Congress of the United States

Washington, DC 20515

March 5, 2024

The Honorable Jennifer M. Granholm
Secretary
Department of Energy
1000 Independence Ave. SW
Washington DC 20585

Dear Secretary Granholm,

We write today to urge the Department of Energy (DOE) to further support chemical looping hydrogen production and carbon capture demonstrations at commercial scale.

DOE has funded research and development activities for chemical looping for over two decades. The investment led to successful, small-scale demonstrations of the technology, including:

- A sub-pilot scale, 25 kW_{th}, coal direct chemical (CDCL) pilot facility which successfully demonstrated operation for steam and power applications,
- A 250 kW_{th} coal-based pilot designed for power generation, and
- A 250 kW_{th} Syngas Chemical Looping pilot facility that successfully produced hydrogen at the National Carbon Capture Center.

Building on these successful investments, Congress directed the Department in the FY23 Consolidated Appropriations Act to "*support pilot and demonstration activities for chemical looping hydrogen production and carbon capture*" and "*encouraged* [the department] *to support a chemical looping hydrogen production and carbon capture commercial demonstration project*."

We were pleased to see the recent DOE Notice of Intent to Issue a Funding Opportunity Announcement (FOA) (FOA No. DOE-FOA-0002614) which focuses on industrial processes using chemical looping approaches. The FOA, however, is only intended to support conceptual design studies and laboratory validation, and specifically excludes from eligibility any pilot or commercial demonstration activities. We believe DOE should follow the direction of Congress and support chemical looping commercial demonstration projects. In Wyoming, Babcock and Wilcox (B&W) and Black Hills Energy stand ready to prove the viability of commercial-scale chemical looping technology.

Commercialization of chemical looping technology could lead to hundreds of highly skilled engineering jobs in Wyoming to support plant designs, hundreds of manufacturing jobs to support fabrication of equipment, and thousands of short-term construction jobs as projects are built. In addition to the direct jobs established by the B&W and Black Hills Energy partnership, this technology would support Wyoming's existing energy infrastructure and workforce while reducing emissions. As such, we urge the Department to support commercial demonstration projects for chemical looping hydrogen production and carbon capture.

We appreciate your support and look forward to continuing to work with you to position Wyoming's energy assets and workforce for a prosperous future.

John Barrasso, M.D.
United States Senator

Cynthia M. Lummis
United States Senator

Harriet M. Hageman
United States Representative