Senate Energy and Natural Resources

Infrastructure Discussion Draft Section by Section

July 9, 2021

Title I—Grid Infrastructure and Resiliency

Subtitle A—Grid Infrastructure and Reliability

Sec. 1001. Preventing outages and enhancing the resilience of the electric grid. This section directs the Department of Energy (DOE) to establish a grant program to support activities that reduce the likelihood and consequence of impacts to the electric grid due extreme weather, wildfire, and natural disaster. This section authorizes $5,000,000,000 for the period of fiscal years (FY) 22-26.

Sec. 1002. Hazard mitigation using disaster assistance. This section amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act to include wildfire within the hazard mitigation program.

Sec. 1003. Electric grid reliability and resilience research, development, and demonstration. This section establishes the "Program Upgrading Our Electric Grid Reliability and Resiliency" program to provide Federal financial assistance to demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden resilience and reliability and to demonstrate new approaches to enhance regional grid resilience, implemented through States by public and publicly regulated entities on a cost-shared basis. It also directs the Secretary to improve resilience, safety, and reliability and environmental protection in rural or remote areas and—in collaboration with Department of Homeland Security, the Federal Energy Regulatory Commission (FERC), and the North American Electric Reliability Corporation (NERC)—to develop a framework to assess the resilience of energy infrastructure. This section authorizes $5,000,000,000 for the period of FY22-26 for the Energy Infrastructure Federal Financial Assistance program and $1,000,000,000 for the period of FY22-26 for Rural or Remote Areas.

Sec. 1004. Utility demand response. This section requires State regulators to consider establishing rate mechanisms to allow utilities to recover the costs of promoting demand-response practices in order to encourage electrical utilities to promote the use of demand-response practices.

Sec. 1005. Siting of interstate electric transmission facilities. This section directs DOE to study capacity constraints and congestion when designating National Interest Electric Transmission Corridors (NIETC). It also adds more objective criteria to the list of considerations the Secretary of Energy uses to select and designate an NIETC. The section adds that the FERC may issue permits for construction or modification of certain interstate transmission facilities if a state commission withholds or denies an application seeking approval for the siting of such facilities. It also directs FERC to consider whether the transmission permit applicant has engaged

states and non-federal entities in good faith consultations and in a timely manner before exercising its backstop siting authority.

Sec. 1006. Rulemaking to increase the effectiveness of interregional transmission planning. This section directs FERC to initiate a rulemaking to address the effectiveness of existing planning processes for interregional transmission projects, make changes to that process, and establish a cost allocation methodology that reflects the benefits provided by interregional transmissions solutions.

Sec. 1007. Transmission facilitation program. This section establishes a $2,500,000,000 revolving loan fund to allow DOE to serve as an "anchor-tenant" for a new transmission line or an upgrade of an existing line. The section permits DOE to buy a certain portion of the planned capacity (not more than 50%), which it then may sell after determining that the transmission project has ensured financial viability. It also permits DOE to issue loans to or enter into public private partnerships with eligible transmission projects. It also authorizes $10,000,000 for each of FY22-26 to carry out the program.

Sec. 1008. Deployment of technologies to enhance grid flexibility. This section amends the Energy Independence and Security Act of 2007 to include Smart Grid investments that provide flexibility and help quickly rebalance the electrical system, facilitate the aggregation or integration of distributed energy resources, provide energy storage to meet fluctuating, provide voltage support, integrate intermittent generation sources, increase the network's operational transfer capacity, and anticipate and mitigate impacts of extreme weather events or natural disasters on grid resilience. The section authorizes $3,000,000,000 for the Smart Grid Investment Matching Grant Program.

Sec. 1009. State energy security plans. This section provides assistance for the creation of State Energy Security Plans that address all energy sources and potential hazards and provides a risk assessment and risk mitigation approach.

Sec. 1010. State energy program. This section authorizes $500,000,000 for the period of FY22-26 for the State Energy Program. It also amends the Energy Policy and Conservation Act to require State Energy Conservation Plans to support transmission and distribution planning activities and to allow State Energy Conservation Plans to include programs that help reduce carbon emissions in the transportation sector and accelerate the use of alternative transportation fuels for, and the electrification of State government vehicles, fleet vehicles, taxis, and ridesharing services, mass transit, school buses, ferries, and privately owned passenger and medium- and heavy-duty vehicles.

Sec. 1011. Power Marketing Administration borrowing authority. This section increases the Bonneville Power Administration's (BPA) borrowing authority by $2,000,000,000 to assist in the financing of the construction, acquisition, and replacement of the Federal Columbia River Power System. It also requires BPA to issue an updated financial plan that considers the projected and planned use and allocation of BPA's borrowing authority across its mission responsibilities and requires BPA to engage with customers and stakeholders on its financial and cost management efforts.

Sec. 1012. Study of codes and standards for use of energy storage systems across sectors. This section directs the Secretary of Energy to conduct a study of types and commercial applications of codes and standards applied to stationary and mobile energy storage systems as well as those that move between stationary and mobile applications such as EV batteries.

Sec. 1013. Demonstration of electric vehicle battery second-life applications for grid services. This section directs the Secretary of Energy to establish a demonstration project for second-life applications of electric vehicle batteries as aggregated energy storage installations to provide services to the electric grid.

Subtitle B—Cybersecurity

Sec. 1101. Enhancing grid security through public-private partnerships. This section requires the Secretary, in consultation with State regulatory authorities, industry, the Electric Reliability Organization, and other relevant federal agencies, to carry out a program to promote and advance the physical security and cybersecurity of electric utilities, with priority provided to utilities with fewer resources. This section also requires a report to Congress on improving the cybersecurity of electricity distribution systems.

Sec. 1102. Energy Cyber Sense program. This section establishes a voluntary Energy Cyber Sense program to test the cybersecurity of products and technologies intended for use in the bulk-power system.

Sec. 1103. Incentives for advanced cybersecurity technology investment. This section directs FERC to initiate a rulemaking to develop incentives that would encourage investment in cybersecurity technology and participation in cybersecurity threat information sharing programs.

Sec. 1104. Rural and municipal utility advanced cybersecurity grant and technological assistance program. This section directs the Secretary of Energy to establish the "Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program" to provide grants and technical assistance for utilities to detect, respond to, and recover from cybersecurity threats. This section authorizes $250,000,000 for the period of FY22-26.

Sec. 1105. Enhanced grid security. This section creates a program to develop advanced cybersecurity applications and technologies for the energy sector, a program to enhance and test emergency response capabilities of DOE, and a program to increase the functional preservation of electric grid operations or natural gas and oil operations in the face of threats and hazards. This section authorizes $250,000,000 for the period of FY22-26 for the Cybersecurity for the Energy Sector RD&D program, $50,000,000 for the period of FY22-26 for the Energy Sector Operational Support for Cyberresilience Program, and $50,000,000 for the period of FY22-26 for Modeling and Assessing Energy Infrastructure Risk.

Sec. 1106. Cybersecurity Plan. This section allows the Secretary of Energy to require that award recipients, funded under this Act, submit a cybersecurity plan that demonstrates the entity's cybersecurity maturity in the context of the project.

Sec. 1107. Savings Provision. This section establishes that nothing in the subtitle affects the authority of any other Federal department or agency.

Title II—Supply Chains for Clean Energy Technologies

Sec. 2001. Earth Mapping Resources Initiative. This section codifies the Earth Mapping Resources Initiative to accelerate mapping efforts at the USGS and authorizes $320,000,000 for the period of FY22-26 to complete an initial comprehensive national modern surface and subsurface mapping and data integration effort to better understand our domestic mineral resources.

Sec. 2002. National Cooperative Geologic Mapping Program. This section includes an abandoned mine land and mine waste geologic mapping component in the geologic mapping program to ensure mine waste is catalogued and characterized for the occurrence of critical minerals and extends the existing program through 2031.

Sec. 2003. National Geological and Geophysical Data Preservation Program. This section directs the National Geological and Geophysical Data Preservation Program to preserve samples to track geochemical signatures from critical minerals in order to provide for provenance tracking.

Sec. 2004. USGS energy and minerals research facility. This section authorizes $167,000,000 in funding for a USGS research facility to support energy and minerals research.

Sec. 2005. Rare earth elements demonstration facility. This section authorizes $140,000,000 for FY22 for the Department of Energy to demonstrate the feasibility of a full-scale integrated rare earth element extraction and separation facility and refinery to strengthen domestic clean energy supply chains and provide environmental benefits through the reuse and treatment of waste material.

Sec. 2006. Critical minerals supply chains and reliability. This section creates improvements to the Federal permitting process with respect to critical mineral production on Federal land.

Sec. 2007. Battery processing and manufacturing. This section establishes a "Battery Material Processing Grant Program" within DOE's Office of Fossil Energy to ensure the US has a viable battery materials processing industry. This section also establishes within the Office of Energy Efficiency and Renewable Energy a battery manufacturing and recycling grant program to support and sustain a North American battery supply chain. This section also directs the Secretary to continue the Lithium-Ion Battery Recycling Prize and convene a task force on battery producer requirements. This section also establishes several programs within the Department of Energy (DOE) that would provide grants for battery recycling research, development and demonstration, states and units of local government to assist in the establishment or enhancement of State battery collection, recycling, and reprocessing programs and retailers that sell batteries for the implementation or establishment of a system to collect used batteries. This section authorizes $3,000,000,000 for FY22-26 for battery material

processing grants, $3,000,000,000 for FY22-26 for battery manufacturing and recycling grants and $10,000,000 for FY22 for the recycling prize and $125,000,000 for the battery recycling programs at DOE.

Sec. 2008. Electric drive vehicle battery recycling and second-life applications program. This section would expand an existing program at the Department of Energy for research, development, and demonstration of electric vehicle battery recycling and second-life applications for vehicle batteries. This section authorizes $200,000,000 for each of FY22-26.

Sec. 2009. Advanced energy manufacturing and recycling grant program. This section establishes a grant program focused on small- and medium-sized manufacturers to enable them to build new or retrofit existing manufacturing and industrial facilities to produce or recycle advanced energy products in communities where coal mines or coal power plants have closed.. This section authorizes $750,000,000 for the period of FY22-26.

Title III—Fuels and Technology Infrastructure Investments

Subtitle A—Carbon Capture, Utilization, and Storage, and Transportation Infrastructure

Sec. 3001. Findings. This section expresses Congress' findings regarding the importance of carbon capture, utilization, storage and transport technologies and infrastructure to meeting or emissions reductions goals.

Sec. 3002. Carbon utilization program. This section establishes a grant program for state and local governments to procure and use products derived from captured carbon oxides. It expands DOE's Carbon Utilization program objectives to include the development of standards and certifications to support commercialization of carbon oxide products. This section authorizes $41,000,000 for FY22, $65,250,000 for FY23, $66,562,500 for FY24, $67,940,625 for FY25, and $69,387,656 for FY26.

Sec. 3003. Carbon capture technology program. This section expands DOE's Carbon Capture Technology program to include front-end engineering and design (FEED) for carbon dioxide transport infrastructure necessary to deploy CCUS technologies. This section authorizes $100 million for FY22-26.

Sec. 3004. Carbon dioxide transportation infrastructure finance and innovation. This section establishes a CO2 Infrastructure Finance and Innovation Act (CIFIA) program, which will provide flexible, low-interest loans for CO2 transport infrastructure projects and grants for initial excess capacity on new infrastructure to facilitate future growth. CIFIA will help facilitate private sector investment in CO2 infrastructure. This section authorizes $600,000,000 for FY22 and 23 and $300,000,000 for each of FY 24-26.

Sec. 3005. Carbon storage validation and testing. This section expands DOE's Carbon Storage Validation and Testing program to include large-scale commercialization of new or expanded carbon sequestration projects and associated carbon dioxide transport infrastructure. This section authorizes $2,500,000,000 for each of FY22-26 for the program.

Sec. 3006. Secure geologic storage permitting. This section provides funding for the permitting of wells for the geologic sequestration of carbon dioxide and creates a grant program for states to establish their own Class VI permitting programs to ensure rigorous and efficient CO2 geologic storage site permitting. This section authorizes $75,000,000 for the period of FY22-26.

Sec. 3007. Geologic carbon sequestration on the outer Continental Shelf. This section allows the Department of the Interior to permit geologic carbon sequestration on the outer Continental Shelf.

Sec. 3008. Carbon Removal. This section authorizes four regional direct air capture hubs to aid the capturing of carbon dioxide from the atmosphere. This section authorizes $3,500,000,000 for FY22-26 for direct air capture projects to establish the four regional hubs.

Subtitle B—Hydrogen Research and Development

Sec. 3101. Findings; purpose. This section expresses Congress' findings on the importance of clean hydrogen in promoting energy security and resilience and outlines the need to accelerate research, development, demonstration, and deployment of hydrogen from clean energy sources.

Sec. 3102. Definitions. The section sets a definition for "clean hydrogen" and "hydrogen."

Sec. 3103. Clean hydrogen research and development program. This section re-establishes and expands the scope of DOE's hydrogen research and development program to advance cross-cutting R&D for purposes of demonstration and commercialization of clean hydrogen production, processing, delivery and end-use application technologies.

Sec. 3104. Additional clean hydrogen programs. This section establishes clean hydrogen programs at DOE, including:

- At least four regional clean hydrogen hubs to demonstrate the production, processing, delivery, storage, and end-use of clean hydrogen. This section authorizes $8,000,000,000 for the period of FY22-26.
- The development of a national strategy and roadmap to facilitate a clean hydrogen economy.
- A clean hydrogen manufacturing and recycling program to support a clean hydrogen domestic supply chain. For this program, the section authorizes $500,000,000 for the period of FY22-26.
- A demonstration, commercialization and deployment program intended to decrease the cost of clean hydrogen production from electrolyzers. For this program, the section authorizes $1,000,000,000 for the period of FY22-26.
- The efficient execution of DOE's clean hydrogen program by establishing the National Energy Technology Laboratory (NETL) as the lead national laboratory for the new regional clean hydrogen hubs and clean hydrogen manufacturing and recycling programs, in coordination with the Idaho National Laboratory and National Renewable Energy Laboratory.

Sec. 3105. Clean Hydrogen Production Qualifications. This section directs the Secretary and the EPA Administrator to develop an initial standard for the carbon intensity of clean hydrogen production from renewable, fossil fuel with CCUS, nuclear, and other fuel sources using applicable production technologies to be applied to the activities in this title.

Subtitle C—Nuclear Energy Infrastructure

Sec. 3201.Infrastructure planning for micro and small modular nuclear reactors. This section requires the DOE to develop a report on the feasibility for using nuclear energy to meet resilience and carbon reduction goals for the Department.

Sec. 3202. Property interests relating to certain projects and protection of information relating to certain agreements. This section allows the DOE to transfer fee title or property interest acquired by the Secretary in relation to any project funded under the Advanced Reactor Demonstration Program and extends the confidentiality of intellectual property associated with the Advanced Demonstration Program from 5 years to 30 years.

Sec. 3203. Civil nuclear credit program. This section provides the DOE with the authority, in consultation with the heads of applicable Federal agencies, to establish a process to evaluate bids through an auction process and select certified nuclear reactors to be allocated credits. This section authorizes $6,000,000,000 for the period of fiscal years FY22-26.

Subtitle D—Hydropower

Sec. 3301. Hydroelectric production incentives. This section authorizes $125,000,000 for FY22 for hydroelectric production incentives until expended.

Sec. 3302. Hydroelectric efficiency improvement incentives. This section authorizes $75,000,000 for FY22 for hydroelectric efficiency improvement incentives until expended.

Sec. 3303. Maintaining and enhancing hydroelectricity incentives. This section directs the Secretary of Energy to make incentive payments to the owners and operators of hydroelectric facilities for capital improvements related to maintaining and enhancing hydroelectricity generation by improving grid resiliency, improving dam safety, and environmental improvements. This section authorizes $553,600,000 for FY22 until expended.

Sec. 3304. Pumped storage hydropower wind and solar integration and system reliability initiative. This section directs the Secretary to establish a demonstration project for a pumped storage hydropower project to facilitate the long-duration storage of intermittent renewable electricity. This section authorizes $10,000,000 for the period of FY22-26.

Subtitle E—Miscellaneous

Sec. 3401. Solar Energy Technologies on Current and Former Mine Land. This section requires the DOE to create a report of the viability of siting solar energy on current and former mine land, including necessary interconnection, transmission siting, and the impact on local job creation.

Sec. 3402. Clean energy demonstration program on current and former mine land. This section establishes a program to demonstrate the technical and economic viability of carrying out clean energy projects on current and former mine land. This section authorizes $500,000,000 for the period of FY22-26.

Title IV—Enabling Energy Infrastructure Investment and Data Collection

Subtitle A—Department of Energy Loan Program

Sec. 4001. Department of Energy loan programs. This section clarifies the reasonable prospect of repayment criteria for both the Title XVII Innovative Energy Loan Guarantee (Title XVII) Program and the Advanced Technology Vehicle Manufacturing (ATVM) Program. It also expands the eligibility of the Title XVII Program to include projects that increase the domestic supply of critical minerals and makes certain state energy financing entities eligible to apply for Title XVII loans. The section expands the eligibility of the ATVM program to include medium and heavy duty vehicles, trains, aircraft, maritime vessels, and hyperloop technology. This section also provides loan guarantees for certain Alaska natural gas transportation projects and systems.

Subtitle B—Energy Information Administration

Sec. 4101. Definitions. This section provides definitions for the Energy Information Administration subtitle.

Sec. 4102. Data collection in the electricity sector. This section directs the EIA to create a dashboard relating to the operation of the bulk power system including hourly operating data, and a system to provide data on the operations of load-serving entities.

Sec. 4103. Expansion of energy consumption surveys. This section directs the EIA to expand the Manufacturing Energy Consumption Survey, the Commercial Building Energy Consumption Survey, and the Residential Energy Consumption Survey to obtain more comprehensive data and reduce the burden on survey respondents; report community-level economic and environmental impacts of energy supply; and improve the presentation and distribution of data.

Sec. 4104. Data collection on electric vehicle integration with the electricity grids. This section directs the EIA to expand data collection with respect to electric vehicle integration with the electricity grid.

Sec. 4105. Plan for the modeling and forecasting of demand for minerals used in the energy sector. This section directs the EIA to develop a plan in collaboration with USGS for the forecasting of demand for energy equipment, including equipment for energy production or storage purposes that uses minerals, such as lithium and cobalt, which are or potentially may be determined to be critical minerals.

Sec. 4106. Expansion of international energy data. This section directs the EIA to implement measures to expand and improve its international energy data resources in order to understand

the production and use of energy in various countries, changing patterns of energy use internationally, the relative costs and environmental impacts of energy production and use internationally, and plans for or construction of major energy facilities or infrastructure.

Sec. 4107. Plan for the National Energy Modeling System. This section directs the EIA to develop a plan to update or further the capabilities of the National Energy Modeling System, including with respect to technologies identified for large-scale demonstration projects, such as carbon capture and hydrogen production.

Sec. 4108. Report on costs of carbon abatement in the electricity sector. This section directs the EIA to submit a report on the potential use of levelized cost of carbon abatement as a metric to compare system-level costs of technology options to reduce emissions, and a potential process to measure carbon dioxide emissions intensity per unit of output production.

Sec. 4109. Harmonization of efforts and data. This section directs the EIA to establish a system to harmonize data collection efforts with EPA and other relevant Federal agencies.

Subtitle C—Miscellaneous

Sec. 4201. Consideration of measures to promote greater electrification of the transportation sector. This section directs states to consider measures to promote greater electrification of the transportation sector including the establishment of rates that promote affordable and equitable electric vehicle charging options, improve the customer experience associated with EV charging including reducing wait times, accelerate third-party investment in public electric vehicle charging, and appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

Sec. 4202. Office of Public Participation. This section amends section 319 of the Federal Power Act regarding the Office of Public Participation. The section strikes provisions related to the Director of the Office of Public Participation's term and termination and updates the Director's pay scale. This section also strikes expired authorization provisions.

Title V—Energy Efficiency and Building Infrastructure

Subtitle A—Residential and Commercial Energy Efficiency

Sec. 5001. Definitions. This section provides definitions for the Residential and Commercial Energy Efficiency subtitle.

Sec. 5002. Energy efficiency revolving loan fund capitalization grant program. This section creates a revolving loan fund capitalization grant program within the State Energy Program for recipients to conduct commercial energy audits, residential energy audits, or energy upgrades or retrofits. This section authorizes $250,000,000 for FY22.

Sec. 5003. Energy auditor training grant program. This section establishes a competitive grant program under which the Secretary shall award grants to eligible States to train individuals to conduct energy audits or surveys of commercial and residential buildings. This section authorizes $40,000,000 for the period of FY22-26.

Subtitle B—Buildings

Sec. 5101. Cost-effective codes implementation for efficiency and resilience. This section creates a grant program within the Building Technologies Office to enable sustained, cost-effective implementation of updated building energy codes. This section authorizes $225,000,000 for the period of FY22-26.

Sec. 5102. Building, training, and assessment centers. This section provides grants to institutions of higher education to establish building training and assessment centers to educate and train building technicians and engineers on implementing modern building technologies. This section authorizes $10,000,000 for FY22.

Sec. 5103. Career skills training. This section directs the Secretary to awards grants to pay the Federal share of associated career skills training programs under which students concurrently receive classroom instruction and on-the-job training for the purpose of obtaining an industry-related certification to install energy efficient buildings technologies. This section authorizes $10,000,000 for FY22.

Sec. 5104. Commercial building energy consumption information sharing. This section requires the EIA and EPA to agree to an information sharing agreement related to commercial building energy consumption data.

Subtitle C—Industrial Energy Efficiency

Part 1—Industry

Sec. 5201. Future of industry program and industrial research and assessment centers. This section provides funding for institution of higher education-based industrial research and assessment centers to identify opportunities for optimizing energy efficiency and environmental performance at manufacturing and other industrial facilities. This section also establishes a grant program to fund upgrades for small- and medium-sized manufacturers that have been recommended in an assessment from an IAC or CHP TAP. This section authorizes $550,000,000 for the period of FY22-26.

Sec. 5202. Sustainable manufacturing initiatives. This section directs the Office of Energy Efficiency and Renewable Energy to provide technical assessments for manufacturers to maximize energy efficiency, prevent pollution, improve efficient use of water, conserve natural resources, and other goals determined by the Secretary.

Part II—Smart Manufacturing

Sec. 5211. Definitions. This section provides definitions for the Smart Manufacturing subtitle.

Sec. 5212. Leveraging existing agency programs to assist small and medium manufacturers. This section requires the Secretary to include smart manufacturing technologies and practices within the scope of technologies covered by the industrial assessment centers of the Department of Energy.

Sec. 5213. Leveraging smart manufacturing infrastructure at National Laboratories. This section requires the Secretary to conduct a study on how the Department can increase access to existing high-performance computing resources in the National Laboratories, particularly for small and medium manufacturers.

Sec. 5214. State manufacturing leadership. This section establishes a program for the Secretary to provide funding to states to invest in smart manufacturing technologies. This section authorizes $50,000,000 for the period of FY22-26.

Sec. 5215. Report. This section requires the Secretary to submit a report on the progress made in advancing smart manufacturing in the United States.

Subtitle D—Schools and Nonprofits

Sec. 5301. Grants for energy efficiency improvements and renewable energy improvements at public school facilities. This section directs the Secretary to award competitive grants to make energy efficiency, renewable energy, and alternative fueled vehicle upgrades and improvements at public schools. This section authorizes $500,000,000 for the period of FY22-26.

Sec. 5302. Energy efficiency materials pilot program. This section establishes a pilot program to award grants to provide nonprofit buildings with energy-efficiency materials. This section authorizes $50,000,000 for the period of FY22-26.

Subtitle E—Miscellaneous

Sec. 5401. Weatherization assistance program. This section authorizes $3,500,000,000 for FY22 for the Weatherization Assistance Program.

Sec. 5402. Energy efficiency and Conservation Block Grant Program. This section authorizes $550,000,000 for FY22 for the Energy Efficiency and Conservation Block Grant Program. This section also amends the Energy Independence and Security Act of 2007 to allow EECBG funding to be used in programs that finance energy efficiency and other clean energy capital investments, projects, loan programs, and performance contracting programs.

Sec. 5403. Survey, analysis, and report on employment and demographics in the energy, energy efficiency, and motor vehicle sectors of the United States. This section establishes an "Energy Jobs Council" to conduct a survey of employers in the energy, energy efficiency, and motor vehicles sectors and perform analysis of the figures and demographics in those sectors to be made publicly available. This section is simply codifying the United States Energy and Employment Report that DOE used to produce, and has been produced by the Energy Futures Initiative since 2017.

Sec. 5404. Assisting Federal Facilities with Energy Conservation Technologies grant program. This section authorizes $250,000,000 for FY22 for the existing AFFECT grants that are distributed through the Federal Energy Management Program to provide grants to federal agencies that they can leverage with private capital to make energy and water efficiency upgrades to federal buildings.

Sec. 5405. Rebates. This section authorizes $20,000,000 for the period of FY22-23 for the extended product system rebate program and the energy efficient transformer rebate program.

Sec. 5406. Model guidance for combined heat and power systems and waste heat to power systems. This section requires the Secretary of Energy and FERC to review existing rules and procedures relating to interconnection service and additional services throughout the United States for electric generation with nameplate capacity up to 150 megawatts connecting at either distribution or transmission voltage levels to identify barriers to the deployment of combined heat and power systems and waste heat to power systems.

Title VI—Methane Reduction Infrastructure

Sec. 6001. Orphaned well site plugging, remediation, and restoration. This section authorizes $4,707,000 for programs to plug, remediate, and reclaim orphaned wells on Federal, State, and Tribal lands.

Title VII Abandoned Mine Land Reclamation

Sec. 7001. Abandoned Mine Reclamation Fund authorization of appropriations. This section authorizes $11,293,000,000 in funds for the Abandoned Mine Land Reclamation Fund.

Sec. 7002. Abandoned Mine Reclamation Fee. This section adjusts the rates of the Abandoned Mine Reclamation Fee to 22.4 cents per ton of coal produced by surface coal mining, 9.6 cents per ton of coal produced by underground mining, and 6.4 cents per ton for lignite coal. This section also extends the fee until 2034.

Sec. 7003. Amounts distributed from Abandoned Mine Reclamation Fund. This section extends the dates that amounts are to be distributed until 2036.

Title VIII—Natural Resources-Related Infrastructure, Wildfire Management, and Ecosystem Restoration

Sec. 8001. Forest Service Legacy Road and Trail Remediation Program. This section authorizes $250,000,000 for the Forest Service's Legacy Road and Trail program, which funds activities to restore fish passage in streams at road and trail crossings, decommission unauthorized, user-created roads, decommission temporary roads, and other activities.

Sec. 8002. Study and report on feasibility of revegetating reclaimed mine sites. This section requires the Director of the Office of Surface Mining Reclamation to submit a study on the feasibility of revegetating reclaimed mine sites.

Sec. 8003. Wildfire risk reduction. This section authorizes $3,369,200,000 to the Department of the Interior and the Forest Service for wildfire risk reduction by providing funding for community wildfire defense grants, mechanical thinning, controlled burns, the Collaborative Forest Restoration Program, and firefighting resources.

Sec. 8004. Ecosystem restoration. This section authorizes $2,130,000,000 for the Department of the Interior and the Forest Service to restore the ecological health of Federal lands and waters and of private lands, through voluntary efforts, via a variety of programs, including through partnering with States.

Sec. 8005. GAO Study. This section directs the Comptroller General of the United States to conduct a study on the implementation of this Title on whether it effectively reduced wildfire risk and restored ecosystems. This section authorizes $800,000 for this study.

Title IX—Western Water Infrastructure

Sec. 9001. Western water infrastructure. This section authorizes $8,300,000,000 for FY22-26 for Bureau of Reclamation western water infrastructure, including:

- $3.2 billion for aging infrastructure,
- $1.15 billion for water storage, groundwater storage and conveyance projects (includes $100 million for small water storage),
- $1 billion for water recycling and reuse projects (includes $450 million for large water recycling projects),
- $250 million for desalination projects,
- $1 billion for rural water projects,
- $500 million for dam safety projects,
- $300 million for Drought Contingency Plan (includes $50 million for Upper Basin States),
- $400 million for waterSMART Water and Energy Efficiency Grants (includes $100 million for natural infrastructure projects),
- $100 million for the Cooperative Watershed Management Program,
- $250 million for Aquatic Ecosystem Restoration Program,
- $100 million for multi-benefit watershed projects, and
- $50 million for Colorado River fish species recovery programs.

Sec. 9002. Water storage, groundwater storage and conveyance projects. This section clarifies eligibility and requirements for feasibility studies and construction funding for storage and conveyance projects.

Sec. 9003. Small water storage and groundwater storage projects. This section authorizes $100 million for a new competitive grant program for small water storage projects.

Sec. 9004. Critical maintenance and repair. This section authorizes $100 million in funding to support certain Bureau of Reclamation infrastructure that has failed in the last two years. This section also authorizes $100 million in funding for dams developed under the Carey Act of 1894.

Sec. 9005. Large-scale water recycling and reuse projects. This section authorizes $450 million for a new competitive grant program for large-scale water recycling and reuse projects.

Sec. 9006. Drought contingency plan funding requires. This section clarifies how the drought contingency plan funding can be used.

Sec. 9007. Multi-benefit projects to improve watershed health. This section authorizes $100 million for a new competitive grant program for habitat restoration projects in river basins that have been impacted by Bureau of Reclamation water projects.

Sec. 9008. Eligible desalination projects. This section provides a technical amendment to current law.

Sec. 9009. Clarification of authority to use Coronavirus Fiscal Recovery Funds to meet a non-federal matching requirement for authorized Bureau of Reclamation water projects. The American Rescue Plan authorized state and local funds to be used broadly for water infrastructure. This section clarifies that these funds can be used to satisfy non-Federal matching requirements for authorized Bureau of Reclamation projects.

Title X—Authorization of Appropriations for Energy Act of 2020

Sec. 10001. Energy storage demonstration projects. This section authorizes funding for the Energy Storage Demonstration Projects and Pilot Grant Program authorized by the Energy Act of 2020. This section authorizes $355,000,000 for FY 22-25 for that program. This section also authorizes $150,000,000 for FY22-25 for a Long-duration Demonstration Initiative and Joint Program.

Sec. 10002. Advanced reactor demonstration program. This section authorizes $3,211,000,000 for the Advanced Reactor Demonstration Program authorized in the Energy Act of 2020.

Sec. 10003. Mineral security projects. This section authorizes $825,668,000 in funding for the National Geological and Geophysical Data Preservation Program, Rare Earth Mineral Security, Critical Material Innovation, Efficiency, and Alternatives, and a Critical Mineral Supply Chain Research Facility.

Sec. 10004. Carbon capture demonstration and pilot programs. This section authorizes $3,474,000,000 for Carbon Capture Large-Scale Pilot Projects and Carbon Capture Demonstration Projects.

Sec. 10005. Direct air capture technologies prize competitions. This section authorizes $115,000,000 for the Direct Air Capture Technologies Prize Competition.

Sec. 10006. Water power projects. This section authorizes $146,400,000 for hydropower and marine energy and National Marine Energy Centers.

Sec. 10007. Renewable energy projects. This section authorizes funding for the period of FY22-25 for renewable energy demonstration projects including $84,000,000 for enhanced geothermal systems, $100,000,000 for wind energy, and $80,000,000 for solar energy.

Sec. 10008. Industrial emissions demonstration projects. This section authorizes $500,000,000 for industrial emissions demonstration projects.

Title XI—Wage Rate Requirements

Sec. 11001. Wage Rate Requirements. This section requires that wages for projects funded under this Act are not less than those prevailing on similar projects in the locality.