

# H.R. 3684, INFRASTRUCTURE INVESTMENT AND JOBS ACT

Amendment in the Nature of a Substitute (Text); Passed Senate, 69-30 (August 10, 2021)

**Sponsors:** Sen. Kyrsten Sinema (D-Ariz.), Sen. Rob Portman (R-Ohio), Sen. Joe Manchin (D-W.Va.), Sen. Bill Cassidy (R-La.), Sen. Jeanne Shaheen (D-N.H.), Sen. Susan Collins (R-Maine), Sen. Jon Tester (D-Mont.), Sen. Lisa Murkowski (R-Alaska), Sen. Mark Warner (D-Va.), Sen. Mitt Romney (R-Utah)

## DIVISION D—ENERGY

### Sec. 40001. Definitions.

#### TITLE I—GRID INFRASTRUCTURE AND RESILIENCY

##### Subtitle A—Grid Infrastructure and Reliability

**Sec. 40101. 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 reduce the likelihood and consequences of impacts to the electric grid due to extreme weather, wildfire, and natural disaster. ***This section authorizes \$5 billion for the five-year period of FY22-26.***

**Sec. 40102. 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. 40103. Electric grid reliability and resilience research, development, and demonstration.** This section establishes the “Program Upgrading Our Electric Grid Reliability and Resiliency” program [sic] to provide federal financial assistance 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 billion for the period of FY22-26 for the Energy Infrastructure Federal Financial Assistance program and \$1 billion for the period for FY22-26 for Rural or Remote areas.***

**Sec. 40104. 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. 40105. 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 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. 40106. Transmission facilitation program.** This section establishes a ***\$2.5 billion 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 above 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 million for each of FY22-26 to carry out the program.***

**Sec. 40107. 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, [sic] 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 billion for the Smart Grid Investment Matching Grant Program.***

**Sec. 40108. 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 mitigation approach.

**ALLIANCE SUPPORTED LEGISLATION: Enhancing State Energy Security Planning and Emergency Preparedness Act,**

- HOUSE: [H.R. 1374](#) (Rush-Upton, 117<sup>th</sup>); [H.R. 2117](#) (Rush-Upton, 116<sup>th</sup>);
- SENATE: [S. 2094](#) (Gardner-Shaheen) 116<sup>th</sup>); [S.Rept. 116-136](#)

**Sec. 40109. State energy program.** This section reauthorizes 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. ***This section authorizes \$500 million for the period of FY22-26.***

**Sec. 40110. Power marketing administration transmission borrowing authority.** This section increases the Bonneville Power Administration's (BPA) borrowing authority by \$10 billion 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. 40111. 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. 40112. 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.

**Sec. 40113. Columbia Basin power management.** This section rebalances the Columbia River Treaty by upgrading transmission capacity between Canada and the Western and Southwestern United States and authorizes \$100 million to rehabilitate and enhance water storage and hydroelectric capacity, and \$10 million to study better coordination of water and power flows between British Columbia and the Pacific Northwest.

**Subtitle B—Cybersecurity**

Sec. 40121. Enhancing grid security through public-private partnerships.

Sec. 40122. Energy Cyber Sense program.

Sec. 40123. Incentives for advanced cybersecurity technology investment.

Sec. 40124. Rural and municipal utility advanced cybersecurity grant and technical assistance program.
Sec. 40125. Enhanced grid security.
Sec. 40126. Cybersecurity plan.
Sec. 40127. Savings provision.
TITLE II—SUPPLY CHAINS FOR CLEAN ENERGY TECHNOLOGIES
TITLE III_FUELS AND TECHNOLOGY INFRASTRUCTURE INVESTMENTS
<b>TITLE IV—ENABLING ENERGY INFRASTRUCTURE INVESTMENT AND DATA COLLECTION</b>
<b>Subtitle A—Department of Energy Loan Program.</b>
Sec. 40401. Department of Energy loan programs.
<b>Subtitle B—Energy Information Administration</b>
Sec. 40411. Definitions.
Sec. 40412. Data collection in the electricity sector.
Sec. 40413. Expansion of energy consumption surveys.
Sec. 40414. Data collection on electric vehicle integration with the electricity grids.
Sec. 40415. Plan for the <i>modeling and</i> forecasting of demand for minerals used in the energy sector.
Sec. 40416. Expansion of international energy data.
Sec. 40417. Plan for the National Energy Modeling System.
Sec. 40418. Report on costs of carbon abatement in the electricity sector.
Sec. 40419. Harmonization of efforts and data.
<b>Subtitle C—Miscellaneous</b>
Sec. 40431. Consideration of measures to promote greater electrification of the transportation sector.
Sec. 40432. Office of public participation.
Sec. 40433. Digital climate solutions report.
Sec. 40434. Study and report by the Secretary of Energy on job loss and impacts on consumer energy costs due to the revocation of the permit for the Keystone XL pipeline.
Sec. 40435. Study on impact of electric vehicles.
Sec. 40436. Study on impact of forced labor in China on the electric vehicle supply chain.
<b>TITLE V—ENERGY EFFICIENCY AND BUILDING INFRASTRUCTURE</b>
<b>Subtitle A—Residential and Commercial Energy Efficiency</b>
<b>Sec. 40501. Definitions.</b>
<b>Sec. 40502. Energy efficiency revolving loan fund capitalization grant program.</b> (Detailed summary based on Discussion Draft) <b>S. 2066, Investing in New Strategies for Upgrading Lower Attaining Efficiency (INSULATE) Buildings Act</b> of 2021 (Manchin-Murkowski) would establish a revolving loan fund within the State Energy Program (SEP) with capitalization grants to State Energy Offices, with 40% of funds distributed via SEP formula grants (10 CFR 420.11), and 60% targeted as supplemental grants to 15 states with highest per-capita residential and commercial sector energy consumption and the highest annual per capita energy-related carbon emissions. Supplemental grants would be capped at \$30 million. Grants would be used to provide loans to fund energy audits in commercial and residential buildings. States would be authorized to distribute up to 25% of funds through grants to low-income individual homeowners (as defined in 29 U.S.C. 3102) or businesses with fewer than 500 employees. The draft bill authorizes \$2.5 billion for capitalization grants (\$250 million per year over 5 years (FY22-26)), while the draft Energy Infrastructure Act authorizes \$250 million, for FY22, until expended. <b><i>This section authorizes \$250 million for FY22.</i></b>
<b>ALLIANCE SUPPORTED LEGISLATION: S. 2066, INSULATE Buildings Act (Manchin-Murkowski)</b>
<b>Sec. 40503. Energy auditor training grant program.</b> This provision, within <b>S. 2066, INSULATE Buildings Act</b> (Manchin-Murkowski) would provide \$8 million per year, over 5 years (FY22-26) for auditor training to identify energy saving opportunities and to recommend strategies to increase energy efficiency and electrification of buildings, including electric vehicle charging infrastructure, electric heating and space cooling, and electric appliances and

equipment. Authorizations of appropriations are the same in both draft bills. ***This section authorizes \$40 million for the period of FY22-26.***

**ALLIANCE SUPPORTED LEGISLATION: S. 2066, INSULATE Buildings Act (Manchin-Murkowski)**

**Subtitle B—Buildings**

**Sec. 40511. Cost-effective codes implementation for efficiency and resilience.** This provision amends Title III of ECPA to add a new Sec. 309 that creates a new grant program at the Department of Energy (DOE) to help homebuilders, contractors, architects, trades, code officials, and others cost-effectively adapt and implement updated building energy codes. The grants would be eligible to be used for training, better data on meeting codes, and plans for improved codes implementation. ***This section authorizes \$225 million for the period of FY22-26.***

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 111 (Shaheen-Portman/Welch-McKinley)).** Per [S. 2137 \(Report\)](#) (116<sup>th</sup>), \$250 million, 10 years (\$25 million per year, FY20-29).

**Sec. 40512. Building, training, and assessment centers.** This provision directs the Secretary to provide grants to institutions of higher education and Tribal Colleges or Universities to establish building training and assessment centers to educate and train building technicians and engineers on implementing modern building technologies. ***This section authorizes \$10 million for FY22.***

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 111 (Shaheen-Portman/Welch-McKinley))**

**Sec. 40513. Career skills training.** This provision directs the Secretary to award 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 million for FY22.***

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 112 (Shaheen-Portman/Welch-McKinley))**

**Sec. 40514. Commercial building energy consumption information sharing.** This provision requires the Energy Information Administration (EIA) and the Environmental Protection Agency (EPA) to submit to Congress an information sharing agreement relating to commercial building energy consumption data.

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 103 (Shaheen-Portman/Welch-McKinley))**

**Subtitle C—Industrial Energy Efficiency**

**Part I—Industry**

**Sec. 40521. Future of industry program and industrial research and assessment centers.** This provision amends the heading of Sec. 452 of EISA to add the “Future of Industry Program.” It adds a new Sec. 454 that provides definitions for “energy service provider” and “industrial research and assessment center.” It also requires the Secretary to establish a Center of Excellence at not more than five of the highest-performing industrial assessment centers to coordinate with and advise within its region on best practices for carrying out assessments. These centers would also facilitate coordination between government and private entities that would aid the industrial facilities in implementing recommendations resulting from an assessment. This subsection also directs industrial research and assessment centers to coordinate with the Manufacturing Extension Partnership Centers of the National Institute of Standards and Technology and DOE’s Building Technologies Program, and to increase partnerships with the national laboratories and energy service and technology providers. This subsection further directs the Secretary to provide funding for outreach and coordination activities by the industrial research and assessment centers, and to provide funding for workforce training purposes.

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 202 (Shaheen-Portman/Welch-McKinley))**

**Sec. 40522. Sustainable manufacturing initiative.** This provision amends part E of title II of the Energy Policy and Conservation Act (EPCA, P. L. 109–163, as amended) to add a Sustainable Manufacturing Initiative which requires DOE’s EERE to provide onsite technical assessments to manufacturers seeking efficiency opportunities and requires the Secretary to carry out a joint industry-government partnership program to research, develop, and demonstrate new sustainable manufacturing and industrial technologies and processes.

**ALLIANCE SUPPORTED LEGISLATION: S. 2137 (116<sup>th</sup>), Energy Savings and Industrial Competitiveness Act, Section 103 (Shaheen-Portman/Welch-McKinley))**

**Part II—Smart Manufacturing**

**Sec. 40531. Definitions.**

**Sec. 40532. 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. 40533. 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 National Laboratories, particularly for small and medium manufacturers.

**Sec. 40534. 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 million for the period of FY22-26.***

**Sec. 40535. Report.** This section requires a report on the progress made in advancing smart manufacturing in the United States.

**Subtitle D—Schools and Nonprofits**

**Sec. 40541. 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 million for the period of FY22-26.***

**ALLIANCE SUPPORTED LEGISLATION: Rebuild America’s Schools Act**

- HOUSE: **H.R. 865** (Rep. Bobby Scott, D-Va., 116<sup>th</sup>)
- SENATE: **S. 266** (Sen. Jack Reed, D-R.I., 116<sup>th</sup>)

**Sec. 40542. Energy efficiency materials pilot program.** This section establishes a pilot program to award grants to provide nonprofit buildings with energy-efficient materials. ***This section authorizes \$50 million for the period of FY22-26.***

**Subtitle E—Miscellaneous**

**Sec. 40551. Weatherization assistance program.** ***This section authorizes \$3.5 billion for FY22.***

**Sec. 40552. Energy Efficiency and Conservation Block Grant (EECBG) Program.** This section 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. ***This section authorizes \$550 million for FY22.***

**Sec. 40553. 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, which has been produced by the Energy Futures Initiative since 2017.

**Sec. 40554. Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant program.** This section authorizes \$250 million for FY22 for 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. ***This section authorizes \$250 million for FY22.***

**Sec. 40555. Rebates.** This section authorizes \$20 million for the period of FY22-23 for the extended product system rebate program and the energy efficient transformer rebate program. ***EPS motors: \$10 million, 2 years (\$5 million per year, FY22-23); EE transformers: \$10 million, 2 years (\$5 million per year, FY22-23).***

**Sec. 40556. 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.