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CALIFORNIA ENERGY COMMISSION

715 P Street Sacramento, California 95814

energy.ca.gov



Request for Information California Carbon Management Hub Docket # 25-ERDD-01

The California Energy Commission (CEC) is issuing this Request for Information (RFI) to gather input from a diverse range of stakeholders—including direct air capture (DAC) and point-source carbon capture, utilization, and storage (CCUS) companies and technology developers, research institutions, clean energy providers, project developers, community engagement organizations, organizations experienced in federal government collaboration, and other potential partners. The purpose is to explore partnerships and technological capabilities for developing carbon management hub(s) in California. This RFI is independent from the current Carbon Removal Innovation Support Program (CRISP) grant funding opportunity and does not influence CEC funding decisions.

This effort aligns with two recently announced U.S. Department of Energy (DOE) funding opportunities, which include up to \$1.8 billion for the design, construction, and operation of mid- and large-scale commercial DAC facilities and infrastructure scaling platforms and \$1.3 billion to drive investments in transformative CCUS technologies. ^{1,2} Through this RFI, the CEC seeks information on project approaches, partnerships, and technologies to support the development of a carbon management hub(s) in California. This hub(s) would showcase DAC technologies while integrating a comprehensive carbon management ecosystem, driving progress toward California's ambitious carbon reduction goals.

The DOE and CEC share an interest in accelerating the deployment of DAC and other carbon management technologies, reducing capture and storage costs, and addressing challenges – such as permitting and infrastructure - to deploy at scale. Established in 2022, the California Climate Crisis Act³ mandates an 85% reduction in California's greenhouse gas (GHG) emissions below 1990 levels and aims for carbon neutrality by 2045. To support this, the California Air Resources Board (CARB) developed the 2022 Scoping Plan, which emphasizes the need for new strategies like carbon dioxide removal (CDR) to address residual emissions.⁴ The plan concludes that achieving carbon neutrality will require mechanical CDR solutions.

A DAC hub(s), combined with CCUS, offers a unique opportunity to address both legacy and point-source emissions while developing infrastructure that can support multiple applications, including

¹ OCED Announces up to \$1.8 Billion in New Funding for Transformational Direct Air Capture Technologies

² OCED Announces \$1.3 Billion in New Funding to Bolster Carbon Capture, Utilization, and Storage Technologies

³ AB 1279, Muratsuchi, Chapter 337, Statutes of 2022

⁴ California Air Resources Board (CARB) 2022 Scoping Plan

transportation and shared equipment. Co-locating with other energy or carbon removal infrastructure could serve as a proving ground for scaling up these technologies. A hub-based approach could address infrastructure and partnership challenges, reduce risks associated with technology demonstration and scale-up, and identify solutions with cross-cutting benefits. It could also enhance monitoring, reporting, and verification standards, providing valuable insights to inform and strengthen California's carbon management policies.

The CEC will not be applying directly to the DOE funding opportunities mentioned above. Instead, our focus is on gathering information to support the potential facilitation of partnerships for a California carbon management hub, with the goal of attracting federal investments to the state. Additionally, this RFI aims to gather insights on how to better support carbon management activities across California. Responders to this RFI are encouraged to share insights on technical challenges, cost considerations, infrastructure needs, partnership models, and research priorities to help guide these partnerships.

All questions in this RFI are optional to respond to, but we encourage responders to provide as much detail as possible for comprehensive input.

- 1. Please describe your interest in partnering with other entities to apply for DOE funding and outline the role and expertise your organization would contribute to a carbon management hub. Include any relevant experience from prior collaborative projects that could help inform and strengthen a hub-based partnership.
- 2. Which types of state-level support beyond grants such as stakeholder convening, streamlined processes, technical assistance, research access, and community engagement is your organization most interested in, and which does your organization believe would be most effective for advancing carbon management efforts, particularly with regards to a hubbased approach?
- 3. What is the current Technology Readiness Level (TRL) of your technology and/or the development stage of your project (e.g., preliminary front-end engineering and design, demonstration)? Please provide potential outcomes from partnering with your organization, including estimated annual carbon capture capacity (in tonnes per year), description of product (if carbon utilization), co-benefits (e.g., hydrogen or water production), and other relevant details.
- 4. What challenges are you currently facing, particularly related to funding (e.g., offsetting construction or operating costs, securing offtake agreements)? What challenges financial or otherwise do you anticipate in scaling these technologies within a hub-based approach, and are there any challenges unique to establishing a hub in California?

How to Provide Information

Respondents to this RFI should not include any proprietary or confidential information. The
RFI currently has no set end date, but to maximize engagement with the CEC, please submit
responses by 5:00 p.m. on Wednesday, January 29. Any future end date for the RFI will
be announced with at least 30 days' notice. Comments must be submitted using the ecommenting feature

(https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=25-ERDD-01

) to submit to Docket 25-ERDD-01 (https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-ERDD-01).

To use the e-commenting system, respondents will be asked for a full name, email address, comment title, and either a comment or an attached document (.doc, .docx, or .pdf format). After a challenge-response test is used by the system to ensure that responses are generated by a human user and not a computer, click on the "Agree & Submit Your Comment" button to submit the information to the CEC's Docket Unit.

Written comments, attachments, and associated contact information included within the documents and attachments will become part of the viewable public record and searchable on the internet.

Interested stakeholders are encouraged to use the electronic filing system described above to submit information. If you are unable to submit electronically, a paper copy of your information may be sent to:

California Energy Commission Docket Unit, MS-4 Re: Docket No. 25-ERDD-01 715 P Street Sacramento, CA 95814-5512

Alternatively, you may email responses to <u>docket@energy.ca.gov</u> with the subject line "for California Carbon Management Hub Request for Information".

Technical Subject Inquiries. Email Tannis Abdoli at Tannis.Abdoli@energy.ca.gov