

CARBONSAFE STORAGE EFFORTS ADVANCE UNDERSTANDING OF LARGE-SCALE STORAGE AT SIX SITES

CarbonSAFE Phase III projects are catalyzing the growth of commercial dedicated storage sites and hubs.

COMPLETED CHARACTERIZATION OF SIX STORAGE COMPLEXES

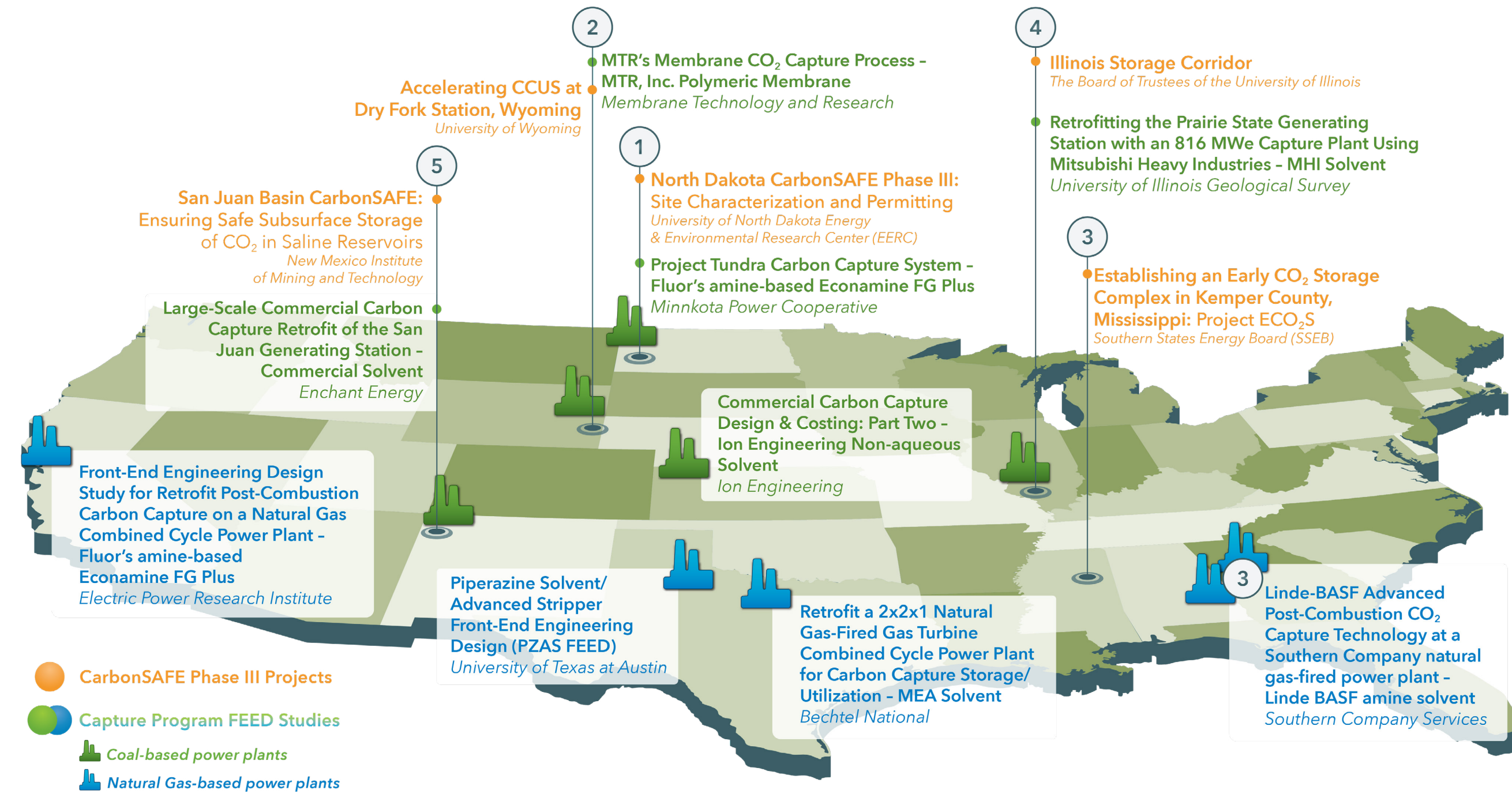
Dedicated Storage that can safely store >50MMT of CO₂ over a 30-yr period.

Carbon Storage Assurance Facility Enterprise (CarbonSAFE) Phase III projects have characterized six storage complexes (two in Illinois, one in North Dakota, one in New Mexico, one in Mississippi, and one in Wyoming) collectively capable of storing at least **975 million metric tons (MMT) of CO₂ over 20 years**. Characterization has included drilling **15 wells, 303.6 total linear miles of 2-D seismic lines (24 lines), and 136.5 square miles of 3-D seismic**. At least **20 MMT of CO₂ is produced per year** by the sources that will feed the storage sites.

The alignment of these projects with five of the nine sites for the DOE Carbon Capture Program's front-end engineering and design (FEED) studies represents an integrated strategy as the foundation for regional CO₂ hubs anchored by these CarbonSAFE facilities.

These projects will apply for at least seven Underground Injection Control (UIC) Class VI permits. Once these sites acquire Class VI permits, they will represent 950 MMT of commercial storage capacity in the United States ready for storage operations.

CarbonSAFE projects are integrated with five capture FEED studies.



Key	Plant(s) (MMT/yr CO ₂)	Storage Location by County	Prospective CO ₂ Storage (MMT of CO ₂)	Charac. Wells	2D seismic lines	3D seismic
1	Milton R. Young Unite 2, ND (4)	Hensler, ND	80	4 (3 fed-funded)	26 mi. collected	18.5 sq. miles
2	Basic Electric Dry Fork Station, WY (2)	Gillette, WY	>50	2	56.6 mi. collected	9 sq. miles
3	Plant Daniels 3&4, MS Or Plant Barry 6&7, AL (>1.7)	Kemper County, MS	500-1,800	7 (6 deep wells, 1 USDW well)	92 mi. acquired	none
4	Prairie State Generating Co: One Earth Energy, IL (1 to 8)	Gibson City, IL Marissa, IL	64 (site 1) 162 (site 2)	2 (1 at each site)	129 mi. collected (2 sites)	9 sq. miles (1 site)
5	San Juan Generation Station, NM (6 to 7)	San Juan County, NM	120	0 (1 planned)	none	100 sq. miles

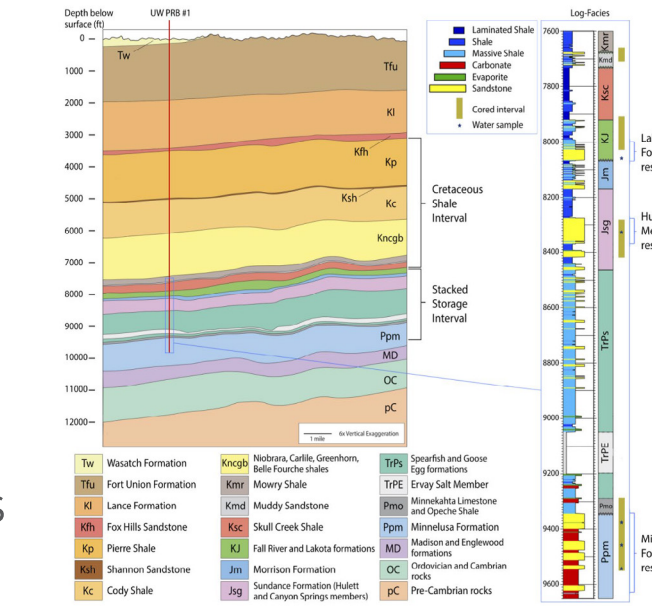
1 Two Class VI UIC permits to construct obtained.

- Near Minnkota's Milton R. Young Station 455-megawatt (MW) Unit 2.
- Less than 4 MMT/yr of CO₂.
- Two Class VI UIC permits to construct injection wells were signed on Jan. 21, 2022.



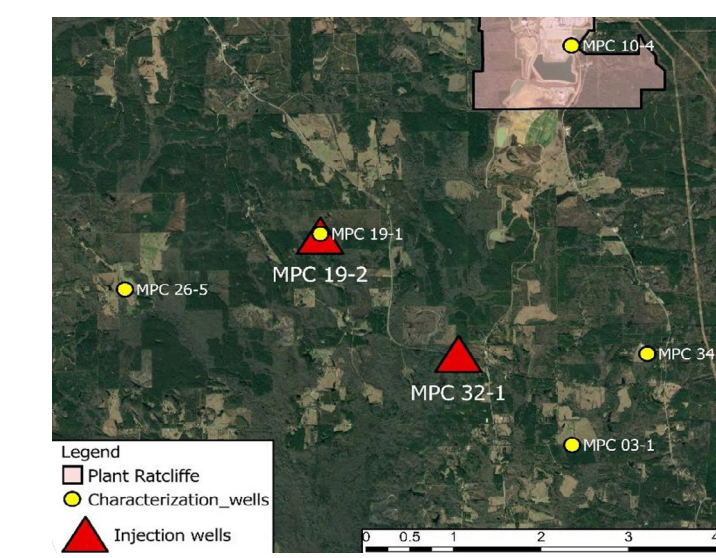
2 Two wells completed to Class VI standards.

- Campbell County, Wyoming, at Basin Electric's Dry Fork Station.
- 2.2 MMT CO₂/yr.
- Two wells were completed to Class VI standards, facilitating their use as project monitoring wells.
- Between nine and twelve Class VI permit applications will be submitted.



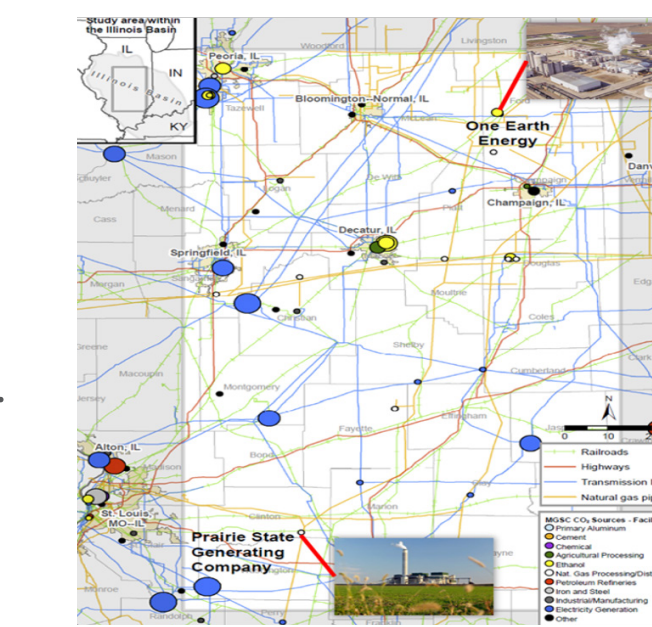
3 One Class VI UIC permit to construct submitted.

- Two-to-three gas-fired power plants and possibly a few industrial sources.
- Less than 900 MMT of CO₂ over a 30,000-acre area.
- Two Class VI UIC permit applications ongoing. First submitted to EPA Region 4 in August 2022.



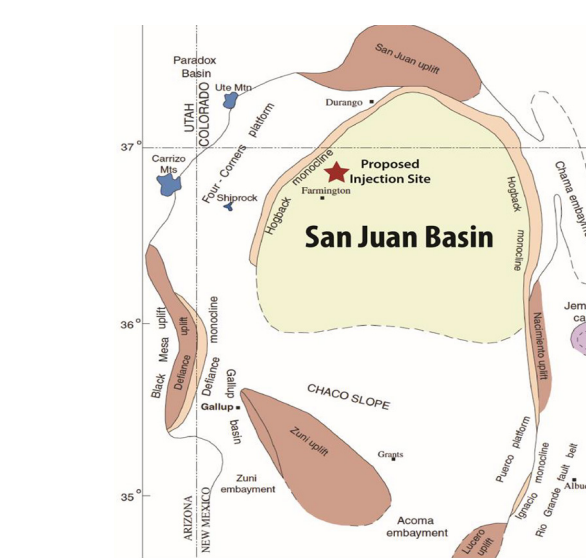
4 Two Class VI UIC permits to construct in progress.

- Prairie State Generation Company, 1,600 MW.
- Six million tons per acre (MTPA) of CO₂.
- Class VI permit writing currently in progress.
- One Earth Energy ethanol plant, 450,000 tons CO₂/yr.
- 0.5 to 1.7 MTPA CO₂.
- Class VI permit writing currently in progress.



5 90% of documentation for permit complete.

- San Juan Generating Station, 847-MW.
- Six-to-seven MMT CO₂/yr.
- Currently completed approximately 90% of the required documentation for a UIC Class VI permit.



AWARD NUMBERS
FE0031891, FE0031890, FE0031889, FE0031892, FE0031888

PROJECT BUDGET
COMBINED FUNDING



DOE \$89,827,651
PARTNERS..... \$31,210,354

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CARBONSAFE LEADS

ILLINOIS
Illinois State Geological Survey

New Mexico Tech
ENERGETIC MATERIALS RESEARCH AND TESTING CENTER

EERC
Energy & Environmental Research Center

UNIVERSITY OF WYOMING

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