

# New Mexico

## IMPLEMENTING CARBON CAPTURE AND STORAGE TECHNOLOGY

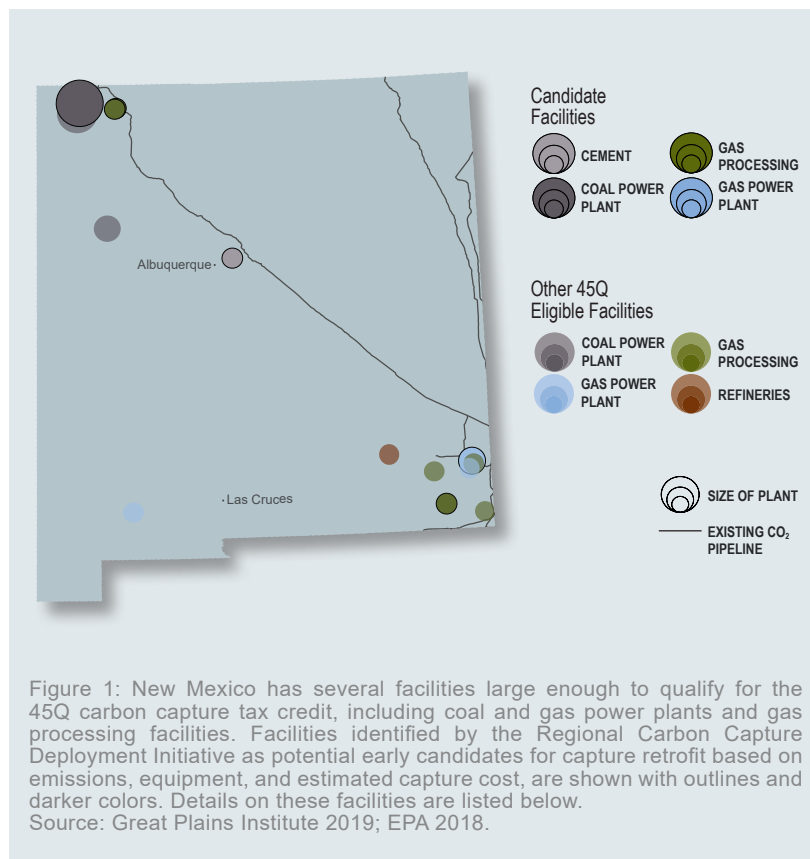
### KEY TAKEAWAYS

- Much of the state's carbon capture potential lies in the three gas processing facilities that have been identified as economically feasible and qualify for the 45Q tax credit. These three plants have the combined potential to capture nearly 1 million metric tons (MT) of CO<sub>2</sub> emissions annually.
- New Mexico provides a tax incentive for qualified EOR projects that reduces the percent of taxable value for the Oil and Gas Severance Tax from 3.75 percent to 1.875 percent.
- New Mexico holds great potential to store or reuse captured emissions due to candidate facilities existing in near proximity of CO<sub>2</sub> pipeline infrastructure.

The **Regional Carbon Capture Deployment Initiative** brings together state officials with diverse industry, NGO, labor, and other stakeholders to promote broad scale deployment of infrastructure for carbon capture, CO<sub>2</sub> pipelines, enhanced oil recovery (EOR), other forms of geologic storage, and beneficial utilization of CO<sub>2</sub> in the Western and Midwest regions of the country.

The Initiative is staffed by the Great Plains Institute (GPI), a nonpartisan, nonprofit working to transform the energy system to benefit the economy and environment. For more information on this effort, go to [carboncaptureready.org](https://carboncaptureready.org) or contact Patrice Lahlum at [plahlum@gpisd.net](mailto:plahlum@gpisd.net).

### SOURCES BY INDUSTRY & VOLUME



### POTENTIAL CANDIDATE FACILITIES FOR CAPTURE WITH ANNUAL EMISSIONS

Facility Name	Location	Industry	Total Facility CO <sub>2</sub> Emissions thousand tons	CO <sub>2</sub> Captured Target thousand tons	Estimated Capture Cost \$/ton
San Juan Unit 4	Waterflow	Coal Power Plant	12,215	3,200	\$54
Hobbs Generating	Hobbs	Gas Power Plant	1,320	1,600	\$55
Val Verde Treater	Bloomfield	Gas Processing	694	490	\$12
Milagro Cogeneration	Bloomfield	Gas Processing	650	376	\$12
GCC Rio Grande	Tijeras	Cement	305	276	\$67
Red Hills Gas Processing	Jal	Gas Processing	198	119	\$16

Table 1: The Regional Carbon Capture Deployment Initiative estimated theoretical facility capture costs based on published capture equipment costs, facility-specific operational patterns, existing equipment, and level of emissions. Most states have a large number of facilities eligible for 45Q. Of those facilities, the above table lists likely economically feasible candidates based on estimated capture cost. This list is not meant to be definitive. Commercial decisions by participating companies, and policy and regulatory decisions by state governments, will ultimately determine if a project is feasible for carbon capture. Captured Emissions refers to the amount of carbon dioxide that can be expected to be captured at a facility considering relevant technological and economic constraints. Source: GPI 2019; EPA 2018.

Maps and graphics within this document are based on work by the Great Plains Institute (GPI) to help the Regional Carbon Capture Deployment Initiative identify facilities that qualify for the federal 45Q tax credit and are optimal near-term investment opportunities for carbon capture for each state. For more information, visit [carboncaptureready.org](https://carboncaptureready.org).

## LEGISLATIVE CONTEXT

In January 2019, Governor Michelle Lujan Grisham joined other states in the US Climate Alliance to commit to a reduction in greenhouse gas emissions by at least 26 to 28 percent below 2005 levels by 2025, track and report progress, accelerate new and existing policies to reduce carbon pollution and promote clean energy deployment. Given recent legislative commitments, including the Energy Transition Act, implementation of carbon capture and storage in coming years at existing and new facilities can provide an important pathway for helping a number of industries in New Mexico to meet the current and future CO<sub>2</sub> emissions reduction targets. Furthermore, New Mexico provides a tax incentive for qualified EOR projects. This incentive reduces the percent of taxable value for the Oil and Gas Severance Tax from 3.75 percent to 1.875 percent.

## CAPTURE AND STORAGE POTENTIAL

There are 13 facilities in New Mexico that are eligible for the federal 45Q tax credit for geologic storage and beneficial use of CO<sub>2</sub>, including gas processing plants, power plants, and industrial facilities. Figure 1 displays the distribution of these facilities throughout New Mexico. These facilities produce over 25 million MT of CO<sub>2</sub> annually, collectively representing 85 percent of the state's total annual emissions and underscoring the potential for carbon capture to help New Mexico achieve its greenhouse gas emissions reduction goals. Much of New Mexico's capture potential comes from gas processing plants. There are five plants that qualify for the 45Q tax credit, three of which have been identified as likely economically feasible candidate facilities within the state, listed in Table 1. These three plants have the combined potential to capture nearly 1 million tons of emissions annually.

New Mexico has tremendous opportunity to store or reuse captured emissions due to existing pipeline infrastructure available to transport CO<sub>2</sub> for use and storage, as well as established and conveniently located geologic storage options. Figure 2 highlights this prime potential by showing candidate facility locations within New Mexico and their proximity to geological storage and pipeline infrastructure. Industry is gearing up to take advantage of this carbon management potential in New Mexico. For example, Occidental Petroleum recently secured EPA approval of monitoring, reporting and verification (MRV) plans for Permian Basin EOR operations at its Hobbs Unit in New Mexico and Denver Unit just across the state line in Texas. The MRV plans provide a framework for quantifying the amount of CO<sub>2</sub> permanently stored through injection of CO<sub>2</sub> for EOR in order to claim the 45Q tax credit.

## REGIONAL CAPTURE OPPORTUNITIES

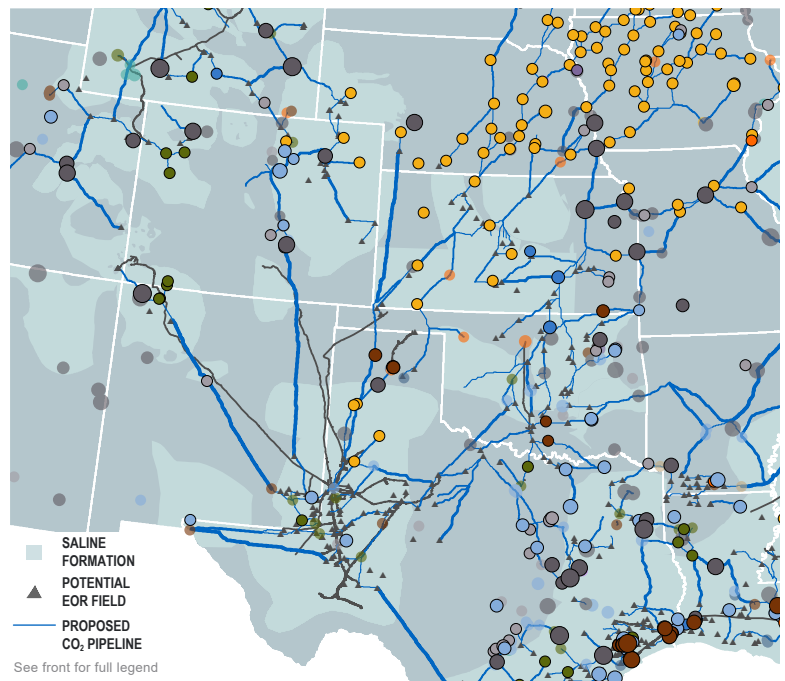
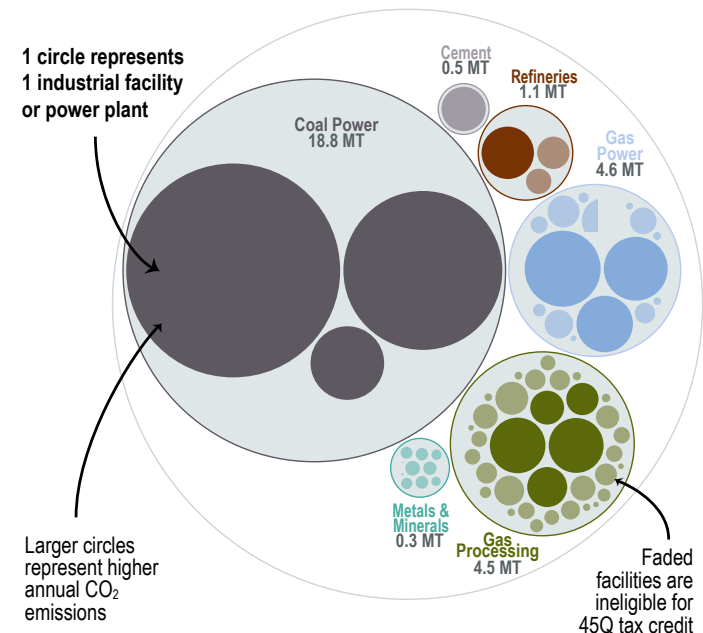


Figure 2: Potential regional CO<sub>2</sub> sources and pipeline corridors for transportation to utilization and storage sites as modeled by the Regional Carbon Capture Deployment Initiative.

## FACILITIES AND EMISSIONS BY INDUSTRY



MT: Million metric tons CO<sub>2</sub>

Figure 3: This bubble diagram visualizes the number of facilities and corresponding annual CO<sub>2</sub> emissions for each industry in New Mexico. The darker large bubbles are eligible for the 45Q carbon capture tax credit, while the faded bubbles are too small to be eligible. The total amount of CO<sub>2</sub> emissions in New Mexico is listed for each industry. Source: GPI 2019; EPA 2018.