Carbon Conversion Procurement Grants – Virtual Workshop for Manufacturers – Construction Materials

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Fossil Energy and Carbon Management (FECM)

Office of Fossil Energy and Carbon Management

DOE-FE is now DOE-FECM

New name for our office reflects our **new vision**

- President Biden’s goals:
  - 50% emissions reduction by 2030
  - CO₂ emissions-free power sector by 2035
  - Net zero emissions economy by no later than 2050
FEFCM Mission: Deep Decarbonization and Environmental Justice

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

Enacting Justice and Supporting Legacy Communities

- Good-paying jobs
- Job growth acceleration
- Healthy economic transitions
- Improve community conditions

Priority Technology Areas

1. Point source carbon capture
2. Carbon dioxide (CO₂) removal
3. CO₂ conversion into products
4. Reliable CO₂ storage
5. Hydrogen production
6. Critical mineral production from industrial and mining waste
7. Methane mitigation

Address hardest-to-decarbonize applications in the electricity and industrial sectors

Office of Carbon Management (FEFCM-20)

Office of Resource Sustainability (FEFCM-30)
A 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
Bipartisan Infrastructure Law (BIL)

FECM - $6.5 billion in new carbon management funding over 5 years through the Infrastructure Investment and Jobs Act (Bipartisan Infrastructure Law).

**Carbon Dioxide Removal - Direct Air Capture**
- Regional Direct Air Capture Hubs: $3.5 billion
- DAC Technology Prize Competition: $115 million

**Carbon Dioxide Utilization and Storage**
- Carbon Storage Validation and Testing: $2.5 billion
- Carbon Utilization Program: $310 million

**Front-End Engineering Design Studies**
- Carbon Capture Technology Program: $100 million

**Critical Minerals and Materials**
- Rare Earth Element Demonstration: $140 million
- Rare Earth Mineral Security: $127 million
Carbon Negative Shot: Key Performance Elements

Carbon Negative Shot’s key performance elements will guide a responsible industry that is responsive to the climate crisis, such that multiple true, durable removal pathways can be deployed at their most affordable cost at the scale required to address the climate crisis.

1. Less than $100/net metric ton CO₂e for both capture and storage
2. Robust accounting of full life cycle emissions
3. High-quality, durable storage with costs demonstrated for MRV for at least 100 years
4. Enables necessary gigaton-scale removal

- Blue are costs associated with ambient air capture
- Green are costs associated with ensuring durable storage

Ensure the first ton of removal is true, durable removal
Ensure the last ton of removal is as affordable as it can be
Purpose of Workshops

• Two Virtual Workshops (today and June 21)
• Four (in person) Regional Workshops on Aug 30, Sep 13, Sep 27, and Oct 11, 2022.
• Understand issues and challenges associated with procurement of CO2-derived products from different stakeholder perspectives
  • Technology developers
  • Manufacturers
  • Procurement
  • Customers
• Understand regional differences
Questions?