

JOBS AND ECONOMIC IMPACT OF CARBON CAPTURE DEPLOYMENT North Dakota

TOTAL JOBS POTENTIAL

Project Jobs	Operations Jobs	Infrastructure Jobs
975	666	310

North Dakota has the opportunity to create an annual average of up to **1,285 project jobs** over a 15-year period and **666 ongoing operations jobs** through the deployment of carbon capture at eight industrial and power facilities. The retrofit of equipment at these facilities would capture **18.2 million metric tons** of carbon dioxide (CO₂) per year. Along with the development of CO₂ transport infrastructure, this would generate up to **\$6.3 billion** in private investment.

CREATING JOBS & CAPTURING CARBON

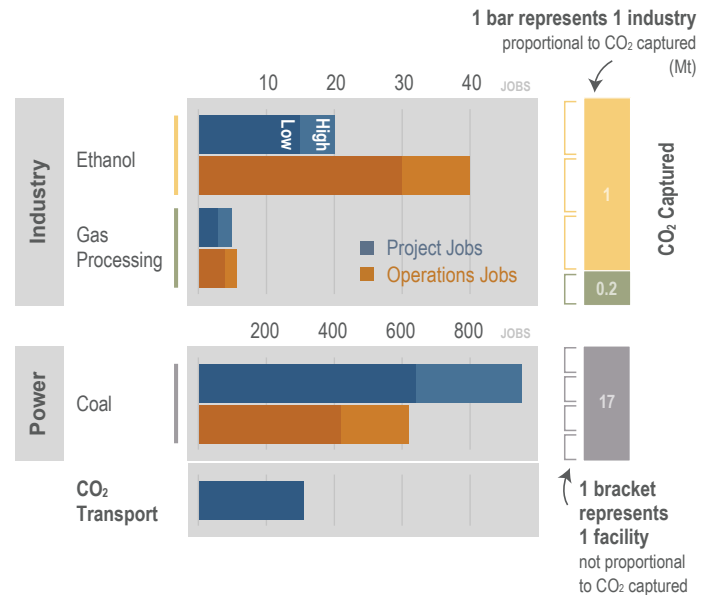
Carbon capture is essential to meeting mid-century emissions reduction goals while retaining and growing a domestic base of high-wage energy, industrial, and manufacturing jobs. Carbon capture retrofits require facilities to be outfitted with capture technologies such as amine scrubbers to remove CO₂ from exhaust gas and compressors to make the CO₂ transport-ready, that are dependent upon the type of industrial plant and vary across industries and facilities. There are jobs associated with the equipment, materials (e.g., cement and steel), engineering, and labor required to install the capture technology, as well as ongoing jobs to operate and maintain the retrofits. These are referred to as **project jobs** and **operations jobs**.

Rhodium Group performed an economic analysis based on the Regional Carbon Capture Deployment Initiative's near- and medium-term capture potential scenario.¹ The Rhodium analysis quantifies the economic impact and employment opportunities of carbon capture retrofit projects by deploying state-specific data in the IMPLAN economic model. The analytical results measure the impact of project investment and operation costs through expected annual jobs. Average annual project jobs were calculated assuming deployment of all projects within the 15-year period from 2021-2035. The jobs reported are in-state jobs, directly associated with carbon capture retrofits. They do not include other jobs at the facilities, nor indirect and induced jobs.

CARBON CAPTURE JOBS AND ECONOMIC IMPACT SUMMARY

Industry	Number of Facilities	Total Capture Target Metric Tons	Private Investment Million Dollars	Annual Average Project Jobs 2021-2035	Annual Operations Jobs
Coal Power	4	17,000,000	\$3,700 - \$5,600	640 - 950	420 - 620
Ethanol	3	1,000,000	\$50 - \$70	15 - 20	30 - 40
Gas Processing	1	200,000	\$11- \$16	3 - 5	4 - 6
CO ₂ Transport Infrastructure	-	-	\$600	310	-

ANNUAL PROJECT AND OPERATIONS JOBS



Mt = million metric tons.

This figure depicts the low and high range of estimated annual average project jobs, transport infrastructure jobs, and ongoing operations jobs that could be created through carbon capture retrofits at industrial and power facilities in North Dakota. The potential amount of CO₂ captured and the number of potential near- or medium-term capture facilities in each industry are shown on the right.

RESULTS

North Dakota is one of the top ten ethanol-producing states in the nation and has three ethanol facilities with the combined potential to create an annual average of up to 20 project jobs and 40 ongoing operations jobs while capturing one million metric tons of CO₂ per year. Four of the state's coal power plants and one gas processing facility hold the combined potential to create an annual average of up to 955 project jobs and 626 ongoing operations jobs. In addition to jobs associated with retrofitting existing industrial and power facilities, the development of CO₂ transport infrastructure would create an annual average of 310 project jobs in the state.

¹ Rhodium Group analytical results: rhg.com/research/

For more information, visit carboncaptureready.org