CONCORD, MA — WASHINGTON, DC

47 Junction Square Drive
Concord, MA 01742

978-369-5533
www.mjbradley.com

MJB&A Summary ■ February 5, 2020

House Energy & Commerce Committee CLEAN Future Act

On January 28, 2020, the U.S. House Energy & Commerce Committee introduced the Climate Leadership and Environmental Action for our Nation's (CLEAN) Future Act.[1] The legislation adopts the Committee's goal of achieving 100 percent clean economy by 2050 through a sector-by-sector approach. The Act includes a Clean Energy Standard for the power sector, a separate title for the transportation sector including establishing vehicle performance standards, and requirements for the Environmental Protection Agency (EPA) to establish standards of performance for methane emissions from oil and natural gas systems. Additional provisions focus on energy efficiency, industry, and environmental justice. To ensure the nationwide targets are achieved, the Act would also require states to develop plans to achieve state-wide net-zero covered emissions[2] by 2050, with interim carbon dioxide (CO_2) reduction goals for 2030 and 2040, and an interim methane reduction goal for 2040.

The following summarizes the legislative text including the eight titles.

[1] The full bill text is available here as released on January 28, 2020.

[2] The Act defines covered emissions as CO_2 and methane emissions emitted by or attributed to a source in the state. For biogenic emissions from agriculture and land use practices, those emissions are only covered if they result from burning woody biomass to generate electricity either for sale to the grid or for onsite industrial use.

Title I: National Climate Target

Title I adopts the Committee's goal of reaching a 100 percent clean economy by 2050 and Title II focus on the power sector including a national Clean Energy Standard, certain reforms for the Federal Energy Regulatory Commission (FERC) and Public Utility Regulatory Policy Act (PURPA), support national grid reliability and security, and improving access to clean electricity generation.

National Target

The Act includes the goal of achieving, by no later than 2050, a "100 percent clean economy", defined in the Act as "economywide, net-zero greenhouse gas [GHG] emissions, or negative greenhouse gas emissions after annual accounting for sources and sinks of anthropogenic greenhouse gas emissions consistent with the coverage of emissions reported by the United States under the United Nations Framework Convention on Climate Change."

The Act includes the bill introduced by Representative McEachin (D-VA) in 2019 (HR 5221), which would direct federal agencies to use existing authority to achieve this goal and would require that the Environmental Protection Agency (EPA) evaluate each federal agency's emission reduction plan, making recommendations to strengthen agency plans and track progress toward the goal. It would also require EPA to establish the Clean Economy Federal Advisory Committee to make recommendations to EPA on one or more interim national GHG emissions reduction goals to achieve before achieving the national net-zero goal. After obtaining the committee's recommendations, EPA would be required to recommend to Congress one or more interim goals.

National Academies of Sciences Review

The Act would direct the National Academy of Sciences (NAS) to submit to Congress a study on the national goal of achieving net-zero GHG emissions by 2050 that includes the metrics by which the achievement of the 2050 goal should be determined and a method to determine progress toward and success in reaching the goal. In addition, the NAS would be required to submit a follow-up report assessing: the effectiveness of the recommended metrics and method as well as EPA's implementation of such metrics and method and any other recommendations in the first report.

Title II: Power Sector

Clean Energy Standard

The Act includes a Clean Energy Standard (CES) for the power sector that is largely based on the CES proposals by Representatives DeGette (D-CO) and Luján (D-NM) and would require 100 percent clean energy for the power sector by 2050.

Compliance Obligation for Retail Electricity Suppliers

The Act would require all retail electricity suppliers[3] to supply an annually increasing amount of qualified energy beginning in 2022 and increasing to 100 percent by 2050. The starting point for each retail electricity supplier would be based on each retail electricity supplier's "average percentage of the electric energy consumed by all electric consumers of the retail electricity supplier that is qualified energy during calendar years 2017, 2018, and 2019." To achieve 100 percent by 2050, each retail electricity supplier's target (i.e., the minimum percentage of qualified energy) would annually increase on a constant percentage point increase spread over the years from 2022 through end-year of 2050 based on the following:

$$Annual\ Increase = \frac{1 - Baseline\ Clean\ Energy\ Percentage}{28}$$

For 2022 and 2023, each retail electricity supplier would be required to submit to the Department of Energy (DOE) clean energy credits (CECs) equal to its applicable target (i.e., the product of their calendar year sales of electric energy, including behind-the-meter generation system, and the applicable target for those years.) For calendar years 2024 through 2050, the quantity of CECs required to be surrendered would be the average of the current year and the prior two calendar years.

If a retail electricity supplier failed to comply with its compliance obligations, the Act would impose civil penalties equal to the product of the total number of CECs that a retail electric supplier failed to submit and 300 percent of that year's Alternative Compliance Payment (described below).

Generation of Clean Energy Credits

The Act directs the DOE to issue CECs to generators generating "qualified energy" based on the carbon intensity of that generation, provided that its carbon intensity is lower than 0.82 metric tons (1,808 lbs.) of CO_2-equivalent (CO_2e)[4] per megawatt-hour (MWh). By March 1 each year, DOE would be required to issue CECs for any qualified energy that was generated in the prior year.

The Act specifies that non-emitting resources would receive one full CEC per MWh and qualifying emitting resources with a carbon intensity below 0.82 metric tons of CO_2e/MWh would receive a partial credit based on the generating unit's lifecycle emissions.

The Act defines qualified energy as either:

- A generating unit with annual carbon intensity less than 0.82 metric tons of CO_2e per MWh
    - The Act defines "generating unit" as a unit that:

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[3] The Act defines a "retail electricity supplier" as "an entity in the United States that sold not fewer than 20 megawatt-hours of electric energy to electric consumers for purposes other than resale during the preceding calendar year."

[4] The Act defines "carbon dioxide equivalent" as "the number of metric tons of carbon dioxide emissions with the same global warming potential over a 20-year period as 1 metric ton of another greenhouse gas…"

        - generates 5 or more MWh of electric energy per calendar year;
        - delivers electric energy to the grid or in the case of behind the meter generation:[5] (i) delivers electric energy to the grid or (i) generates electric energy that is consumed on site for a useful purpose; and
        - generates energy that is consumed in the United States.
- Qualified combined heat and power system
- Qualified waste-to-energy
    - A facility that captures CO_2 from: a generating facility that results in an annual carbon intensity below 0.82; the waste stream of another facility; or the atmosphere directly and permanently prevents the release of the captures CO_2.

The Act makes clear that solar, wind, ocean, current, wave, tidal, geothermal and nuclear energy are assigned a carbon intensity of zero and thus would receive one full credit per MWh.

To determine the carbon intensity of each generating unit using fossil fuel, the Act would require DOE to use the "best available science" to account for the CO_2 emissions from the generating units and the average amount of CO_2e that occurs from "extraction, flaring, processing, and transportation to the generating units of the fuel used by the unit." The Act includes a provision that allows DOE to consider a smaller amount of applicable CO_2e of natural gas if a generator can demonstrate through direct measurements (including of low-frequency, high-emission events) that the average amount of emissions from extraction, flaring, processing, and transportation to that generator is smaller.

The Act would also require DOE to account for the carbon intensity of hydropower, including hydropower reservoirs. In order to account for behind-the-meter generation, the Act includes a provision requiring that retail electricity suppliers submit verifiable information regarding the "carbon intensity of each behind-the-meter generation system and the quantity of electric energy generated by each behind-the-meter generation system that is consumed by electric consumer served by the retail electricity supplier."

For qualified low-carbon fuels,[6] the Act would require DOE to account for GHG emissions of any source of electricity used in the production of such qualified low-carbon fuel.

The Act also directs DOE to provide CECs to qualified renewable biomass generators based on the unit's generation and the carbon intensity of the qualified renewable biomass. For waste-to-energy facilities and combined heat and power systems, the Act also directs DOE to issue CECs based on the determined carbon intensity of each unit.

Finally, the Act would require that DOE conduct two studies, and possible rulemakings, that could affect the emissions intensity and credits earned by generating technologies:

- Within 180 days of enactment, DOE would begin to "evaluate data, models, and methodologies for quantifying lifecycle greenhouse gas emissions associated with generating electric energy from each type of significant source of clean energy," including both zero emissions sources and natural gas and other emitting sources. Within 540 days, DOE would be required to produce a report that would include

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[5] In order to account for behind-the-meter generation, the Act includes a provision that would allow the Secretary to require retail electricity suppliers to submit verifiable information regarding the "carbon intensity of each behind-the-meter generation system and the quantity of electric energy generated by each behind-the-meter generation system that is consumed by electric consumer served by the retail electricity supplier."

[6] The Act defines "qualified low-carbon fuel" as a fuel that "is produced through any process that significantly limits or avoids greenhouse gas emissions and does not release any greenhouse gas during combustion."

"determining the carbon intensity, accounting for lifecycle greenhouse gas emissions, of electric energy generated from each type of significant source of clean energy." A year later, DOE would have to take into account this report to promulgate regulations for "calculating lifecycle greenhouse gas emissions of electric energy generated from each type of significant source of clean energy" and "determining the carbon intensity of electric energy generated from each type of significant source of clean energy." DOE would be required to consult with EPA if it does decide to promulgate these regulations.

- Within six years of enactment, DOE would evaluate the implementation of the CES, including whether "a crediting mechanism could account for marginal carbon displacement achieved at the time and place that a generator generating qualified energy delivers energy to the grid (minus any carbon emissions produced by the generator generating qualified energy)."

Clean Energy Credit Trading and Alternative Compliance Payment

Within one year of enactment, DOE would be required to establish a national CEC trading program to record, track, enable, and allow for centralized auctions and bilateral transfers of CECs. The Act would allow generators to sell or transfer CECs and would authorize DOE to delegate the administration of the auction, sale, and trade of CECs as well as the measurement and tracking of the dispatch of qualified energy generation.

CECs may be banked for use in the calendar year in which they are generated as well as the subsequent two calendar years. The Act includes an alternative compliance payment (ACP) schedule detailing the payments that retail electricity suppliers could make in lieu of submitting clean energy credit in order to demonstrate annual compliance. The ACP would start at $22 and annually increase by $1.50 adjusted for inflation,[7] reaching $34 by 2030, $49 by 2040, and $64 by 2050. Funds collected through the ACP would to be directed toward a "State energy efficiency, clean energy deployment, and carbon capture and sequestration program." The collected funds would be distributed to the states proportionally based on the amount paid by retail electricity suppliers in that state. The Act would require that such funds be used for:

- energy efficiency improvements;
- replacement of natural gas space heaters, natural gas water heaters, and natural gas stoves, with electric appliances;
- replacement of fossil fuel-powered vehicles owned by the state or local agencies with electric vehicles or other low-carbon fuel vehicles;
- replacement of fossil fuel-powered ground airport and seaport vehicles with electric vehicles or low-carbon fuel vehicles;
- electric vehicle fast charging infrastructure along both highways and public roads in both rural and urban areas; and
- funding for CO_2 direct air capture and permanent sequestration and utilization.

Preemption and Existing State Programs

The Act would not preempt states from adopting or enforcing state clean energy or renewable energy programs or from regulating retail electricity suppliers. The Act would also direct DOE to consult with states to facilitate "to the maximum extent practicable, coordination between the implementation of this subtitle and the relevant State clean energy and renewable energy programs."

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[7] The Act does not include a definition of inflation to be used.

However, if DOE determines, in coordination with a state, that the state's clean energy program requires retail electricity suppliers to comply with a more stringent state clean energy program than the current federal CES, then those retail electricity suppliers would be considered to be in compliance with the requirements of the federal standard. The Act defines "more stringent State clean energy program" as one that results in a "greater percentage of qualified energy deployment than would be achieved in the State… over a 5-year period," under the federal standard, and also "includes compliance mechanisms, including the imposition of penalties, that are at least as effective in enforcing compliance as the system of enforcement" under the federal standard.

FERC Reform

The Act includes a number of provisions that would substantively alter the actions and operations of FERC, including:

- establishing national and interregional transmission planning policy;
- establishing a new Office of Public Participation and Consumer Advocacy within FERC;
- amending the Natural Gas Act to include consideration of potential climate change and other environmental impacts when considering natural gas and liquified natural gas (LNG) terminals and extension of facilities;
- modifying the process for natural gas pipelines to require that all federal and state permits, as well as demonstrated compliance with all environmental conditions, is met prior to exercising eminent domain;
- allowing FERC to approve carbon pricing policies in setting rates and charges;
- prohibiting state legal and regulatory barriers that may prohibit or unduly burden purchasing of clean electricity across state lines; and
- requiring public utilities to place their transmission facilities within the control of an ISO or RTO.

National and Regional Transmission Planning

The Act would require that FERC, within six months of enactment, begin a rulemaking proceeding to "increase the effectiveness of the interregional transmission planning process."[8] In conducting the rulemaking, the Act would direct FERC assess the effectiveness of the interregional transmission planning process for identifying solutions[9] that provide economic, reliability, operation, and public policy benefits while also considering the public interest, the integrity of markets, and the protection of consumers. Additionally, the rulemaking would need to emphasize several specific factors including, for example, consideration of the benefits of the solutions, ensuring that interregional benefit analyses[10] made between multiple regions not be subject to a reassessment by a single regional entity, and recognizing the importance of coordinating the planning process between regions.

FERC would be required to complete the rulemaking within one year of enactment as well as submit a report to Congress describing the its progress under section 219 of the Federal Power Act (Transmission infrastructure

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8 The Act defines "interregional transmission planning process" as "an evaluation of transmission needs established by public utility transmission providers in two or more neighboring transmission planning regions that are jointly evaluated by those regions."

9 The Act defines "interregional transmission solution" as "an interregional transmission facility that is evaluated by two or more neighboring transmission planning regions and determined by each of those regions for the ability of the project to efficiently or cost effectively meet regional transmission needs or to provide substantial benefits that are not addressed in either of the region's regional planning process."

10 The Act defines interregional benefit analysis as "the identification and evaluation of the estimated benefits of interregional transmission facilitates in two or more neighboring transmission planning regions to meet the needs for transmission system reliability, economic, and public policy requirements, that are not addressed by those transmission planning regions in their regional process."

investments) in encouraging the development of transmission technologies and other measures to "increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities." FERC would also be required to evaluate whether that rule or any other applicable rule or polices could be modified to "encourage greater deployment of such transmission technologies."

Office of Public Participation and Consumer Advocacy within FERC

The Act would establish a new Office of Public Participation and Consumer Advocacy, headed by a Director appointed by DOE, with the power to "intervene, appear, and participate,… in administrative, regulatory, or judicial proceedings on behalf of energy customers with respect to any matter concerning natural gas siting and infrastructure development under [FERC's jurisdiction] or the rates, charges, prices, tariff, or service of public utilities and natural gas companies under [FERC's jurisdiction]." Thus, the Office would have the authority to participate on any matter before the Commission on rates or service of a public utility or natural gas company and as an amicus curiae in judicial matter or other federal regulatory hearings and proceedings.

The Office would also:

- "support public participation in the sitting and permitting of natural gas storage and distribution infrastructure" under FERC's jurisdiction:
- "monitor and review energy customer complaints and grievances on matters concerning rates or service of public utilities and natural gas companies" under FERC's jurisdiction;
- "employ means, such as public dissemination of information, consultative services, and technical assistance, to ensure…that the interests of energy customers are adequately represented" in any applicable hearing or proceeding;
- collect data concerning rates or service of public utilities and natural gas companies under FERC's jurisdiction;
- prepare and issue reports and recommendations; and
- "take such other actions as the Director determines to be necessary to ensure just and reasonable rates for energy customers."

The Act would also establish a Public and Consumer Advocacy Advisory Committee within FERC, composed of at least two state utility consumer advocates and one non-governmental consumer advocate, that would serve to review rates, services, and disputes and make recommendations to the Director. The Committee would also be tasked with issuing reports and guidance, as appropriate, regarding market practices and potential improvements for FERC's practices as well as public outreach to improve compliance with FERC rules and orders and public participation in the siting and permitting of natural gas storage and distribution infrastructure under FERC's jurisdiction.

Enhance Public Interest Consideration under the Natural Gas Act

The Act would amend the Natural Gas Act (NGA) to add a subsection that details enhanced public interest in the exportation or importation of natural gas and LNG terminals. The Act would add language to ensure that the potential benefits outweigh any adverse effects and consider:

- "the climate polices of affected States;
- regional infrastructure need determinations;
- all environmental impact and concerns identified pursuant to the National Environmental Policy Act, including any direct, indirect, and cumulative effects on climate change; and
- community and landowner impacts."

The Act would also add similar language to ensure the public interest is considered for any extension or abandonment of natural gas facilities.

Modification of Eminent Domain for Natural Gas Pipelines

The Act would amend the NGA's eminent domain provisions to require that any entity attempting to exercise eminent domain authority obtain all federal and state permits required for the construction and operation of pipeline facilities and comply with all environmental conditions appended to the certificate order. The Act would also amend the NGA to prohibit the use of eminent domain for pipelines attached to LNG facilities.

Market Barriers to Clean Energy Development

The Act includes provisions to clarify that FERC would have the authority to approve carbon pricing regimes that reflect the "externalities associated with [GHG] emissions, to be used in setting rates and charges under sections 205 and 206 of the Federal Power Act (FPA)." The Act would also prohibit a state from establishing or enforcing any "law or regulation that prohibits or unreasonably burdens the purchase of clean electricity in interstate commerce by an ultimate consumer." Finally, the Act would amend the FPA by requiring FERC to "require each public utility to place its transmission facilities under the control of an ISO or an RTO not later than two years after the date of enactment."

PURPA Reform

The Act would amend the Public Utility Regulatory Policy Act (PURPA) of 1978 to require states to, within a year of enactment, conduct a process to contemplate requiring that as part of a supply side resource planning process, an electric utility of the State should demonstrate that it considered an investment in energy storage systems. Such considerations could include total costs and normalized life cycle costs, cost effectiveness, improved reliability, security, and system performance and efficiency.

The Act would direct the DOE to, to the maximum extent practicable ensure that the funding and administration of the different offices within DOE's Grid Modernization Initiative and other programs conducting energy storage research are coordinated and streamlined.

The Act would amend PURPA to require that each electric utility "implement non-wires solutions when appropriate." Non-wires solution is defined as an "electricity grid investment or project that uses one or more nontraditional solutions, including distributed generation, energy storage, energy efficiency, demand response, microgrids, or grid software and controls, to defer or replace the need for specific equipment upgrades or new infrastructure, such as transmission or distribution lines or transformers, at a substation or circuit level. The cost of these upgrades shall be recovered through rates in the same manner that transmission investments would be.

Finally, PURPA would be amended to direct FERC to require that qualifying facilities have the option to enter a fixed price contract.

Electricity Infrastructure Modernization and Resilience

The Act includes a number of provisions to support national grid reliability and security.

First, the Act would direct DOE to establish a program to provide financial assistance to eligible partnerships to carry out projects related to grid modernization, specifically projects for the deployment of technologies to improve monitoring of, advanced controls for, and prediction of performance of, a distribution system and projects related to transmission system planning and operation. The objective would be to support projects that improve the resiliency, performance or efficiency of the electric grid while also ensuring safe, secure, reliable and affordable

power. Each project would have to contain a cybersecurity plan written in accordance with standards to be established by the DOE. Implementing partnerships would be required to include at least an electric utility, RTO, or ISO, and could partner with entities such as academic institutions, national labs, or state or local government. $200 million each year from 2021 to 2030, to be made available until expended, would be appropriated for this program.

The Act would also direct DOE to establish a competitive grant program for states, units of local governments, and Indian Tribes economic development entities to, on a cost-share basis, enhance energy security through infrastructure hardening and enhanced resilience and reliability by enabling broader use of resiliency-related technologies, upgrades, and institutional measures. Improving preparedness and restoration time to mitigate power disturbances resulting from weather and climate change and facilitating greater incorporation of renewable energy generation into the electric grid are two possible purposes highlighted by the Act. Grant recipients would be required to demonstrate to DOE how the deployment of resiliency-related technologies, upgrades, and measures achieve improvements in the resiliency and recovery of electricity delivery infrastructure and related services, including a comparison of data collected before and after deployment. Possible metrics could include power quality during disturbances, duration or extent of customer irruptions, cost impacts including economic losses, impacts on electricity-dependent essential services, and societal impacts. The Act would authorize $515 million per year for 2021-2030 fiscal years for such grants. Additionally, the Act includes grant provisions related to Indian Energy and rural electric cooperatives.

The Act would direct DOE to establish a new energy efficient transformer program as a federal strategic transformer reserve. Ninety days after enactment of the Act, DOE would be required to create the energy efficiency transformer program, which would provide rebates to the owner of industrial or manufacturing facilities, commercial buildings, or multifamily residential buildings, a utility, or an energy service company for expenditures made for the replacement of a qualified energy inefficient trans former with a qualified energy efficient transformer. $10 million would be appropriated for each of fiscal years 2021 through 2030, to remain available until expended. Second, DOE would be direct to establish "one or more" federally owned strategic transformer equipment reserves, as appropriate, to "ensure nationwide access to reserve equipment." The goal of the program would be to ensure that large power transformers and other critical electric grid equipment can be replaced to ensure that the electric grid function can be rapidly restored in the event of severe damage due to a physical or cyber-attack, electromagnetic pulse, geomagnetic disturbances, severe weather, climate change, or seismic events. In developing the program, DOE would consult with FERC, the Electricity Subsector Coordinating Council, the Electric Reliability Organization, and owners and operators of critical electric infrastructure and defense and military installations.

The Act also directs DOE to establish a:

- "cross-cutting national program for the research of energy storage systems, components, and materials" as well as a grant program to disseminate information and provide grants to support the procurement of energy storage systems;
- program to promote the development of microgrids for isolated communities and microgrid systems to increase resilience for isolated communities;[11] and

[11] The Act defines "microgrid" as an integrated energy system consisting of interconnected loads and distributed energy resources, including generators and energy storage devices, within clearly defined electrical boundaries that a) acts as a single controllable entity with respect to the grid; and b) can connect and disconnect from the grid to operate in both grid-connected mode and island mode.

- program to provide information and technical assistance to states, local, Tribal, and territorial governments to support the redevelopment of sites that previously had fossil fuel-powered electric generating units by deploying zero-emissions electricity including wind, solar, nuclear, hydropower, geothermal, storage, and the use of "existing and underutilized electric transmission and distribution infrastructure associated with such sites
- EPA grant program under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) to provide grants to remediate sites that previously had fossil fuel-powered electric generating units.

Expanding Access to Clean Electricity Generation Through Loans and Grants

Distributed Energy Systems

The Act directs DOE to establish loan and technical assistance grants to support the deployment of distributed energy systems that increase the use of clean energy, improve grid resiliency and reliability, and enhance demand-side management. Eligible entities for such loans include states, state energy offices, tribal organizations, institutions of higher education, and electric utilities. The grants would be available for any nonprofit or for-profit entity with the priority being entities that have the greatest potential for facilitating the use of renewable energy resources; strengthening the reliability and resilience of the energy infrastructure to the impact of extreme weather, power grid failures, and other interruptions in supply of fossil fuel; improving the feasibility of microgrids or islanding particularly in rural areas; and minimizing environmental impact from regulated air pollutants and GHG emissions.

PV Solar Systems

The Act also directs DOE to establish a loan and grant program to support the installation of photovoltaic (PV) solar systems in low-income and underserved communities.

Hydropower

The Act would reauthorized sections 242 and 243 of the Energy Policy Act of 2005 to provide incentives for owners and operators of hydroelectric projects to make production and efficiency improvements to hydropower facilities from fiscal years 2021 through 2036 and to expand eligibility of the program to hydropower facilities at existing dams or conduits with generating capacity of 10 MW or less.

To improve the hydropower licensing process, the Act would add a new section to the FPA and direct FERC and the federal resources agencies to develop a rulemaking process to coordinate the necessary federal authorizations and authorize FERC to make a final decision on a license within three years after receiving a completed license application. The Act would also allow FERC, federal, state or local government agencies to use "relevant, existing studies and data and avoid duplicating such studies that are applicable to the projects." However, the Act makes clear that studies "repeated for the purpose of characterizing seasonable or annual variation of a relevant characteristic or resource shall not be considered duplicative."

The Act also includes language to qualify FERC's *ex parte* regulations to encourage greater cooperating among all parties to the license process.

Additionally, the Act would amend the definition of "renewable energy" in the Energy Policy Act of 2005 to include all hydropower production and would set the goals for federal purchase of renewable energy at: at least 25 percent in 2020 through 2024; at least 30 percent in 2025 through 2030; and at least 50 percent for 2030 and thereafter.

Nuclear Power

The Act would establish a pilot program that would require DOE to enter into a least one introduces a long-term power purchase agreement by the end of 2023 to purchase energy from advanced nuclear power technologies.

Distributed Energy Opportunity Board

The Act would direct DOE to establish a non-profit corporation—the Distributed Energy Opportunity Board—to "carry out programs to streamline the process for local permitting and inspection of qualifying distributed energy systems."[12]

Power Purchase Agreements

The Act would amend the existing statute regarding federal procurement to extend the maximum length of a federal power purchase agreement by the Administrator of General Services from ten to 40 years for zero-emission power generating technologies.

Low-Income Assistance

The Act amends the Low-Income Home Energy Assistance Act of 1981 to reauthorize the program through 2030.

[12] The Act defines "qualifying distributed energy systems" as "any equipment or materials installed in, on, or near a residential, commercial , or industrial building to support onsite or local energy use, including" to generate electricity from distributed renewable energy sources (solar PV, wind, hydrogen electrolysis and fuel cell systems); to store and discharge electricity from batteries with at least 2 kWh capacity; to charge a plug-in EV at a power rate of at least 2KW; to refuel a fuel cell EV; or to store and discharge electricity from fuel cell systems with a capacity of at least 2 kWh.

Title III: Efficiency

Title III includes provisions that would strengthen building energy codes and enhance existing energy efficiency codes, while providing funding for existing build retrofits, smart metering technology deployment, and other energy efficiency programs and initiatives.

Energy Saving Building Codes

The Act would amend section 307 of the Energy Conservation and Production Act of 1976 (ECPA) to establish a national energy savings target for model building energy codes. DOE would be directed to establish such targets to "significantly enhance energy and water use efficacy, to enable the achievement of the aggregate energy standards…, and by 2030, to enable the adoption of codes that would require zero energy ready buildings." The Act would authorize the DOE to propose amendments to the model codes to ensure the national energy savings targets will be achieved.

The Act would also require DOE to provide technical and financial support for the development of stretch codes and advanced standards, with the intent that stretch codes achieve zero-net-energy residential and commercial buildings and zero-energy-ready residential and commercial buildings prior to 2029.

The Act would also amend section 304 of ECPA to direct DOE to encourage and support the adoption of the building energy codes by states, tribes and local governments. Each state and Indian tribe would be required to certify whether they have adopted the revised building energy code, and starting in 2024 and every three years thereafter, DOE must analyze compliance by each state and tribal nation with the applicable building energy codes. If a state or Indian tribe fails to comply, the Act would authorize DOE to withhold federal financial support related to energy and buildings. The Act would appropriate $200 million to implement these two sections related to building energy codes and such funds would be available until expended.

Existing Building Retrofits

The Act would reauthorize the Weatherization Assistance Program through 2030, increasing annual funding to $350 million in fiscal year (FY) 2021, increasing each FY 2022 through 2024 and remaining at $1 billion for FY 2025 through 2030. In addition, the Act would revise the definition of weatherization materials the program covers to include "renewable energy technologies and other advanced technologies."

Additionally, the Act would direct financial assistance to work on units occupied by low-income persons and authorize DOE to encourage entities receiving funding to "prioritize the hiring and retention of employees" who are from the community in which such assistance is bring provided.

The Act includes language focused on energy efficient public buildings and retrofit assistance and grants for public schools.

Promoting Energy Efficiency

The Act would suspend the preemption of federal appliance and equipment efficiency standards if DOE misses a deadline to update such standards, thereby allowing states to develop more stringent regulations of such products.

The Act would also amend section 542 of the Energy Independence and Security Act of 2007 (EISA) to add the additional purpose to the Energy Efficiency and Conservation Block Grant Program of diversifying energy supplies by "facilitating and promoting the use of alternative fuels." The Act would appropriate $3.5 billion for each FY 2021 through 2030.

Additionally, the Act would:

- Require each federal agency to develop an implementation strategy "for the maintenance, purchase, and use by the Federal agency of energy-efficient and energy-saving information technologies at or for federally owned and operated facilities," considering to-be established performance goals;
    - The Act would also amend EISA to ensure a focus on energy efficiency of data centers and information technology, including requiring DOE, in collaboration with EPA, to submit a report to Congress within four years after the date of enactment that includes comparisons and analysis of the impact of cloud platforms and recommendations for education in water use;
- Require DOE to provide grants to eligible entities to carry out projects that implement advanced and innovative technology-based solutions that "will improve the energy or water efficiency of water, wastewater, or water reuse systems" (the Act would appropriate $15 million to carry out this program and remain available until expended);
- Require DOE to establish the "Federal Smart Buildings Program" to implement smart building technology and demonstrate their costs and benefits; and
- Require DOE to establish a pilot program to provide grants to nonprofit organizations to purchase energy efficient materials for nonprofit buildings (the Act would appropriate $10 million for each FY 2021 through 2030 and remain available until expended).

Homes

The Act includes a number of provisions providing funding for home energy audits, partial system rebates for certain home energy improvements, and grants to states to provide rebates for certain home energy efficiency retrofits. For example, the Act would allow DOE to provide homeowners a rebate of up to $800 for the installation of insulation and air sealing and $1,500 for the installation of air sealing and replacement of an HVAC system, the heating component of an HVAC system, or the cooling component of an HVAC system. For these programs related to energy efficiency programs for homes, the Act would appropriate $1 billion for each FY 2021 through 2030, which would remain available until expended.

Energy Savings Performance Contracts

The Act would amend the National Energy Conservation Policy Act to encourage the use of performance contracting in federal facilities.

Investing in State Energy

The Act would amend ECPA to require DOE to provide weatherization assistance funds and funding for state energy programs to a state within 60 days of receiving the funds.

Title IV: Transportation

The Act includes a number of provisions addressing emissions from the transportation sector, including establishing vehicle performance standards, electrification programs and incentives, and infrastructure and advanced vehicle investment incentives and grant programs.

Vehicle Performance Standards

For on-road vehicles, the Act would require that EPA promulgate GHG emission standards for every class of new motor vehicle or new motor vehicle engine for which EPA had previously promulgated GHG emission standards (as of the date of Title enactment).

- Light Duty Vehicles: The Act would require that, within one year of enactment, EPA promulgate GHG emission standards beginning with Model Year (MY) 2026 and extending at least five years. MY 2026 levels must require a minimum reduction of at least six percent below MY 2020, with each succeeding model year reducing at least six percent below the previous model year standard.
- Medium- and Heavy-Duty Vehicles: By June 30, 2020, EPA would be required to establish GHG emission standards beginning with MY 2028 and extending at least five years. Such standards must require annual reductions of at least four percent.

For non-road vehicles, EPA would be required to promulgate GHG emission standards for every class or category of new nonroad engines and new nonroad vehicle engines, taking into account "costs, noise, safety, and energy factors associated with the application of technology which the [EPA] determines will be available for the engines and vehicles to which such standards apply." EPA would also be required to promulgate GHG emission standards for new locomotives and new engines for locomotives taking into account "noise, energy, and safety factors." EPA would have two years after enactment to promulgate these regulations.

Within two years of enactment, the Act would require that EPA establish GHG emission standards for new and in-service aircraft engines. The standards must require a 50 percent reduction in GHG emissions from 2010 levels by 2031.

For all on-road vehicles, non-road vehicles, and aircraft, EPA would be required to continue to ensure that there are increasingly stringent GHG emission standards in place for each subsequent year, with the stringency "based on the degree of [GHG] emission reductions needed to achieve the national goal of economy-wide net-zero [GHG] emissions by not later than 2050."

EPA would be required to submit to Congress a study of "methane slip in engine exhaust" within 24 months of enactment of the Act. In consultation with DOE, EPA would be required to "carry out science-based research and development activities to pursue dramatic improvements in the effectiveness for methane control of catalytic systems suitable for commercial application."

The Act would also modify Section 177 of the Clean Air Act, which allows other states to adopt California's approved vehicle emission standards, including those for GHG emissions. The Trump Administration has argued that this section only authorizes states to adopt California's standards if they that have at least one area in nonattainment. However, the Act would revise this title to read "New motor vehicle emission standards in ~~nonattainment~~ **all** areas" and modify the opening language as follows: "any State ~~which has plan provisions approved under this part~~ may adopt and enforce for any model year standards [California's standards]."

Cleaner Fuels

The Act would require EPA to approve a petition for approval of a renewable fuel pathway under the renewable fuel program within 90 days, provided the combination of the fuel type, production process, and feedstock that is described in the petition has been approved for sale in at least one state under a program designed to reduce the carbon intensity of transportation fuel.

ZEV Vehicle Deployment

DERA Reauthorization

The Act would reauthorize EPA's Diesel Emissions Reduction (DERA) program through 2030 and increase appropriations from $100 million to $200 million per year.

Refrigeration Electrification Pilot

The Act would establish a pilot program, with total budget of $10 million, to award competitive grants for the electrification of refrigerated vehicles. Eligible projects would include: retrofitting heavy-duty vehicles with existing diesel-powered transport refrigeration units for electric units (eligible for recovery of 75 percent of costs); electric shore power infrastructure to service refrigeration units (eligible for recovery of 55 percent of costs); and operation and maintenance costs of either type of project (eligible for recovery of 45 percent of costs).

EPA would be required to prioritize projects that maximize public health benefits, are the most cost-effective, and "will serve the communities that are most polluted by diesel motor emissions," including nonattainment areas for ozone or particulate matter (PM). EPA would be required to provide regular reports to Congress regarding the impact and findings of the pilot.

Clean Schoolbus Program

The Act would reauthorize the Clean Schoolbus Program, with $50 million each fiscal year from 2021 through 2030 and adding electricity as an eligible alternative fuel.[13] This program provides grants to eligible school districts to retrofit existing school bus diesel engines with cleaner engines or with low- or zero- emitting buses. The costs associated with schoolbus charging infrastructure would be considered eligible for grants funding.

Clean Cities Coalition Program

The Act would authorize DOE to establish a Clean Cities Coalition Program, which would designate Clean Cities, make awards for administrative expenses and awards for eligible projects, and provide technical assistance and opportunities for sharing best practices. The program would fund projects and activities that reduce petroleum consumption, improve air quality, promote energy and economic security, and encourage deployment of a diverse domestic supply of alternative fuels in the transportation sector. Eligible projects would include:

- the purchase and use of alternative fuel vehicles and alternative fuels, including by fleet managers;
- expediting the establishment of local, regional, and national infrastructure to fuel alternative vehicles;
- advancing the use of other petroleum fuel reduction technologies and strategies;
- conducting outreach and education activities to advance the use of alternative fuels and alternative fuel vehicles;

[13] Currently eligible fuels are: a) liquefied natural gas, compressed natural gas, liquefied petroleum gas, hydrogen, or propane; (b) methanol or ethanol at no less than 85 percent by volume; or (c) biodiesel.

- providing training and technical assistance and tools to users that adopt petroleum fuel reduction technologies; and
- collaborating with and training officials and first responders with responsibility for permitting and enforcing fire, building, and other safety codes related to the deployment and use of alternative fuels or alternative fuel vehicles.

Annual funding would begin at $50 million in 2021, increasing each year to $100 million by 2025 and each year thereafter.

Zero Emissions Vehicle Infrastructure Buildout

The Act includes a number of provisions to promote the deployment of electric transportation infrastructure and vehicles, including an infrastructure rebate program, direction for utilities to recovery costs associated with electric vehicle infrastructure investment, and federal fleet procurement requirements.

EVSE Rebate Program

The Act would require DOE to establish an electric vehicle supply equipment (EVSE) rebate program no later than 2021, with $100 million appropriated per year between fiscal years 2021 through 2030, to promote the purchase and installation of publicly accessible EVSE. Eligible applicants would include private individuals and entities, state, local, and tribal governments, and metropolitan planning organizations. Equipment must come from a DOE-approved list and be located in a publicly accessible parking lot or facility with at least 10 spaces. Costs eligible for the rebate include the EVSE hardware, installation material and labor costs, permits, and on-site storage systems.

The rebate would be the lesser of 75 percent of eligible equipment or the following caps:

	Non-Networked L2 EVSE	Networked L2 EVSE	Networked DCFC EVSE
New Equipment	$2,000	$4,000	$75,000
Replacement Equipment	$1,000	$2,000	$25,000

Multi-port installations would be eligible for the full rebate for the first port and 50 percent for each subsequent port. No more than 25 percent of total funds could be used for networked DC fast charging (DCFC) EVSE. Program participants would be required to submit periodic information to DOE on usage and charging equipment maintenance. Hydrogen fuel cell refueling infrastructure would also be eligible at levels equal to DCFC EVSE.

Expanding Access to Electric Vehicles in Underserved Communities

In order to expand access to electric vehicles (EVs) in underserved communities, within one year of enactment, the Act would require DOE to assess "the state of, challenges to, and opportunities for the deployment of electric vehicle charging infrastructure in urban areas, particularly in underserved or disadvantaged communities." This assessment would identify the current state of EV infrastructure in underserved communities, as well as identify existing barriers to expanding deployment in these areas, while compiling best practices used by states, cities, and private entities to expanding EV charging infrastructure. The report would be updated every five years.

Revisions to PURPA

The Act would amend PURPA in three ways. First, the Act would add requirements that states, within two years of enactment, consider and complete an analysis of measures to "stimulate investment in and deployment of electric vehicle supply equipment and to foster the market for vehicle charging." Second, it would authorize electric utilities

to recover from ratepayers any "capital, operating expenditure, or other costs of the electric utility relating to load management, programs, or investments associated with the integration of electric vehicle supply equipment onto the gird and promoting greater electrification of the transportation sector." Finally, the Act would modify PURPA to clarify that a person or agency that owns and operates an EV charging facility for the sole purpose of recharging an EV battery would not be regulated as an electric utility if such sales are the only sale of electricity made by the person or agency.

State Energy Transportation Plans

The Act would amend the Energy Policy and Conservation Act (EPCA) to allow state energy conservation plans to include, as an optional feature, a state energy transportation plan. These plans would be to "promote the electrification of the transportation system, reduced consumption of fossil fuels, and improve air quality." The implementing agency would be the agency responsible for developing a state energy conservation plan under EPCA, but the Act would direct that agency coordinate with a wide range of other parties including other regulators, electric utilities, RTOs/ISOs, private EV charging entities, EV manufacturers, and fleet and transportation hub managers. The Act would appropriate $25 million each year from 2021 to 2025 and $35 million from 2026 to 2030 for the development of these state energy transportation plans.

Federal Fleet Requirements

The Act would amend the Energy Policy Act of 1992 to require that, beginning in 2025, 100 percent of light-duty vehicles[14] purchased by the federal government be alternative fuel vehicles, including a growing percentage of zero emission vehicles:

- 2025 – 2034: at least 50 percent zero emission vehicles or plug-in hybrids
- 2035 – 2049: at least 75 percent zero emission vehicles or plug-in hybrids
- 2050 and beyond: 100 percent zero emission vehicles

In addition, the Act would require a growing percentage of federally purchased medium- and heavy-duty vehicles be alternative fuel vehicles:

- 2025 – 2029: least 20 percent
- 2030 – 2039: at least 30 percent
- 2040 – 2049: at least 40 percent

The Act would also reestablish a federal fleet GHG emission reduction target, calculated per agency, requiring the following reductions below 2015 levels:

- 30 percent or more by 2025;
- 50 percent or more by 2030; and
- 100 percent by 2050.

The Act would also require that federal fleets increase the annual percentage of alternative fuel consumption by agency fleet vehicles with interim steps in 2025 and 2035 up to at least 85 percent of total fuel consumption that is alternative fuel by the end of fiscal year 2050.

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[14] The Act defines "fleet" to mean "20 or more light-duty vehicles, located in a metropolitan statistical area or consolidated metropolitan statistical areas established by the Bureau of the Census, with a 1980 population of more than 250,000 or 10 or more medium- or heavy-duty vehicles, located in a metropolitan statistical area or consolidated metropolitan statistical areas established by the Bureau of the Census, with a 1980 population of more than 250,000."

Other Infrastructure Provisions

The Act would require DOE to "develop a proposal to establish or update…model building codes for: integrating electric vehicle supply equipment into residential and commercial buildings that includes space for individual vehicle or fleet vehicle parking; and integrating onsite renewable power equipment and electric storage equipment (including electric vehicle batteries to be used for electric storage into residential and commercial buildings," and within one year of enactment, submit a proposal to the American Society of Heating, Refrigerating, and Air Conditioning Engineers, the International Code Council, and states for their consideration.

The Act would require that DOE, in consultation with the Office of Electricity Delivery and Energy Reliability, convene a group to develop standards that "support the expanded deployment of electric vehicle supply equipment; develop an electric vehicle charging network to provide reliable charging for electric vehicles nationwide; and ensure the development of such network will not compromise the stability and reliability of the electric grid." This group would report their findings to Congress within one year of enactment.

The Act would amend the Energy Independence and Security Act (EISA) of 2007 to include "expand[ed] use of electric vehicles, and facilitate electrification of the transportation sector" in a DOE program to provide grants "to carry out one or more projects to encourage the use of plug-in electric drive vehicles or other emerging electric vehicle technologies." The Act would also reauthorize and increase the funding to $2 billion per year for each fiscal year from 2021 through 2030 (roughly double annual funding that expired in 2012). Additionally, the Act would reauthorize and expand EISA's Near-Term Transportation Sector Electrification Program, amending the statue by renaming it the "Large-Scale Transportation Electrification Program" and increasing funding to $2.5 billion per year for fiscal years 2021 through 2030.

Promoting Domestic Advanced Vehicle Manufacturing

The Act includes provisions to spur domestic advanced vehicle manufacturing by directing DOE to "accelerate domestic manufacturing efforts directed toward the improvement of batteries, power electronics, and other technologies for us in plug-on electric vehicles." The Act would direct DOE to prioritize the "refurbishment or retooling of manufacturing facilities that have recently ceased operation or will cease operation in the near future" for the purpose of developing and manufacturing plug-in electric vehicle technology. The Act would appropriate $2.5 billion for each fiscal year between 2021 through 2030.

Finally, the Act would amend the Advanced Technology Vehicles Manufacturing Incentive Program under EISA by providing funding for up to 50 percent of the cost for an automotive manufacturer to reequip, expand, or establish a facility to produces advanced light-, medium-, and heavy-duty vehicle technology.

Title V: Industry

Title V includes provisions relating to industrial decarbonization technology, including carbon capture, utilization, sequestration (CCUS) and direct air capture (DAC), and associated research and development efforts, as well as provisions relating to industrial efficiency and low-carbon construction materials and products.

Industrial Technology Development, Demonstration, and Deployment

The Act would create a new position for an additional Assistant Secretary at DOE to be in charge of manufacturing and industrial decarbonization. Responsibilities of this Assistant Secretary would include: research, development, demonstration, deployment commercialization, and technical assistance for projects related to energy efficiency, fuel switching, and carbon capture; promoting increased domestic manufacturing production of energy-related technologies; promoting adoption of low-carbon processes; and promoting other activities resulting in pollution abatement from industrial facilities.

The Act would also amend the Energy Policy Act of 2005 to modify the Innovative Energy Loan Guarantee Program and expand project eligibility. Newly eligible projects would include DAC, energy storage, technologies for reducing high global warming potential pollutants, advanced nuclear reactors, system-level energy management solutions, energy platform technologies, water-energy efficiency, and innovative technologies for improving the resilience or reliability of existing energy infrastructure. The Act additionally expands project eligibility in two ways: 1) allowing projects utilizing multiple technologies and receiving federal assistance for one technology to be eligible for the loan guarantee loan program and 2) prohibiting DOE from deeming a project ineligible because a similar project exists in a different region of the country.

The Act would repeal the expired Clean Coal Power Initiative, established by the Energy Policy Act of 2005. The Act would further amend the Energy Policy Act of 2005 to ensure that DOE's Fossil Energy program prioritizes GHG reductions and removal.

The Act would direct DOE to establish a carbon capture and utilization technology commercialization program "to significantly improve the efficiency, effectiveness, cost, and environmental performance of fossil fuel-fired facilities." Table 1 includes the program's components and associated funding and cost-sharing provisions.

Table 1: Carbon Capture and Utilization Technology Commercialization Program

Projects	Allocated Funds	Cost Sharing
Front end engineering studies for commercial demonstration projects for at least 3 types of advanced carbon capture technology and at least 1 type of DAC technology	$100 million annually from 2021 through 2025; and such sums as may be necessary for 2026 through 2030	DOE grants may not provide more than 80% of project funds
Commercial demonstration of advanced carbon capture technology projects intended to produce a standard design specification for up to 5 demonstrations of a particular technology type	$1.5 billion annually from 2021 through 2025; and such sums as may be necessary for 2026 through 2030	DOE grants may not provide more than 50% of project funds
Commercial demonstration of DAC technology projects intended to produce a standard design specification for up to 5 demonstrations of a particular technology type	$250 million annually from 2021 through 2025; and such sums as may be necessary for 2026 through 2030	DOE grants may not provide more than 50% of project funds
Commercialization projects of large-scale CO_2 storage sites in saline geological formations that are designed to accept at least 10 million tons per year of CO_2, including activities exploring, categorizing, and developing storage sites and necessary pipeline infrastructure	$500 million annually from 2021 through 2025; and such sums as may be necessary for 2026 through 2030	DOE grants may not provide more than 50% of project funds

The Act would also direct DOE to, in consultation with EPA, establish a DAC prize program "designed to significantly reward development, demonstration, and deployment of [DAC] technologies." Under the program, DOE is to provide financial awards on an annual basis for qualified facilities that capture CO_2 directly from the ambient air and capture more than 10,000 metric tons of CO_2 annually.[15] DOE would be authorized to award up to $180 per metric ton of CO_2 captured. The Act would authorize funding of $200 million for the period of 2021 through 2025, and $400 million for the period of 2026 through 2030, to remain available until expended.

Finally, the Act would authorize funding for activities related to EPA permitting of Class VI wells (wells used for geologic sequestration of CO_2) , in accordance with the requirements of the Safe Drinking Water Act and the relevant EPA regulations.[16]

Industrial Efficiency

Combined Heat and Power (CHP) Technical Assistance Partnership Program

The Act would amend section 375 of the Energy Policy and Conservation Act to redesignate the DOE Clean Energy Application Centers as the "CHP Technical Assistance Partnership Program." DOE would be directed to operate the program to "encourage deployment of combined heat and power, waste heat to power, and efficient district energy" through education and outreach efforts and to "provide project specific support to building and industrial professionals through economic and engineering assessments and advisory activities." The objective of program would be to make funds available, for a period of up to five years, to "higher education institutions, research centers, and other appropriate institutions" for certain specified activities "to ensure the continued operations and effectiveness" of the program. The Act would authorize $12 million annually in funding for 2021 through 2030.

Smart Manufacturing Leadership

The Act would direct DOE to:

- In consultation with the National Academies of Sciences, Engineering, and Medicine, develop a national plan for smart manufacturing technology development and deployment, in order to "improve the productivity and energy efficiency of the manufacturing sector." DOE is to complete the plan three years after enactment of the Act and revise the plan every two years at minimum thereafter.
- Expand the scope of technologies covered by DOE's existing Industrial Assessment Centers to: 1) additionally include smart manufacturing technologies and practices and 2) equip the directors of these centers with the training and tools necessary to provide technical assistance to manufacturers regarding smart manufacturing technologies and practices, including energy management systems.

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[15] For the purposes of this section, the Act defines "qualified carbon dioxide" as any CO_2 that is both captured directly from ambient air and also measured at the source of capture and verified at the point of disposal, injection, or utilization;" the Act specifies that this includes "the initial deposit of captured [CO_2] used as a tertiary injectant" but does not include CO_2 that is "recaptured, recycled, and reinjected as part of the enhanced oil and natural gas recovery process." "Qualified direct air capture facilities" are defined any facility that "uses carbon capture equipment to capture [CO_2] directly from the ambient air" and "captures more than 10,000 metric tons of qualified [CO_2] per year;" the Act specifies that this does not include any facility that captures CO_2 that is 1) deliberately released from naturally occurring subsurface springs; or 2) using natural photosynthesis.

[16] 75 Fed. Reg. 77,230 (published December 10, 2010), https://gov.ecfr.io/cgi-bin/text-idx?SID=d6f7aaae2870c971ee751b8d4a6a90b4&mc=true&node=sp40.25.146.h&rgn=div6.

- Conduct a study on how DOE can "increase access to existing high-performance computing resources in the National Laboratories, particularly for small and medium manufacturers" (as defined in the Act), while ensuring that information from the manufacturer is protected and the security of the National Laboratory is maintained. DOE would also be directed to facilitate this computing access to the specified manufacturers.
- Make grants on a competitive basis to states "for establishing state programs to be used as models for supporting the implementation of smart manufacturing technologies."

Motor Rebate Program

The Act would require that DOE establish a rebate program to incentivize the replacement of inefficient commercial and industrial electric motors with more efficient electric models. The rebate would be available for expenditures associated with the purchase or installation of "qualified extended product systems." The Act would authorize $6 million annually to fund this program for each of the first 10 fiscal years following the date of enactment of the Act.

Buy Clean Program

The Act would direct EPA to establish a "Buy Clean Program" in order to "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." EPA would maintain a list of eligible materials for the Buy Clean Program and a National Environmental Product Declaration Data base for eligible materials used in federally-funded projects. EPA would designate a single product category rule, either developed by EPA or a third party and then reviewed every five years, to be used to create environmental product declarations for each eligible material, and then establish annual performance targets for each eligible material, beginning in 2025.

Beginning two years after the enactment of the Act, bids for federally-funded projects would be required to include environmental product declarations for all eligible materials. Within four years of enactment, bids for federally-funded projects would be required to demonstrate that all eligible materials meet the applicable performance target. The Act would also direct EPA to establish a technical assistance and grant program to help manufacturers of eligible materials develop and verify environmental product declarations.

Title VI: Environmental Justice

Title VI includes provisions to incorporate environmental justice considerations into a range of existing statutes, establish and revitalize grant programs and other testing / funding initiatives, and create a system for a strategic climate change health assessment and preparedness program.

Empowering Community Voices

The Act would authorize EPA to award grants to eligible entities to enable them to participate in decisions impacting the health and safety of their communities in connection with an actual or potential release of a covered hazardous air pollutant (HAP). Those eligible to receive grants are defined as "group[s] of individuals who reside in a community that: 1) is a population of color, a community of color, an indigenous community, or a low-income community; and 2) is in close proximity to the site of an actual or potential release of a covered HAP pollutant."

The Act would also direct EPA to convene an interagency working group to coordinate federal efforts to alleviate disproportionate impacts of pollution. The working group is to provide opportunities for public participation. The Act would also require agencies to integrate environmental justice into their respective missions, including conducting any programs, policies, and activities that substantially affect human health or the environment in a manner that is nondiscriminatory and non-exclusionary and that does not deny the benefits of the activities to any group or individual due to race, color, or national origin. The Act would enact a previously drafted EPA charter for a National Environmental Justice Advisory Council.

The Act would also amend section 110(a) of the Clean Air Act to require that state implementation plans (SIPs) require "pollution prevention or control requirements necessary to reduce disproportionate impacts on fenceline communities (meaning populations living in close proximity to a source of pollution), populations of color, communities of color, indigenous communities, and low-income communities." The Solid Waste Disposal Act would also be amended to ensure that "a waste program [under that Act] does not create or exacerbate disproportionately high or adverse health or environmental effects on populations of color, communities of color, indigenous communities, or low-income communities."

The Act would also create new grant programs and appropriate additional funding for existing grant programs. This would include:

- $10 million annually for the combined Environmental Justice Small Grants Program, the Environmental Justice Collaborative Problem-Solving Cooperative Agreement Program, and the Community Action for a Renewed Environment Program (I and II); and
- Environmental Justice Community Technical Assistance Grants under the Solid Waste Disposal Act to "enable [eligible] entities to participate in decisions impacting the health and safety of their communities relating to the permitting or permit renewal of a solid waste disposal facility or hazardous waste facility."

Restoring Regulatory Protections

The Act would amend the Safe Water Drinking Act to require EPA to propose regulations for oil injection wells for enhanced oil recovery that include sequestration of CO_2 in order to "ensure the protection of underground sources of drinking water from enhanced oil recovery." The Safe Water Drinking Act would also be amended to prohibit the underground injection of fluids or propping agents pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities unless the person proposing to conduct the hydraulic fracturing operations agrees to conduct testing and report data in accordance with a new set of requirements. These requirements would include testing every six to 12 months by an EPA-approved laboratory and reporting results to an EPA-managed

public and searchable database. EPA would also be required to conduct a rulemaking to determine if any "drilling fluids, produced waters, or other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy" should be classified, listed, and regulated as hazardous waste.

The Act would also amend the Solid Waste Disposal Act to ensure the safe disposal of coal ash, adding new requirements including: a required public hearing (instead of only public comment) and "meaningful public comment;" allowing states to set more stringent requirements; prohibiting the continued operation of unlined impoundments and unencapsulated use of coal combustion residuals; limiting fugitive dust at coal combustion residuals units; and requiring increased ground water monitoring.

Infrastructure to Protect Communities

The Act would direct EPA to set financial responsibility requirements for facilities that could release toxic chemicals due to extreme weather or climate change and amends the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) such that owners would be liable for any releases after extreme weather events connected to climate change.

Additionally, the Act would fund the CERCLA Brownfields program at $350 million in 2021, increasing $50 million each year until $550 million in each of years 2025 through 2030. It would also provide for state climate change response programs $70 million in 2021, increasing $10 million each year until $1100 million in each of years 2025 through 2030.

The Act would also provide funding under the Safe Water Drinking Act for initiatives such as an Indian reservation drinking water program, lead testing in schools, school drinking fountain replacement, a drinking water system resilience program, and PFAS testing and community assistance.

Climate Public Health Protection

The Act would declare that the Federal government should "use all practical means and measures" to, among other things: "incorporate measures to prepare public health and health care systems to respond to the impacts of climate change;" to assist public health officials in preparation and research for the impacts of climate change, including identifying and supporting vulnerable communities; and to enhance preparedness activities, health care, and public health infrastructure relating to climate change and health.

The Act would direct the Secretary of Health and Human Services to publish a strategic action plan and establish a program to ensure the public health and health care systems are prepared for and can respond to the impacts of climate change on health in the United States and other nations. This action plan would require consultation with a broad range of stakeholders and include an assessment of the health system capacity. The established Climate and Health Program would track data, identify risks and vulnerable communities, enhance science, communicate risks, develop partnerships and provide leadership for states and other parties, and provide technical support.

Title VII: Super Pollutants

The Act includes subtitles relating to the reduction of emissions in super pollutants, specifically methane and black carbon.

Methane

Oil and Gas Sector

The goal of this subtitle is to steadily decrease methane emissions from the oil and natural gas sector, establishing a target of a 65 percent reduction below 2012 levels by 2025 and 90 percent reduction below 2012 levels by 2030.

In the short term, the Act would require that the final EPA rule, ‘‘Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources’’ (published June 3, 2016) remain in effect without revision unless and until a further regulation as directed by the Act.

To achieve the 2025 goal, the Act would direct EPA to, within 18 months of the Act’s enactment and by no later than December 31, 2021, issue final regulations that establish standards of performance for existing sources under Clean Air Act (CAA) section 111(d). Such regulations would apply to sources of methane “from every segment of oil and natural gas systems, including oil and natural gas production, processing, transmission, and storage.” These regulations would require states to submit plans no later than 30 months after the enactment of the Act. EPA would also be required to create a federal plan for a state that fails to submit a plan by the deadline, or for a state for which EPA disapproves of the state’s plan, within 42 months of the Act’s enactment.

To achieve the methane reduction goal for 2030, EPA would be required to issue regulations by no later than December 31, 2022, under CAA section 111 that require:

- new and existing natural gas transmission and distribution pipelines to reduce methane emissions by application of the best system of venting and leakage reduction;
- new and existing sources with equipment that handles liquified natural gas to reduce methane emissions from that equipment by application of the best system of emission reduction; and
- new and existing offshore petroleum and natural gas production facilities to reduce methane emissions by application of the best system of emission reduction.

Regulation of Routine Flaring

The Act would direct EPA to propose by the end of 2020 two regulations relating to the flaring of natural gas. The first would require regulations under CAA section 111(b) to establish standards of performance for new sources that prohibit routine flaring of natural gas.[17] The second would require regulations under CAA section 111(d) to establish standards of performance that require existing sources to reduce GHG emissions from routine flaring such that nationwide flaring is reduced by at least 80 percent by 2025, and by 100 percent by no later than 2028, both below 2017 levels. The Act would require EPA to finalize such regulations no later than the end of 2021.

[17] Routine flaring is defined as “flaring of natural gas during normal oil and natural gas production operations in the absence of sufficient facilities to reinject the produced gas, utilize it onsite, or dispatch it to a market.” This does not include safety flaring, which is defined as “flaring of natural gas that is required to ensure safe operation of the facility due to some unforeseen condition.”

Technology Commercialization Program

The Act would direct the DOE to establish a "technology commercialization program to reduce GHG emissions from the oil and natural gas sector, and to improve existing technologies and practices to reduce such emissions" by prioritizing projects that develop and bring to market approaches to reduce CO_2 emissions from natural gas system compression, including the use of electrification. The Act allocates $10 million in funding for the program, to remain available until expended.

As part of this effort, DOE would be directed to research activities that would help achieve improved efficiency of natural gas pipeline systems and lowered barriers to electrification of compression in pipeline systems.

State Grant Program for Improving Natural Gas Distribution Systems

The Act would direct DOE to establish, no later than one year after the Act's enactment, a state grant program "for the purpose of improving public safety and environmental performance of the natural gas distribution system," specifically by offsetting rate increases to low income households or providing incentives for natural gas distribution companies to accelerate, expand, or enhance improvements to the natural gas distribution system.

Under the program, states could apply for grants to provide funding to natural gas distribution companies in their state to carry out eligible projects, defined as those for: 1) replacing cast and wrought iron and bare steel pipes and other leak-prone components of the distribution system; or 2) inspection and maintenance programs for the distribution system. To be eligible, projects would be required to also "accelerate, expand, or enhance the implementation of a plan" that the state has approved before the application for a grant is submitted. Natural gas distribution companies could only use awarded funds to offset the "near-term incremental costs to low-income households as reflected in utility rate increases" associated with these improvements and could only receive funding for up to four years.

In awarding grants, DOE would be required to prioritize applications based on the expected results of an eligible project with respect to:

- quantifiable benefits for public safety;
- the magnitude of methane emissions reductions;
- innovation in technical or policy approaches;
- the number of low-income households to benefit from the assistance; and
- the overall cost-effectiveness of the project.

The Act would appropriate $250 million dollars to carry out the grant program for each of fiscal years 2021 through 2030.

Black Carbon

The Act would direct EPA to submit to Congress, within one year of the Act's enactment, two reports regarding black carbon emissions.[18] The first would be required to summarize the current information and research regarding black carbon emissions in the U.S., including: an inventory of emissions; "effective and cost-effective" control technologies; potential metrics and approaches for quantifying the climatic effects of black carbon emissions; and black carbon emissions environmental and public health impacts. The Act would also direct that this report include recommendations regarding additional areas for research and actions that the Federal government may take to

[18] The term ''black carbon'' means the primary light absorbing aerosols, as defined by the EPA, based on the best available science.

encourage or require reductions in black carbon emissions. The second report would be required to identify opportunities and recommendations to achieve significant black carbon emission reductions in foreign countries through technical assistance or other approaches.

In addition, the Act would direct EPA to, taking into consideration the public health and environmental impacts of black carbon emissions, either: 1) propose regulations under the CAA to reduce black carbon emissions by 70 percent relative to 2013 levels by 2025; or 2) issue a proposed finding that regulations have otherwise been promulgated as of the enactment of the Act that adequately regulate black carbon emissions. EPA would be required to propose the regulation or finding no later than one year after the Act's enactment and promulgate a final regulation/finding no later than two years after the Act's enactment. The Act also includes provisions to ensure EPA allows indigenous populations in the Arctic and other communities disproportionally affected by black carbon emissions to participate in this regulatory action through negotiated rulemaking or an equivalent mechanism.

Title VIII: Economy-Wide Policies

Title VIII includes provisions relating to the creation of state climate plans to reach these targets as well as details on the establishment of a National Climate Bank, training a clean energy workforce, considering climate change in national security, and workforce fairness.

State Climate Plans

The Act includes a provision to require the development of state climate plans in which states detail how they intend to reach net-zero emissions by 2050, with interim 2030 and 2040 carbon dioxide standards, and an interim 2040 methane standard. The Act would require states to develop plans to achieve state-wide net-zero covered emissions[19] by 2050, with interim CO_2 reduction goals for 2030 and 2040, and an interim methane reduction goal for 2040.

State Plan Targets

The Act is expected to include a 2030 standard but does not do so at this time.

EPA would be directed to establish a 2040 standard for each state's CO_2 emissions. EPA would need to take into account multiple factors in setting such standard, including: the best available science on the needed pace of reducing GHG emissions to limit global warming to 1.5 Celsius; international commitments by the United States to address climate change; the degree of progress considered necessary by calendar year 2040 to maximize the likelihood that there is an economically and technically feasible path forward from such date to achieve the national climate standard; and the projected emissions reductions from every state's plan under this title and projected emissions reductions from all other enforceable domestic GHG reduction measures.

Each state's 2040 methane reduction standard would be equal to 95 percent below each state's 2012 methane emission baseline.

State Inventories

Within two years from enactment, states would be required to submit a comprehensive inventory of state-wide emissions from the previous calendar year, detailing covered emissions, sources, sinks and other negative emissions. The States may rely on data reported pursuant to part 98 of title 40, Code of Federal Regulations (or successor regulations), in developing an inventory. States would be required to update their inventories annually.

Plan Requirements

The Act would require states to submit a climate plan for achieving each target. The plan for the first period (through 2030) would be due three years after enactment. The plan for the second period (2031-2040) would be due by the end of 2028, and the plan for the third period (2041-2050) would be due by the end of 2038.

Within 18 months after the date of the enactment of the Act, EPA would be required promulgate regulations containing minimum criteria that any State climate plan must meet before the Administrator must act on the submission. Under the Act, each plan would need to include, among other elements:

- enforceable emission limits or other control measures to meet the applicable requirements as well as schedules and timetables for compliance and maintenance of the applicable standards

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[19] The Act defines covered emissions as CO_2 and methane emissions emitted by or attributed to a source in the state. For biogenic emissions from agriculture and land use practices, those emissions are only covered if they result from burning woody biomass to generate electricity either for sale to the grid or for onsite industrial use.

- contingency provisions if EPA determines it necessary to ensure the state can "promptly correct any violation of the national climate standard" once EPA determines a state achieves the standards
- appropriate monitoring and enforcement provisions.
- environmental justice provisions in each plan and "ensure fairness and equity for workers and communities affected by the implementation of the title."

State plans could include market-based programs such as emission fees, permits, and actionable emission allowances. The Act would also require states to revise such plans as necessary to account for revisions of the standards, the availability of improved or more expeditious methods to achieve the standards, or if EPA determines the plan is "substantially inadequate to achieve any of the standards."

The Act would require EPA to determine the completeness of each state climate plan within 60 days of receipt. If EPA were to fail to determine whether a state climate plan or revision meets the completeness criteria within six months of receipt, the Act would require that such plan be deemed satisfactory. If, however, EPA were to find that the plan or revisions did not meet the minimum completeness criteria, the Act would require EPA to impose the federal carbon fee backstop as described below.

The Act would require that, within 12 months of determining a submitted plan or revision is complete, EPA either approve or disapprove it, in whole or in part. If EPA determines that the plan is "substantially inadequate to achieve any applicable standard…or to maintain the national climate standard," the Act would require EPA to require the state to revise the plan as necessary.

The Act includes provisions to allow two or more states to submit joint climate plans, including joint plans for only certain sectors in the region. When reviewing joint plans, EPA would be directed to treat such plans jointly when evaluating the adequacy of the joint plan or component and determining whether the States have achieved the applicable standards.

Failure to Achieve Emission Reduction Standards

The Act would require EPA to, within 12 months of the relevant standard deadline, designate a state as achieving the applicable standard once: the standard is achieved; EPA has approved the state plan and any revisions; the state has met all applicable requirements; and EPA determines the reductions are permanent and enforceable reductions. If, however, a state fails to achieve the standards, the Act would require EPA to publish such notice in the Federal Register within 30 days of such a determination, which would trigger the obligation for the state to submit a revised state plan within one year.

If a state fails to meet the 2030 target, the Act would require the revised state plan to achieve the 2030 target with annual CO_2 emission reductions equal to at least five percent of the state's 2030 reported CO_2 emissions until the 2030 target is met. Additionally, the Act would require that the plan include a requirement that new and modified sources with emissions of 25,000 tons or more of CO_2e offset such emissions on a two-to-one basis. Any emissions reductions required under any Federal or State law other than this title of the Act would not be creditable as emissions reductions for purposes of the offset requirement. The offset requirements would cease once the state achieved the 2030 standard and the state has an EPA-approved plan to achieve the 2040 CO_2 standard.

If a state fails to meet the 2040 emissions target, the Act would require the revised state plan to achieve the 2040 target with annual CO_2 emission reductions equal to at least ten percent of the state's 2040 reported CO_2 emissions. Additionally, the Act would require that the plan include a requirement that new and modified sources with emissions of 25,000 tons or more of CO_2e offset such emissions on a three-to-one basis. The offset requirements

would cease once the state achieved the 2040 standard and the state has an approved plan to achieve the national climate standard.

If a state fails to meet the 2040 methane target, the Act would require the revised state plan to achieve the 2040 methane standard with annual methane emission reductions equal to at least five percent of the state's 2040 reported methane emissions.

Finally, if a state fails to meet the 2050 national climate standard, the Act would require the revised state plan to achieve the national climate standard with annual CO_2 and methane emission reductions equal to at least ten percent of the state's 2050 emissions.

Federal Backstop Carbon Fee

The Act would impose a carbon fee to be assessed and collected if a state fails to submit a climate plan or revision, as required, or if EPA disapproves the climate plan, in whole or in part. The fee would apply to each terminal used for bulk storage of, and each distributor of, fuels associated with the covered CO_2 and methane emissions and each source of such covered emissions under the Act. The carbon fee would be set at a level based on "modeling [which] predicts with a high degree of confidence will reduce covered emission in the State so as to put the State on a trajectory to timely achieve the standards established" under the Act.

Any funds collected under the federal carbon fee backstop program would be directed toward a new "Race to Net-Zero Grant Program," which would provide grants toward:

- Any project EPA determines will "directly reduce covered emissions at the source receiving the grant, including projects for improving energy efficiency";
- Carbon removal strategies;
- Zero-emission transportation vehicles including light-, medium-, and heavy-duty vehicles
- Charging infrastructure deployment to support zero-emissions vehicles including improvements to electrical grid infrastructure;
- Residential and commercial electrification to reduce demand for natural gas, heating oil, gasoline, diesel fuel, or propane;
- Industrial emission reductions; and
- Landfill gas capture and utilization.

EPA Model Control Strategies

The Act would require EPA to develop model control strategies that states could adopt in their climate plans including:

- Model cap-and-trade programs for covered sources;
- Performance-based fuel standards based on the average lifecycle of GHG emission per unit of energy;
- Carbon removal strategies;
- Energy efficiency control strategies;
- Provisions to adopt and enforce California's emission control standards for new motor vehicles or vehicle engines under section 177 of the Clean Air Act, including California's zero-emissions vehicle regulation;
- Any other program that would facilitate state progress toward achieving the emission reduction standards outlined in the Act.

National Climate Bank

The Act would amend the Energy Policy Act of 2005 to establish a nonprofit corporation National Climate Bank ("Bank") to finance a range of GHG-reduce projects. The mandate of the Bank would be to "make the United States a world leader in combating the causes and effects of climate change through the rapid deployment of mature technologies and the commercialization and scaling of new technologies by maximizing the reduction of emissions in the United States for every dollar deployed by the Bank. Eligible projects would include: renewable energy generation; building energy efficiency, fuel switching, and electrification; grid technologies including transmission, distribution, and smart grid infrastructure; agriculture and lands projects that reduce GHGs; and clean transportation. The Bank would be required to prioritize emissions reductions, environmental justice, consumer protection and fair labor practices.

The Bank would be initially funded with an appropriation of $10 billion followed by an additional $25 billion spread over the next five years; at no point could the liabilities of the Bank exceed $70 billion. The Bank would be overseen through DOE.

Clean Energy Workforce

The Act would authorize $20 million each year from 2021 to 2030 for DOE's Office of Economic Impact, Diversity, and Employment to establish and carry out a comprehensive, nationwide program to improve education and training for jobs in energy-related industries, including manufacturing, engineering, construction, and retrofitting jobs in such energy-related industries, in order to increase the number of skilled workers trained to work in such energy-related industries. DOE would be required to prioritize the education and training of underrepresented groups and collaborate with the Bureau of Labor Statistics publish an annual report on job creation in the energy-related industries.

An additional grant program, provided $70 million each year from 2021 to 2030, would also be run through this DOE office to provide grants to eligible businesses to pay all or a portion, depending on various eligibility criteria, of the wages of new and existing employees during the time period that such employees are receiving training to work in the renewable energy sector, energy efficiency sector, or grid modernization sector.

National Security

The Act would declare that it is the policy of the Federal Government to ensure that the current impacts of climate change, and those anticipated in the coming decades, be identified and considered in the development and implementation of relevant national security doctrine, policies, and plans.

Specifically, the National Security Advisor and the Director of the Office of Science and Technology Policy would be directed to establish an interagency working group, called the Climate and National Security Working Group, to coordinate the development of a "strategic approach to identify, assess, and share information on current and projected climate-related impacts on national security interests and to inform the development of national security doctrine, policies, and plans." The Act identifies a broad set of functions of the working group, including identifying U.S. security priorities, developing recommendations for requirements for climate and social science data and intelligence analyses, cataloging climate science data and intelligence analyses, and coordinating the development of quantitative models, predictive mapping products, and forecasts to anticipate the various pathways through which climate change may affect public health as an issue of national security.

Membership of the working group would include delegates from nearly every federal agency and many relevant congressional committees, each of whom would be required, within 150 days, to develop an action plan supporting the consideration of climate change in national security.

Fairness for American Workers

With some exceptions, the Act would mandate that none of the funds appropriated or otherwise made available by the Act may be used for "a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States." The Act would also establish fair labor laws in keeping with the Davis-Bacon Act.

Next Steps

The Committee intends to hold hearings and meetings on the Act and to continue to seek stakeholder feedback.

Contacts

For more information on this topic, please contact:

Carrie Jenks
Executive Vice President
cjenks@mjbradley.com
(978) 369-5533

Grace Van Horn
Consultant
gvanhorn@mjbradley.com
(202) 525-5770

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