oil Tax Loopholes***

### **Sec. 5051 – 5055 Repeal of Tax Incentives for Major Integrated Oil and Gas Companies**

Under current law, a variety of tax incentives are available for oil and gas extraction and refining companies, including foreign tax credits, the section 199 domestic manufacturing deduction, expensing for intangible drilling costs, the use of percentage over cost depletion for oil and gas wells, and a deduction for the use of tertiary injectants for enhanced oil recovery, among others. The ability to use these incentives varies based on the size and level of integration of oil and gas companies.

The proposal completely eliminates these incentives for major integrated oil companies.

## **Title VI – Conservation**

### **Sec. 6001 - National Park Service Centennial Fund**

Next year will mark the 100th anniversary of the establishment of the National Park Service. This section would establish a new National Park Centennial Fund in the Treasury to fund critical National Park System maintenance and infrastructure needs and other projects and programs that will better enable the National Park Service to protect national park resources and provide improved visitor services. \$150 million annually from Outer Continental Shelf oil and gas receipts would be deposited into the Fund, and would be available for expenditure without further appropriation.

### **Sec. 6002 - Land and Water Conservation Fund Reauthorization,**

This section permanently reauthorizes the Land and Water Conservation Fund at its \$900 million annual authorized level and makes expenditures from the fund available each year without further appropriation. The President is directed to submit to Congress as part of the annual budget submission to Congress each year detailed account, program, and project allocations to be funded. The section provides that Congress may provide for alternate allocation of amounts made available from the Fund each year through Appropriation Acts; however, if Congress fails to enact legislation within 120 days after the beginning of the fiscal year, the amounts made available by this section shall be allocated by the President.

### **Sec. 6003 - Historic Preservation Fund**

This section permanently reauthorizes the Historic Preservation Fund at its \$150 million annual authorized level, and makes expenditures from the fund available each year without further appropriation.