

Natural Gas & Carbon Capture



A Critical Pathway to Reliable, Affordable, Low-Carbon Energy

The United States is entering a new era of energy demand driven by AI-enabling data centers, advanced manufacturing, and economywide electrification. Sustaining this growth will require reliable, affordable, and lower-emission electricity. Natural gas power generation paired with carbon capture and storage technologies offers a pathway to meet demand while preserving grid reliability, reducing emissions, and supporting high-quality jobs. By leveraging America's abundant energy resources and existing infrastructure, low-emissions gas power can complement nuclear power, renewables, hydrogen, and other clean energy technologies as part of an all-of-the-above energy strategy.

WHY DOES DEPLOYING CARBON CAPTURE WITH NATURAL GAS POWER GENERATION MATTER

- **Reliability:** Provides 24/7 dispatchable power to support grid reliability and resource adequacy.
- **Affordability:** Leverages existing infrastructure and domestic resources to help manage electricity costs.
- **Energy security:** Strengthens domestic energy production and system resilience.
- **Competitiveness:** Supports industrial growth, investment, and American competitiveness.
- **Workforce:** Preserves and creates high-quality energy, construction, and manufacturing jobs.
- **Communities:** Builds on existing energy infrastructure and workforce expertise.
- **Emissions:** Reduces up to 90 percent of CO₂ emissions from power generation.

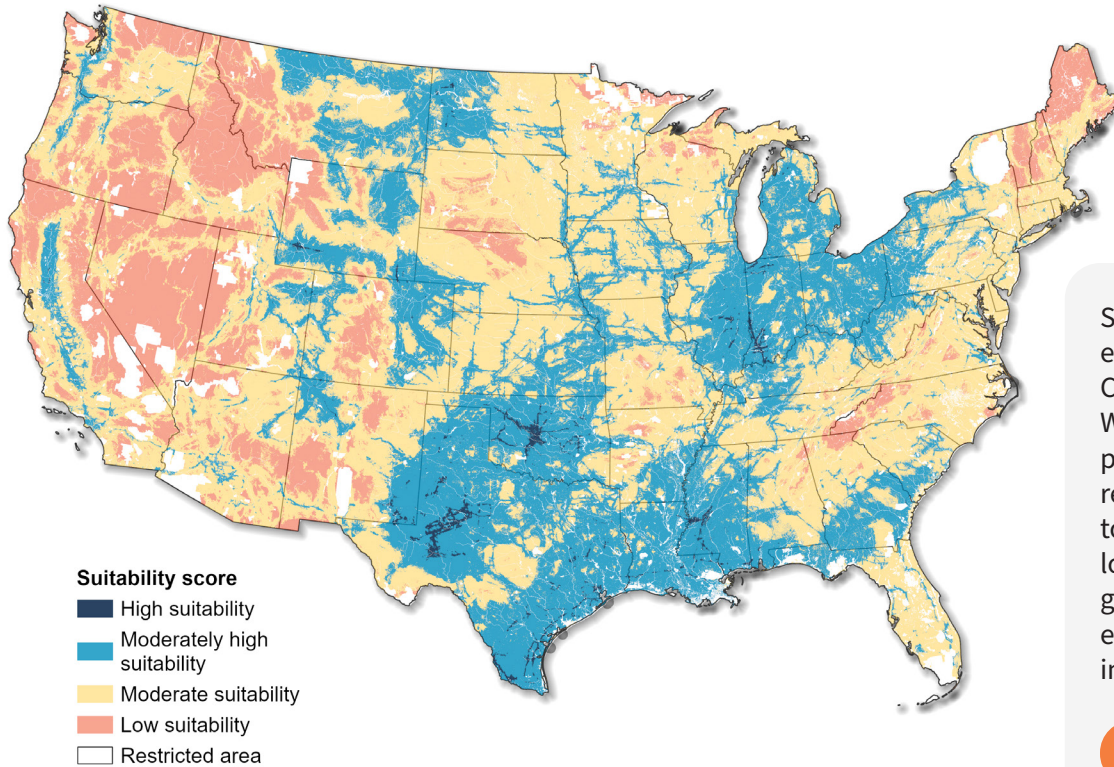


HOW CARBON CAPTURE AND STORAGE AT POWER FACILITIES CAN MEET THE MOMENT

- **Demand growth:** Data centers, manufacturing, and electrification are increasing low-carbon electricity demand.
- **Reliability:** Dispatchable generation remains essential to maintaining grid reliability.
- **Complementary:** Low-emissions natural gas power generation can provide low-carbon firm power, complementing low-cost, but intermittent, renewable power.
- **Retrofits:** Existing natural gas facilities can be upgraded to reduce emissions while utilizing existing infrastructure.
- **Deployment:** Existing resources and infrastructure create opportunities for deployment at scale.

LOW-EMISSIONS GAS POWER GENERATION CAN BE DEPLOYED AT SCALE

Great Plains Institute identifies locations suitable for low-emissions natural gas power generation, with high suitability reflecting areas where available infrastructure, geologic storage access, land characteristics, and water availability overlap.



Strong opportunities emerge across the Gulf Coast, Permian Basin, and West Texas, Oklahoma, and parts of the Midwest. These regions are well-positioned to support reliable, lower-emission power generation while leveraging existing energy assets and infrastructure.

[Read the full report](#)

FEDERAL POLICY SUPPORT DRIVES DEVELOPMENT AND DEPLOYMENT

A strong policy framework can help accelerate deployment-ready projects and build the infrastructure needed for large-scale carbon management.

SUPPORT DEPLOYMENT-READY PROJECTS

- **45Q tax credit:** Maintain and strengthen 45Q.
- **Project certainty:** Strengthens domestic energy production and system resilience.
- **Project economics:** Enhance values to support commercial-scale deployment.

BUILD SHARED CARBON MANAGEMENT INFRASTRUCTURE

- **CO₂ transport networks:** Expand regional CO₂ transportation and storage sites.
- **Class VI permitting:** Accelerate permitting and development of geologic storage resources.
- **Storage capacity:** Support the development of shared storage infrastructure.