



CLEAN ENERGY

INNOVATION AND DEPLOYMENT ACT

U.S. REPRESENTATIVE DIANA DEGETTE

Framework of the Clean Energy Innovation and Deployment Act

Title I. Investment in Clean Energy Technology Innovation. The Department of Energy (DOE) will implement a wide range of measures to bring promising clean energy technologies to the point of commercial availability, including through the activities of a new Clean Energy Deployment Administration. The technologies will include solar and wind power; energy storage; advanced nuclear power; carbon removal, utilization, and storage; grid modernization; electric vehicle deployment; and energy efficient building technologies. The Clean Energy Deployment Administration will be equipped with a range of tools to create attractive investment environments for the development and deployment of the technologies, including through a new Clean Energy Investment Fund. In addition, the bill will establish new energy conservation and efficiency grant programs, new tax credits for electric vehicles and energy efficient buildings, and extensions of existing production and investment tax credits for renewable energy technologies.

Title II. Zero-emission Electricity Standard. The main mechanism driving the deployment of innovative technologies will be a Zero-emission Electricity Standard, similar to the renewable energy standards and clean energy standards found in most states. Under the standard, each year, starting in 2022, each power company will submit an increasing amount of Zero-Emission Electricity Credits (ZEEC) to the Secretary of Energy. Each ZEEC will represent one unit of zero-emission electricity. The zero-emission fraction will grow by 2030 to the percentage projected to result in a 50% reduction of aggregate carbon emissions below 2005 levels. By no later than 2050, the zero-emission fraction will be 100%. ZEECs will be tradable – a company generating more than its required amount of zero-emission electricity will be able to sell its excess ZEECs to a company that has not generated its required amount. If zero-emission electricity technology is far less costly than currently projected, the date by which the zero-emission fraction reaches 100% could be advanced to as early as 2037.

Title III. Incentives for Deployment of 100% Zero-Emission Electricity. Power companies prepared to move to 100% zero-emission electricity well before 2050 will be given federal support to do so through either an investment tax credit or a DOE grant.

Title IV. Low-income Rate-payer Protection. Low-income rate payers will be protected through a reform and expansion of the existing Weatherization Assistance Program and reauthorization of the Low-Income Home Energy Assistance Program (LIHEAP).

Title V. Energy Workforce Transition and Training. DOE will use a range of measures to promote just access to jobs in the modern energy economy, especially for energy workers in transition and communities that have historically been disproportionately impacted by climate change. A new DOE Energy Workforce Transition Office will identify the existing resources it can provide to displaced energy workers and communities, as well as the support DOE could provide given additional authority. DOE will also provide financial assistance to States for individualized State Energy Plans, which will deal with the elimination of greenhouse gas emissions, as well as workforce and economic transition. (This provision is based on a recently-enacted Colorado state law.) DOE will also establish an energy jobs apprenticeship program, a workforce pilot program, and a university leadership program. A Climate Resiliency Corps, similar to the Civilian Conservation Corps, will be established to assist communities in deploying climate resiliency infrastructure. All programs will prioritize disproportionately impacted communities, as well as marginalized and underrepresented communities like minorities, women, and veterans.

Section by Section Summary

Section 1. Short Title; Table of Contents. The Act may be cited as the "Clean Energy Innovation and Deployment Act of 2020."

Title I. Investment in Clean Energy Technology Innovation.

Under Title I, the Department of Energy (DOE) will implement a wide range of measures to bring promising clean energy technologies to the point of commercial-availability, including through the activities of a new Clean Energy Deployment Administration. The technologies will include solar and wind power; energy storage; advanced nuclear power; carbon removal, utilization, and storage; grid modernization; electric vehicle deployment; and energy efficient building technologies.

Section 100. Purpose

Subtitle A. Clean Energy Deployment Administration.

Section 101. Definitions.

Section 102. Energy Technology Deployment Goals. Requires the Secretary and an Advisory Council established by this subtitle to create short- and long-term goals for the deployment of clean energy technologies through programs implemented by the Clean Energy Deployment Administration established by this subtitle. These goals include:

- Sufficient electricity generation capacity to meet the projected energy demand of the United States no later than 2050 using technologies with net-zero greenhouse gas emissions;
- Sufficient infrastructure, as well as commercialization and manufacturing capacity, for cost-effective clean energy deployment; and

- A domestic commercialization and manufacturing capacity that will establish the United States as a world leader in clean energy technologies.

Further directs the Secretary to revise the goals from time to time as appropriate, to account for changes in technology.

Section 103. Clean Energy Deployment Administration. Establishes a Clean Energy Deployment Administration (CEDA) within the DOE. CEDA will operate under the direction of a CEDA Administrator and Board of Directors, who will be appointed by the President with the advice and consent of the Senate for 5-year terms. The Board will oversee operations and consult with the Administrator on policies and best practices.

Establishes an Energy Technology Advisory Council, consisting of 6 members selected by the Secretary and 3 members of the Board, to serve 5-year terms. The Council will develop and publish a methodology for CEDA to use in evaluating clean energy technology projects.

Specifies that the Administration will offer assistance and resources to energy transition communities and Indian Tribes so that these communities will have access to the best available scientific and technical information for use in the regulation, development, and management of clean energy technologies.

Section 104. Administration Functions. Authorizes CEDA to issue direct loans, letters of credit, loan guarantees, insurance products, and other credit enhancements, as the Administrator deems appropriate, and establishes criteria for awarding this support. Specifies that CEDA will generally be expected to issue final decisions for credit support within 180 days after the submission of completed applications.

CEDA will use a portfolio investment approach to mitigate risk and diversify investments across technologies. The Administrator will establish an expected loan loss reserve to account for estimated losses attributable to deployment activities. The Board will submit a report to Congress on the loss rates of the portfolio in order to determine the reserve. The first report will be submitted within the first 90 days, with annual reports submitted thereafter.

CEDA will work with Federal, State, local, and private sector entities to develop debt instruments to promote the widespread deployment of clean energy technologies. CEDA will be authorized to acquire, hold, and sell any debt associated with the deployment of clean energy technologies. The Administrator will establish eligibility criteria for loan originators, sellers, and servicers seeking support for portfolios relating to clean energy technologies. CEDA will be able to lend on the security of, and make commitments to lend on the security of, any debt that it has issued.

Section 105. Improvements to Existing Clean Energy Investment Programs. Establishes a revolving Clean Energy Investment Fund (CEIF) to carry out the provision of the Energy Policy Act of 2005 which provides authority for the Department of Energy to guarantee loans for innovative projects. Further amends the provision to improve the existing loan guarantee program, including by changing the definition of "commercial technology" so that it does not foreclose loan guarantees to similar projects or technologies. Allows use of balances in the CEIF to cover the costs of loan guarantees and eliminates the need for new budgetary authority to support loan guarantees. All associated fees will be deposited in the CEIF by the Secretary and will be used for administrative expenses and broader availability of loan guarantees.

Section 106. Federal Credit Authority. Within 18 months, all functions and authority of the Secretary under the existing loan guarantee programs will be transferred to CEDA, including the Innovative Energy Loan Guarantee Program and Tribal Energy Loan Guarantee Program. The Secretary of the Treasury will transfer additional funds, not already appropriated, from the Treasury to the Clean Energy Investment Fund to carry out this subtitle.

The Administrator will charge fees and collect compensation generally in accordance with commercial rates—except for breakthrough technologies, for which CEDA will charge the minimum amount in fees or compensation practicable. CEDA will be authorized to use alternative arrangements, such as profit participation, contingent fees, and other valuable contingent interests, to compensate for its expenses and the risk inherent in the support. In order to maintain sufficient liquidity for deployment activities, CEDA will be authorized to issue notes, debentures, bonds, or other obligations for purchase by the Secretary of the Treasury. The Secretary will be authorized to purchase these as long as the obligations do not increase to an amount greater than \$2 billion. The obligations will be treated as public debt transactions of the United States.

Section 107. General Provisions. The activities undertaken by CEDA will be subject to audits by the Government Accountability Office. The Administrator will have an additional annual audit performed by an independent public accountant that will be submitted to the Secretary. The Administrator will also submit annual and quarterly financial reports, as well as any other special reports the Secretary might require. Within 1 year, and biannually afterward, the Administrator will also submit a report to Congress with a description of technologies supported and the performance of CEDA in meeting its short- and long-term goals. All reports will be made public. The authority of CEDA will be terminated January 1, 2029, at which point any authority and obligation will revert to the Secretary.

All rights and remedies of CEDA will be immune to impairment, limitation, or restriction by laws or administrative actions passed after CEDA acquires a subject or property. CEDA will be considered a corporation, but will be authorized to conduct its business without regard to state laws relating to incorporation.

Subtitle B. Beneficial Electrification.

Section 111. Innovation in Electric Vehicles Through the Advanced Technology Manufacturing Incentive Program. Extends the Advanced Technology Vehicles Manufacturing Incentive Program to 2030. This program endows the DOE’s Loan Program Office with renewed loan authority to support the manufacture of eligible light-duty vehicles and qualifying components. To date, the program has loaned \$8 billion for projects that have supported the production of more than 4 million advanced technology vehicles.

Section 112. Deployment of Electric Vehicles Through Tax Credits. Expands the tax credit for new plug-in electric vehicles and extends the tax credit for new fuel cell motor vehicles to 2028.

Section 113. Deployment of Electric Vehicle Charging Infrastructure Through Supply Equipment Programs. Requires the Assistant Secretary of the Office of Electricity to establish a group that will develop standards necessary to expand deployment of electric vehicles, develop an electric vehicle charging network, and ensure the stability and reliability of the electric grid.

Amends the Public Utility Regulatory Policies Act of 1978 to allow States to establish rate programs and standards for electric vehicle charging programs. Establishes a model building code for integrating electric vehicle equipment into residential and commercial properties, including onsite renewable power equipment and electric storage equipment.

Section 114. Deployment of Energy Efficient Buildings Through Tax Credits. Extends the tax credit for residential energy efficient property through 2026.

Section 115. Deployment of Energy Efficient Buildings Through Grants. Extends appropriated funding for energy efficient public buildings and the energy efficient building block grant program through 2026. Specifies that the funds are to be used for deployment of energy distribution technologies that increase energy efficiency and expand access to alternative sources of energy. Also establishes a Smart Federal Building program, for which the Secretary will establish targets within 18 months for the number of buildings to be commissioned and evaluated within 3-6 years. The Secretary will use building criteria that include cost-effectiveness, reduced environmental impacts, increased energy savings, and increased cybersecurity within smart building infrastructure.

Subtitle C. Zero-Emission Electricity Generation Technology.

Section 121. Deployment of Solar and Wind Technology Through Tax Credits. Amends the Internal Revenue Code to allow an energy tax credit for investment in qualified offshore wind property constructed before 2028. Extends the existing Solar Investment Tax Credit (ITC) to January 1 2028 and the Wind Production Tax Credit (PTC) to January 1 2028 and provides for transferability of both tax credits to eligible project partners, including electric cooperatives and public power utilities. The PTC will be extended to hydropower, marine, and hydrokinetic facilities.

Section 122. Energy Tax Credit Monetization. Allows energy tax credits to be made as direct payments against taxes. This will be available to any developer of an electricity generation source eligible for a tax credit, as well as electric cooperatives and public power utilities.

Section 123. Innovation in Energy Storage Through Research, Development, and Demonstration. Establishes within the Office of Electricity at DOE a research, development, and demonstration program of grid-scale energy storage systems, to be established within 180 days. Also within 180 days, and updated every 2 years thereafter, the Secretary will be responsible for submitting a 10-year strategic plan to Congress for the program that identifies research and development activities, establishes cost targets, and details expected timelines. By September 30, 2023, the Secretary will enter into agreements to carry out 5 grid-scale energy storage system demonstration projects.

Section 124. Deployment of Energy Storage Through Tax Credits. Amends the Internal Revenue Code to create tax credits for battery and other energy storage technologies. Expands the tax credit for investments in energy property to include equipment that receives, stores, and delivers energy using batteries and has a capacity of at least five kilowatt hours. Expands the tax credit for residential energy efficient property to include expenditures for battery storage technology that is installed on or in connection with a residence used by the taxpayer and has a capacity of at least three kilowatt hours.

Section 125. Normalization Opt-Out for Utilities. Amends the Internal Revenue Code to allow utilities to opt-out of normalization rules. Normalization spreads the tax benefit of a particular investment over the life of a project. Opting-out of normalization will allow utilities to pass along the full value of the credit to customers up-front.

Section 126. Deployment of Carbon Capture Utilization and Storage Through Tax Credits. Amends Section 45Q of the Internal Revenue code to extend the existing tax credit for carbon capture utilization and storage through 2029.

Section 127. Innovation in Advanced Nuclear Technology through Demonstration. Finds that the national nuclear enterprise requires a domestic source of low- and high-enriched uranium. Many domestic advanced nuclear power industry partners require this for initial fuel testing, operation of demonstration reactors, and commercial operation of advanced nuclear reactions. As of now, no domestic uranium enrichment or fuel fabrication capability exists.

Amends the Energy Policy Act of 2005 to include research and development goals for advanced nuclear reactors. Directs the Secretary of Energy to advance the research and development of domestic advanced affordable nuclear energy and complete at least 2-5 demonstration projects by December 31, 2025. The Secretary will also identify candidate technologies that are not developed sufficiently to demonstrate within the timeframe, and to identify the technical challenges to these technologies. Also establishes a long-term nuclear power purchase agreement pilot program and requires the Secretary to submit a Nuclear Energy Strategic Plan to be submitted to Congress within 180 days, and every 2 years thereafter.

Section 126. Innovation in Carbon Removal, Utilization, and Storage Through Research, Development and Demonstration. Establishes a research, development, and demonstration program to test, validate, and improve technologies and strategies to remove carbon dioxide from the atmosphere on a large scale. The program will include research, development, and demonstration activities relating to:

- direct air capture of carbon dioxide and storage technologies;
- bioenergy with carbon capture and sequestration;
- enhanced geological weathering (by which carbon is removed from the atmosphere by bonding with minerals);
- agricultural and grazing practices, and forest management and afforestation;
- planned or managed carbon sinks, both natural and artificial; and
- novel uses for carbon, including the conversion of carbon oxides for commercial and industrial products.

In developing and identifying technologies and strategies, the program will consider:

- the potential for carbon removal on a massive scale;
- the extent to which the carbon storage can be made permanent;
- land use changes, including impacts on natural and managed ecosystems;
- net greenhouse gas emissions;
- ocean acidification; and
- commercial viability and potential for near-term impact.

The program will establish a Carbon Removal Technology Prize Competition, within 1 year, for projects that have the potential to reduce the level of carbon dioxide in the atmosphere at

bench- or commercial-scale. Also establishes a Carbon Utilization Program which will identify and assess new uses for carbon, including the conversion of carbon oxides for commercial and industrial use.

Establishes the Carbon Capture Facilities Demonstration Project. Within 120 days, the Secretary will create a competitive, merit-reviewed process for demonstration or pilot projects to construct and operate up to 5 facilities to capture carbon dioxide facilities from qualifying electric generation facilities. The Secretary will enter into cooperative agreements with qualified projects by September 30, 2025, leveraging existing public-private partnerships and federal sources to do so. Defines CCUS pilot projects as those with a generating capacity of up to 200 megawatts.

Section 129. Deployment of Electric Grid Modernization Through Grants. Establishes a program to provide financial assistance for projects related to the modernization of the electric grid, including projects that improve monitoring and control of the distribution system and projects related to transmission system interconnectivity. Projects will be designed to improve resiliency, performance, and efficiency of the grid, while ensuring secure integration and management of energy resources. Each project will also include a cyber-security and data privacy program plan.

Section 130. Prize Competition for Electricity-Related Technologies for Remote Communities. Establishes a competitive program that will award prizes for technologies that efficiently generate or utilize electricity for use by homes, businesses, communities, and military installations that are in remote locations or are not connected to a regional or national electric grid, such as island communities. Eligible technologies will include technologies that generate electricity, energy storage technologies, and appliances that are highly-efficient in their use of electricity.

Section 131. Report to Congress. Directs the Secretary of Energy to submit within two years, and every five years thereafter, a report to Congress on the critical technologies identified in Title I, including a reporting of:

- Risks and benefits associated with each critical technology and recommendations for managing the risks;
- Barriers to development of each technology;
- Technical milestones and research opportunities;
- Incentives needed for adoption of each technology;
- Federal capacity to support state and local efforts towards deployment of the technologies;
- Existing agencies and programs that overlap or are duplicative and recommendations for promoting their efficiency; and
- The current infrastructure of regional electricity grids and the potential for growth within them.

Subtitle D. Davis-Bacon Compliance.

Section 141. Davis-Bacon Compliance. Requires that all laborers and mechanics employed on projects funded by this Act be paid wages at rates not less than those prevailing on projects of a similar character in the locality.

Title II. Zero-Emission Electricity Standard.

The main mechanism driving the deployment of innovative technologies will be a Zero-emission Electricity Standard, similar to the renewable energy standards and clean energy standards found in most states. Under the standard, each year, starting in 2022, each power company will submit an increasing amount of Zero-Emission Electricity Credits (ZEEC) to the Secretary of Energy. Each ZEEC will represent one unit of zero-emission electricity. The zero-emission fraction will grow by 2030 to the percentage projected to result in a 50% reduction of aggregate carbon emissions below 2005 levels. By no later than 2050, the zero-emission fraction will be 100%. ZEECs will be tradable – a company generating more than its required amount of zero-emission electricity will be able to sell its excess ZEECs to a company that has not generated its required amount. If zero-emission electricity technology is far less costly than currently projected, the date by which the zero-emission fraction reaches 100% could be advanced to as early as 2037.

Section 200. Purpose

Subtitle A. Zero-Emission Electricity Standard.

Section 201. Definitions.

Section 202. Zero-Emission Electricity Requirement. Requires that each year, starting in 2022, each retail electricity supplier will submit a specified amount of zero-emission electricity credits (ZEEC) to the Secretary of Energy. Each ZEEC will represent one megawatt-hour of electricity generated without emitting carbon dioxide.

The amount of ZEECs required in 2022 and 2023 will represent the average percent of zero-emission electricity sold by the electricity supplier from 2018-2020. In other words, each electricity supplier will start from its current percentage of zero-emission electricity. For each year from 2024 to 2050, the required percent of zero-emission electricity will increase by an even amount. In 2050 and every year thereafter, the amount of ZEECs required will be equal to 100% of the electricity sold by the electricity supplier. From 2024 on, each electricity supplier will submit an amount of ZEECs representing a rolling average of zero-emission electricity sold over the previous three years.

Price ceiling: In the event of an unexpected increase in the price of ZEECs, an electricity supplier will be allowed to pay an alternative compliance payment (ACP) instead of submitting one or more of its required ZEECs. The ACP price in 2022 will be \$20 per required ZEEC; the ACP price in 2050 will be \$62 per required ZEEC; from 2022 to 2050, ACP prices will increase evenly. Alternatively, the electricity supplier could petition the Secretary of Energy to make a "determination of inadequate availability of technology." If the Secretary determines that the number of zero-emission megawatt-hours that can be provided affordably and reliably with current technology is less than the number of ZEECs the petitioner is required to submit, the petitioner will be allowed to submit only as many ZEECs as needed to match the level of current technological availability.

Price floor: From 2025 on, if the average price of a ZEEC is very low for three years in a row, the annual increase in the required percent of zero-emission electricity will be doubled for the fifth year following the low ZEEC prices. For example, if ZEEC prices for 2022-2024 are

\$10, the annual increase in zero-emission electricity required in 2030 will be doubled. Once the average annual price of ZEECs rises above half the ACP, the required increase will return to the normal rate. The ACP itself will remain unchanged throughout.

The objective of the price ceiling and price floor mechanisms is to create a “price collar” that keeps the price of ZEECs below each year’s ACP – protecting rate-payers from price spikes – while keeping ZEEC prices high enough to provide the certainty needed to make investments in clean energy technology. Moreover, if the price of ZEECs stays consistently below half the ACP, for example due to the success of the technology innovation measures of Title I, 100% zero-emission electricity could be achieved by 2037. Note that the actual cost of complying with the acid rain provisions of the 1990 Clean Air Act amendments was one-third of the projected cost.

Any distribution electricity cooperative, some of which have very small staffs, could enter into an agreement under which its reporting and compliance obligations would be borne by its generation and transmission cooperative or by another electricity generating company. Similarly, any public power authority could enter into an agreement under which its obligations would be borne by its "joint action agency" (the entities that generate electricity for many public power authorities) or another generator.

Any retail electricity supplier served by an Independent System Operator (ISO) or Regional Transmission Organization (RTO) could base its initial required percentage of zero-emission electricity on either the average percent of zero-emission electricity it sold in 2018-2020 (i.e., the default described above) or the average percent of zero-emission electricity the ISO or RTO sold in 2018-2020.

A retail electricity supplier would have the option of including zero-emission electricity generated by behind-the-meter systems in submitting its ZEECs.

Section 203. Zero-Emission Electricity Credit Trading Program. Requires the Secretary of Energy, within one year, to establish a ZEEC trading program to record, track, and facilitate the auction and transfer of ZEECs. The Secretary may delegate the administration of this program to an appropriate entity. Electricity generators will be able to sell or otherwise transfer credits through auctions established by the trading program, as well as through direct sales and other transactions. ZEECs will only be purchased by, transferred to, or otherwise secured by retail electricity suppliers.

Electricity suppliers will initially be able to bank ZEECs for up to five years, a number that will decline steadily to two years by 2040 -- except that, if the above-mentioned price floor mechanism is engaged, ZEECs may be banked for up to five years.

Section 204. Determination and Issuance of Quantity of Zero-Emission Electricity Credits. Requires that by March 1 of each year, the Secretary of Energy will issue to each generator a quantity of ZEECs equal to the number of megawatt-hours of zero-emission electricity it generated and sold in the previous year. Specifies the methods by which the Secretary will issue ZEECs to electricity generators utilizing the different electricity generation technologies.

The amount of ZEECs the Secretary issues a given generating unit will reflect the fraction of its electricity not associated with the release of greenhouse gases to the atmosphere. This number will be determined by comparing the carbon intensity of the generating

unit with the carbon intensity of an efficient coal-burning power plant (which is 0.82 metric tons of carbon dioxide per megawatt-hour).

Any generator that generates electricity using only solar, wind, ocean, current, wave, tidal, geothermal or nuclear energy or an existing hydropower facility will be issued one whole ZEEC for every megawatt-hour of electricity it generates. For any hydropower facility that goes into service after the date of enactment, the Secretary shall account for the greenhouse gas emissions of the impoundment reservoir in issuing ZEECs.

The number of ZEECs issued to a generator using coal, natural gas or oil, with or without carbon capture, utilization and/or storage (CCUS), will be based on two factors. The first factor will be the extent to which the generator releases less than 0.82 metric tons of carbon dioxide for every megawatt-hour of electricity it generates. A coal generating unit will not receive any ZEECs without CCUS. Combined cycle natural gas generating units, however, generally emit about 0.4 metric tons of carbon dioxide per megawatt-hour, making them eligible to receive ZEECs even without CCUS.

The second factor in the issuance of ZEECs to coal, natural gas and oil-fired generators will be the extent to which they draw from a supply chain that allows the release of carbon dioxide and methane into the atmosphere. Upstream carbon dioxide and methane release will be counted against the carbon intensity of the generating unit, with the default being the average amount of carbon dioxide and methane released by such supply chains in the United States. However, if a generator can demonstrate a smaller upstream release of methane and carbon dioxide, the smaller figure can be used in calculating the generator's carbon intensity. Note that while the average amount of upstream methane loss in the United States is estimated to be 2-3%, at least one major oil company intends to reduce this figure to 0.2% for the natural gas it provides its customers.

The Secretary will issue ZEECs to any entity that captures carbon dioxide from the atmosphere and permanently stores or uses it. The Secretary will also issue additional ZEECs to generators using combined heat and power systems, rather than a separate thermal source, to meet onsite thermal needs.

Generators using renewable biomass, waste-to-energy, and low-carbon fuels will be issued ZEECs in amounts determined by the Secretary.

Generators will not receive more zero-emissions credits than the number of megawatt-hours they have generated for a given year. The Secretary also will not issue a negative quantity of ZEECs to a generator.

Section 205. Carbon Mitigation Fund. Specifies that ACPs paid under Section 202, as well as civil penalties collected under Section 208, will be collected by the Secretary of the Treasury and transferred to a Carbon Mitigation Fund. The money in the Fund will be awarded to promote electricity-related activities that avoid greenhouse gas emissions or remove carbon dioxide from the atmosphere. This can include activities that:

- Improve the energy efficiency of facilities and devices;
- Replace natural gas space heaters, water heaters, stoves, and electric appliances;
- Replace traditional fossil-fuel powered vehicles with electric or low-carbon vehicles;
- Replace fossil-fuel powered airport and seaport vehicles with electric or low-carbon vehicles;

- Install charging stations for electric vehicles; and
- Capture and permanently store or utilize carbon dioxide from the atmosphere, unless the activity has already received a ZEEC under Section 204.

In addition, any carbon mitigation activity endorsed by a generator or retail electricity supplier will be eligible for funding, even if it is not on the above list, as long as it meets the requirements described below.

The Secretary will solicit proposals for these carbon mitigation activities by February 1, 2024 and each February 1 thereafter. In order to apply for funds, proposals will describe the carbon mitigation activities, the amount of emission reduction or carbon removal, the bid amount, and the methodology for monitoring and reporting emissions. The Secretary will award funds by August 1, 2024 and each August 1 thereafter. Funds will be awarded beginning with the proposal with the lowest bid per ton of carbon mitigated, then the next lowest bid, sequentially until the total amount of funds appropriated have all been awarded. Because the marginal cost of carbon abatement of these activities will likely be lower than the marginal cost of abating carbon from a power plant in a year when ZEEC prices rise above the ACP, triggering this price ceiling mechanism will likely result in greater-than-projected carbon reductions for the year.

Section 206. State Programs. Specifies that nothing in this Act affects the authority of States to adopt or enforce laws that regulate retail electricity suppliers, except that no State can pass a law to relieve electricity suppliers from compliance with this Act. The Secretary will consult with the States to ensure coordination between the implementation of this Act and relevant State clean and renewable energy programs.

The Secretary will determine whether a State is implementing a more stringent program than that established by this Act. This determination will be made by January 1, 2021 and every 5 years thereafter, or within 6 months of enactment of such a program by a State. If a State program is more stringent, a retail electricity supplier in compliance with the State program will be deemed in compliance with this Act. If a State has a program that is not more stringent, any megawatt-hour of electricity from a non-emitting source could be awarded both a ZEEC and a credit issued under the state program.

Section 207. Report to Congress. Requires the Secretary by 2040 to submit a report to Congress with an evaluation and a forecast of the remaining barriers to achieving generation of electric energy with no emissions of carbon dioxide by calendar year 2050.

Section 208. Information Collection. Specifies that the Secretary can require any retail electricity supplier, generator, or other entity to submit information determined by the Secretary as appropriate to carry out this Act.

Section 209. Civil Penalties. Specifies that a retail electricity supplier that fails to meet the requirements of this title will be subject to civil penalties that equal the total quantity of ZEECs that the retail electricity supplier failed to submit for the calendar year multiplied by 300% the alternative compliance payment for a calendar year. If a supplier is unable to comply with this title for reasons outside of its control, the Secretary can mitigate or waive the penalty. The Secretary can also reduce the penalty by any amount paid by the supplier to a State for failure to comply with a State requirement, if the State requirement is more stringent.

Section 210. Regulations. States that within 1 year, the Secretary will promulgate the regulations of this Act.

Subtitle A. Methane Regulation.

Section 211. Methane Regulation. Requires the Environmental Protection Agency to establish rules to reduce the methane emissions of the oil and natural gas sector so that the emissions are at least 90 percent below 2012 emissions by 2030.

Title III. Incentives for the Accelerated Deployment of 100% Zero-Emission Electricity System.

Under Title III, power companies prepared to move to 100% clean energy well before 2050 will be given federal support through either an investment tax credit or a grant.

Section 300. Purpose.

Section 301. Zero-Emission Electricity Acceleration Investment Tax Credit. Amends the Internal Revenue Code to establish an investment tax credit for an electricity generator that has replaced all of its carbon dioxide-emitting electricity generation capacity with zero-emission electricity generation capacity. In order to qualify to receive the tax credit, the company must have replaced its carbon-emitting units with zero-emitting units that are of at least the same capacity.

The amount of the grant will be the cost of the new zero-emission electricity generating units multiplied by:

- 50%, for units that begin to generate electricity before 2026;
- 40%, for such units before 2031;
- 30%, for such units before 2038; and
- Zero after 2038.

A company allowed a credit under this section may transfer any portion of such credit to another taxpayer or to monetize the credit. (As specified in Title II, a company that receives an investment tax credit under this section will be neither subject to the requirement under Title II to submit ZEECs nor able to sell ZEECs.)

Section 302. Zero Emission Electricity Acceleration Grants. Specifies that the Secretary of Energy will provide a grant to each power company that has replaced all of its carbon dioxide-emitting electricity generation capacity with zero-emitting electricity generation capacity. In order to qualify to receive the tax credit, the company must have replaced its carbon-emitting units with zero-emitting units that are of at least the same capacity.

The amount of the grant will be the cost of the new zero-emission electricity generating units multiplied by:

- 50%, for units that begin to generate electricity before 2026;
- 40%, for such units before 2031;
- 30%, for such units before 2038; and
- Zero after 2038.

(As specified in Title II, company that receives a grant under this section will be neither subject to the requirement under Title II to submit ZEECs nor able to sell ZEECs.)

Title IV. Low-Income Rate-Payer Protection.

Under Title IV, low-income rate payers will be protected through a reform and expansion of the existing Weatherization Assistance Program and reauthorization of the Low-Income Home Energy Assistance Program (LIHEAP).

Section. 400. Purpose.

Section 401. Weatherization Assistance Program. Amends the Energy Conservation and Production Act to reauthorize the Weatherization Assistance Program at \$350 million through Fiscal Year 2024. Allows support for renewable energy technologies and other advanced technologies. Allows re-weatherization of homes 15 years after past weatherization services were completed.

Section 402. LIHEAP Authorization. Amends the Low-Income Home Energy Assistance Act to authorize the Low-Income Home Energy Assistance Program (LIHEAP) through Fiscal Year 2030.

Title V. Energy Workforce Transition and Training.

DOE will use a range of measures to promote access to jobs in the modern energy economy, especially for energy workers in transition and communities that have historically been disproportionately impacted by climate change. A new DOE Energy Workforce Transition Office will identify the existing resources it can provide to displaced energy workers and communities, as well as the support DOE could provide given additional authority. DOE will also provide financial assistance to States for individualized State Energy Plans, which will deal with the elimination of greenhouse gas emissions, as well as workforce and economic transition. (This provision is based on a recently-enacted Colorado state law.) DOE will also establish an energy jobs apprenticeship program, a workforce pilot program, and a university leadership program. A Climate Resiliency Corps, similar to the Civilian Conservation Corps, will be established to assist communities in deploying climate resiliency infrastructure. All programs will prioritize disproportionately impacted communities, as well as marginalized and underrepresented communities like minorities, women, and veterans.

Section 500. Purposes.

Subtitle A. State Energy Plans.

Section 501. State Energy Plans. Amends the Energy Policy and Conservation Act to establish State Energy Plans. The Secretary of Energy will provide financial assistance to any State to develop its plan for promoting the elimination of net greenhouse gas emissions, improved air and water quality, and conservation of natural resources. Plans will consider:

- Workforce and economic transition planning;
- The social cost of carbon;
- The need to balance consumer choice, resilient and reliable systems, and reduced pollution;
- Existing state resources available for transition;

- The need to support local utility leadership towards transition; and
- Necessary infrastructure upgrades, including smart grid investments, improved building codes, appliance efficiency, and electric vehicle infrastructure.

Section 502. Authorization of Appropriations. Authorizes the appropriation of \$25 million annually for state energy plans from 2022 through 2026.

Subtitle B. Energy Workforce Transition.

Section 511. Definitions.

Section 512. Energy Workforce Transition Office and Advisory Council. Establishes a DOE Energy Workforce Transition Office which will project the timing and location of energy-related facility closures and the impacts on affected workers, businesses and communities, and support an Energy Workforce Transition Advisory Committee, also established by the law. The Advisory Council will, by January 1, 2023, complete an Energy Workforce Transition Plan to identify, align and streamline resources to assist workers and communities impacted by the transition in consideration of wage differential benefits, among other things. The Advisory Committee will include representatives of energy industry workers experiencing a transition (including at least one from a union representing coal workers, one from a building trades union, and one from a union representing workers from another energy sector), communities that have experienced an energy-related transition since 2008, and disproportionately-impacted communities (any community of color, low-to-middle income community, or indigenous community that is or has been disproportionately impacted by energy-related pollution).

Section 513. Energy Workforce Transition Plans and Reemployment of Affected Workers.

Owners and operators of energy-related facilities in the process of closing will be required to submit workforce transition plans to the Clean Energy Transition Office. To the extent practicable, the plan will be submitted six months before the closure of the larger coal-related facilities and two months before the rest. To the extent practicable, the plan will include how many workers' jobs will be eliminated; reduced in hours; retained under the same owner or operator; employed in the decommissioning and environmental remediation; or, if at a coal-related facility replaced with a zero-emissions facility, how many will be employed at the new facility.

Subtitle C. Modern Energy Workforce Development

Section 521. Definitions.

Section 522. Modern Energy Workforce Development. Establishes a nationwide program to improve education and training for jobs in energy-related industries (including energy-related manufacturing, engineering, construction, and retrofitting jobs) to increase the number of skilled workers trained in energy-related industries with existing or expected worker shortages. The Secretary will prioritize the education and training of underrepresented groups, including coal transition workers, women, minorities, and veterans, and partner with labor organizations that have multi-year records of training and supporting such individuals to a successful completion of pre-apprenticeship and apprenticeship programs. The Secretary will provide direct assistance (including financial awards, technical expertise, and guidance) to local educational agencies,

local workforce development boards, State educational agencies, State workforce development boards, institutions of higher education, nonprofit organizations, labor organizations, and apprenticeship and pre-apprenticeship programs. In collaboration with these institutions, the Secretary will publish an annual report on job creation in energy-related industries.

Section 523. Zero-Emissions Economy Workforce Pilot Program. The Secretaries of Labor and Energy will collaborate to establish a pilot program to provide competitively awarded cost-shared grants to eligible entities to pay for on-the-job training of new or existing employees to work in zero-emission energy generation, energy efficiency, grid modernization, reduction of greenhouse gas emissions, or participate in a pre-apprenticeship program that provides a direct pathway to an energy-related career. The program will prioritize individuals from communities such as minorities, women, veterans, tribal entities, or coal transition workers. Eligible entities will submit applications to the Secretary of Labor.

Section 524. University Zero-Emissions Energy Leadership Program. The Secretary of Energy will establish a program to provide scholarships, fellowships, and research and development projects at institutions of higher education in areas relevant to the development and deployment of zero emissions technology.

Section 525. Climate Resiliency Corps. The President will establish a program of public works called the Climate Resiliency Corps, similar to the Civilian Conservation Corps, to employ those who are otherwise unemployed or underemployed in the construction and maintenance of climate resiliency projects. These projects may include coastal restoration, resilient infrastructure, and other natural solutions. The program will prioritize the hiring of minorities, women, veterans, tribal entities, and energy transition workers.

Section 527. Authorization of Appropriations. Authorizes appropriations necessary to carry out this title from fiscal year 2021 through 2035.