U.S. Department of Energy
Office of Technology Transitions

Bipartisan Infrastructure Law
Technology Commercialization Fund

Notice of Intent No. DE-LC-0001001

Notice of Intent to Issue Lab Call No. DE-LC-000L100

The Department of Energy's (DOE's) Office of Technology Transitions (OTT), in partnership with the Office of Fossil Energy and Carbon Management (FECM), intends to issue a lab call on Carbon Dioxide Removal Measurement, Reporting, and Verification Best Practices and Capabilities. The lab call is funded by the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), as part of the DOE Technology Commercialization Fund (TCF). OTT anticipates releasing the solicitation in the coming months, and eligible applicants include DOE National Laboratories, plants, and sites.

OTT's mission is to expand the public impact of the Department's research, development, demonstration, and commercial application (RDD&CA) portfolio to advance the economic, energy, and national security interests of the nation. OTT is responsible for implementing the TCF, which Congress established through the Energy Policy Act of 2005 and reauthorized in the recent Energy Act of 2020 to promote promising energy technologies for commercial purposes. As with base appropriations, 0.9 percent of the RDD&CA funding provided by BIL is allocated to the TCF. Under TCF BIL, OTT pursues activities that broadly support the commercialization of promising energy technologies while simultaneously enhancing and improving American infrastructure, competitiveness, opportunity, and equity and addressing the climate crisis. Working collaboratively across relevant DOE program offices, OTT seeks to cultivate a broader innovation network around the BIL provision activities to enable faster replication and scaling of demonstration projects.

This is a Notice of Intent (NOI) only. OTT may issue a lab call as described herein, may issue a lab call that is significantly different than the lab call described herein, or OTT may not issue a lab call at all.

The lab call aims to support the development of measurement, reporting, and verification (MRV) tools and protocols that are necessary to enable carbon dioxide removal (CDR) commercialization at scale. The lack of robust and standardized MRV practices to quantify and compare CDR solutions, including direct air capture, for net greenhouse gas removals in an apples-to-apples manner is a market formation bottleneck impeding the ability to commercialize promising new CDR technologies. CDR MRV best practices and capabilities projects will allow CDR companies, academics, and industry stakeholders to leverage National Lab expertise to enable carbon removal claims to be compared in a rigorous, transparent, and bankable manner across the broad portfolio of approaches.

Researchers across the National Labs have developed a wealth of expertise on various carbon removal approaches and can offer an independent perspective on MRV across a diverse set of carbon removal solutions. In parallel, emerging CDR companies are acutely aware of the need to develop high quality MRV for their businesses to gain commercial traction. These companies understand that tools and processes (and associated technologies) are needed to establish robust MRV frameworks, and they are turning to external experts to help improve carbon removal quantification and reporting practices. The selected awardees will work to identify and address key scientific, engineering, and standards gaps and challenges preventing current and novel CDR solutions from achieving the robust MRV required for effective deployment at scale. It is anticipated that the National Lab awardees will collaborate with and support commercial advancement of the forthcoming BIL-funded CDR demonstration activities.

National Lab expertise can help enable the emerging CDR industry and provide a pathway to commercialization for new technologies by solving the following problems:

1. **Measuring Carbon**: identifying, developing, and validating affordable, precise tools to measure and quantify baseline and carbon fluxes to reservoirs
2. **Quantifying Net Carbon Removed**: drawing cradle-to-grave lifecycle analysis boundaries and analyzing permanence, additionality, and leakage of specific approaches
3. **Transparency**: improving access and understanding of models and processes underlying CDR MRV to improve bankability and enable widespread adoption
4. **Developing Best Practices for Protocols and Processes**: validating methodologies and cost-effective measurement techniques used for verifying carbon removal claims

Tackling these challenges in parallel will enable net carbon removal comparisons of leading carbon removal pathways in a consistent manner, enabling a broader range of carbon removal solutions to gain commercial traction.

It is anticipated that the lab call will award multiple National Lab-led projects, which will generally consist of two phases. In the first phase, awardees will build up capabilities and collaborate with each other to develop a harmonized MRV framework. The second phase will focus on usage of capabilities, including deeper engagements with industry partners. One of the awardees will likely serve as program lead or coordinator. Stakeholder engagement will be critical throughout the projects to support knowledge sharing across the selectees and external stakeholders. Applicants can propose developing new mechanisms or leveraging existing structures, for example hosting an annual summit. Applicants should consider the teaming elements that are needed to successfully achieve the proposed project objectives. The cost share requirement for the first phase of projects may be reduced or eliminated; however, it is expected that a 50% cost share will be required in the second phase of projects.

This notice is issued so that interested parties are aware of the OTT's intention to issue this lab call in the near term. All information contained in this notice is subject to change. OTT will not respond to questions concerning this notice. Once the lab call is released, OTT will provide an avenue for potential applicants to submit questions.

OTT plans to issue and manage the lab call with the Exchange. If applicants wish to receive official notifications and information regarding this lab call, they should register in Exchange. When the lab call is released, applications will be accepted only through Exchange. Questions related to the registration process and use of the Exchange website should be submitted to: EERE-eXCHANGESupport@hq.doe.gov.