



Clean Energy and Climate Legislation in the 116th Congress

LEGISLATIVE COMPARISON

This document highlights similarities and differences between legislation introduced or reported by Committees in both chambers of Congress that may see further action in the 116th Congress. Legislative items included in the House Energy & Commerce Committee Majority’s signature climate bill, the *CLEAN Future Act*, the newly released *Clean Economy Jobs and Innovation Act* (H.R. 4447), and bills reported by the Senate Energy and Natural Resources Committee have the greatest chance of passage and are reflected in green; bills with some hurdles to agreement are in yellow; bills with no companion in the opposing chamber, political opposition, or low momentum are reflected in red.

Bill Title	Senate action	House action	Analysis
The Energy Savings Through Public-Private Partnerships Act	S. 1706 (Gardner) reported by Senate Energy & Natural Resources (ENR) Committee	H.R. 3079 (Welch) referred to House Energy & Commerce (E&C) Committee. Similar to provisions in CLEAN Future Act Sec. 341 and H.R. 4447 Sec. 530.	Amends the National Energy Conservation Policy Act to encourage the increased use of performance contracting in federal facilities by using Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs). While the CLEAN Future Act and H.R. 4447 both support public-private partnerships to move towards cleaner energy and reduced energy use, they does not mention UESCs, only ESPCs. These bills have bipartisan support, and passed through committees with unanimous support.
The Smart Building Acceleration Act	S. 2335 (Cantwell) reported by ENR Committee	H.R. 2044 (Welch) reported by E&C and was included in the LIFT America Act infrastructure package. Similar to provisions in Sec. 325 of CLEAN Future Act and H.R. 4447 Sec. 1805.	Directs the Secretary of Energy to establish the “Federal Smart Building Program” to implement smart building technology and demonstrate the costs and benefits of smart buildings. This bill passed with unanimous support from ENR. The CLEAN Future Act and the Clean Economy Jobs and Innovation Act both require DOE to conduct a survey of smart buildings across the country to assess which technologies are the most effective, instead of authorizing the entire program at once. These bills were favorably reported from committees and await floor consideration in both chambers.
The Grid Modernization Act	S. 2332 (Cantwell) reported by ENR	H.R. 5428 (Lamb) reported out of Science. Some similar provisions included in CLEAN Future Act under Sec. 235. Provisions included in H.R. 4447 under Title V.	The Grid Modernization Act authorizes research, development, and demonstration programs at DOE for energy storage, distribution infrastructure, and microgrids. It also requires DOE to provide tools to aid local and regional grid regulators to accelerate the adoption of new technology and controls. This bill passed with unanimous support from ENR. The CLEAN Future Act provides a grant program to aid in carrying out projects to promote grid storage. Almost all of the provisions from this act are included in the Clean Economy Jobs & Innovation Act, except a provision to enhance grid resilience and emergency response.

<p>The Energy Cybersecurity Act</p>	<p>S. 2333 (Cantwell) reported by ENR</p>	<p>Some provisions of the bill are similar to CLEAN Future Act Sec. 232. Some similar provisions are also included in H.R. 4447 Sec. 1304a.</p>	<p>Directs DOE to develop advanced cybersecurity applications and technologies for the energy sector. The bill directs DOE to accomplish this through methods such as leveraging electric grid architecture as a means to assess risks to the energy sector, and performing pilot demonstration projects within the energy sector to gain experience with new technologies. This bill passed with unanimous support from ENR.</p>
<p>The Federal Energy and Water Management Performance Act</p>	<p>S. 1857 (Murkowski) reported by ENR</p>	<p>Similar to provisions in CLEAN Future Act Sec. 312. and H.R. 4447 Sec. 1411. H.R.5650 (Welch) referred to E&C; H.R.3962 (Welch) referred to House Transportation & Infrastructure (T&I) Committee, hearing held in E&C.</p>	<p>This bill formally authorizes the Federal Energy Management Program (FEMP), which has existed without authorization, at DOE. The bill also establishes energy and water performance requirements in federal buildings. This bill passed with unanimous support from ENR. The CLEAN Future Act authorizes EPA to provide guidance to state agencies on energy efficiency improvements, and authorizes a grant program for public buildings to make these efficiency updates. The CLEAN Future Act does not have a provision specific to federal buildings, but the Clean Economy Jobs and Innovation Act has provisions related to federal buildings. The bill addresses energy and water performance requirements for federal buildings as well as certifications necessary for federal buildings to become green. All three bills share the goal of increasing energy efficiency.</p>
<p>The Better Energy Storage Technology (BEST) Act</p>	<p>S. 1602 (Collins) reported by ENR</p>	<p>H.R. 2986 (Foster) reported by House Science, Space, & Technology (Science) Committee, included in CLEAN Future Act as Title II Subtitle C and H.R. 4447 Title V Subtitle C.</p>	<p>Requires DOE to establish within its Office of Electricity a research, development, and demonstration program for grid-scale energy storage systems. The CLEAN Future Act and the Clean Economy Jobs and Innovation Act both similarly establish a national program within DOE for research into energy storage systems, components, and materials. All bills establish a grant program to share information, provide technical assistance, and provide grants for new energy storage systems.</p>
<p>Launching Energy Advancement and Development Through Innovations for Natural Gas</p>	<p>S. 1685 (Cornyn) reported by ENR</p>	<p>H.R. 3828 (Crenshaw) referred to Science. Similar to provisions in CLEAN Future Act as Sec. 503 and H.R. 4447 as Sec. 970c.</p>	<p>Directs the DOE to establish a program to award competitive grants to certain entities for the capture of carbon dioxide produced during the generation of natural gas-generated power. The CLEAN Future Act and the Clean Economy Jobs and Innovation Act also establish a program under DOE that establishes a direct air capture technology prize program for qualified facilities, but they also direct DOE to establish a carbon capture and utilization technology commercialization program under the jurisdiction of the Secretary of Energy. This bill did not pass Senate ENR by unanimous consent, but both bills have bipartisan support in their respective chambers.</p>

The CHP Support Act	S. 2425 (King) reported by ENR	H.R. 1480 (Welch) referred to E&C and Science, and is included in CLEAN Future Act as Sec. 511 and H.R. 4447 as Title IX Subtitle D.	The bill would create a Combined Heat and Power (CHP) technical assistance program. These bills seek to support businesses that want to invest in energy efficient CHP technology, and enable higher education research centers to provide assistance and analysis for businesses considering investing in CHP technology deployment. These bills have bipartisan, bicameral support.
The Reliable Investment in Vital Energy Reauthorization (RIVER) Act	S. 859 (Gardner) reported by ENR	H.R. 3361 (McKinley) reported by E&C Subcommittee on Energy, included in CLEAN Future Act as Sec. 243 and H.R. 4447 as Title II Subtitle B.	The RIVER Act amends the Energy Policy Act of 2005 to reauthorize hydroelectric production incentives and hydroelectric efficiency improvement incentives. The CLEAN Future Act and the Clean Economy Jobs and Innovation Act both reauthorize the same sections of the Energy Policy Act of 2005. While this bill did not pass through ENR with unanimous consent, it is possible that it will be included in an energy package.
The Smart Manufacturing Leadership Act	S. 715 (Shaheen) reported by ENR	H.R. 1633 (Welch) referred to Science and included in the CLEAN Future Act as Sec. 512 and H.R. 4447 as Sec. 9102.	Seeks to improve the productivity and energy efficiency of the manufacturing sector by directing the Secretary of Energy, in coordination with the National Academies and other appropriate federal agencies, to develop a national smart manufacturing plan and to provide assistance to manufacturers in implementing that plan. All bills establish smart manufacturing programs under the Secretary of Energy. The House and Senate bills both have bipartisan, bicameral support.
The Energy Efficient Government Technology Act	H.R. 1420 (Eshoo) reported by ENR	H.R. 1420 (Eshoo) passed the House, included in CLEAN Future Act as Title III Subtitle A and H.R. 4447 as Sec. 1302.	This bill sets forth requirements aimed at increasing the energy efficiency of information technologies and data centers within the federal government. It requires each federal agency to coordinate with OMB, DOE, and EPA to develop a strategy for the maintenance, purchase, and use of energy-efficient and energy-saving information technologies at federally owned facilities. This bill passed through both the House and Senate ENR, so it has a chance of being passed through the Senate as well.
The Weatherization Enhancement and Local Energy Efficiency Investment and Accountability Act	S. 983 (Coons) reported by ENR	H.R. 2041 (Tonko) reported by E&C and included in CLEAN Future Act as Sec. 311 and H.R. 4447 as Sec. 1601.	Reauthorizes DOE's Weatherization Assistance Program, which helps low-income families and the elderly with energy efficient weatherization updates to their homes. Both bills update the definitions of weatherization materials, allow third parties to receive grants to perform weatherization activities, and other provisions. These bills passed through both Senate ENR and House E&C and are likely to move forward easily.

The Energy Savings and Industrial Competitiveness Act	S. 2137 (Portman) reported by ENR	Provisions resembling H.R. 1420 (Eshoo) (listed below), H.R. 2664 (Carter), and H.R. 3962 (Welch) included in CLEAN Future Act as Title III Subtitle A and H.R. 4447 as Title I, Subtitle A, Part 1.	Portman-Shaheen aims to promote energy savings in residential and commercial buildings by updating and encouraging the adoption of building energy codes. The bill directs DOE to develop and adjust energy savings targets in recognition of potential energy savings and gains. This bill, the CLEAN Future Act, and the Clean Economy Jobs and Innovation Act all aim to improve efficiency in public schools, federally owned data centers, and monitor and improve model building energy codes; however the text is not identical. This bill passed through Senate ENR with unanimous consent, but versions of this bill have struggled to get across the finish line in previous Congresses.
The Wind Energy Research and Development Act	S. 2660 (Smith) reported by ENR	H.R. 3609 (Tonko) reported by Science. Included in H.R. 4447 as Sec. 2522.	The bills create research, development and demonstration programs for wind technologies. Both bills have bipartisan, bicameral support and are likely to progress as they move on to the Senate and House floors. The Clean Economy Jobs and Innovation Act includes provisions from this bill.
The Advanced Geothermal Innovation Leadership Act of 2019	S.2657 (Murkowski) reported by ENR	H.R. 5374 (Lucas) reported by Science. It is included in H.R. 4447 under Title II Subtitle E Part 3.	The bill would support innovation in advanced geothermal research and development. In addition, the CLEAN Future Act includes geothermal energy as a renewable source, but consistently cautions its use and impact to water. This bill faced opposition in the Senate, and does not have a House counterpart, so it is likely to face hurdles in the future.
The Grid Security Research and Development Act	N/A	H.R. 5760 (Bera) reported by Science Included in H.R. 4447 under Title V Subtitle A Part 3.	This bill provides for a comprehensive interdisciplinary research, development, and demonstration initiative to strengthen the capacity of the energy sector to prepare for and withstand cyber and physical attacks. This bill codifies activities already taking place at agencies, making it likely to be passed.
The Solar Energy Research and Development Act	S. 2668 (Sinema) reported by ENR	H.R. 3597 (McAdams) reported by Science. Included in H.R. 4447 under Title II Subtitle E Part 1.	The bills reauthorize research, development and demonstration programs for solar technologies.
The Enhancing Grid Security through Public-Private Partnerships Act	S. 2095 (Gardner) reported by ENR	H.R. 359 (McNerney) reported by E&C.	Authorizes a program to develop voluntary models for cybersecurity, provide technical assistance to utilities, and advance third-party vendor security, among other things. These bills were favorably reported from committees and await floor consideration in both chambers.
The Clean Industrial Technology (CIT) Act	S. 2300 (Whitehouse) reported by ENR	H.R. 3978 (Casten) referred to E&C, and passed out of Science. Similar to provisions in	Establishes an industrial emissions reduction technology development program of research, development, demonstration, and commercialization, to identify technologies that will reduce climate emission by promoting the use of low-carbon materials. The CLEAN Future Act establishes the Buy Clean Program, which aims to

		CLEAN Future Act as Title V Subtitle C and H.R. 4447 as Title IX Subtitle C.	steadily reduce the quantity of embodied carbon emissions of construction materials and products and promote the use of clean construction materials and products in projects supported by federal funds. The CIT Act and the Clean Economy Jobs & Innovation Act would both place the program under DOE, while the CLEAN Future Act would place it under EPA. This bill did not pass out of the Senate Committee by unanimous consent, and has multiple referrals in the House, so it is likely to face many roadblocks.
The Nuclear Energy Leadership Act (NELA)	S. 903 (Murkowski) reported by ENR	H.R. 3306 (Luria) multiple committee referrals; PPA provision included in CLEAN Future Act as Sec. 245. Provisions included in H.R. 4447 under Title IV Subtitle B.	NELA establishes a pilot program for long-term power purchase agreements (PPA) and directs advanced nuclear R&D, including advanced nuclear demonstration projects. With multiple referrals in the House, some provisions may face barriers to passage. This bill did not pass ENR by unanimous consent and could face future roadblocks, however both bills have bipartisan support.
The Public Land Renewable Energy Development Act	S. 2666 (McSally) hearing held in ENR	H.R. 3794 (Gosar) reported by Natural Resources Committee. Provisions included in H.R. 4447 under Title II Subtitle F.	This bill aims to promote the development of renewable energy on public land. It directs DOI to establish priority areas on covered land for geothermal, solar, and wind energy projects. This bill has bipartisan support in both chambers. It passed with unanimous support out of House Natural Resources, but still awaits a vote in ENR, and on the House floor.
Bureau of Reclamation Pumped Storage Hydropower Development Act	S. 1751 (Cantwell) reported by ENR	N/A	This bill authorizes pumped storage hydropower development utilizing multiple Bureau of Reclamation reservoirs. To date, the Lake Roosevelt project in Washington is the only non-federal pumped-storage project. This bill passed with unanimous support from ENR, but lacks a champion in the House.
21st Century Workforce Act	S. 2334 (Cantwell) reported by ENR	Similar to provisions included in the CLEAN Future Act in Title VIII Subtitle C and H.R. 4447 under Sec. 12111.	Establishes a 21 st Century Energy Workforce Advisory Board to develop a strategy to develop a skilled energy workforce. The CLEAN Future Act and the Clean Economy Jobs and Innovation Act both require the Secretary of Energy to provide direct assistance and resources for energy-related job training programs, and set up a workforce grant program for eligible businesses to pay the wages of new and existing employees during the time period that those employees receive training to work in the renewable energy sector. While S. 2334 also aims to set up a robust renewable energy workforce, the CLEAN Future Act and H.R. 4447 both provide guidance for the set up of the program, and provides funding opportunities for it to be carried out. S. 2334 faced opposition from several Senators when it was voted out of ENR.

The All-of-the-Above Federal Building Energy Conservation Act	S. 1245 (Hoeven) reported by ENR	H.R. 2664 (Carter) referred to E&C, and T&I. Included in H.R. 4447 as Sec. 1412. Divergent from CLEAN Future Act.	This bill requires federal agencies to apply energy conservation measures to, and improve the design for the construction of, their federal buildings in order to meet the prescribed energy consumption reduction target. While the CLEAN Future Act does require building energy codes to be updated in both new and existing buildings, it does not differentiate between federal and non-federal buildings when setting guidelines and timelines for the updates. The bill did not receive unanimous support in Senate ENR, and has multiple referrals in the House.
The Vehicle Innovation Act	S. 1085 (Peters) reported by ENR	H.R. 2170 (Dingell) referred to Science.	Authorizes appropriations through FY2024 to DOE for research, development, engineering, demonstration, and commercial application of innovative vehicle technologies. Both bills target reducing emissions from industrial projects through innovative technologies. This bill has been referred to multiple committees in the House, and faced opposition in Senate ENR.
Climate Change Health Protection and Promotion Act	S. 523 (Markey) referred to Committee on Health, Education, Labor, and Pensions (HELP)	H.R. 1243 (Cartwright) referred to E&C Subcommittee on Health. Similar to Title IV, Subtitle D of CLEAN Future Act	The bill requires the Department of Health and Human Services (HHS) to take action to address the potential impacts of climate change on public health. It directs HHS to develop a strategic action plan and a climate and health program to ensure the public health and health care systems in the US are prepared for the impacts of climate change on health. CLEAN Future Act contains similar provisions that direct HHS to develop plans for the changing needs of the healthcare system. This bill does not have bipartisan support in the Senate, making it unlikely that it will pass.
The Clean Energy Standard Act	S. 1359 (Smith) introduced in the Senate	H.R. 2597 (Lujan) referred to E&C and Science. Similar to provisions in CLEAN Future Act Title II Subtitle A	Both the Clean Energy Standard Act and the CLEAN Future Act establish clean energy standards and clean energy credit programs. While the credit programs are similar in each bill, the definition of “clean energy” and what qualifies for credits differs. They also include slightly different requirements for the determination of the number of credits needed to qualify, and the penalty for not providing an adequate amount of credits. These bills may face challenges as they currently lack bipartisan support.
The Protecting Resources on the Electric Grid with Cybersecurity Technology (PROTECT) Act	S. 2556 (Murkowski) reported by ENR	N/A	The bill would create a grant and technical assistance program for not-for-profit utilities to deploy advanced cybersecurity technologies. It also allows incentive-based rates for cybersecurity investments and participation in information-sharing programs. This bill did not pass ENR by unanimous consent and does not have a House counterpart.
The Nuclear Energy Renewal Act	S. 2368 (Coons) reported by ENR	Provisions included in H.R. 4447 as Sec. 952.	The bill would create a light water reactor sustainability program to support licensing and relicensing of nuclear facilities and nuclear research, development and demonstration programs. While this bill has bipartisan support, it did not pass out of ENR with unanimous support so it may face hurdles going forward, and it lacks a House champion.

Home Owner Managing Energy Savings (HOMES) Act	N/A	H.R. 2043 (Welch) hearing held in E&C. Similar to CLEAN Future Act Title III, Subtitle D and H.R. 4447 Title I, Subtitle D Part 2.	The CLEAN Future Act requires DOE to establish a Home Energy Savings Retrofit Rebate Program to provide rebates to homeowners for retrofits that achieve home energy savings. Subtitle D of the CLEAN Future Act is based on the HOMES Act. This bill does not have bipartisan support, and the Senate has not yet introduced related legislation.
Environmental Justice Act	S. 2236 (Booker) referred to the Environment and Public Works (EPW) Committee	H.R. 3923 (Ruiz) referred to House Judiciary. Similar to Title IV of CLEAN Future Act and Title XI of H.R. 4447.	The bill requires Federal agencies to address and eliminate the disproportionate environmental and human health impacts on populations of color, communities of color, indigenous communities, and low-income communities by establishing an interagency federal working group and environmental justice grant programs. The CLEAN Future Act similarly establishes a grant program and an interagency federal working group. It is unlikely that this legislation will be included in an energy package, as it does not have bipartisan support and has not yet been heard by the EPW Committee.
National Climate Bank Act	N/A	H.R. 5416 (Dingell) referred to T&I. Included in CLEAN Future Act as Title VIII, Subtitle B	Mandates the establishment of a National Climate Bank, which aims to make the U.S. a world leader in combating the causes and effects of climate change through the rapid deployment of mature technologies and commercialization of new technologies by maximizing the reduction of emissions in the U.S. for every dollar deployed by the Bank. It is unlikely that this will be included as part of an energy package as there is no Senate companion to this bill.
Blue Collar to Green Collar Jobs Development Act	N/A	H.R. 1315 (Rush) reported by E&C. Included in CLEAN Future Act as Title VIII, Subtitle C and in H.R. 4447 as Title XII.	Directs the Secretary of Energy to establish and carry out a comprehensive, nationwide energy-related industries jobs program. It is unlikely that this will be included as part of an energy package as there is no Senate companion to this bill.
National Policy on Transmission, Advanced Transmission Technologies Review	N/A	Included in CLEAN Future Act, Sec. 211, Sec. 213.	Establishes that it is the policy of the U.S. that a modern transmission system should facilitate a decarbonized electricity supply to enable GHG emissions reductions, and that the public interest is served by reducing barriers to transmission investments that enable clean energy resources deployment. Requires FERC to review and report on its progress in encouraging deployment of transmission technologies that increase the capacity and efficiency of existing transmission infrastructure. It is unlikely that this will be included as part of an energy package as there is no Senate companion to this bill.

<p>Natural Gas Act Modifications</p>	<p>N/A</p>	<p>Included in CLEAN Future Act, Sec. 215, Sec. 216. Provisions included in H.R. 4447 as Title III Subtitle C.</p>	<p>Defines the public interest under Sections 3 and 7 of the Natural Gas Act (NGA). Clarifies that FERC must consider climate change in its decision-making. Amends the NGA to prevent pipeline companies from using eminent domain until they have obtained all federal and state permits necessary for the construction and operation of a pipeline project. It is unlikely that this will be included as part of an energy package as there is no Senate companion to this bill.</p>
<p>Market Barriers to Clean Energy Development</p>	<p>N/A</p>	<p>Included in CLEAN Future Act, Sec. 217.</p>	<p>Clarifies that nothing in the Federal Power Act (FPA) limits FERC’s ability to approve a carbon pricing regime to set rates under sections 205 and 206; disallows state interference in a customer’s right to purchase clean electricity in interstate commerce; and requires all public utilities to place transmission facilities under the control of an independent system operator (ISO) or regional transmission organization (RTO) within two years. It is unlikely that this will be included as part of an energy package as there is no Senate companion to this bill.</p>