

New analysis finds opportunities for carbon capture, storage

July 9 2020

The Great Plains Institute (GPI) and the University of Wyoming's Jeffrey Brown explore the planning of carbon dioxide transportation networks on a regional scale in a new analysis.

The [white paper](#) also looks at the economic and environmental benefits that can be achieved through economies of scale to meet the United States' midcentury decarbonization goals. The paper may be found [here](#).

Using modeling efforts to identify regional-scale CO₂ [transport](#) infrastructure, the analysis identifies near-term capture and storage opportunities—then designs and plans the regional transport infrastructure required to maximize CO₂ reductions while minimizing cost and land use impacts throughout the Midwest, Rockies, Plains, Gulf Coast and Texas.

"Planning CO₂ transport infrastructure on a longer time horizon, for 2050 as opposed to 2030, achieved twice the amount of capture and storage in our modeling scenarios, while having almost no increase in land use impact and only a marginal increase in cost," GPI Director of Research Dane McFarlane says. "Thus, twice as much carbon was stored at half the cost per ton when planning a coordinated regional network for the midcentury."

The screening process identified industrial and power sector CO₂ sources where retrofitting facilities to capture carbon is financially viable. This captured CO₂ is transported through modeled pipeline

networks to carry the CO₂ to deep saline geologic formations to be stored permanently.

The expansion of the federal Section 45Q tax credit has created momentum for [carbon capture](#) in the United States with a more favorable policy landscape.

"Going forward, state policy also can play an important role in complementing 45Q and other federal policies to help carbon capture projects bridge cost gaps and achieve financial feasibility," GPI Vice President Brad Crabtree says. "State policies providing incentives for carbon capture, facilitating the development of CO₂ transport and storage infrastructure, and implementing energy portfolio requirements can all make [carbon](#) capture more economically feasible at local and regional levels."

Provided by University of Wyoming

Citation: New analysis finds opportunities for carbon capture, storage (2020, July 9) retrieved 25 April 2024 from <https://phys.org/news/2020-07-analysis-opportunities-carbon-capture-storage.html>

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