



SCS PROJECT OVERVIEW

Sloux County, Iowa

4/23/24

DEVELOPING THE LARGEST INTEGRATED CARBON CAPTURE, TRANSPORTATION, AND STORAGE PROJECT IN THE WORLD.

PARTNERED WITH **57 ETHANOL
PLANTS** ACROSS THE MIDWEST



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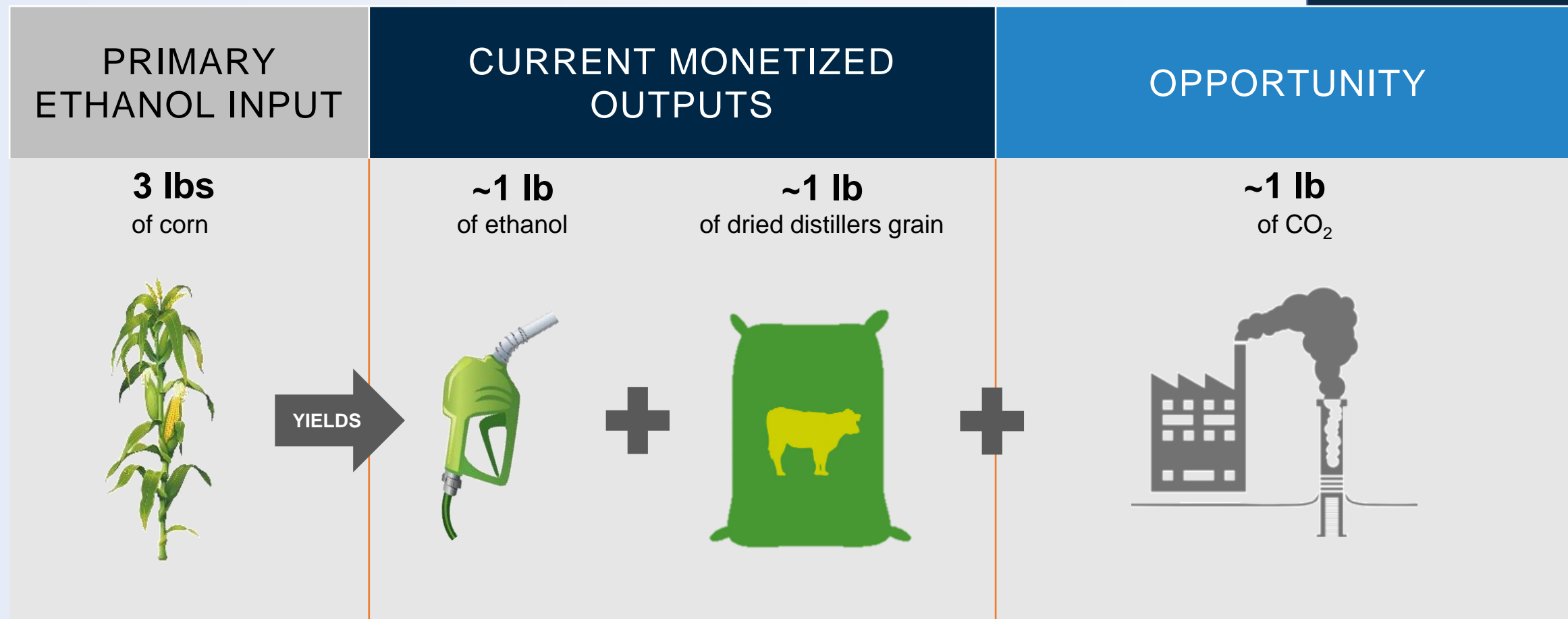
Green Plains





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Where's the CO₂ Coming From?





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Midwest Carbon Express Overview



CAPTURE

SCS will capture up to 18M tons of CO₂ per year.



TRANSPORT

The CO₂ will be transported via a CO₂ line network that spans nearly 2,500 miles and will be completed in 2026.



STORE

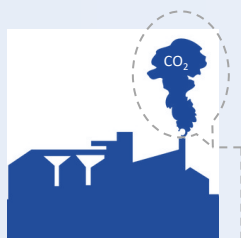
The CO₂ will be permanently and safely stored deep underground in geologic formations in North Dakota.



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Midwest Carbon Express Overview

At our 57 partner ethanol plants, Summit Carbon Solutions will install new, state-of-the-art infrastructure



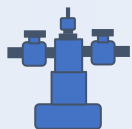
Step 1

Carbon dioxide (CO₂) is captured that otherwise would be emitted into the atmosphere.



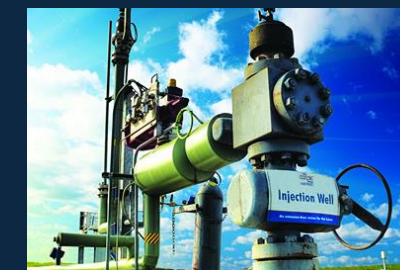
Step 2

The CO₂ is compressed and transported through a newly constructed pipeline system (MCE).



Step 3

CO₂ arrives at the injection site in North Dakota where it will be permanently and safely stored in deep underground geologic formations.

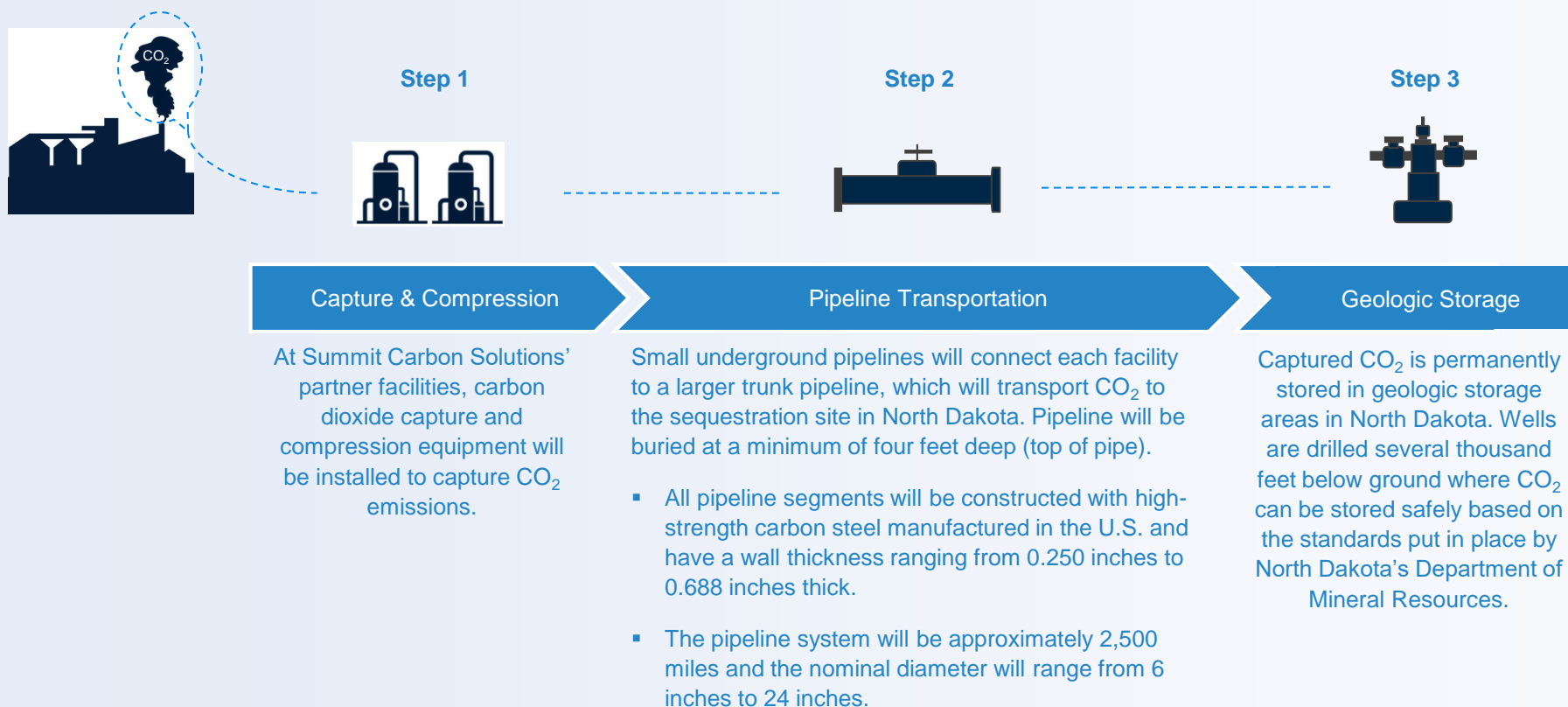




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CO₂ Commodity Process & Safety

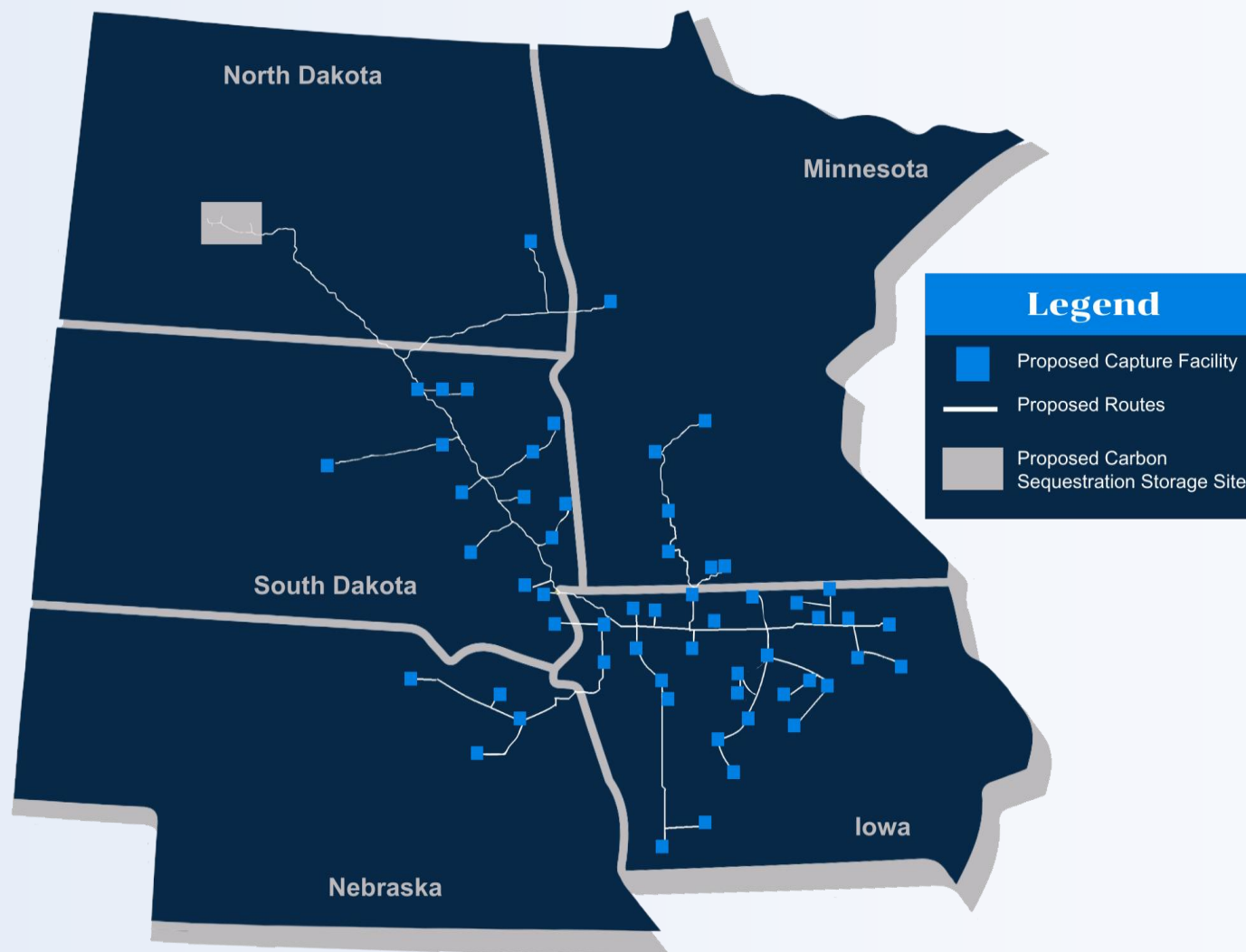
DEPLOYING EXISTING, PROVEN TECHNOLOGIES TO REDUCE CARBON INTENSITY OF ETHANOL PRODUCTION





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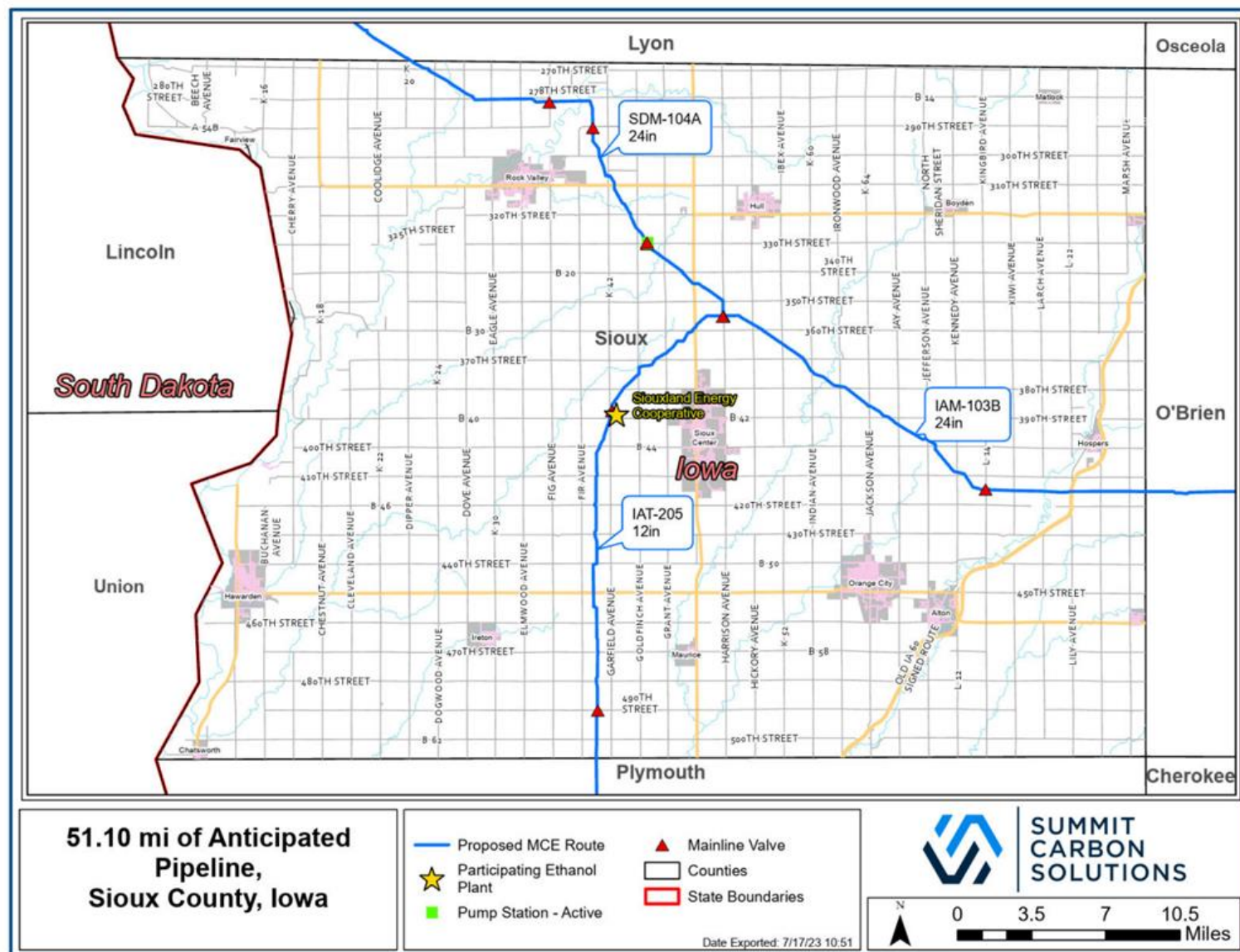
Project Overview Map





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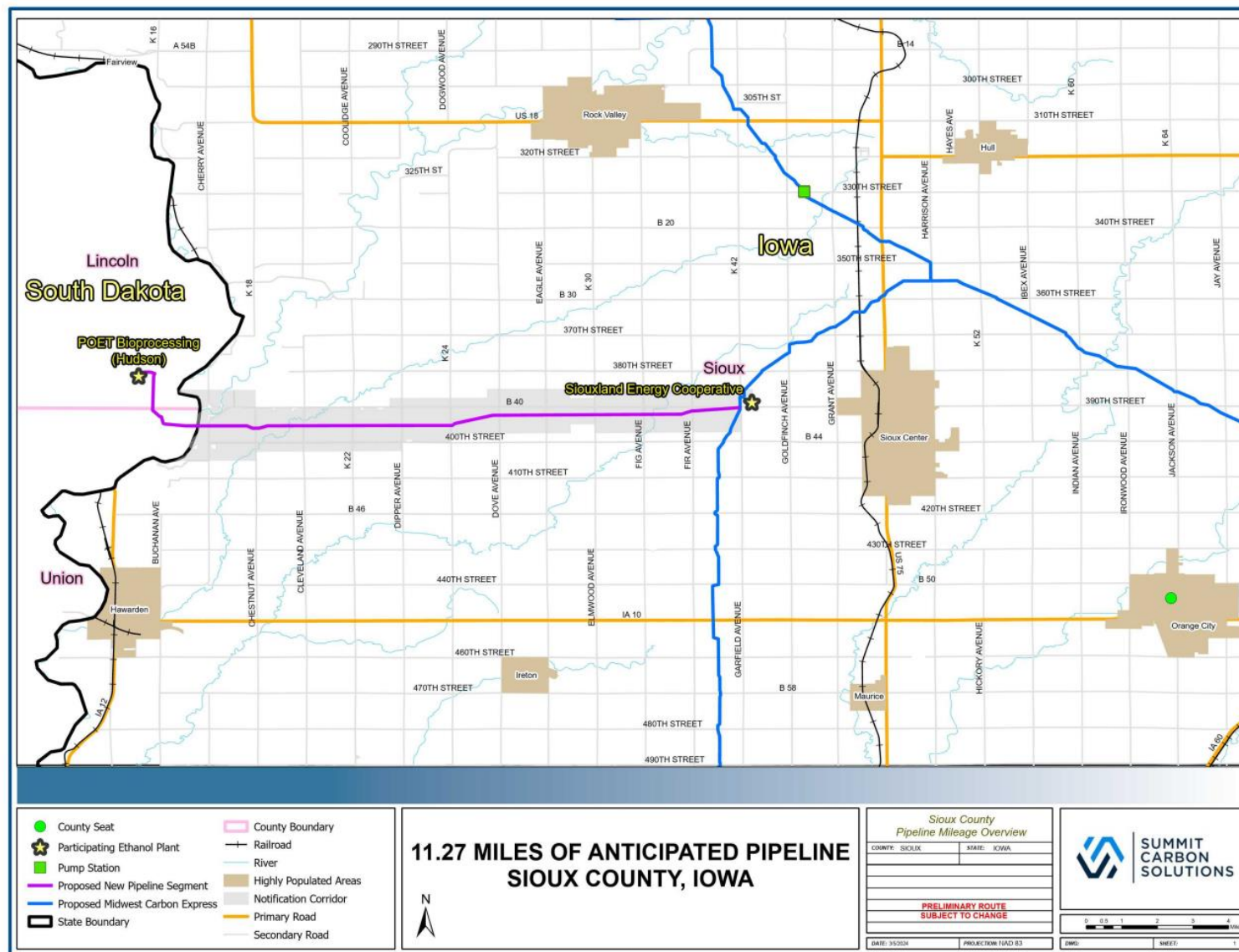
Sioux County Project Map – Pre Expansion





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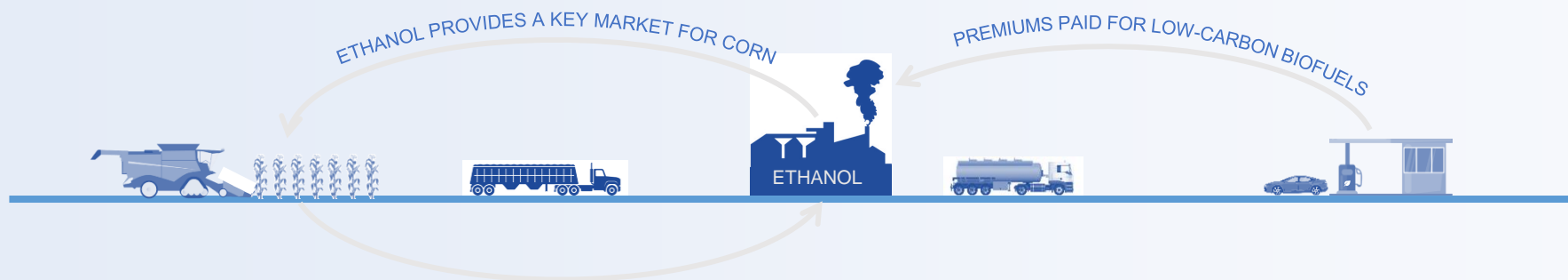
Sioux County Project Map – Post Expansion





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Enhancing the Long-Term Profitability of Ethanol & Agriculture



ETHANOL AND AGRICULTURE WORK TOGETHER TO ADD VALUE ACROSS THE SUPPLY CHAIN AS WELL AS CREATE ECONOMIC IMPACT AND JOBS FOR RURAL AMERICA.

UNITED STATES

EACH YEAR, THE ETHANOL
INDUSTRY ADDS:

\$43B+
of annual GDP
contribution

EACH YEAR, THE ETHANOL
INDUSTRY SUPPORTS:

340,000+
jobs

IOWA

\$5.5B+
of annual GDP
contribution

44,000+
direct jobs

THE LONG-TERM VIABILITY OF THE ETHANOL INDUSTRY IS CRITICAL FOR AGRICULTURE AND RURAL AMERICA.



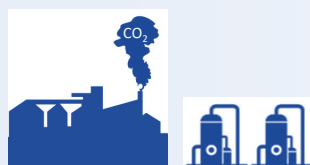
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Economic Benefits

SCS will drive economic growth and job creation across the Midwest and beyond

\$8 Billion

capital investment with operations beginning in 2026



	Capture & Compression	Pipeline	TOTAL
AVERAGE ANNUAL PROJECT JOBS*	1,176 – 1,453	4,360 – 5,468	5,536 – 6,921
OPERATION JOBS ¹ *	462 - 593	264 - 396	725 - 989

SUMMIT CARBON SOLUTIONS IS COMMITTED TO UTILIZING LOCAL CONTRACTORS, LOCAL SUPPLIERS, AND LOCAL BUSINESSES TO PROVIDE ONGOING ECONOMIC BENEFITS TO LOCAL COMMUNITIES ACROSS IOWA AND THE MIDWEST.

Source: Ernst & Young 2023 Economic Impact Study; internal analysis

(1) Operations jobs includes direct SCS employees, indirect, and induced

*Numbers exclude POET and Valero expansion

Supporting Iowa's Economy

ESTIMATED PROPERTY TAXES PAID ANNUALLY BY COUNTY*



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County	New Property Taxes
Adams County	\$933,000
Boone County	\$190,000
Bremer County	\$762,000
Buchanan County	\$816,000
Buena Vista County	\$979,000
Butler County	\$1,343,000
Cerro Gordo County	\$1,599,000
Cherokee County	\$2,199,000
Chickasaw County	\$1,226,000
Clay County	\$2,413,000
Crawford County	\$873,000
Dickinson County	\$1,813,000
Emmet County	\$265,000

County	New Property Taxes
Fayette County	\$241,000
Floyd County	\$2,500,000
Franklin County	\$680,000
Fremont County	\$855,000
Greene County	\$1,745,000
Guthrie County	\$2,256,000
Hamilton County	\$1,364,000
Hancock County	\$2,220,000
Hardin County	\$3,126,000
Ida County	\$2,657,000
Kossuth County	\$2,135,000
Lyon County	\$729,000
Mitchell County	\$1,381,000

County	New Property Taxes
Montgomery County	\$1,110,000
O'Brien County	\$3,330,000
Osceola County	\$838,000
Page County	\$389,000
Palo Alto County	\$2,195,000
Plymouth County	\$1,668,000
Pottawattamie County	\$803,000
Shelby County	\$674,000
Sioux County	\$3,654,000
Story County	\$1,174,000
Webster County	\$3,132,000
Woodbury County	\$666,000
Worth County	\$1,180,000
Wright County	\$2,619,000

Internal estimates to be refined as route changes*



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Partnering with Midwest Landowners

Along with safety, Summit Carbon Solutions' top priority is collaborating with landowners in Iowa, Minnesota, Nebraska, South Dakota, and North Dakota to drive growth in ethanol, agriculture, and energy.

73%

of landowners signed

Project Wide

72%

of landowners signed

Iowa



Our Commitment to Landowners



Summit Carbon Solutions will **work with landowners, community leaders, stakeholders,** and more with respect, honesty, and transparency.



The **safety of our operations**, our employees, the communities where we operate, and our landowner partners is our core Company **value**.



Summit Carbon Solutions will comply with our Agricultural Impact Mitigation Plan (AIMP) to **protect and restore lands**, topsoil, drain tiles, drainage systems, and terraces to their preconstruction levels.

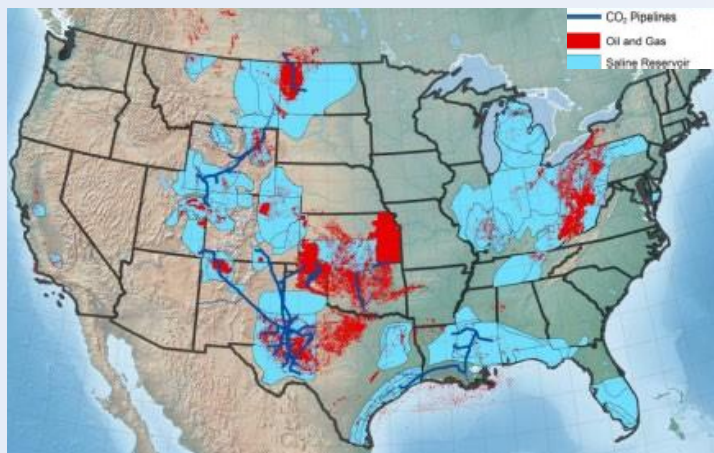


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SCS: A Commitment to Safety

CCS technology has been safely and successfully implemented since the 1970s

CURRENT U.S. CO₂ PIPELINE FOOTPRINT



IMPECCABLE SAFETY RECORD

Zero

CO₂ pipeline fatalities in
the last 25 years¹

CO₂ is much less of a health and environmental hazard than other pipelines. CO₂ is not combustible (it is used as a fire retardant)

- ✓ Capture technology has been deployed at 40+ ethanol facilities throughout the U.S.
- ✓ CO₂ pipelines are regulated by the Pipeline Hazardous Material Safety Administration (PHMSA); same code that regulates crude oil pipelines, refined products pipelines, and other pipelines transporting liquid products
- ✓ More than 5,300 miles of CO₂ pipelines are currently operating in the U.S.
- ✓ Pipeline transportation is the safest method of transportation; 99.999% reliable
- ✓ SCS will only use high quality material and equipment and prefer material and equipment made or manufactured in the U.S. when available
- ✓ SCS will utilize proven technologies and employ best industry practices to ensure the project is safe for landowners and the communities where they live, work, and raise families



The Future of Ethanol With SAF

Ethanol-based sustainable aviation fuel (SAF) is used by airlines in their effort to become more carbon neutral. With limited alternatives to power today's modern aircraft, SAF is expected to make up the majority of emissions reductions for the aviation industry.

EXPECTED GROWTH



PER BUSHEL: CCS could add up to \$1 / bushel and 15-25% raise in production.



~ 80 MILLION: In 2022, global production of SAF a ~80 million gallons.



3.3 BILLION: Corporate targets of SAF usage amount annually by 2030.



PER GALLON: SAF can add value of \$1.25 to \$2+ per gallon of ethanol.

Airline	Commitment	Producer	Pathway
American Airlines	620 Million gallons	gevo	Alcohol to Jet; ethanol
DELTA	525 million gallons	gevo	Alcohol to Jet; ethanol
jetBlue	670 million gallons	SG Preston	HEFA; vegetable and waste oils
Southwest	219 million gallons	VELOCYS	Fischer-Tropsch; syngass
United Airlines	1.5 billion gallons	ALDER FUELS	Biomass to crude oil; forest and crop waste

WITHOUT CARBON CAPTURE PIPELINES, ETHANOL WILL NOT QUALIFY FOR THIS MARKET OPPORTUNITY



Thank You