Heartland Greenway

a Navigator CO_2 Project

www.heartlandgreenway.com

HEARTLAND
GREENWAY

Agenda

About Navigator

We are pioneering a path to sustainable carbon solutions, while maximizing value for all stakeholders in the new carbon economy

Matt Vining
CEO

David Giles
COO

Tyler Durham
SVP and CDO

Laura McGlothlin
EVP & CCO

Stephen Lee
EVP, Engineering

Vidal Rosa
EVP, Operations

Jeff Allen
EVP & CFO

Kevin Strehlow
EVP & General Counsel

Elizabeth Burns-Thompson
VP, Government & Public Affairs

Chris Brown
VP, Capital Projects

Monica Howard
Vice President, Environmental & Regulatory

Ann Welshans
Director, Right-of-Way

Navigator's Track Record

- $1.3B Capital Deployed
- >1,300 Miles of Pipeline Built Since 2012
- >200 Years of Combined Experience
- Strong, Proven Partnership with BlackRock
- Third Midstream Infrastructure Venture

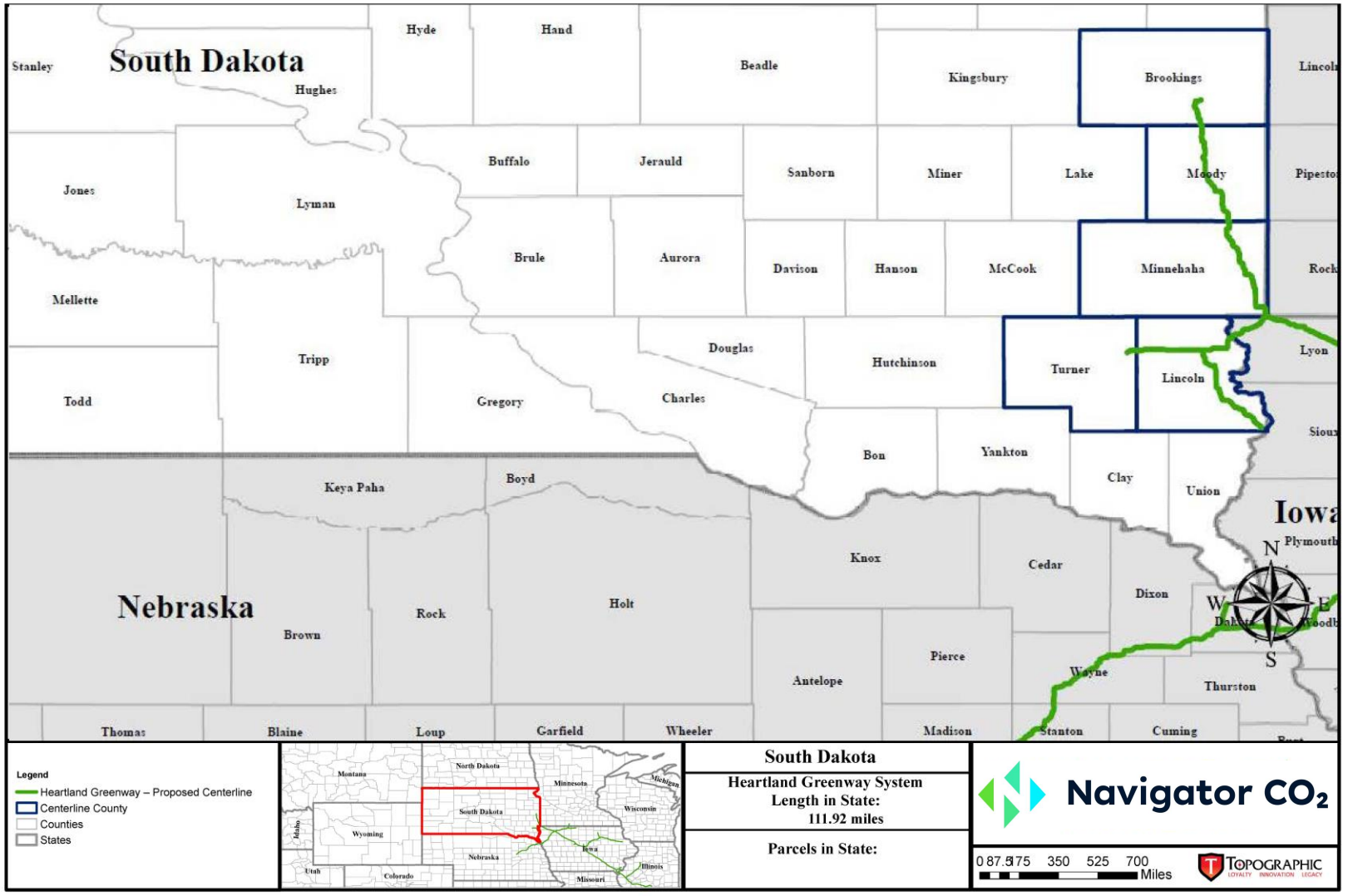
HEARTLAND GREENWAY

Project Overview

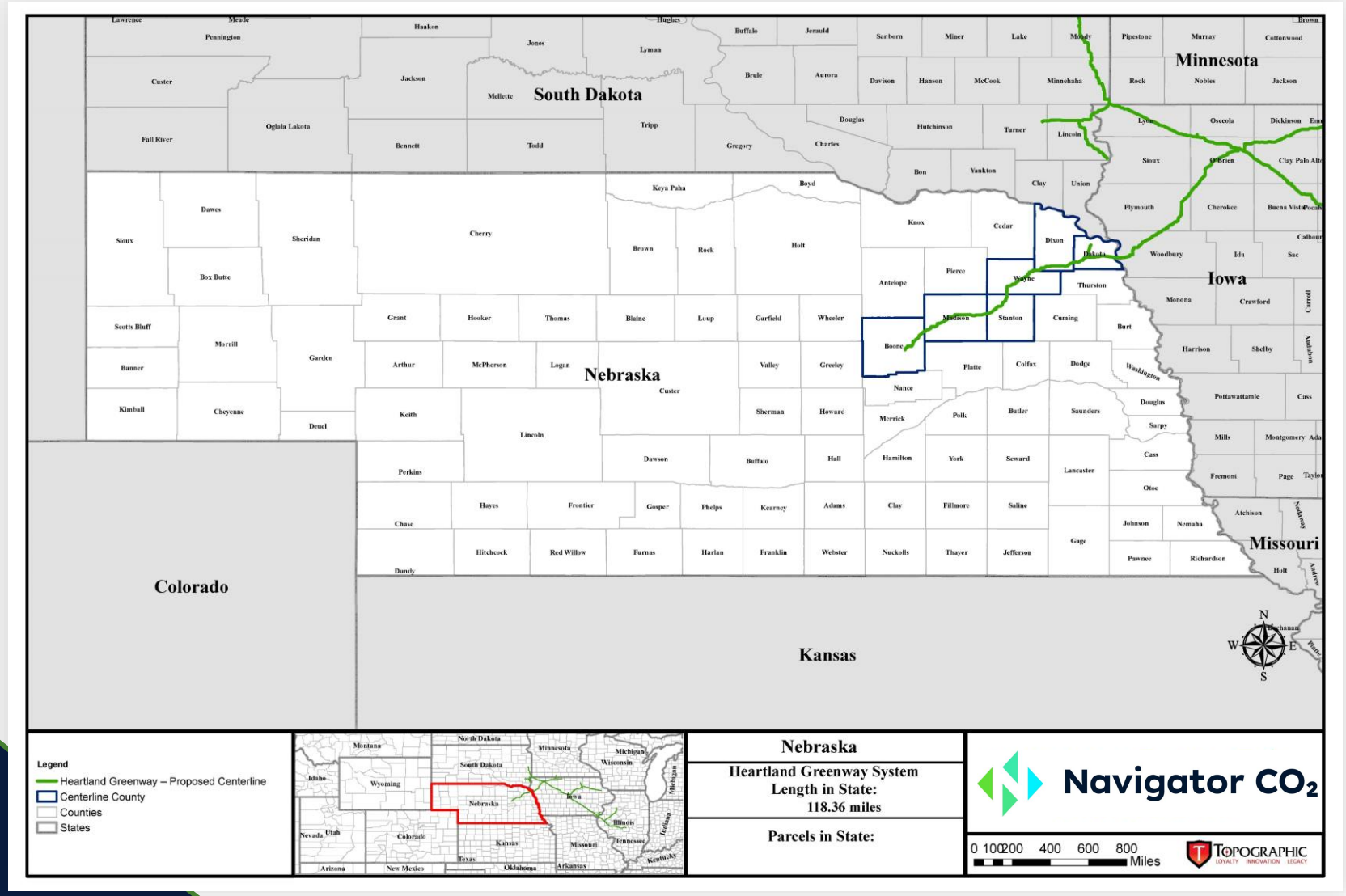
- ~1,300 miles of new liquid CO_2 pipeline to be permitted in Phase I
- Permanent storage in Illinois
- Up to 15 million metric tons/year
- 30+ receipt points: ethanol and fertilizer
  - POET
  - Valero Renewables
  - Big River
  - OCI Fertilizer
  - Siouxland Ethanol
- Financially backed by BlackRock

One of the most economical, actionable carbon management platforms

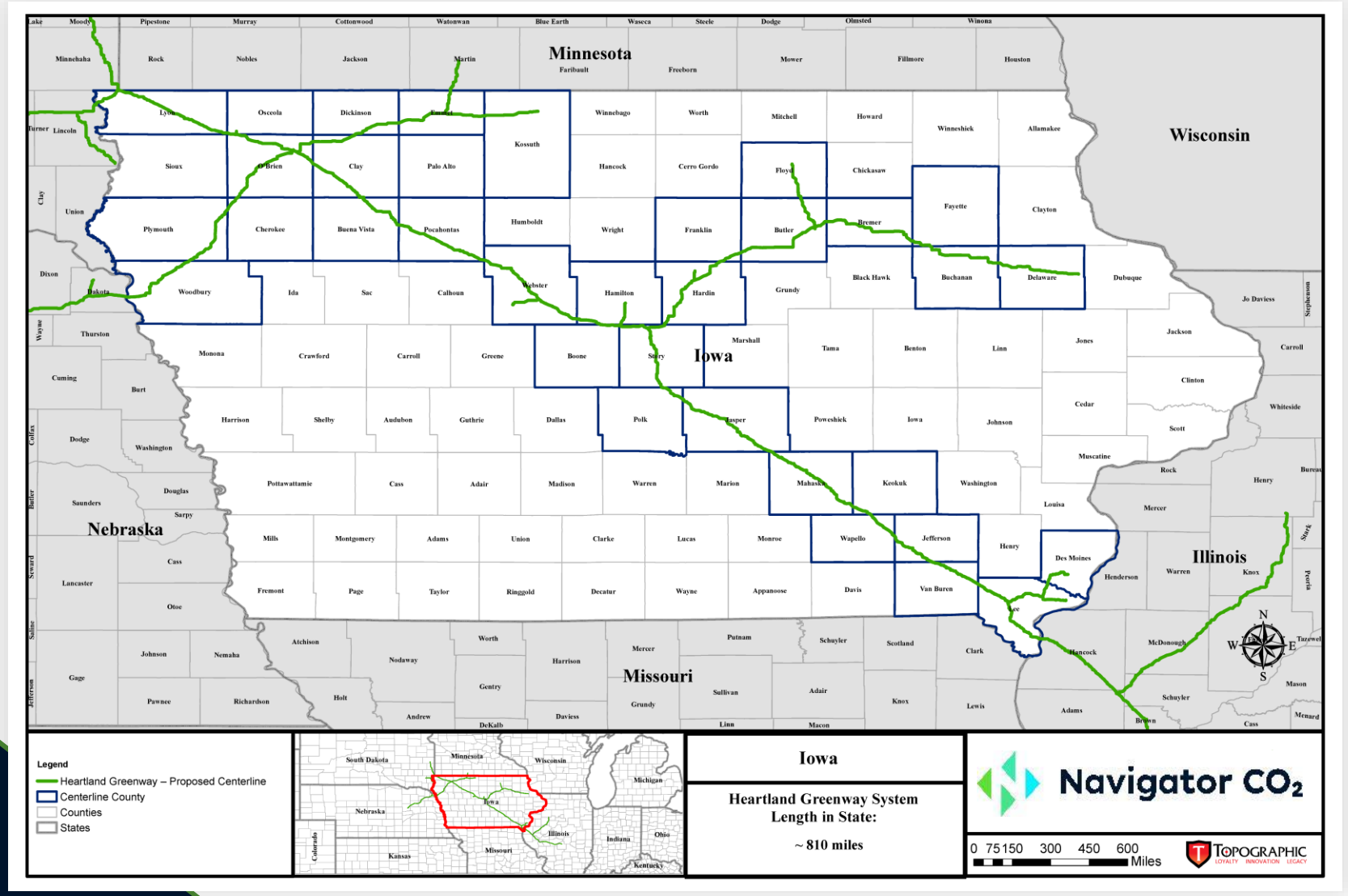
South Dakota Proposed Project Map



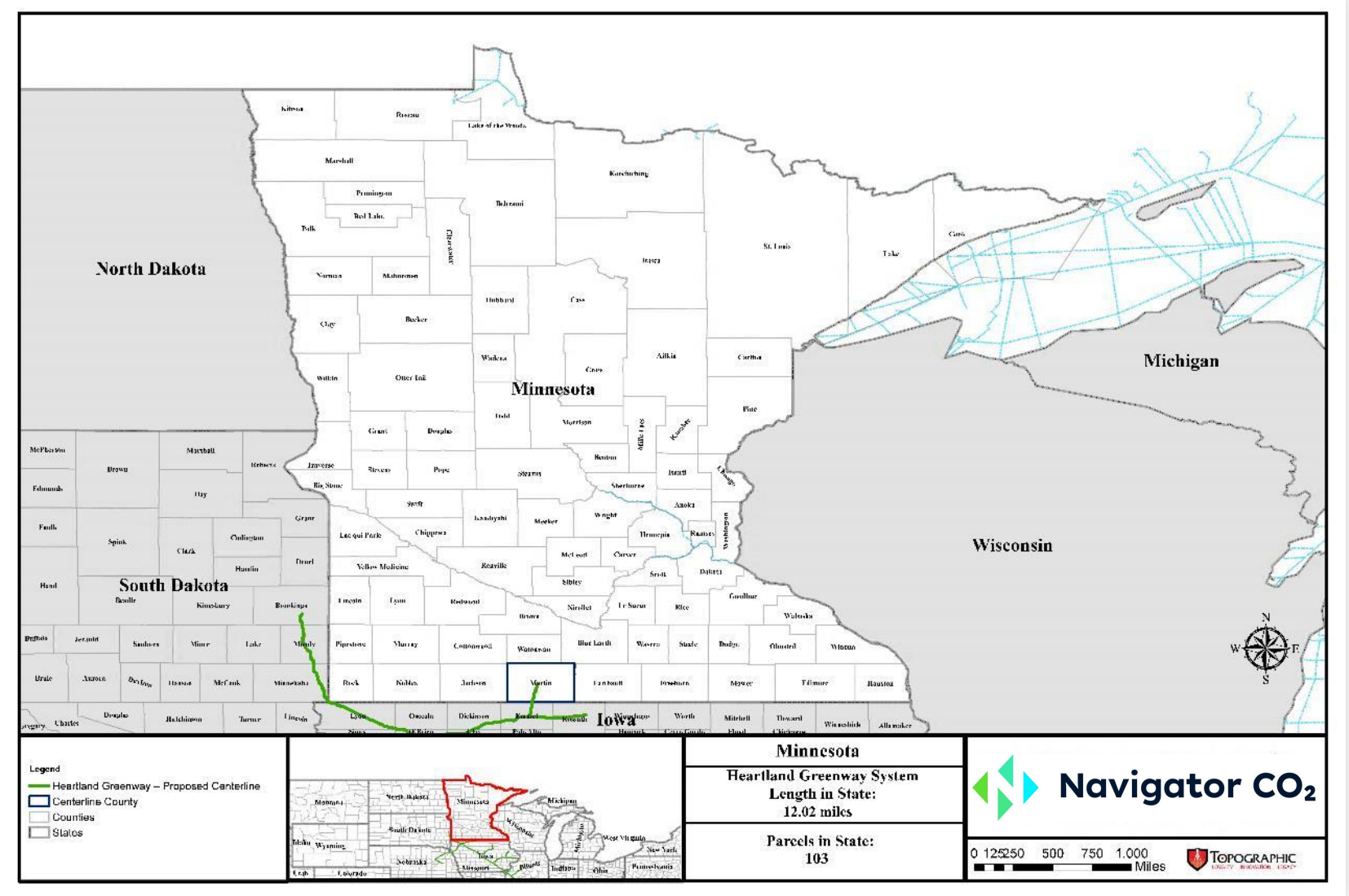
Nebraska Proposed Project Map



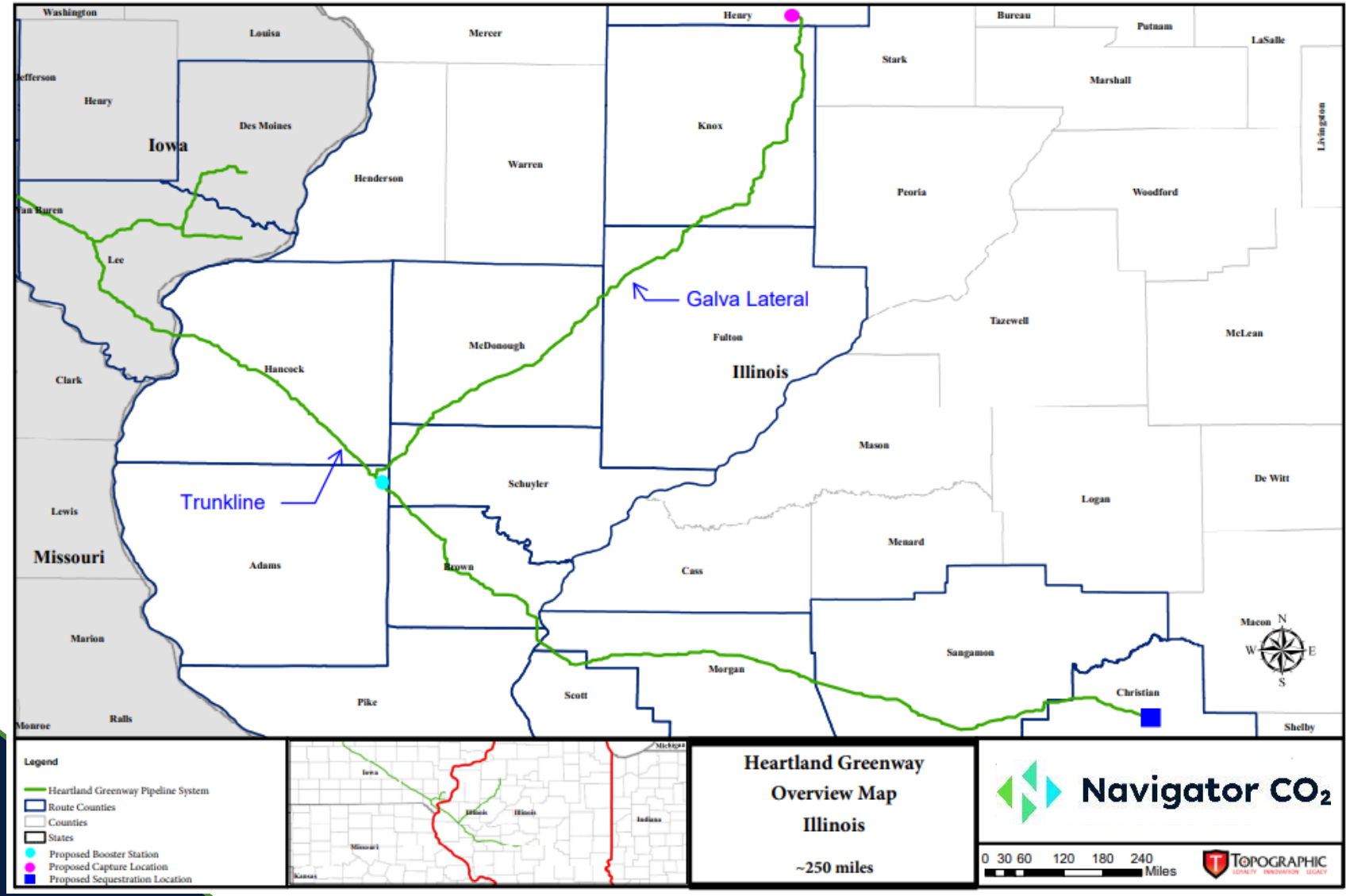
Iowa Proposed Project Map



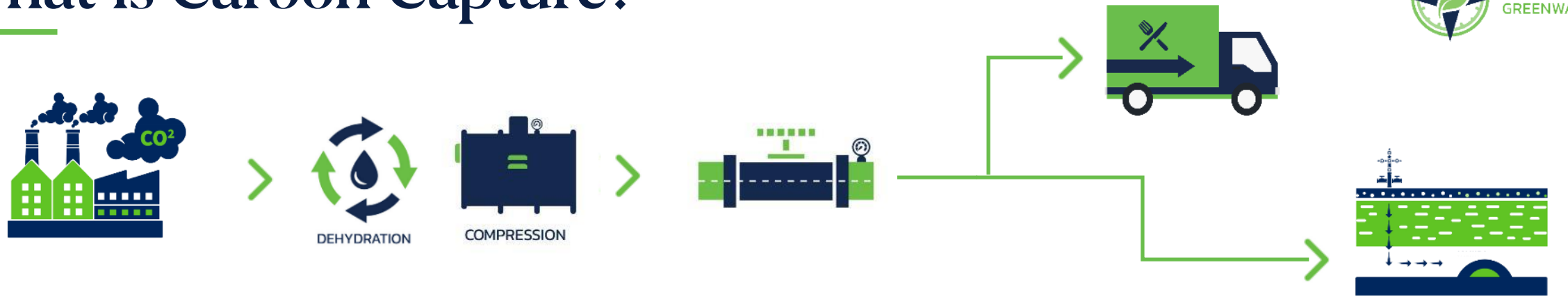
Minnesota Proposed Project Map



Illinois Proposed Project Map



What is Carbon Capture?



PRODUCTION

CO_2 is a byproduct of manufacturing

Industrial processes are responsible for ~25% of energy-related CO_2 emissions

CAPTURE

CO_2 is captured, dehydrated, and compressed into a liquid using equipment added onto the facility without interrupting normal operations

TRANSPORTATION

Liquid CO_2 is aggregated from connected facilities and transported in a network of new steel pipeline

UTILIZATION

Liquid CO_2 is made available via truck terminals and pipeline offtake connections for value-added commercial and industrial uses

STORAGE

Liquid CO_2 is injected more than a mile below ground, far below critical water resources, where over time the carbon mineralizes

Why Capture Carbon?

CO_2 Emissions

- Our customers produce some of the purest **quality CO_2**, making them great partners for CCUS
- **Dynamic infrastructure**, allows for sequestration and provides necessary supply chain backbone for future innovation of CO_2 uses

Commercial Model

- A simple fee-based **common carrier** model
- Those responsible for decarbonization receive **economic incentives**:
  - 45Q Tax Credit
  - Low carbon fuel programs
  - Emission offsets

Unique Geology

- Only certain areas have the **geology necessary** for this type of geological storage
- Pipeline infrastructure is best suited for **connecting our partner facilities** to these areas with storage capacity

Environmental Benefits

The carbon offset of the Heartland Greenway once fully expanded is equivalent to:

GHG emissions from
3.2 Million Vehicles
driven annually

CO_2 emissions from
34.7 Million
barrels of oil consumed

15 Million
metric tons of CO_2
captured annually

Annual CO_2 emissions from
1.8 Million
homes' energy use

Annual carbon stored by
18.3 Million Acres
of U.S. forests

Source: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Anticipated Phase I Project Timeline

October 2020 – October 2021

Route development and optimization

October 2021 – Q3 2022

Survey authorization outreach

November 2021 – January 2022

Open House Meetings

Q2 2022 – Q3 2022

Constructability and environmental surveys

Q2 2022 – Q1 2023

Route adjustments from landowners and stakeholder feedback

Q3 2022

Additional open house meetings & kickoff easement acquisition

Q3-Q4 2022

Projected filing of state permits

Q3 2022 – Q4 2022

Project filing of federal permits and inter-agency consultations (USACE/USFWS/SHPO)

Second Half 2023

Anticipated receipt of state and federal permits

2024

Construction commences

2024 – 2025

Phased start up and commissioning

Challenges

- A **new concept** for many across the footprint, first of its kind at this scale
- Changes in the **permitting processes** and structure from state to state
- Project opponents oversimplify the process and fixate on **condemnation**
- Differentiate between **on-farm carbon** activities and processor carbon efficiencies
- Stigma of **pipelines,** and landowner experiences with prior operators
- Technology for **utilization historically** focused largely on oil recovery

Opportunities

HEARTLAND GREENWAY

- Farmers/ethanol are **innovators** and value technology that increases profitability
- Permits necessary at many levels, provides for maximum **project input**
- Still in early stages of outreach, sharing our **commitment to collaboration**
- Continued growth in conversations and attention to **carbon broadly**
- Carbon **management platform**, unlike pipelines of the past
- Value-added **partners for utilization** exist across corn-belt/project footprint

Thank You!

Navigator CO_2

(402) 520-7089

info@heartlandgreenway.com

www.heartlandgreenway.com

HEARTLAND GREENWAY