

# **BPC & BPC Action Impacts: Key Energy Policy Wins**

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**2020-2022**

Since 2020, historic progress has been made to bolster American energy innovation and put the United States on a pathway to reaching our mid-century climate goals. The BPC Energy Program was instrumental in shaping key policy ideas and seeing legislation through to enactment and implementation.

These policies boost investment in advanced energy R&D, accelerate the commercialization and deployment of clean energy technologies, promote climate-smart agricultural practices, kickstart the carbon management industry, and more.

# 2020

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## **The Energy Act of 2020**

- **Carbon Management**
  - Authorizes nearly \$7 billion for carbon management and removal programs, including for carbon capture and storage demonstration projects and a direct air capture prize competition
  - Expands DOE Loan Programs Office (LPO) authority to provide assistance to carbon capture, utilization, and storage projects
- **Clean Energy Innovation**
  - Reauthorizes and ramps up funding for ARPA-E
  - Invests in R&D for renewables, geothermal, advanced nuclear, and clean industrial technologies
- **Commercialization of Next Generation Technologies**
  - Establishes Office of Technology Transitions (OTT) to advance the commercialization of innovation energy technologies
  - Allows LPO to use appropriated funds to pay for credit subsidies and administrative fees, making the programs more accessible
  - Establishes the Lab Partnering Service Pilot program

## **Two-Year Extension of 45Q Carbon and Direct Air Capture Tax Credit**

Extended the 45Q tax credit to continue support for CCUS.

## **SEA FUEL Act**

Advances carbon capture and DAC military technologies.

## **USE It Act**

Boosts innovation for carbon capture and DAC technologies to reduce carbon emissions.

## **Testifying in the Senate**

Sasha Mackler testified before the Senate Energy Committee in July 2020 on development and deployment of large-scale carbon dioxide management technologies. Jason Grumet also testified in July before the Senate Environment and Public Works Committee on infrastructure development opportunities to drive resiliency and economic growth.

## **FY21 Appropriations**

FY21 Congressional appropriations funding:

- \$427m for ARPA-E
- \$32m for LPO Title 17
- \$1.49b for USDA ARS
- \$192m for DOI BOEM
- \$90.5m for CO2 removal
- \$8m for industrial carbon capture
- \$10m for natural gas carbon capture
- \$15m for FEED studies

# 2021

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## The Infrastructure Investment and Jobs Act

- **Energy Innovation**
  - Establishes DOE Office of Clean Energy Demonstrations
  - Funds demonstration projects through the Energy Act of 2020 for energy storage, carbon capture, direct air capture, renewable energy, and advanced nuclear reactors
  - Funds offshore wind enabling infrastructure through the Department of Transportation
  - Invests in critical mineral R&D needed to build next generation energy technologies
- **Carbon Management infrastructure**
  - Invests in CO<sub>2</sub> removal through four DAC hubs and a DAC tech prize competition
  - Supports the build out of carbon capture utilization and storage (CCUS) for CO<sub>2</sub> pipeline infrastructure through the SCALE Act
  - Includes the REGROW Act which remediates orphaned O&G wells, helping the environment and creating energy jobs for skilled oil and gas workers
- **Modernizing the Permitting Process**
  - Permanently reauthorizes FAST-41 to streamline and reduce timelines for the permitting process of clean energy projects while maintaining environmental standards
  - Codifies One Federal Decision for Transportation projects, which establishes a federal goal of reviewing and permitting projects within two years
  - Increases funding for federal agencies responsible for permitting decisions
  - Expands federal permit authority related to transmission
- **Natural Climate Solutions**
  - Authorizes and funds hazardous fuels management and forest restoration efforts, including the Collaborative Forest Landscape Restoration program
  - Includes the REPLANT Act, which removes the current \$30M per year cap on the Reforestation Trust Fund

## FY22 Appropriations

FY22 Congressional appropriations funding:

- \$450m for ARPA-E
- \$713m for fusion research
- \$469m for CCUS R&D
- \$5m for USDA climate hubs
- \$58m for Indian Energy program
- \$129m for crosscutting CO<sub>2</sub> removal
- \$510m for industrial emissions R&D
- \$187m for USFS hazardous fuels management
- \$163m for BOEM including CO<sub>2</sub> removal

# 2022

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## **CHIPS and Science Act of 2022**

- **Energy Research and Innovation**
  - Provides ARPA-E with a \$1 billion authorization for advanced energy R&D
  - Authorizes \$11.2 billion for DOE's applied energy offices for R&DD on technologies related to advanced manufacturing, industrial emissions, grid modernization, advanced nuclear, and alternative fuels
  - Invests in tools, technologies, and methods for low-emission steel manufacturing
  - Advances microelectronics developments, prototyping, technology transfer, and workforce initiatives at DOE
- **Commercialization**
  - Establishes the Foundation for Energy Security and Innovation to mobilize private sector efforts alongside federal programs to drive commercialization of energy technologies
  - Establishes the Regional Clean Energy Innovation Program to invest in energy innovation ecosystems in diverse geographic regions
  - Includes the Energizing Technology Transfer Act to support collaboration between DOE national laboratories and innovative entrepreneurs and startups
- **Carbon Management**
  - Strengthens carbon management through increased investments including \$1 billion authorization for CO<sub>2</sub> removal
  - Establishes the Carbon Sequestration Research and Geologic Computational Science Initiative to research subsurface geology for carbon sequestration
- **Fission for the Future**
  - Authorizes \$800 million to establish a Nuclear Reactor Grant Program within DOE to provide states, local governments, utilities, and private entities with financial assistance for advanced nuclear research, development, and demonstration projects, prioritizing projects in communities with retired fossil fuel plants
  - Prioritizes applicants that establish traineeships to develop a U.S. nuclear workforce

## **Inflation Reduction Act of 2022**

- **Clean Energy Technology Deployment**
  - Extends and increases existing clean energy production and investment tax credits
  - Creates new technology neutral clean energy production and investment tax credits
  - Provides the DOE Loan Programs Office with \$40 billion in loan authority and \$3.6 billion for credit subsidies for the Title 17 program to help finance innovative energy projects
  - Provides the DOE Loan Programs Office with \$250 billion in loan authority for clean energy projects that reutilize existing energy infrastructure
  - Increases the electric vehicle tax credit and removes the manufacturer quota that prevented the most popular electric vehicles from qualifying

- **Energy Research Infrastructure**
  - Appropriates nearly \$2 billion for infrastructure improvements at the DOE National Laboratories to advance science and technology development
- **Carbon Management**
  - Increases and expands the 45Q tax credit for carbon capture and removal
  - Allows for direct pay for the 45Q tax credit in lieu of a reduction in tax liability
- **American Manufacturing**
  - Establishes advanced manufacturing tax credits to incentivize domestic production of critical clean energy components, strengthening America's supply chains
  - Provides a bonus tax credit to electric vehicle manufactureres who source a large percentage of critical minerals from North America or a country with a Free Trade Agreement
- **Investments in the Permitting Process**
  - Provides \$760 million to DOE to facilitate and accelerate the siting and permitting of interstate transmission projects
  - Provides \$40 million to the Environmental Review Improvement Fund of the FAST Act to accelerate and streamline the environmental review process
  - Provides \$100 million to EPA to develop review documents and a process that provide for a timelier environmental review process
- **Natural Climate Solutions**
  - Provides nearly \$40 billion in funding for climate-focused agriculture conservation, forestry, and rural energy programs, including \$19 billion for agricultural conservation, \$5 billion for forestry, and \$14 billion for rural programs

## **Senate Ratification of the Kigali Amendment**

In September 2022, the Senate ratified the Kigali Amendment to the Montreal Protocol to phase down the use of hydrofluorocarbons. This historic bipartisan achievement will limit warming by almost a full degree Fahrenheit this century and further open U.S. heating, ventilation, air conditioning, and refrigeration manufacturers to global markets, resulting in massive economic benefits and significant job creation.

## **SBIR and STTR Extension Act of 2022**

The SBIR/STTR programs were reauthorized for three years and certain pilot programs relating to commercialization were extended.

## **DOE Reorganization to Advance Commercialization**

In February 2022, DOE announced a reorganization that would place the Loan Programs Office and the Office of Clean Energy Demonstration under common leadership by creating a new Undersecretary of Infrastructure. DOE's announcement cited the recommendations made in the January 2022 report of BPC's American Energy Innovation Council. This reorganization will help create a smoother transition between DOE programs as innovative energy projects move towards commercialization.

## **Testifying on BPC's Natural Climate Solutions Report**

In March 2022, former Sen. Heidi Heitkamp (D-ND), co-chair of the BPC's Farm and Forest Carbon Solutions Task Force, testified before the House Agriculture Committee on the recommendations included in the Energy Program's February 2022 report on natural climate solutions.

## **Growing Climate Solutions Act**

In December 2022, the Growing Climate Solutions Act was signed into law as part of the FY23 Omnibus. This bipartisan bill lowers the barriers to entry for farmers and private forest owners to participate in carbon credit markets by providing technical assistance for implementing practices that capture carbon, reduce emissions, improve soil health, and make operations more sustainable.

## **FY23 Appropriations**

FY23 Congressional appropriations funding:

- \$470m for ARPA-E
- \$89m for OCED
- \$685m for industrial decarbonization R&D
- \$5m for EPA Class VI wells with \$1.2m for regulator education and training
- \$10m for DOE's Lab-Embedded Entrepreneurship Program (LEEP)
- Report language to assess carbon management environmental impact issues for infrastructure projects to support CO2 removal provisions in the Infrastructure bill and the Energy Act
- \$2m for BOEM offshore leasing for CCUS
- \$44m for LPO programs
- \$140m for CO2 removal RD&D program
- Report language to allow the first CO2 removal RD&D procurement program
- \$22m for OTT with \$5m to support Innovation Clusters Program
- \$2.8m for USDA climate hubs
- \$34m for the Office of Economic Impact and Diversity (OEID)