



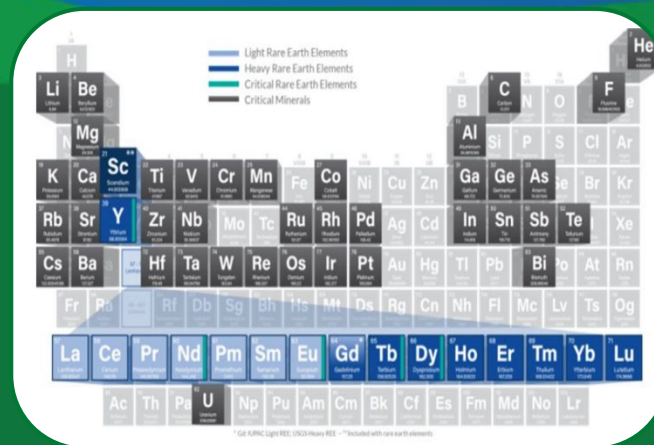
U.S. DEPARTMENT OF
ENERGY

Fossil Energy and
Carbon Management

Hydrogen with Carbon Management Policy, Analysis and Engagement Priorities

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Director, Office of Policy, Analysis and Engagement

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FECM Mission: Deep Decarbonization

Minimize environmental and climate impacts of fossil fuels from extraction to use



Point-Source Carbon Capture (PSC)

Reduce the cost, increase the efficacy, and advance the deployment of commercial-scale point source capture technologies in the power and industrial sectors, coupled to storage.



Methane Mitigation

Develop technologies and deploy regional initiatives to quantify and reduce methane emissions from fossil fuel infrastructure including coal, oil, and gas.



Carbon Dioxide Removal (CDR)

Invest in a diverse set of CDR approaches to support DOE's Carbon Negative Shot of just, sustainable, and scalable CDR at costs below \$100/net metric ton of CO₂-equivalent.



Domestic Critical Minerals (CM) Production

Support demonstrations for extraction and remediation to processing and refining for building a strong CM supply chain while creating good-paying jobs.



Carbon Transport and Storage

Make advancements in storage technologies and transport mechanisms, provide technical assistance in Class VI well permitting, and support large-scale transport and storage facilities and regional hubs.



Hydrogen with Carbon Management

Hydrogen production coupled with carbon capture and storage using sustainably sourced carbon-based feedstocks. Invest in the advancement of hydrogen storage, fuel cells, and 100 percent hydrogen-fired turbines, supporting DOE's Hydrogen Shot target.



Carbon Dioxide Conversion

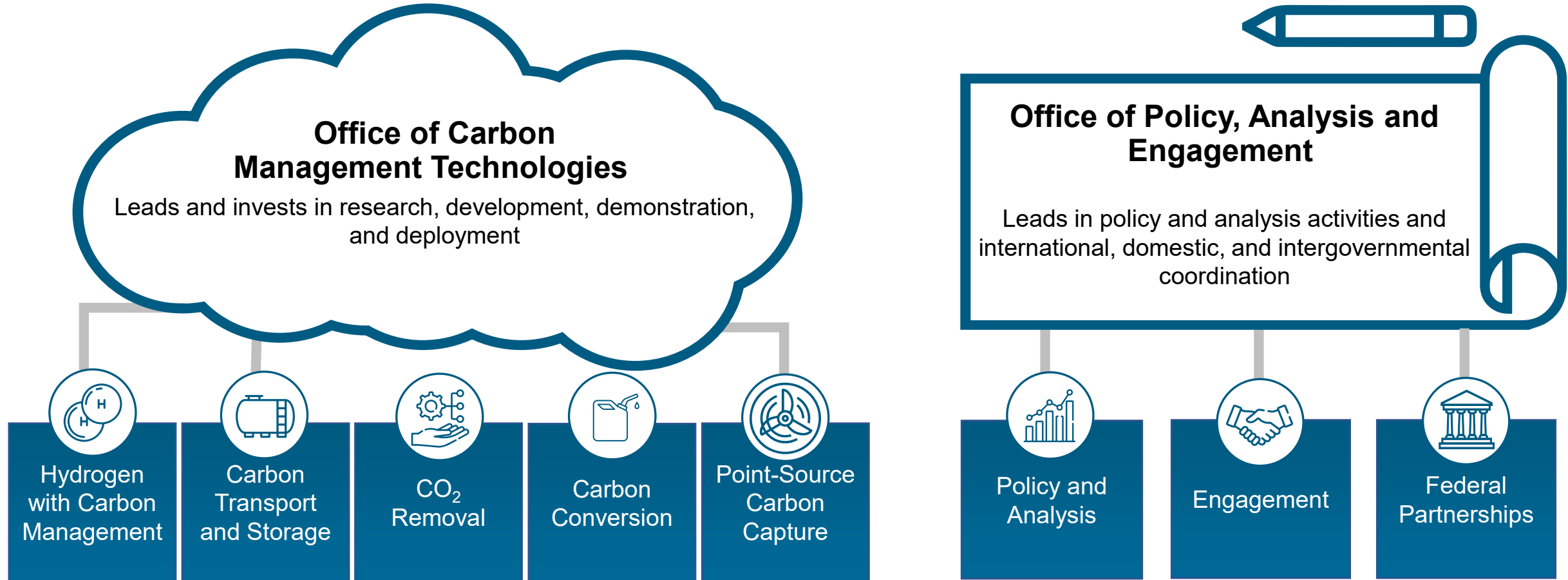
Accelerate capabilities for large-scale conversion of CO₂ into products that advance net-zero goals, facilitated by markets that use CO₂ as a feedstock.



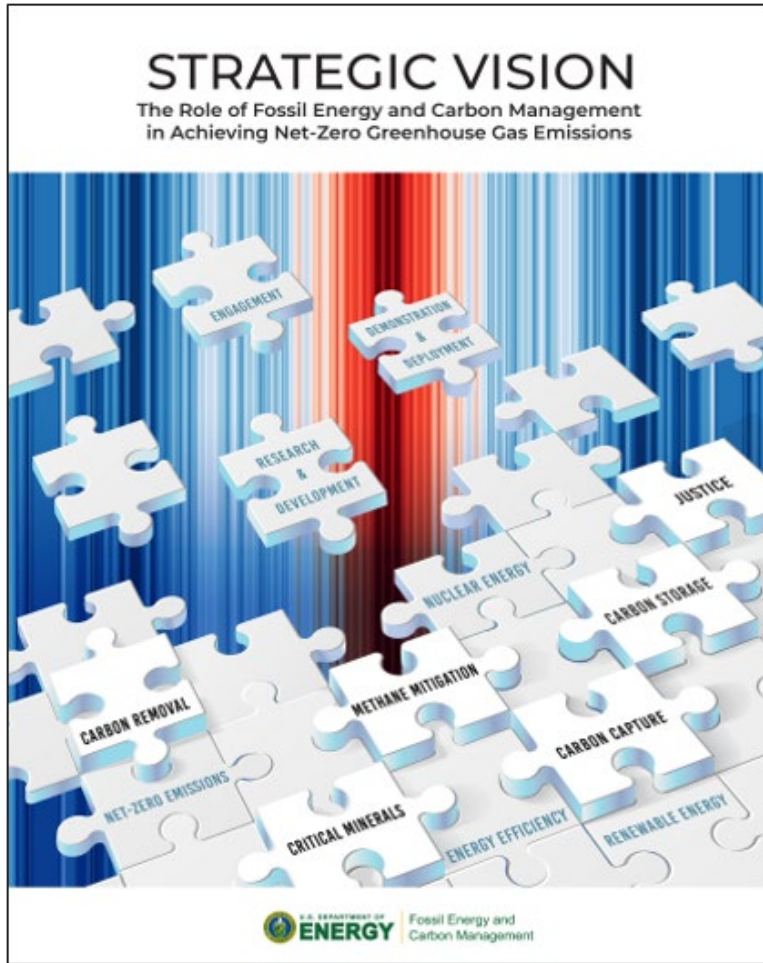
Justice, Labor, and Domestic and International Collaboration

Collaborate with domestic and international partners to create a sustainable energy infrastructure with equity and justice at the core of FECM's work.

FECM's Office of Carbon Management



FECM's Vision for Carbon Management



A carbon management framework that will guide FECM's engagement with offices across the Department, Federal agencies, tribal and international governments, industry, non-governmental organizations, and communities

Advancing Justice, Labor, and Engagement

Priorities: Justice, labor, and international and domestic partnerships

Advancing Carbon Management Approaches Toward Deep Decarbonization

Priorities: Point-source carbon capture (PSC), carbon dioxide conversion, carbon dioxide removal (CDR), and reliable carbon transport and storage

Advancing Technologies that Lead to Sustainable Energy Resource

Priorities: Hydrogen with carbon management, domestic critical minerals (CM) production, and methane mitigation

Integrated Carbon Management Approach



Drivers for Domestic Engagement

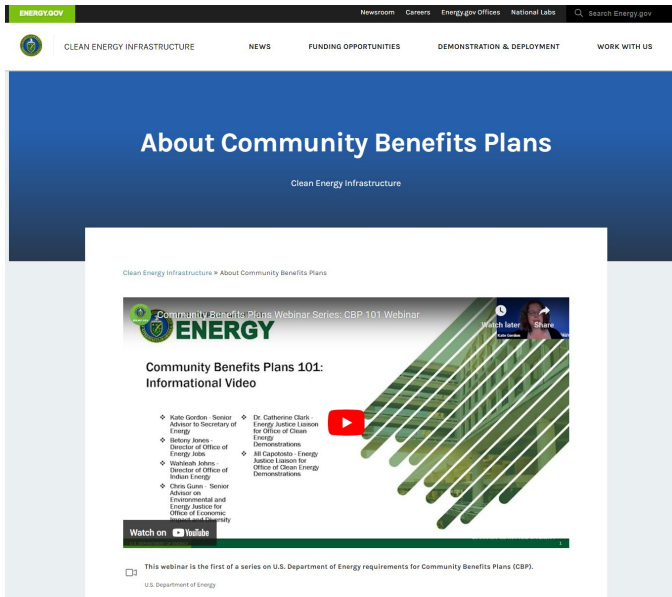
- Federal Policy Framework – BIL and IRA
- National polling indicates low awareness of carbon management
- Opposition from some environmental and community stakeholders / landowners
- Misinformation channels emerging
- Government/DOE not always viewed as trusted source of information
- DOE lacks comprehensive established relationships at local/regional level

“There's a gap between the world of federal programs and public policy and the real lives of community members that are affected directly by these projects. And one of the critical things that we need to do is bridge that gap and bring members of communities and project developers and government agencies together to make sure we advance these projects in a way that meets community needs.”

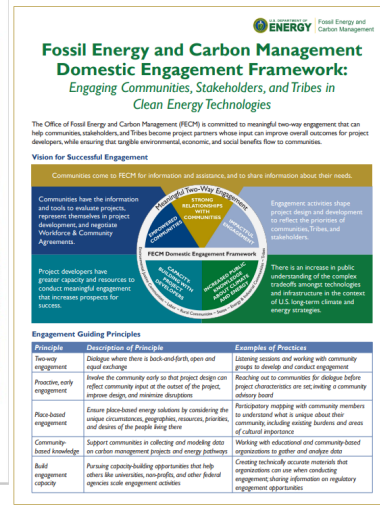
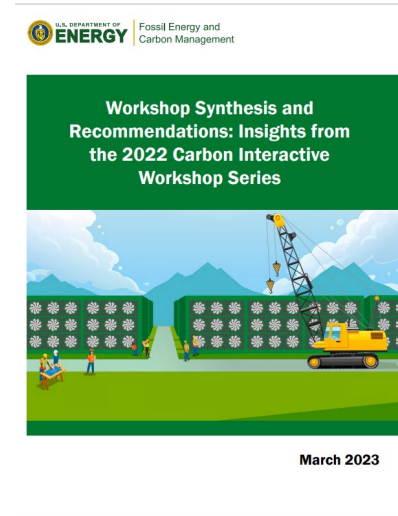
Brad Crabtree, Assistant Secretary of Fossil Energy and Carbon Management

Domestic Engagement – Key Work Areas

Implementation of DOE's Community Benefit Plans Framework



Publishing Engagement Guidance and Educational Tools



Carbon Management Dialogue, Houston, TX, Nov. 2023



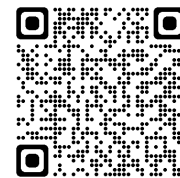
Carbon Management Workshop, Pueblo, CO, April 2024

Implementation of DOE's Responsible Carbon Management Initiative (RCMI)

Learn more:
Community Benefit Plans



Learn more:
RCMI

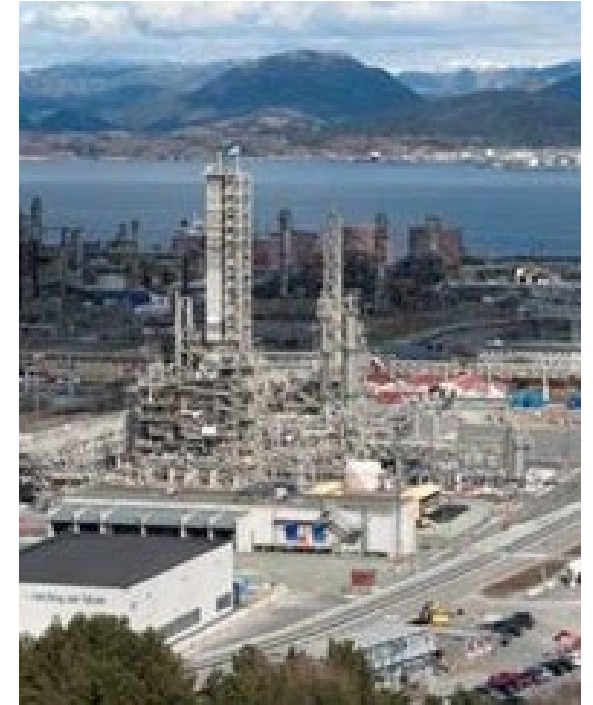


Federal Partnerships

- Interagency coordination & training
 - Lead interagency dialogue and provide training and technical assistance to federal partners on carbon management technologies
 - Coordinate DOE National Lab technical assistance related to evaluating EPA Underground Injection Control (UIC) Class VI well permits for secure geologic storage of carbon dioxide
- Administer USE IT Act permitting task forces
 - MOU with Council on Environmental Quality

Drivers for International Engagement

- Country complementarities
- Avoid duplication of effort
- Geopolitical benefit
- Enabling environments



Norway's Technology Center Mongstad, which has unique testing capabilities for carbon capture technologies

International Engagement – Key Work Areas

Joint research and development to leverage funding

- Accelerating CCUS Technologies Initiative (ACT) and Clean Energy Transition Partnership (CETP)

Bilateral cooperation to take advantage of resource complementarities

- Canada, Norway, Japan, U.K., Australia, UAE, KSA, and more

Bilateral cooperation to facilitate enabling environments

- Kenya, Nigeria, Brazil, India, Indonesia and more

Multilateral collaborations for information sharing and catalyzing actions

- Carbon Management Challenge, Clean Energy Ministerial, Mission Innovation, CDR Launchpad, G7, G20, IEA GHG R&D Programme, and more

Collaborate with international partner networks for capacity building

- Industry organizations, non-profit groups

Collaboration to increase financing for first-of-a-kind facilities

- Multilateral development banks, bilateral agreements



Policy and Analysis

- Cost and performance for technologies
- Role of carbon management in energy markets
- Life cycle analysis
- Effects of carbon management deployment in communities



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Thank You!

