



CARBON CAPTURE COALITION

March 10, 2019

The Honorable Lisa Murkowski, Chairman
Subcommittee on Interior, Environment, and
Related Agencies
Senate Committee on Appropriations
Washington, DC 20510

The Honorable Tom Udall, Ranking Member
Subcommittee on Interior, Environment, and
Related Agencies
Senate Committee on Appropriations
Washington, DC 20510

Dear Chairman Murkowski and Ranking Member Udall,

On behalf of over 75 companies, unions, and environmental, energy and agricultural organizations in the Carbon Capture Coalition (see attached) who are working together to advance economywide deployment of carbon capture, utilization, removal and storage, we stand ready to work with your Committee and the U.S. Environmental Protection Agency (EPA) to ensure that federal programs critical to scaling a commercial carbon capture industry are properly implemented, funded and staffed.

The United States leads the world in the commercialization of carbon capture, and there is bipartisan support for capturing and utilizing carbon dioxide (CO₂) and its precursor carbon monoxide. Carbon oxides may be captured from diverse sources, including power plants, industrial facilities and ambient air through direct air capture. Sustained investment in these technologies represents a genuine win-win for our nation's economy and environment, greatly reducing our nation's emissions, while benefitting energy-producing and industrial regions with the creation of high-paying jobs and a greater tax base.

For carbon capture to reach its full emissions reduction and economic potential, commercial options for storing carbon dioxide (CO₂) in saline geologic formations need to be expanded, as such formations are capable of safely and permanently storing vast volumes of captured CO₂. Therefore, the permitting of Class VI injection wells required for saline storage under EPA's Underground Injection Program (UIC), and the related delegation of primacy to states, are critical elements for advancing saline geologic storage projects during the current authorization of 45Q, in which carbon capture projects must commence construction by the end of 2023 to claim the credit.

A key determinant of project success is the ability for companies to have a concise and predictable timeline for securing Class VI injection permits, particularly given the commence construction deadline. However, the process for application and approval of Class VI well permits and for state Class VI primacy applications is currently too long and uncertain, presenting a significant obstacle to future development of the carbon capture industry in the United States, and to its ability to scale up geologic storage sufficient to meet midcentury emissions reduction goals.

The time required to prepare a Class VI well permit application, submit it to EPA for review, and receive approval already puts potential carbon capture projects that seek to do saline geologic storage, but which are not well into initial stages of development, outside the remaining four year commence construction window for 45Q. While 45Q was meant to spur the development of carbon capture projects by making them more economically attractive, the chances of meeting the commence construction deadline are extremely low and uncertain. Development of carbon capture projects can take as long as five years before construction can begin, so the window for project development is already rapidly closing. Similarly, states now contemplating Class VI primacy applications will not have sufficient time to secure approval for primacy from EPA and then, in turn, permit Class VI applications in their states in order for project developers to begin construction and meet the 45Q deadline.

There are currently six Class VI well permits that EPA has issued, and only one carbon capture project is actively injecting CO₂ into the subsurface under a Class VI permit (there are numerous carbon capture projects storing CO₂ in oil and gas fields under much less costly and time-consuming Class II permits). The Illinois Industrial Carbon Capture and Storage Facility is storing approximately 1.1 million tons of CO₂ per year from ADM's Decatur, IL corn processing facility. The time between application to CO₂ injection for ADM's Class VI project took a total of six years, yet to meet midcentury climate goals, we will need to remove and safely store billions of tons of CO₂ in appropriate saline formations that are captured from industry, power generation and directly from the atmosphere through direct air capture.

The timeframes for application and approval of Class VI well permits and state Class VI primacy present already present a significant constraint on the 45Q tax credit achieving its full deployment potential. This situation risks being exacerbated by limited EPA and state resources and staffing to manage an anticipated significant increase in Class VI well permit and state primacy applications in response to 45Q, creating the prospect of policy failure with respect to commercial development of saline storage projects. It is estimated that once the U.S. Treasury issues final guidance for 45Q, up to two dozen projects will seek Class VI wells, and current EPA staffing levels for the Class VI program are inadequate to meet the expected increase in well applications in a timely manner.

Additionally, while a number of states that have applied or intend to apply for Class VI primacy have tremendous geologic storage potential, knowledgeable regulatory staff and political support to assist project developers undertaking commercial carbon capture projects, state UIC budgets are currently unable to meet the challenge of permitting Class VI wells at a significant scale. Completing a Class VI well permit involves extensive site characterization, injection well construction, monitoring, financial and reporting requirements, along with considerable associated financial commitments on the part of the applicant and significant staffing resources at the state level. In a best-case scenario, time between preparing a state primacy application to permitting the first Class VI well is anticipated to take up to four years, which would place any potential project outside the commence construction window.

We also raise two additional points for further consideration as you draft the FY21 budget:

- 1) To enable the Class VI permitting and primacy application process at EPA to occur at the pace and scale required both by the current 45Q authorization and mid-century climate goals, we respectfully request that in FY 2021, the EPA Water – Human Health Protection budget receive an increase of at least \$4 million above the fiscal year 2020 level, to develop expertise and capacity at the Agency, specifically within the UIC program related to Class VI wells for geologic

storage. To accelerate broader commercialization of carbon capture projects, further funding increases will be required in future years. Additional staffing to process Class VI well applications and state primacy applications will be crucial to reducing the overall permitting time for Class VI projects.

- 2) Additionally, the current federal UIC program has been funded at levels near \$10.5 million per year for the last twenty years, while the complexity and cost of permitting all classes of UIC wells have grown during that time period. To begin building the capacity at the state level to support robust Class VI well programs, we request that in FY 2021, the EPA UIC program receive at least \$6 million above the fiscal year 2020 level.

Building on momentum from congressional reform and expansion of the Section 45Q tax credit and a suite of recently introduced bipartisan legislation to help further commercialize carbon capture technology, we respectfully urge you to robustly fund the EPA Class VI programs in the FY 2021 budget, which are critical to timely and effective project permitting. We look forward to working with you and the EPA and to provide any additional information you might need.

Thank you for your consideration of our requests.

Sincerely,



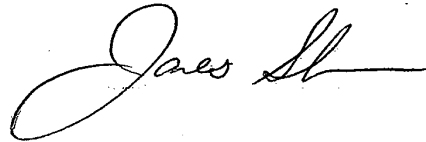
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James Selvin
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Utility Workers Union of America



Brad Markell
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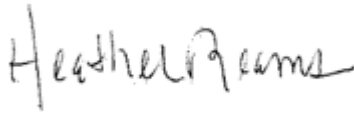
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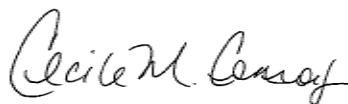
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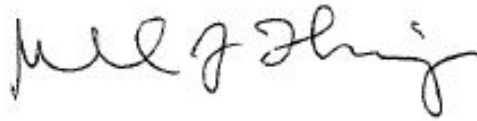
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Third Way



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The Nature Conservancy



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Vice President, Energy Transition
Baker Hughes



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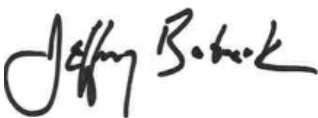
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Accelergy Corporation

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Archer Daniels Midland Company

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Senior Director-Government Affairs
Occidental Petroleum Corporation

Ari Bernstein
Principal
Greene Street Capital

Brad Crabtree
Director
Carbon Capture Coalition, Great Plains
Institute



CARBON CAPTURE COALITION

Coalition Participants:

Accelergy	Energy Innovation Reform Project	NRG Energy
AFL-CIO	Glenrock Energy	Occidental Petroleum Corporation
Air Liquide	Great River Energy	Pacific Ethanol
Air Products	Greene Street Capital	Peabody
AK Steel	Impact Natural Resources LLC	Prairie State Generating Company
American Carbon Registry	ION Engineering LLC	Praxair, Inc.
ArcelorMittal	International Brotherhood of Boilermakers	Shell
Arch Coal	International Brotherhood of Electrical Workers	SMART Transportation Division (of the Sheet Metal, Air, Rail and Transportation Workers)
Archer Daniels Midland Co.	Jackson Hole Center for Global Affairs	Summit Power Group
Baker Hughes	Jupiter Oxygen Corporation	Svante
Bipartisan Policy Center Action	Lake Charles Methanol	Tenaska Energy
Capital Power	LanzaTech	The Nature Conservancy
Carbon180	Linde LLC	Third Way
Carbon Wrangler LLC	Mitsubishi Heavy Industries America, Inc.	Thunderbolt Clean Energy LLC
Center for Climate and Energy Solutions	National Audubon Society	United Mine Workers of America
Citizens for Responsible Energy Solutions Forum	National Farmers Union	United Steel Workers
Clean Air Task Force	National Wildlife Federation	Utility Workers Union of America
ClearPath	NET Power	White Energy
Conestoga Energy Partners	New Steel International, Inc.	Wyoming Outdoor Council
Core Energy LLC		
DTE Energy		
EBR Development LLC		
EnergyBlue Project		

Observers:

Algae Biomass Organization	Environmental Defense Fund
Biomass Power Association	Growth Energy
Brown Brothers Energy & Environment, LLC	Institute of Clean Air Companies
Carbon Engineering	Melzer Consulting
Carbon Utilization Research Council	Renewable Fuels Association
Chart Industries	Systems International The ZEROS Project
Cornerpost CO2 LLC	Tellus Operating Group
Enhanced Oil Recovery Institute, University of Wyoming	World Resources Institute