U.S. DEPARTMENT OF ENERGY
Fossil Energy and Carbon Management

Carbon Transport RD&D Focus Areas

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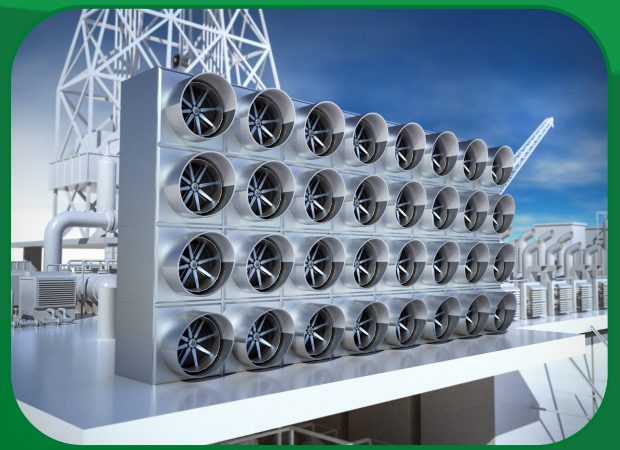
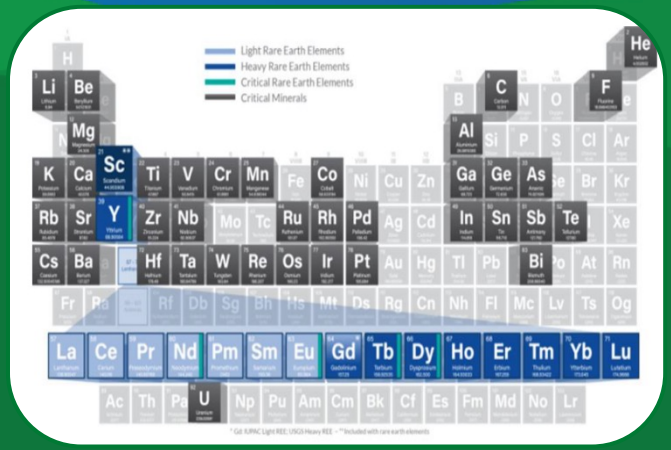
Office of Fossil Energy and Carbon Management

US-Norway Bilateral 2022 | June 30, 2022





US-NORWAY BILATERAL – 2022

- **Bipartisan Infrastructure Law: CO2 Transport FEEDs**
- **Repurposing Infrastructure R&D Priorities Report – Wells & Pipelines**
- **Carbon Matchmaker and Interactive Diagram**

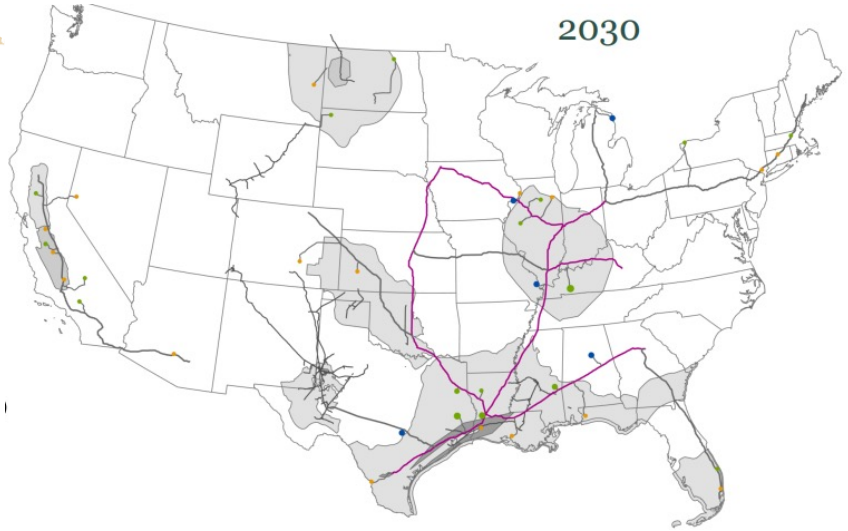
Bipartisan Infrastructure Law:
CO_2 Transport Front-End Engineering Design (FEED) Studies

The build out of CO_2 transport infrastructure enables CCUS and CDR industry growth and meeting midcentury decarbonization goals.

Today → **2030** → **2050**

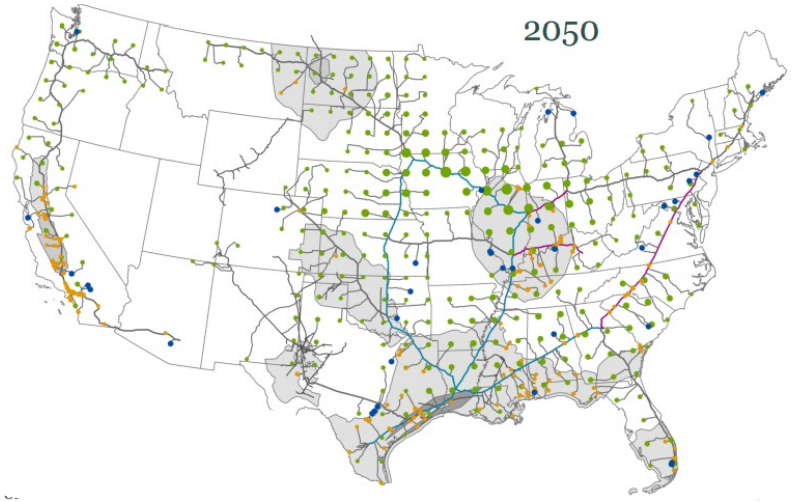
NPC: Meeting the Dual Challenge (2019)

5,000 miles of pipelines



Modeling from Princeton's Net-Zero America Study (2020)

11,000+ miles of pipelines



Modeling from Princeton's Net-Zero America Study (2020)

13,000+ miles of trunk pipelines
52,000+ miles of spur pipelines

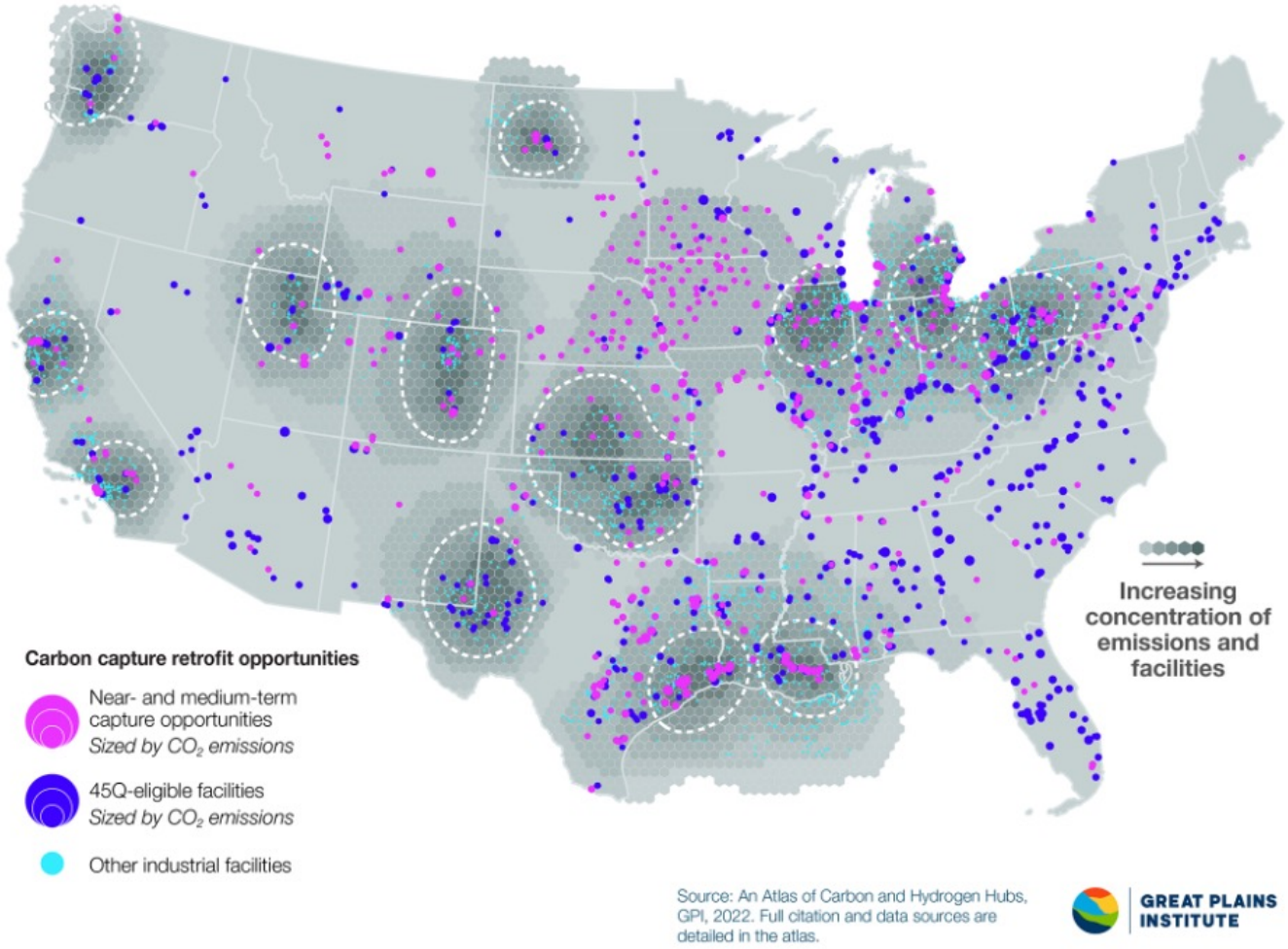
Bipartisan Infrastructure Law:
CO2 Transport Front-End Engineering Design (FEED) Studies

Objective:

- **$100 million, $20M/year for FY22-26**
- Supporting front-end engineering design (FEED) studies to enable **new carbon transport buildout or repurposing of existing infrastructure to CO2 use**
- Successful FEED studies can apply for DOE Loan Program Office (LPO)'s **loan guarantees or future growth grants (CIFIA)**
- Carbon transport can include pipeline, barge, ship, rail, and truck transport

Estimated funding opportunity release:

- **In development, Fall 2022**



Great Plains Institute (GPI) has identified potential CCUS hubs and clusters by mapping carbon capture retrofit opportunities across the United States.

Repurposing Infrastructure R&D Priorities Report – Wells & Pipelines

Workshop objectives:

- Connecting industry, professional associations, and other government stakeholders active in repurposing pipeline and wells infrastructure for carbon transport and storage research, development, demonstration, and deployment (RDD&D) projects.
- Improving understanding about the challenges and opportunities in meeting future carbon transport and storage goals.
- Exploring technical advancements, operational considerations, RDD&D gaps, and regulatory considerations for conversion of use of pipeline and well infrastructure for carbon transport.

Outcomes: Report collated action items and observations across Technical R&D, Policy, and Regulatory considerations from a consortium of industry, academic, and government stakeholders

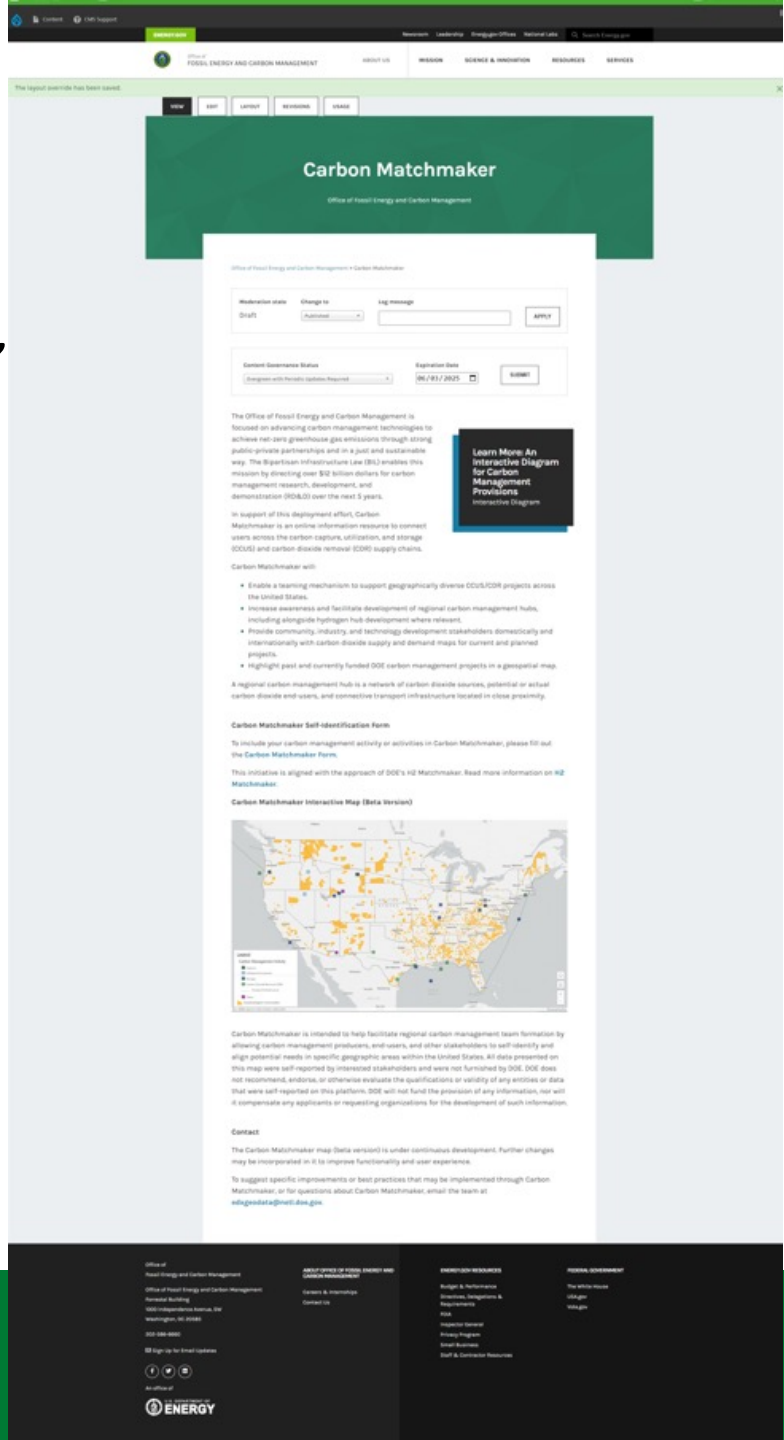
COMING SOON: Carbon Matchmaker

A partnering and teaming tool for DOE carbon management funding opportunities, mirroring DOE's H2 Matchmaker.

Carbon Matchmaker is an online information resource to connect users across the carbon capture, utilization, and storage (CCUS) and carbon dioxide removal (CDR) supply chains.
Carbon Matchmaker will:

- Enable a teaming mechanism to support geographically diverse CCUS/CDR projects across the United States.
- Increase awareness and facilitate development of regional carbon management hubs, including alongside hydrogen hub development where relevant.
- Provide community, industry, and technology development stakeholders domestically and internationally with carbon dioxide supply and demand maps for current and planned projects.
- Highlight past and currently funded DOE carbon management projects in a geospatial map.

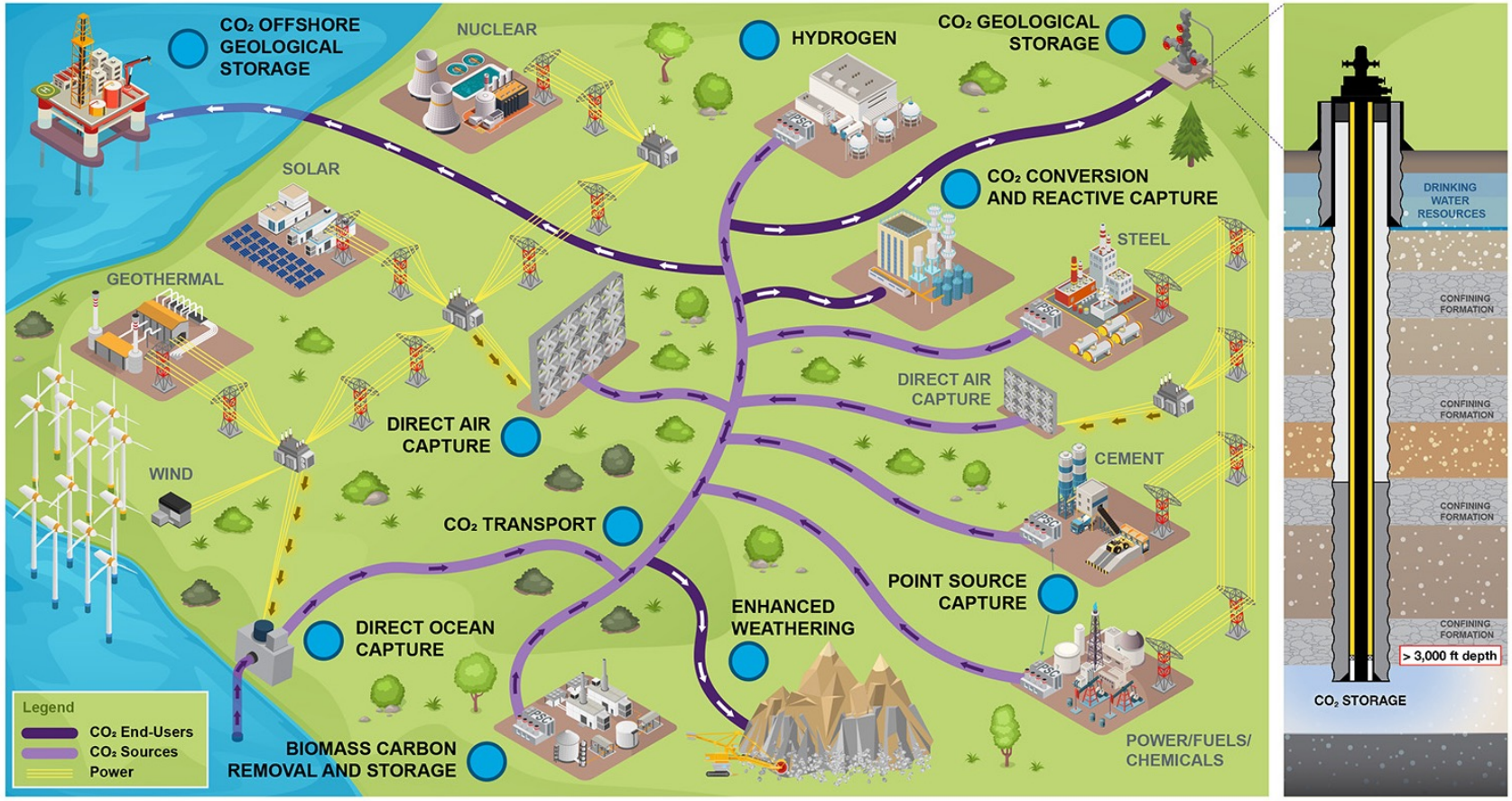
Carbon Matchmaker is intended to help facilitate regional carbon management team formation by allowing carbon management sources, end-users, and other stakeholders to self-identify and align potential needs in specific geographic areas within the United States.



FECM's Carbon Management Interactive Diagram is a tool for stakeholder engagement

10 Blue Dots "pop-up" with relevant content for each program and provision

- Description
- Fact Sheets
- Funding Opportunities across all of DOE (FECM Appropriated, BIL, SBIR, ARPA-E, LPO, others)



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Questions?

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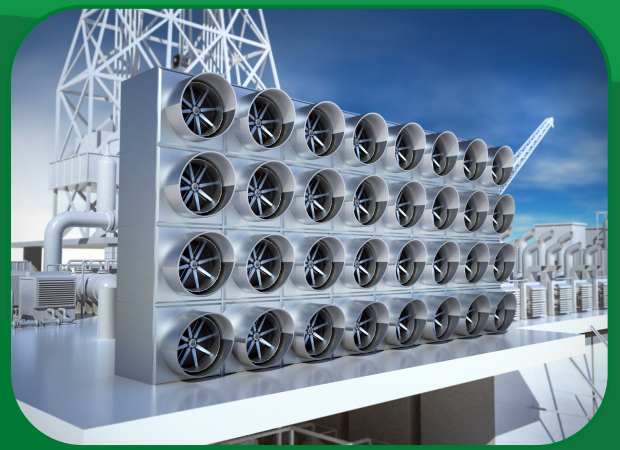

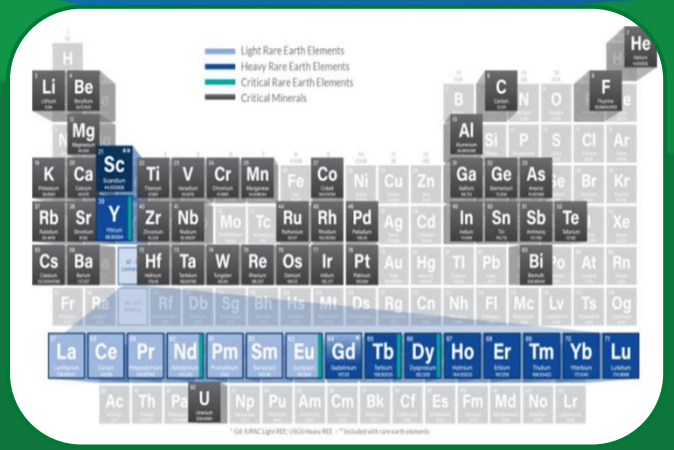

Carbon Matchmaker (simulated data for demonstration)