

November 17, 2022

The Honorable Patrick Leahy
Chairman
Senate Committee on Appropriations
Washington, DC 20510

The Honorable Richard Shelby
Vice Chairman
Senate Committee on Appropriations
Washington, DC 20510

The Honorable Dianne Feinstein
Chair
Subcommittee on Energy & Water Development
Senate Committee on Appropriations
Washington, DC 20510

The Honorable John Kennedy
Ranking Member
Subcommittee on Energy & Water Development
Senate Committee on Appropriations
Washington, DC 20510

Dear Chairman Leahy, Vice Chairman Shelby, Chair Feinstein and Ranking Member Kennedy:

As the Committee negotiates the final Fiscal Year (FY) 2023 Energy and Water Development Appropriations Bill, we urge you to support the Carbon Materials Science Initiative at the Department of Energy (DOE). This program was originally proposed in the *Department of Energy Science for the Future Act of 2022* introduced by Senators Manchin and Barrasso before it was enacted as part of the *CHIPS and Science Act of 2022*. Specifically, we ask that you provide \$25 million for FY 2023 to accelerate research into converting coal and coal waste into valuable products and to kick-start the establishment of carbon materials research centers in the major coal-producing regions of our country, pursuant to the Act.

Coal's uses are not limited to power generation and steelmaking. With support from DOE, researchers have demonstrated that coal and coal waste can be used to produce graphite for batteries, metal composites and alloys, building materials and piping, rare earth elements, and other essential products necessary for advanced technologies and industrial applications. This research has highlighted opportunities to manufacture carbon-based products from coal with lower environmental impacts, including reduced CO₂ emissions, and lower consumer costs than other methods of production.¹

We are excited that the private sector is leveraging this coal-to-products and carbon ore processing research to commercialize several products. Further appropriations are needed to assist with the high-risk, early-stage research and development that will yield additional carbon materials opportunities. Funding this research will bolster our economic and national security by creating new, sustainable sources for materials needed by our construction, aerospace, defense, transportation, and energy storage industries.

Despite the successful past research, development, and commercialization of several coal-to-products pathways through initiatives spearheaded by DOE's Office of Fossil Energy and Carbon Management, funding has been cut from these programs in recent years. In some cases, this has led to the termination of promising carbon materials research and development projects that were already underway. Abandoning these productive lines of research amounts to abandoning an important economic opportunity for our coal communities and takes potential new supply chains off the table for our nation.

¹ See, e.g., Yahya A. Al-Majali et al., *Coal-Filler-Based Thermoplastic Composites as Construction Materials: A New Sustainable End-Use Application*, *ACS Sustainable Chem. Eng.* 2019, 7, 19, 16870–16878.

This is why Congress explicitly authorized a Carbon Materials Science Initiative. Consistent with this Congressional action, we urge the restoration of funding for carbon materials research.

Thank you for your consideration of these requests.

Sincerely,



Joe Manchin III
United States Senator



Sherrod Brown
United States Senator



John Barrasso, M.D.
United States Senator



Kevin Cramer
United States Senator