

Chairman Porter, members of the committee, on behalf of the Energy & Environmental Research Center (EERC), thank you for this opportunity to provide feedback on House Bill 1574. As a leading developer of technologies to advance optimization of our energy resources and address environmental challenges, the EERC has spent decades assisting in the research and development of carbon capture technologies, carbon dioxide (CO₂) utilization, and CO₂ storage, as well as providing science-based support for regulatory frameworks that ensure proper oversight and safety of carbon capture utilization and storage (CCUS). Since 2003, the EERC has also led the Plains CO₂ Reduction (PCOR) Partnership with the goal of advancing CCUS through site characterization, demonstration, and commercial deployment.

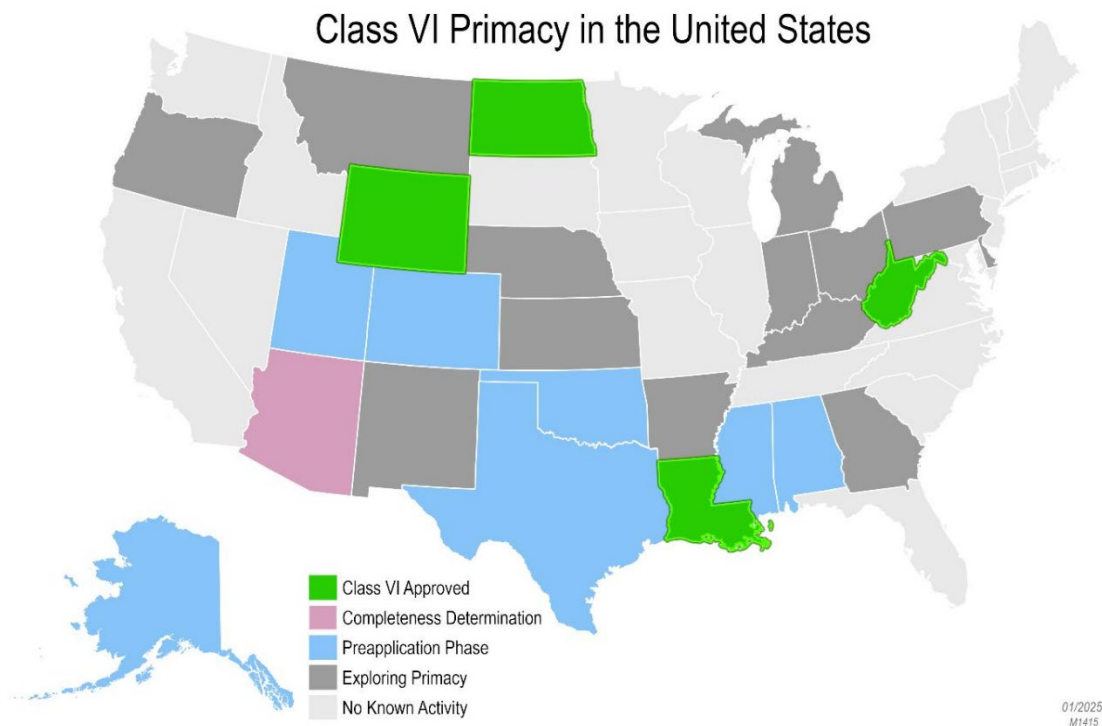
Accordingly, while the federal government, namely the Environmental Protection Agency, has developed regulations under a waste disposal framework, North Dakota has adopted one of a commodity-based resource management program, which has been recommended by the Interstate Oil and Gas Compact Commission. A resource management framework recognizes the regulatory complexity of CO₂ storage and allows for the integration of environmental protection; ownership and management of the pore space; maximization of storage resource; and responsibility for long-term liabilities into an all-encompassing (i.e., cradle-to-grave) regulatory framework.

The timeline of North Dakota's regulatory development is summarized as follows:

- Effective April 2009: Senate Bill 2139 created North Dakota Century Code (NDCC) Chapter 47-31, Subsurface Pore Space Policy, which granted the title of pore space ownership to the overlying surface estate and prohibited severing the title to the pore space from surface ownership, although leasing is allowed. The relationship between pore space and mineral estates identified the mineral estate as dominant.
- Effective July 2009: Senate Bill 2095 created NDCC Chapter 38-22, Carbon Dioxide Underground Storage, a new statutory chapter that granted regulatory authority to NDIC, established permit requirements that included pore space amalgamation, created an administrative fund and a long-term trust fund, and addressed responsibility for long-term liability through a certificate of project completion (to be issued no sooner than 10 years postinjection following demonstration of a stable CO₂ plume in the subsurface) and transfer of title of the stored CO₂.
- Effective April 2010: North Dakota Administrative Code (NDAC) Chapter 43-05-01, Geologic Storage of Carbon Dioxide, provided a first-of-a-kind state regulatory framework that incorporates permitting, well construction, and detailed engineering and geological data analyses, along with a CO₂ injection plan that includes a description of the mechanisms of geologic confinement to ensure the prevention of horizontal or vertical migration of CO₂ beyond the proposed storage reservoir. The operator is also required to submit for state approval an emergency response plan, worker safety plan, corrosion monitoring and prevention plan, and a facility and storage reservoir leak detection and monitoring plan.

- 2011: House Bill 1014 provided an appropriation of \$532,000 from the general fund to the CO₂ storage facility administrative fund, which was established in 2009, creating one full-time position to prepare a Class VI primacy application and secure approval of Class VI primacy for the state of North Dakota.
- Effective April 2013: NDAC Chapter 43-05-01, Geologic Storage of Carbon Dioxide, was amended (effective April 2013) to meet the “as stringent as” standard of the federal Class VI UIC program. EPA required rules to be codified as part of North Dakota’s Class VI primacy application.

This regulatory environment led to North Dakota being the first state in the nation to be awarded primacy status for Class VI injection of CO₂. Gaining primacy status represents that North Dakota regulations meet the “as stringent” standard of federal Class VI underground injection control program requirements. Since then, three other states have been awarded primacy status, while seven are in the preapplication phase, and a dozen are exploring the prospect of Class VI primacy as depicted below:



Concurrently with these regulatory developments, monetary incentives for the commercial deployment of CCUS projects have also developed in the form of federal tax incentives and further evolution of CO₂ credits and voluntary markets such as low-carbon fuel programs, firmly establishing CO₂ as a commodity resource. The cumulative result of this progress being that North Dakota is now home to four commercial-scale CCUS projects. These projects are helping secure the economic viability of the state’s (and Northern Hemisphere’s) only coal gasification plant, producing incremental oil from legacy operations in southwest North Dakota, and creating new economic opportunity for North Dakota

agriculture and ethanol producers. Looking forward, the stage that North Dakota has set for CCUS continues to drive interest for development of CO₂ capture projects, including point source capture from in-state facilities, development of sustainable aviation fuel and other low-carbon energy sources, and direct air capture (DAC).

DAC is a CO₂ capture technology similar to that which would be applied to a point source, except that the CO₂ is captured from ambient air versus the flue gas of a power plant or industrial facility. DAC has gained significant interest from the private sector and energy industry for the ability to provide CO₂ offsets and comply with scope 3 emissions requirements. Several companies have expressed interest in siting DAC facilities in North Dakota due to access to CO₂ storage and opportunity for utilization via enhanced oil recovery (EOR). Further, as DAC is a net electric consumer, project developers see opportunity in utilizing North Dakota natural gas for on-site power generation.

In the interest of developing a commodity-based economy for CO₂, North Dakota should be technology agnostic. Enabling CO₂ capture from all sources serves multiple purposes – ensuring the successful development of carbon capture technologies, providing for EOR that will extend Bakken production, providing a safeguard for the state's coal industry, and supporting the growth of other low-carbon agricultural and energy sectors. CO₂ utilization secures the benefits our state has enjoyed from its energy resources through tax revenues, jobs, and low-cost reliable energy for generations to come.

House Bill 1574, as well as other legislation being considered by this committee today only serves to preclude development of this technology and devalue CO₂ as an important commodity for North Dakotans. Further, as mentioned above, while North Dakota benefits from its head start in this space, there is growing opportunity for competition in the region and across the nation. As our economy has demonstrated time and again, investment will go somewhere, and tends to go where it is welcome. Reaping the benefits of CO₂ capture to maximize the Bakken, preserve our coal industry, and provide future opportunities for generations of North Dakotans relies on the continued consistency, and certainty, of North Dakota's CO₂ policy and regulatory framework.

Thank you again for this opportunity to provide comments on this important issue and I would be happy to answer any questions.