



PROJECT ELEMENT: CARBON CAPTURE AND SEQUESTRATION

PRAIRIE HORIZON ENERGY SOLUTIONS –

a collaboration between Marathon Petroleum Corporation and TC Energy – is a potential low-carbon energy project in Stark County, North Dakota. The project includes a low-carbon hydrogen and ammonia production facility, a carbon dioxide (CO₂) pipeline and carbon capture and sequestration (CCS) operations.



LOW-CARBON HYDROGEN & AMMONIA PRODUCTION FACILITY

CO₂ PIPELINE

SEQUESTRATION SITE

CARBON CAPTURE

filters and collects more than 90% of CO₂ from the Production Facility's emission stream instead of releasing it to the atmosphere.

SEQUESTRATION

permanent geological storage of the CO₂ deep underground – more than a mile below the earth's surface and well below the area's water table – minimizing impacts to our air, water and land.

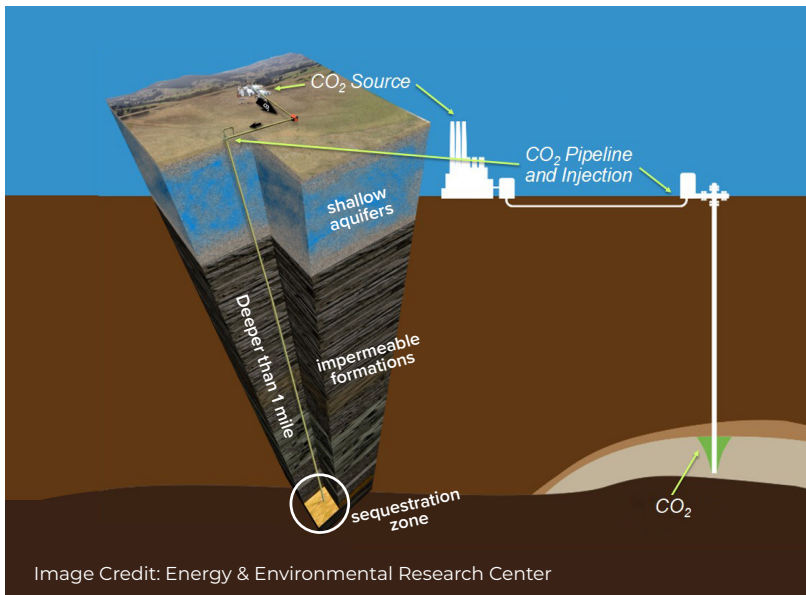


Image Credit: Energy & Environmental Research Center

WHY IS CCS IMPORTANT?



Provides environmental and health benefits



Generates economic benefits including jobs and business opportunities



Supports the continued development of domestic energy resources

IS CCS SAFE?



Underground injection of CO₂ is a proven and safe technology used for more than 50 years. Safety measures will include a monitoring system, routine surveys and integrity testing of the injection well.

WHAT CAN LANDOWNERS EXPECT?



Dialogue with Prairie Horizon team members



Information on the potential project, benefits and impacts



Permission request to conduct site and/or seismic surveys*



Solicitation of a lease or easement for project facilities*

*Varies by landowner

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SEISMIC SURVEY

- Conducted early in the CCS evaluation phase.
- Provides information to evaluate rock layers and further analyze the potential CO₂ storage location.
- Common survey used in the energy industry; surveys have been performed in every county in western ND.

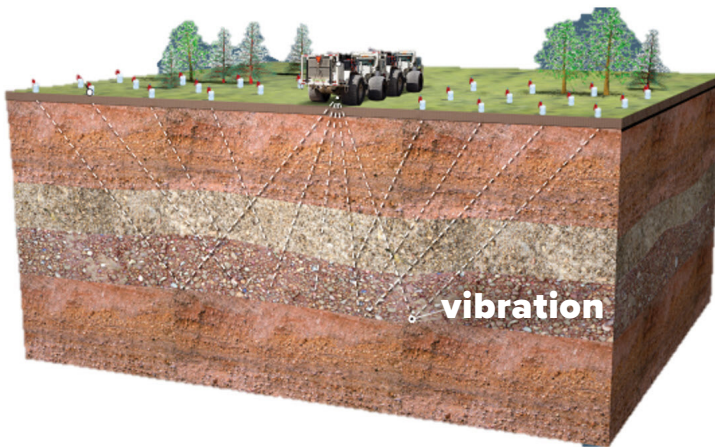


Image Credit: Energy & Environmental Research Center

PROCESS

- ➔ Truck-mounted device generates vibrations using a metal plate that lies on the ground and shakes from side-to-side.
- ➔ Vibrations travel deep into the earth and are reflected back.
- ➔ Surface sensors record the reflected vibrations.
- ➔ Geophysics analyze the results to better define potential CO₂ storage formations.

SCOPE

- ➔ Prairie Horizon expects to survey about 64 square miles, centered southeast of Gladstone

TIMING

- ➔ Third Quarter 2024

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Additional information on seismic survey



Permission request to conduct seismic surveys*



Prairie Horizon to work with landowner on survey schedule