

FEDERAL FUNDING

A DEEPER LOOK AT SEVERAL CURRENT OPPORTUNITIES

BY MARK FOGARTY



Congressional funding for carbon removal and carbon capture has swelled in the last four years, mobilizing billions of dollars to accelerate growth of these emerging fields through research and development and early deployment. Some of the funding is specifically intended to be available for tribes, but as with many federal programs, match requirements and other hurdles remain.

—Brad Warren



OPPORTUNITY: BIPARTISAN INFRASTRUCTURE LAW (BIL) REGIONAL DIRECT AIR CAPTURE HUBS

Who: Department of Energy

What: Funds Opportunity Announcement

When: 4th Quarter 2022

Opportunity:

The BIL authorizes and appropriates a total of \$3.5 billion for the five-year period fiscal 2022 through 2026 for projects that contribute to Regional Direct Air Capture (DAC) Hubs.

Sovereignty-Friendly:

Incorporating environmental justice, community engagement and consent-based siting, and equity and workforce development.

Government wish list:

- To facilitate the deployment of direct air capture projects.
- To capture and sequester, utilize, or sequester and utilize at least 1,000,000 metric tons of carbon dioxide from the atmosphere annually from a single unit or multiple interconnected units.
- To demonstrate the capture, processing, delivery, and sequestration or end use of captured carbon.
- Projects could be developed into a regional or interregional carbon network to facilitate sequestration or carbon utilization.

What DOE is looking for in potential applications:

- Carbon intensity of local industry - located in a region with— (I) existing carbon-intensive fuel production or industrial capacity; or (II) carbon-intensive fuel production or industrial capacity that has retired or closed in the preceding 10 years.
- Geographic diversity - located in different regions of the United States.
- Carbon potential - located in regions with high potential for carbon sequestration or utilization.
- Hubs in fossil-producing regions - contribute to the development of at least 2 Regional DAC Hubs located in economically distressed communities in the regions of the United States with high levels of coal, oil, or natural gas resources.



- Scalability - give priority to eligible projects that, as compared to other eligible projects, will contribute to the development of Regional DAC Hubs with larger initial capacity, greater potential for expansion, and lower levelized cost per ton of carbon dioxide removed from the atmosphere.
- Employment - give priority to eligible projects that are likely to create opportunities for skilled training and long-term employment to the greatest number of residents of the region. Note that projects proposing use and incidental or associated storage of CO2 as part of the recovery an

WARNING: COST SHARING REQUIREMENT! See 2 CFR 200.306 for restrictions related to cost sharing under Federal awards, including that cost share funds cannot be paid by the Federal Government under another Federal award.

ANALYSIS: DOE FUNDING AVAILABLE FOR CARBON CAPTURE, THIS YEAR

Funding for Carbon Capture and Storage (CCS) and Carbon Removal R&D Activities at DOE

Budget authority in millions of dollars

Program Area	FY2021 Enacted	FY2022 Enacted (Regular)	FY2022 Supplemental
Carbon Capture	86.3	99.0	1,344.0
Carbon Utilization	23.0	29.0	41.0
Carbon Storage	79.0	97.0	500.0
CIFIA	n/a	n/a	3.0
CCS Subtotal	188.3	225.0	1,888.0
Carbon Dioxide Removal (FECM)	40.0	49.0	815.0
Carbon Dioxide Removal (other offices)	32.5	55.0	n/a
CDR Subtotal	72.5	104.0	815.0
Total	260.8	329.0	2,703.0

Source: Congressional Research Service, April 2022

GRANTS.GOV has more than 400 grants pending in the category of “CARBON CAPTURE”
 URL: [Search Grants | GRANTS.GOV](https://www.grants.gov)

Necessary steps to put in an application for carbon capture grants from GRANTS.GOV (the red tape):

SUBMISSION AND REGISTRATION REQUIREMENTS FOR FULL APPLICATION

If the FOA is released, it will be posted at Grants.gov (<http://www.grants.gov>) and at FedConnect (<http://www.fedconnect.net>).



Entities interested in applying for awards under the FOA are strongly encouraged to register at these sites to receive notification of announcements regarding the FOA. If DOE decides to issue the FOA, applications can only be submitted through Grants.gov.

There are several one-time actions an applicant must complete to submit a Full Application in Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the System for Award Management (SAM), register with Grants.gov, and register in FedConnect.net to submit questions).

Applicants who are not registered with SAM and Grants.gov, should allow at least 44 days to complete these requirements. It is suggested that the process be started as soon as possible.

- DUNS - Applicants must obtain a DUNS number (including the plus 4 extension, if applicable) from Dun and Bradstreet (D&B). DUNS website: <http://fedgov.dnb.com/webform>.
- SAM - Applicants must register with SAM at <http://www.sam.gov/> prior to submitting a Full Application in response to an FOA. NOTE: Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Failure to register with SAM will prevent an organization from applying through Grants.gov. The SAM registration must be updated annually.
- Grants.gov - Applicants must register with Grants.gov and set up a Workspace. An applicant cannot submit a Full Application through Grants.gov unless it is registered. Please read the registration requirements carefully and start the process immediately.

1) The Authorized Organizational Representative (AOR) must register at:
<https://apply07.grants.gov/apply/OrcRegister>

2) An email is sent to the E-Business (E-Biz) POC listed in SAM. The E-Biz POC must approve the AOR registration using their MPIN from their SAM registration. More information about the registration steps for Grants.gov is provided at:
<https://www.grants.gov/web/grants/applicants/registration.html> –FedConnect.net - Applicants must register with FedConnect to submit questions to an FOA. FedConnect website: www.fedconnect.net.



Example: DOE “Carbon Negative Shot” Notice of Intent (This is a project of 4 units of DOE)

The U.S. Department of Energy’s (DOE) Office of Fossil Energy and Carbon Management (FECM) announced its intent to fund cost-shared research and development to accelerate the wide-scale deployment of carbon capture and storage (CCS) and carbon dioxide removal (CDR)—critical components to achieve the Biden-Harris Administration’s goal of net-zero carbon emissions by 2050. The potential projects will be selected under the DOE’s Carbon Storage Assurance Facility Enterprise (CarbonSAFE) Initiative, which focuses on developing geologic storage sites with capacities to store at least 50+ million metric tons of carbon dioxide (CO₂).

CDR technologies remove CO₂ directly from the atmosphere, and CCS technologies reduce CO₂ emissions from power plants and industrial facilities by capturing the CO₂ they produce. That CO₂ can then be transported to safe and permanent storage in deep geological reservoirs. Together, CCS and CDR have the potential to eliminate hundreds of millions of tons of CO₂ per year. CCS is considered necessary to successfully decarbonize the energy and industrial sectors as they transition to a net-zero carbon economy, while CDR technologies can address emissions from the hardest to decarbonize sectors (e.g., agriculture, aviation and shipping) and eventually remove legacy CO₂ emissions from the atmosphere.

Significant advancements have been made in CCS technologies over the past two decades, scaling up both point source carbon capture and CDR technologies such as direct air capture. The funding opportunity, if released, will build upon this body of knowledge to support the assessment and verification of safe and cost-effective geologic storage of captured CO₂ at commercial-scale, with consideration to minimizing impacts to and potentially providing benefits for the environment and frontline communities.

Visit FedConnect for more information on this Notice of Intent.

(Note: An NOI (Notice of Intent) is only an intention to fund a project. To actually apply, a funding opportunity availability (FOA) must be issued. In this case, an FOA was issued in early 2022 with an application deadline in April, 2022, now seemingly beyond due date. Later, the deadline was extended to August, 2022 so it pays to keep monitoring. This one is technically still open for applications though the deadline is soon.)



DOE “Carbon Negative Shot” Description

On November 5, 2021, Secretary Jennifer M. Granholm announced the latest of the US Department of Energy’s (DOE) Earthshots¹—the “Carbon Negative Shot”—with a new goal to remove gigatons of carbon dioxide (CO₂) from the atmosphere and durably store it for less than \$100/ton of net CO₂-equivalent. This represents the first official US effort in carbon dioxide removal (CDR).

According to the DOE’s announcement, “four performance elements will define the technologies DOE will advance through Carbon Negative Shot.” These are stated as:

- A reduced cost of CDR of less than \$100/net metric ton CO₂ equivalent for both capture and storage;
 - A robust accounting of lifecycle emissions (i.e., ensur[ing] emissions created when running and building the removal technology are accounted for);
 - High-quality, durable storage with costs demonstrated for monitoring, reporting and verification for at least 100 years; and
 - To enable necessary gigaton-scale removal.
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