



SUMMIT CARBON SOLUTIONS

DRIVING ECONOMIC GROWTH IN THE MIDWEST

The ethanol industry utilizes approximately half of the corn produced in North Dakota.

KEY ECONOMIC FACTS

Project-Wide (Construction Phase)

| | |
|--|---------------|
| Total Investment | \$3.7 billion |
| Total Average Annual Jobs Created | 11,427 |
| Total Federal, State, Local Taxes Paid by SCS | \$371 million |
| Expenditures to Suppliers, Contractors, and More | \$2.1 billion |
| Total Right-of-Way and Other Landowner Payments | \$309 million |

Project-Wide (Operations Phase)

| | |
|--|---------------|
| Annual Expenditures | \$170 million |
| Total Jobs Supported | 1,170 |
| Expenditures to Suppliers, Contractors, and More | \$78 million |
| Total Federal, State, Local Taxes Paid by SCS | \$97 million |

We are proud to partner with local and other skilled contractors to build this innovative new project.

SUPPORTING ETHANOL AND AGRICULTURE

Summit Carbon Solutions will bolster the ethanol and agricultural industries that are so critical to the Midwest economy. The ethanol industry:

- Supports 360,000 jobs
- Contributes more than \$45 billion to annual U.S. GDP
- Provides a \$14 billion boost to grain markets

The project will lower carbon intensity scores for the 32 ethanol plants who have chosen to partner with Summit Carbon Solutions. This will enable ethanol plants to keep their doors open and allow farmers to continue selling their corn for a high value.

PARTNERS IN NORTH DAKOTA

Tharaldson Ethanol (Casselton)

**W165
PU-22-391**



**SUMMIT
CARBON
SOLUTIONS**

SUPPORTING NORTH DAKOTA'S ECONOMY

INVESTING IN NORTH DAKOTA: KEY FACTS

North Dakota (Construction Phase):

| | |
|--|---------------|
| Total North Dakota Investment | \$898 million |
| Total Labor Income in North Dakota | \$392 million |
| State and Local Taxes Paid by SCS (North Dakota) | \$61 million |

North Dakota (Operations Phase):

| | |
|----------------------------------|--------------|
| Annual North Dakota Expenditures | \$18 million |
|----------------------------------|--------------|

BY COUNTY

The following table shows the projected amount of new property taxes each county will realize as part of the Summit Carbon Solutions project.

| County | Total Investment | Total Labor Income | New Property Taxes |
|----------|------------------|--------------------|--------------------|
| Burleigh | \$81,000,413 | \$34,637,788 | \$464,779 |
| Cass | \$75,610,460 | \$32,222,010 | \$433,851 |
| Dickey | \$74,676,253 | \$31,933,421 | \$428,491 |
| Emmons | \$73,753,741 | \$31,538,932 | \$423,197 |
| Logan | \$3,759,407 | \$1,607,616 | \$21,571 |
| McIntosh | \$68,967,326 | \$29,492,142 | \$395,733 |
| Mercer | \$84,458,780 | \$35,837,897 | \$484,623 |
| Morton | \$34,663,811 | \$14,823,107 | \$198,900 |
| Oliver | \$185,125,345 | \$78,746,033 | \$1,062,245 |
| Richland | \$131,226,560 | \$56,115,737 | \$752,975 |
| Sargent | \$79,546,105 | \$34,015,890 | \$456,434 |



NORTH DAKOTA

Voluntary Easement Miles Acquired

- Over 207,57 miles now signed
- Over 332 landowners have signed, equating more than 554 agreements executed

OVER
207.57
miles

Construction Anticipated Start Date: **Fall of 2023**



- A gas in atmospheric conditions.
- A dense phase deep underground or in a pipeline. A dense phase has the viscosity of a gas but a density closer to that of a liquid.
- Nonexplosive and noncombustible.
- Dispersed as a gas when introduced to conditions outside the pipeline.
- CO₂ pipelines have an excellent safety record exceeding pipelines that carry other materials.
- Transported at ambient temperature that does not affect the surrounding soil.

Pipeline Transport Is Critical to Carbon Capture & Storage

Transporting carbon dioxide by pipeline is the safest method for the large volumes of CO₂ that will be captured and permanently stored. With more than 5,000 miles of infrastructure currently operating in the United States, carbon dioxide pipelines have an excellent safety record.

Carbon capture and storage utilizes longstanding technology that is safe for landowners and communities.

- CO₂ capture is already deployed at more than 40 ethanol plants.
- There are 5,000 miles of existing CO₂ pipelines in the United States regulated by the Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA).
- Captured CO₂ is permanently and safely stored deep underground based on EPA standards.

Pipelines Are Highly Regulated

Stringent requirements for the safe design, construction, and operation of CO₂ pipelines have been established by the DOT PHMSA. Additionally, constructing the Summit Carbon Solutions system requires permits from the following entities:

- | | |
|--|---|
| State: | Federal: |
| • North Dakota Public Service Commission | • United States Army Corps of Engineers |
| | • United States Fish and Wildlife |

Summit Carbon Solutions is working with landowners, community leaders, stakeholders, and more with respect, honesty, and transparency to obtain the necessary rights from the landowners for any proposed temporary and permanent easements.

Investors



- Ethanol Plant Partners
- John Deere
- Continental Resources
- Tiger Infrastructure
- TPG Rise Climate
- Summit Agricultural Group

Partners

- 32 ethanol plants across 5 states (Nebraska, Iowa, Minnesota, North Dakota, South Dakota)
- Minnkota Power Cooperative (CO₂ storage) giving Summit Carbon Solution access to the largest of only three permitted CO₂ storage sites in the United States.



Summit Carbon Solution's Pipeline is Overbuilt for Safety

Summit Carbon Solutions' pipeline will be built beyond federal specifications in these ways:

- PHMSA - 195.248 Pipeline Location - requires 3ft depth below ground level. Summit Carbon Solutions will be at 4ft minimum depth.
- PHMSA - 195.210 Pipeline Location - requires 50ft setback from all dwellings. Summit Carbon Solutions is designing the pipeline that far exceeds the minimum setback.
- PHMSA - 195.250 Clearance Between Pipe and Underground Structures - Any new pipe must be at least 12" away from any other underground pipe or structure. Summit Carbon Solutions' best practice is 24".
- PHMSA 49 CFR Part 195 defines minimum requirements like the spacing between block valves, which is no more than 20 miles apart and in some cases less for Summit Carbon Solutions' pipeline.

Summit Carbon Solutions will employ a computer based, computational leak detection system that continuously monitors the operation of the pipeline from a manned control center. Similar leak detection systems are currently being utilized in the operation of numerous pipelines across the United States. Data will be continuously collected from pressure sensors, flowmeters, and temperature sensors installed along the pipeline and used to identify abnormal operating conditions. In the unlikely event of a leak, the system will provide information necessary to locate the leak, isolate the pipeline segment, and mitigate risk.

Community Investment

Summit Carbon Solutions is looking to invest and volunteer in local communities. If there is somewhere we can invest in your community, please contact Kaylee Langrell 501-581-3348 or Kaylee.Langrell@tkl360.com

CONTACT INFORMATION

For Emergency Management Questions:
ROD DILLON
Director of Regulatory Compliance
rdillon@summitcarbon.com
515-531-2624

For More Project Information or Interviews:
JESSE HARRIS
Director of Public Affairs
jharris@summitcarbon.com
515-240-2104