

The Honorable Patty Murray
Chair
Energy and Water Development
Subcommittee
U.S. Senate Committee on Appropriations

The Honorable Chuck Fleischmann
Chair
Energy and Water Development and Related
Agencies Subcommittee
U.S. House Committee on Appropriations

The Honorable John Kennedy
Ranking Member
Energy and Water Development
Subcommittee
U.S. Senate Committee on Appropriations

The Honorable Marcy Kaptur
Ranking Member
Energy and Water Development and Related
Agencies Subcommittee
U.S. House Committee on Appropriations

April 8, 2024

Dear Chair Murray, Chair Fleischmann, Ranking Member Kennedy, and Ranking Member Kaptur:

As you begin drafting the Fiscal Year 2025 (FY25) Energy and Water Development appropriations bill, we strongly recommend that you include at least \$1 billion in crosscutting funding for the Department of Energy (DOE) to support the decarbonization of America's industrial base and enhance its long-term global competitiveness. This funding would ensure resources are dedicated to industrial decarbonization at all stages of the research, development, demonstration, and deployment (RDD&D) continuum. This work is spread out across a variety of offices and programs within DOE, including the Office of Energy Efficiency and Renewable Energy (EERE), the Office of Fossil Energy and Carbon Management (FECM), the Office of Science (SC), the Office of Nuclear Energy (NE), the Office of Manufacturing and Energy Supply Chains (MESC), and the Office of Clean Energy Demonstrations (OCED). Dedicated funding is necessary to ensure continued emphasis on industrial decarbonization across the RDD&D continuum within the Department.

In addition to the dedication of funding towards industrial decarbonization across the Department, we would like to bring your attention to three specific needs:

- (1) Given the unique heat demands of the industrial sector, which are currently met almost entirely with fossil fuels, we encourage the Committees to ensure support for the decarbonization of industrial process heat in line with goals outlined by the Department-wide Industrial Heat Shot initiative.
- (2) We ask the Committees to expand support for industrial sector demonstrations through OCED, which has received greater demand from the private sector than current resources can accommodate.
- (3) We ask the Committees to ensure the effectiveness of DOE's approach to industrial decarbonization by recognizing the need for stronger coordination across the Department and a multi-year plan to implement the strategy laid out in DOE's *Industrial Decarbonization Roadmap* and *Industrial Decarbonization Commercial Liftoff* reports.

Industrial decarbonization is critical to achieving national climate commitments, requiring immediate action to develop and deploy cost-competitive, next-generation technologies. The industrial sector produces 30% of U.S. greenhouse gas emissions when including electricity use, largely driven by a handful of materials that are critical to our economy, such as steel and cement. These sectors generate significant emissions from the on-site combustion of fossil fuels to produce high-temperature heat that drives industrial processes, as well as “process emissions” resulting from chemical reactions from the transformation of raw materials. The heat required to drive industrial processes alone makes up 9% of U.S. greenhouse gas emissions, and a dedicated focus on industrial heat is an important component of any industrial decarbonization strategy. As such, DOE launched the Department-wide Industrial Heat Shot in 2022 to accelerate solutions.

Many of the technologies necessary to reach higher levels of decarbonization remain in the early stages of development and deployment at scale, and support from the federal government is essential in bringing these nascent technologies to maturity. However, federal investment in RDD&D for industrial decarbonization has lagged despite clear demand from domestic manufacturers. For example, OCED’s \$6.3 billion Industrial Demonstrations Program was significantly oversubscribed, receiving a total of over \$60 billion worth of funding requests across hundreds of concept paper submissions from private businesses and other applicants. While Congress has made critical investments in industrial decarbonization through the Bipartisan Infrastructure Law and the Inflation Reduction Act, more support is needed.

This support should be delineated under a coordinated, Department-wide crosscut guided by a multi-year program plan aligned with DOE’s *Industrial Decarbonization Roadmap* and *Industrial Decarbonization Commercial Liftoff* reports to ensure investments target the most significant and challenging sources of industrial emissions. DOE’s industrial decarbonization activities are carried out by a variety of offices and programs, including EERE, FECM, SC, NE, MESC, and OCED. While there is significant interaction between these offices and programs, DOE must continue and build upon this coordination of activities as well as do more to demonstrate to Congress and other stakeholders how coordination of activities across the Department is being conducted to maximize efficiency, clarify roles, and provide accountability.

Investments in industrial decarbonization are ultimately investments in protecting the long-term competitiveness of domestic manufacturing. Market demand for lower-carbon products is increasing among the private sector and governments due to numerous factors, including corporate net-zero targets, efforts to reduce emissions from procurement and product value chains, pressure from investors, greater demands for emissions disclosure, and rising interest in climate-related trade restrictions. An industrial producer’s emissions profile and the investments it makes in decarbonizing its operations will play an increasingly large role in determining its global market share.

At the same time, the transition to lower-emissions technologies and process heat will be costly, risky, and technically challenging; off-the-shelf technologies and measures alone can reduce greenhouse gas emissions to some degree but cannot eliminate them. According to DOE’s *Industrial Decarbonization Commercial Liftoff* report, deploying commercially available technologies with net-positive economics could abate up to 40% of industrial emissions by 2030, while further technology RD&D is required to address technical barriers and drive cost

reductions to abate remaining industrial sector emissions. The federal government is instrumental in developing and de-risking these critical new technologies, facilitating their wider market adoption.

We greatly appreciate your leadership in securing funding increases for DOE's crosscutting initiatives over the last several years. As negotiations commence on the FY25 Energy and Water appropriations bill, we ask for your continued support for growth in annual appropriations for this essential program to maintain the competitiveness of domestic industries and reduce U.S. emissions in this vital sector. With the right investments, decarbonizing U.S. heavy industry presents an enormous economic opportunity and an opportunity for continued U.S. leadership in manufacturing in the 21st century.

Sincerely,

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