

## **Enhancing Fossil Fuel Energy Carbon Technology (EFFECT) Act**

*Ranking Member Joe Manchin*

**BACKGROUND:** This year, several energy experts have testified before the Senate Committee on Energy and Natural Resources that fossil fuels will be part of the global energy mix for decades to come, including Dr. Fatih Birol of the International Energy Agency who said that carbon capture, utilization, and storage may be the most critical technology that we can invest in. In order to maintain affordable and reliable electricity domestically, and U.S. leadership globally, it is critical for our country to commercialize technologies that will reduce carbon emissions from fossil fuel generation.

**SUMMARY:** The EFFECT Act would expand the DOE's fossil energy research and development (R&D) objectives and establish new R&D programs for carbon capture, utilization, storage, and removal.

- 1. A Coal and Natural Gas Technology Program:** This program would authorize five sub-programs to develop transformational technologies to improve the efficiency, effectiveness, costs, and environmental performance of coal and natural gas use. These subprograms include research and development, large-scale pilot projects, demonstration projects, and front-end engineering and design. The authorization levels would total \$727 million in FY 2020, and \$4.3 billion total through FY 2024.
- 2. A Carbon Storage Validation and Testing Program:** This program would authorize \$105 million in FY 2020, and \$580 million total through FY 2024, for:
  - Research, development and demonstration for carbon storage, including assessing U.S. geologic storage formation capacity, developing monitoring tools, researching and potential impacts of a leak, and supporting business model assessments to examine the economic viability of technologies and systems developed under the program.
  - A large-scale carbon sequestration demonstration program to collect and validate information on the cost and feasibility of commercial deployment of large-scale technologies.
  - The DOE would be authorized to establish a program to transition a large-scale demonstration project into an integrated commercial storage complex.
- 3. A Carbon Utilization Program:** This program would authorize \$25 million in FY 2020, and \$138 million total through FY 2024, to identify and assess novel uses for carbon, carbon capture technologies for industrial systems, and alternative uses for coal. It would also direct the DOE to work with the National Academies of Science, Engineering, and Medicine on a study to assess barriers and opportunities relating to commercializing carbon dioxide.
- 4. A Carbon Removal Program:** This program would authorize \$45 million in FY 2020, and \$181 million total through FY 2024, for technologies and strategies to remove atmospheric carbon dioxide on a large scale, including direct air capture and storage, bioenergy with CCS, afforestation, etc. Of the funding in FY 2020, \$15 million would be for an air capture technology prize competition.