

Bipartisan Infrastructure Law
Technology Commercialization Fund



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
Technology Transitions



OCED

Office of Clean Energy Demonstrations

DE-LC-000L002
Collaborative Alignment
for Critical Technology
Industries Lab Call

Informational Webinar
April 4, 2023

Housekeeping

- All applicants are strongly encouraged to carefully read the entire lab call and adhere to the stated submission requirements.
- This presentation summarizes the contents of lab call. If there are any inconsistencies between the lab call and this presentation or statements from DOE personnel, the lab call is the controlling document and applicants should rely on the lab call language and seek clarification from OTT at TCF.BIL@hq.doe.gov.
- Everyone has been placed on mute.
- Please provide your questions through the Q&A feature. We will endeavor to answer questions at the end of webinar. All questions will go into the formal Q&A log and will be answered and publicly posted to Exchange.
- The informational webinar will be recorded. Recording will stop after Q&A is completed. The presentation and audio of the recording will be posted to Exchange (<https://oced-exchange.energy.gov/>).

Agenda

- Key Dates
- General Information
 - Budget per Topic Area
 - Estimated Funding for this Solicitation
- Program Overview and Topics
- Eligibility
- Cost Share
- Partnering
- Community Benefits
- Concept Paper Stage
- Full Application Stage
- Selections and Notification
- Background
- Questions
- Open Discussion Opportunity for Potential Applicants (not recorded)

Key Dates

KEY DATES

Solicitation Issue Date

March 23, 2023

Informational Webinar

April 4, 2023, 2 p.m. (ET)

PROPOSAL DEADLINE AND DECISION DATES

Submission Deadline for Concept Papers

April 28, 2023, 3 p.m. (ET)

Concept Paper Status Notifications

May 19, 2023 (est.)

Submission Deadline for Full Applications

June 27, 2023, 3 p.m. (ET)

Expected Date for Selection Notifications

Q4 Fiscal Year (FY) 23

General Information

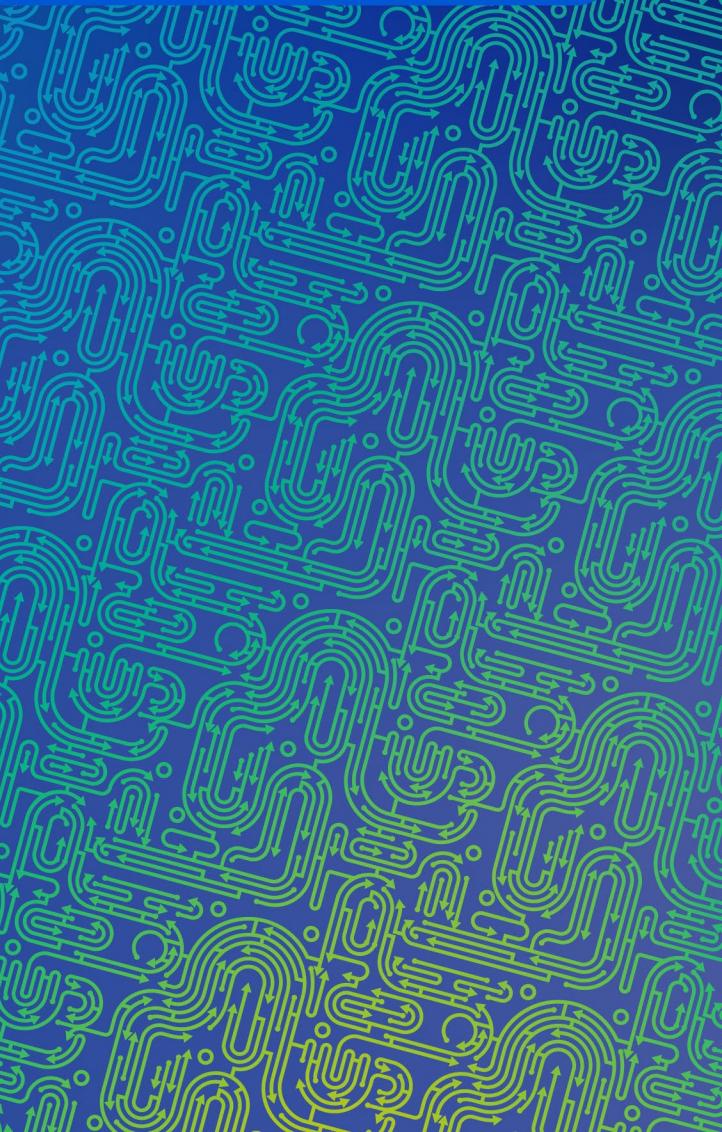
| | |
|--|--|
| Means of Submission for Applications: | Exchange https://oced-exchange.energy.gov/ (DE-LC-000L002). DOE will not review or consider proposals submitted through other means. |
| Total Amount to be Provided: | DOE expects to make up to \$15 million in Bipartisan Infrastructure Law funding available to fund all projects solicited in this lab call, pending program direction and go/no-go decision points. DOE may issue one, multiple, or no awards. |
| Estimated Number of Projects: | 2 (1 per topic area) |
| Estimated Project Duration: | 24 – 36 months |
| Estimated Budget per Project: | \$3 to \$10 million of DOE funding, in addition to cost share from partners |
| Eligible Entities: | All U.S. Department of Energy National Laboratories, Plants, and Sites |
| Submission of Multiple Proposals: | There is no limit on the number of concept papers that a lab can submit, but note that DOE expects to make a single selection per topic and encourages collaborative proposals. If labs receive an encourage determination from DOE at the concept paper stage, they are invited to further expand their concept into a full application. |
| Questions: | TCF lab call solicitation: TCF.BIL@hq.doe.gov Using the online application portal: OCED-ExchangeSupport@hq.doe.gov |

What will be discussed today

BIPARTISAN INFRASTRUCTURE LAW TECHNOLOGY COMMERCIALIZATION FUND: COLLABORATIVE ALIGNMENT FOR CRITICAL TECHNOLOGY INDUSTRIES LAB CALL

- The Department of Energy's (DOE's) Office of Technology Transitions (OTT), in partnership with the Office of Clean Energy Demonstrations (OCED), announced a lab call to bring together stakeholders across industries to address challenges that result when people work on similar issues in isolation and develop actionable recommendations, strategies, and best practices to facilitate scale-up and replication. This lab call is focused on industry alignment for clean hydrogen and long duration energy storage (LDES) technologies.
- The lab call is funded by the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law (BIL), as part of the DOE Technology Commercialization Fund (TCF).
- OTT expects to make up to \$15 million in BIL TCF federal funding available for projects led by DOE national laboratories, plants, and sites and supported by diverse industry partnerships spanning the hydrogen and long duration energy storage sectors.

Program and Topics



Program Scope

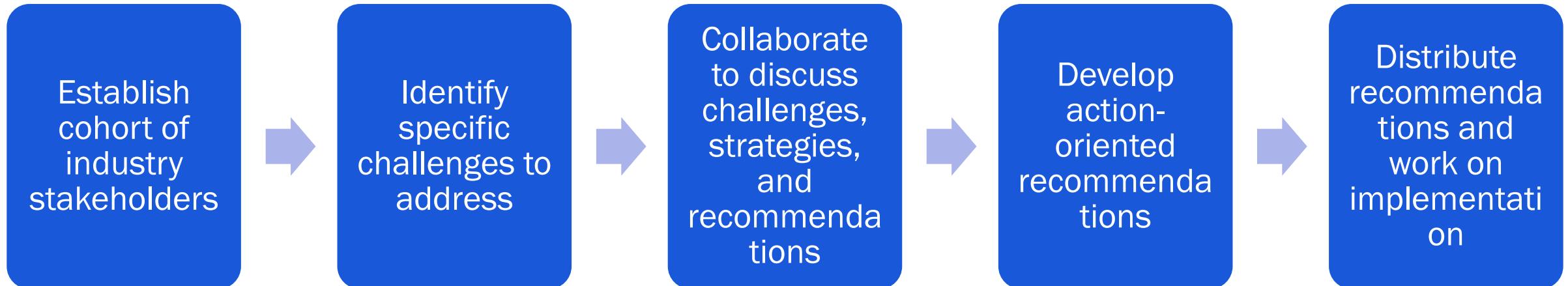
- Proposed projects must align with TCF's goals to promote the commercialization of promising energy technologies and the goals of the relevant BIL provisions.*
- Applicants should clearly articulate their position within the entire ecosystem of the topic for which they are applying, including technical expertise, degree of thought leadership, history of partnerships, and relevant outreach and engagement in this area. Applicants should be familiar with commercialization barriers and the recent Pathways to Commercial Liftoff reports.**
- Proposals should describe plans for assembling and convening the working group on an ongoing basis and what deliverables will be provided to achieve the goals of the project. Key milestones for proposals under this topic should be commercialization-focused, not technology-focused.
- Proposals should describe an effective mechanism and engagement plan for working with and maintaining their cohort throughout the project period.
- Note that proposals that fall outside the parameters specified in the topic description sections will be deemed nonresponsive and will not be reviewed or considered.

*40314 - Regional Clean Hydrogen Hubs; 41001(b) - Long Duration Demonstration Initiative and Joint Program

**Pathways to Commercial Liftoff, <https://liftoff.energy.gov/>.

Project Structure

- OTT envisions awarding 1 project per topic area (total of 2 projects) led by national labs.
- Proposals must be broken into at least one budget period per fiscal year, with a logical go/no-go decision point between the budget periods.
- Applicants should consider the teaming elements that are needed to successfully achieve the proposed project objectives.
- Proposed project structure below (not prescriptive and can be modified to better meet program objectives)



Topic 1: Collaborative Alignment for Clean Hydrogen

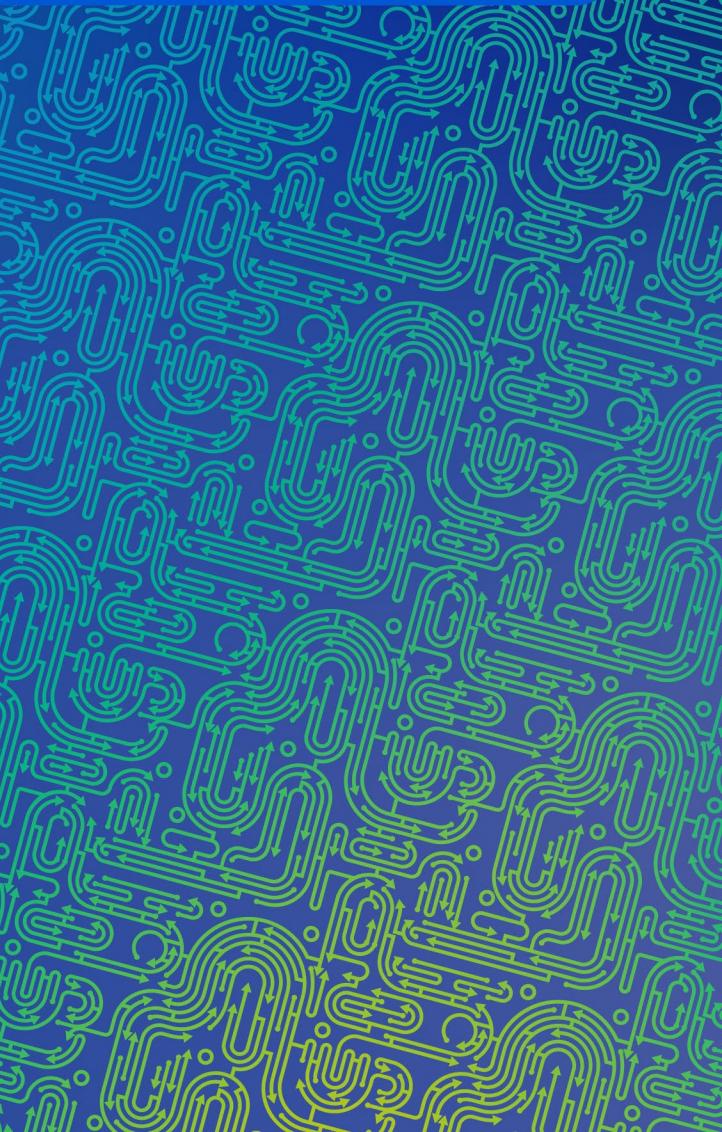
- Aligning processes and systems across hydrogen production, storage, delivery, and utilization pathways can help overcome adoption barriers for clean hydrogen to help it reach its full commercial potential.
- Through this topic, multiple national laboratories with proven and extensive expertise and capabilities in the hydrogen sector will partner to establish a working group consisting of stakeholders across the hydrogen value chain. The labs will lead this industry working group and ensure its sustained operations over time and work to address barriers, determine potential synergies, and collaboratively develop and implement recommendations and best practices for common challenges.
- DOE has identified potential areas of interest for a working group of hydrogen stakeholders to consider within the areas of equipment and manufacturing, production, distribution, market, and safety. Please see the lab call for details. This list not meant to be prescriptive or exhaustive.

Topic 2: Collaborative Alignment for Long Duration Energy Storage

Page 20 of Lab Call

- Ensuring that LDES can meet its potential share of the net-zero energy system will require concentrated and coordinated efforts across the LDES ecosystem, including companies, regulators, investors, public utility commissions, and organizations.
- Through this topic, multiple national laboratories with proven and extensive expertise and relationships in the LDES sector will partner to establish a working group consisting of stakeholders across LDES industries. The labs will lead this working group and ensure its sustained operations over time and work to address barriers, determine potential synergies, and collaboratively develop and implement recommendations and best practices for common challenges.
- DOE has identified potential areas of interest for a working group of LDES stakeholders to consider, including common terminology, regulatory hurdles, soft costs, balance of system costs, security, and safety. Please see the lab call for details. This list not meant to be prescriptive or exhaustive.

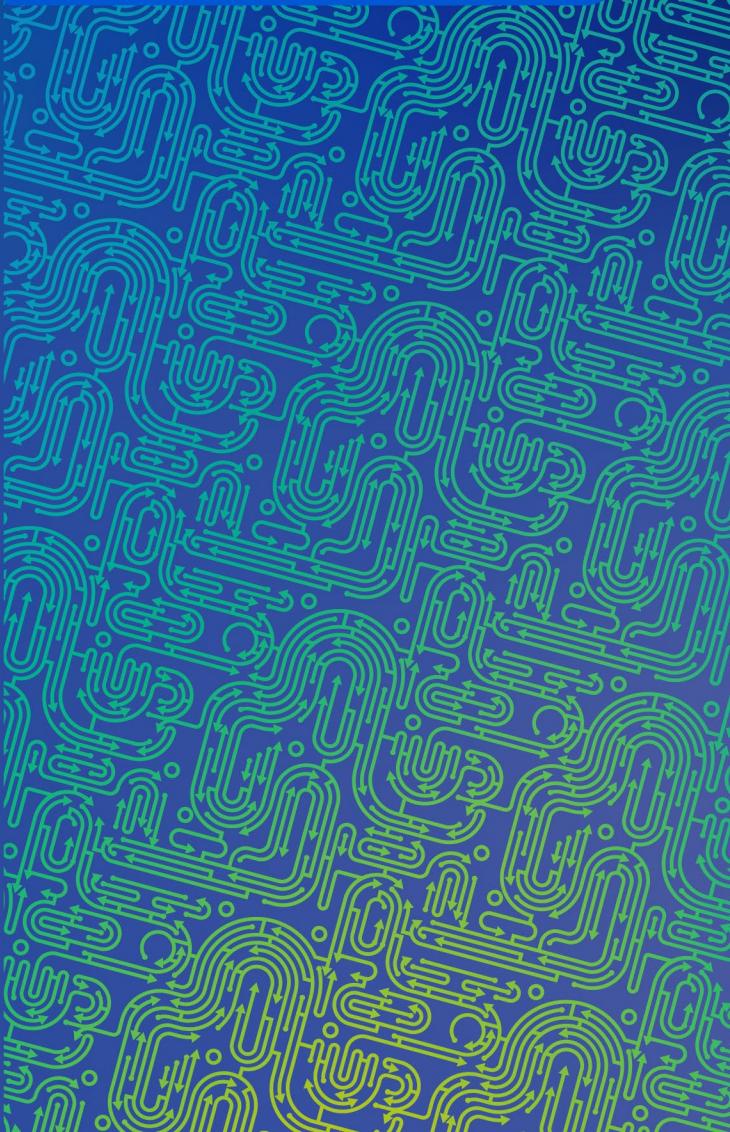
Eligibility



Eligibility

- Only DOE national laboratories, plants, and sites are eligible prime applicants to this lab call.
- Labs are expected to collaborate on proposals.
- DOE anticipates selecting a single, multi-lab project for each topic.

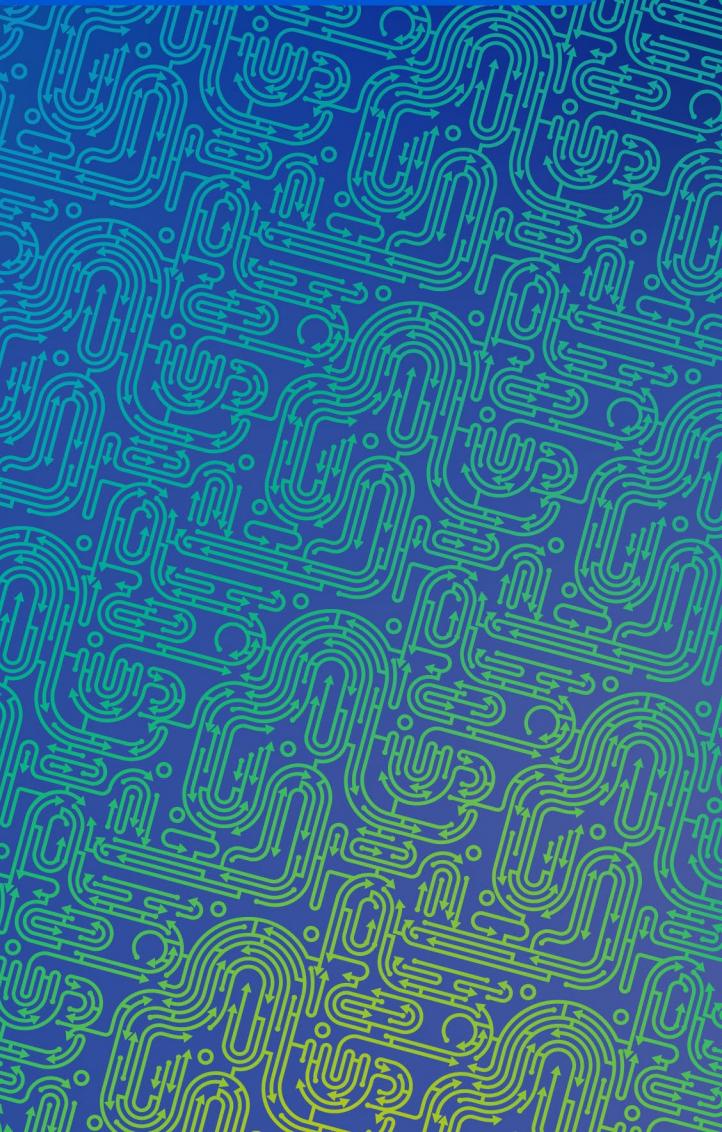
Cost Share



Cost Share

- This lab call is subject to Section 988(b)(3) of EPAct05 regarding cost-share, which requires 50% cost-share for demonstration and commercialization activities. However, DOE acknowledges that some potentially high impact proposed projects may not be able to meet this requirement.
- Labs may apply with less than 50% cost-share, clearly indicating in the application the amount of cost-share they intend to contribute and providing a justification for the cost-share reduction
- Note that the review criteria reflect that cost share is a consideration for selection.

Partnering



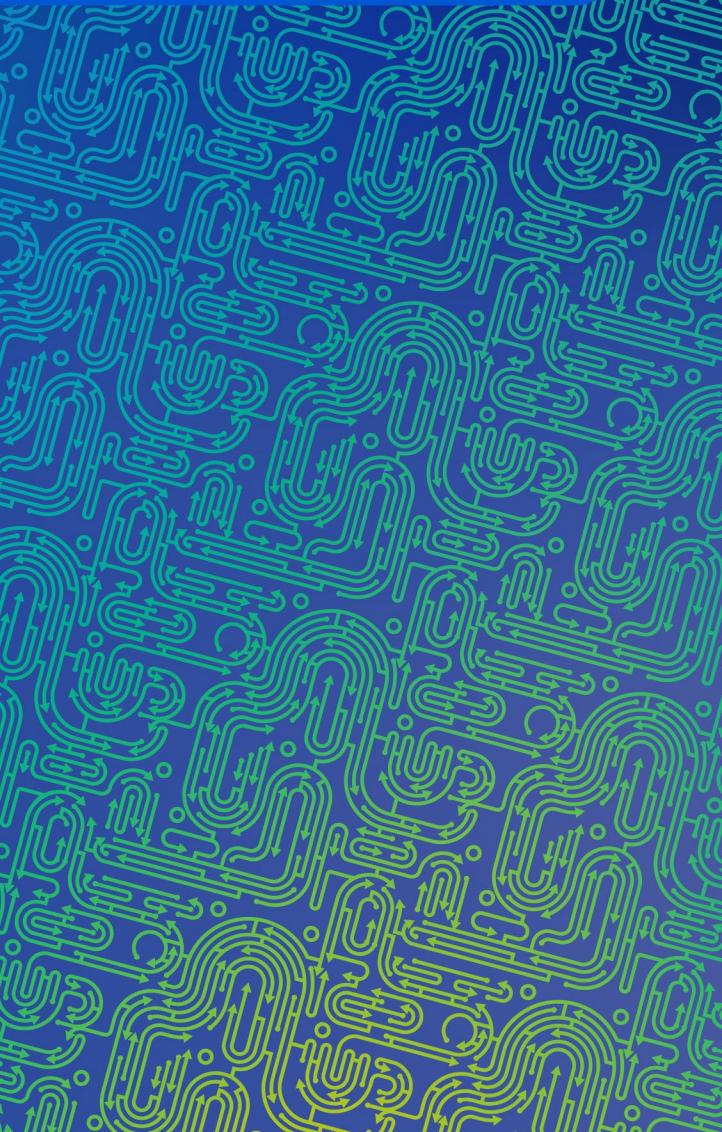
Partnering

- DOE strongly encourages projects that bring together multiple labs to leverage diverse lab capabilities, avoid duplication of effort, and ensure the strongest possible applications are put forward. DOE also anticipates that meeting project goals will require significant industry engagement and partnership.
- All partnerships between the labs and outside partners must comply with individual lab requirements under their management and operating (M&O) contracts.
- Partners can be any nonfederal entity, including private companies, state or local governments (or entities created by a state or local government), colleges, universities, tribal entities, or nonprofit organizations.

Teaming Partner List

- To expedite external partnerships in support of this lab call, DOE is compiling a “Teaming Partner List” to facilitate the formation of new project teams. The Teaming Partner List allows organizations who may wish to participate on an application to express their interest to other applicants and to explore potential partnerships. Updates to the Teaming Partner List will be available in the Exchange website. The Teaming Partner List will be regularly updated to reflect new teaming partners who provide their organization’s information.
- **Submittal Instructions:** Any organization that would like to be included on this list should find the Teaming Partner List for this solicitation (TPL-0000014) on [Exchange](#) and submit the following information: Organization Name, Organization Type, Website, Contact Name, Contact Address, Contact Email, Contact Phone, Area of Expertise, Brief Description of Capabilities, and Applicable Topic and Subtopic.

Community Benefits



Community Benefits Plans

- To support the goal of building a clean and equitable energy economy, BIL-funded projects are expected to:
 1. Support meaningful community engagement;
 2. Advance diversity, equity, inclusion, and accessibility (DEIA).
- Applications must include a Community Benefits Plan that describes how the proposed project would incorporate the above objectives and include specific details on how to ensure the delivery of measurable community benefits.
- The proposed project should include at least one Specific, Measurable, Assignable, Realistic and Time-Related (SMART) milestone per budget period supported by DEIA-relevant metrics to measure the success of the proposed actions. This implementation strategy for the proposed project will be evaluated as part of the application review process.
- Applicants are highly encouraged to include individuals from groups historically underrepresented in science, technology, engineering, and math (STEM) in their working groups

Community Benefits Plan Guidance

Community & Labor Engagement

Describe plans to engage with community stakeholders (e.g., labor unions, local governments, tribal governments, and community-based organizations) that support or work with underserved and disadvantaged communities.

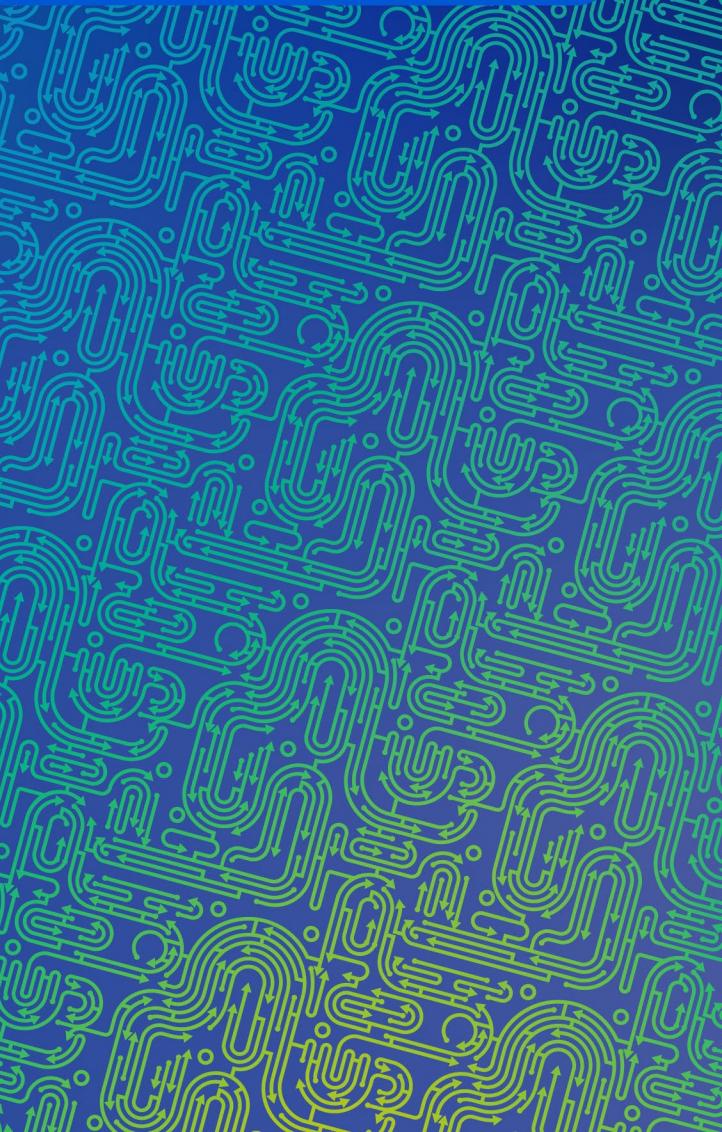
Diversity, Equity, Inclusion, & Accessibility (DEIA)

Describe how DEIA objectives will be incorporated into the project and how the applicant(s) will partner with underrepresented businesses, educational institutions, training organizations that serve workers who face barriers to accessing quality jobs, and/or other project partners to help address DEIA.

Justice40 Initiative

Describe how to maximize benefits to disadvantaged communities that the specific technology area project can deliver in the objectives of each working group.

Concept Paper Stage



Concept Paper

Submission of concept papers is required. To be eligible to submit a full application, applicants must submit a concept paper. Labs are required to submit the concept paper in Exchange no later than **April 28, 2023, 3:00 p.m. (ET)**

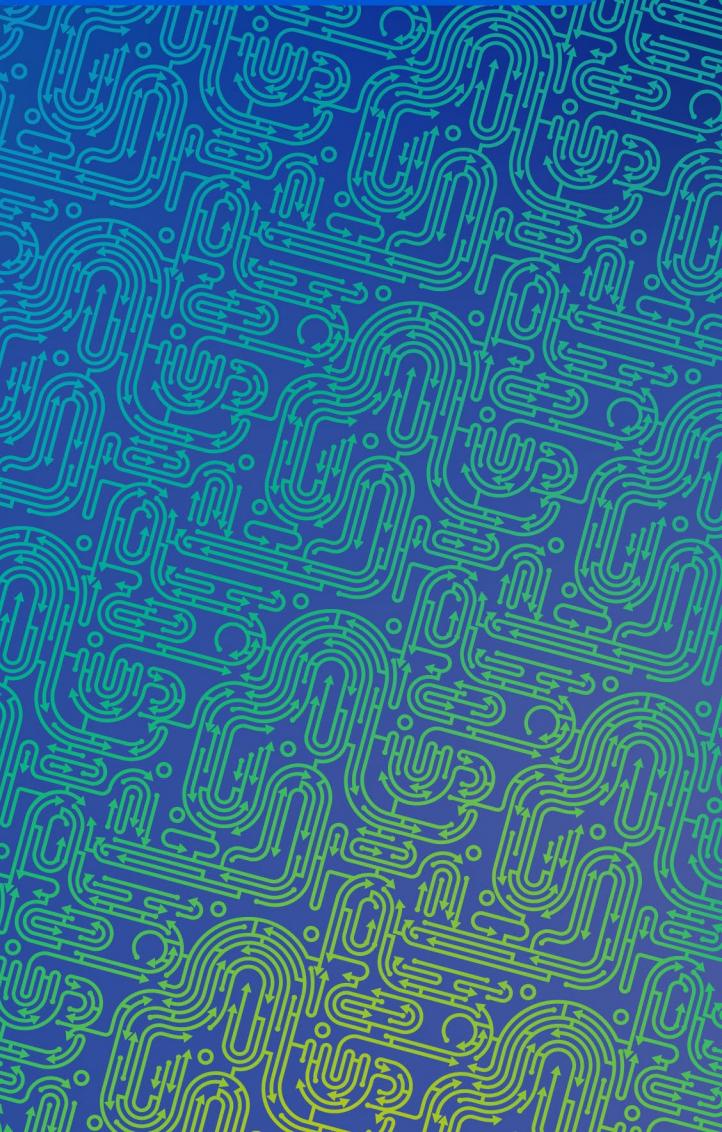
- The intent is to help the labs focus their efforts on the concepts with the highest potential under this lab call.
- DOE will review the concept paper, and applicants will receive an official determination. DOE will encourage or discourage concepts at this stage.
- Only labs that receive an encourage determination on the concept paper will be allowed to submit a full application
- Applicants are strongly encouraged to submit their concept papers and full applications at least 48 hours in advance of the submission deadline.

Concept Paper (Continued)

The concept paper must conform to the content requirements found in the solicitation.

| Section | Page Limit | Description |
|---------------------|-----------------|---|
| Cover Page | 1 page maximum | The cover page should include the project title, points of contact, name of the lab and any partners, the topic under which the proposal is applying, amount of federal funding requested, the expected amount of cost-share to be provided and justification for reduction in cost-share if requested, and optional summary. |
| Project Description | 3 pages maximum | Describe the project in enough detail that it may be evaluated for its innovation, impact, and relevance to the topic objectives. Show the impact that DOE funding and the proposed project would have on the relevant field and application. Describe how the proposed project, if successfully accomplished, would clearly meet the objectives stated in the lab call. Describe how the proposed project will advance goals related to: (1) community engagement and (2) advancing DEIA. Consider how to build long-term sustainability into program design such that relationships and solutions endure beyond the project's conclusion. |
| Addendum | 2 pages maximum | Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed project team. |

Full Application Stage



Full Applications

- If labs receive an encourage determination from DOE at the concept paper stage, they are invited to expand their concept into a full application.
- Full applications are required to be eligible for award(s) under this solicitation. Application materials must be submitted through Exchange.
- Full applications are due June 27, 2023, 3:00 p.m. (ET). DOE will not accept full applications after this deadline
- DOE will not review or consider ineligible full applications. Each full application shall be limited to a single concept. Unrelated concepts shall not be consolidated in a single full application

Please read the lab call in its entirety for all full application requirements, starting on page 31.

Full Application Scoring Criteria

- Criterion 1: Innovation and Impact (20%): How innovative and impactful is the project, assuming the stated outcomes can be achieved as written?

| | | |
|---------------------|-----------|--|
| Innovative | Impactful | Accelerates Speed of Commercialization |
| Long-Term Viability | Scalable | Commercialization Outcomes |
| Differentiated | | |

- Criterion 2: Quality and Likelihood of Completion of Stated Goals (30%): Are the stated goals of the project SMART, and are they likely to be accomplished within the scope of this project? Is there a likelihood of success for the proposed project? Is the proposal likely to result in implementation of recommendations, over and beyond publishing best practices? Is the proposal likely to lead to outcomes that are adopted?

| | | |
|------------|-------------------|------------------------|
| Measurable | Risks mitigated | Reasonable assumptions |
| Validated | Reasonable budget | |

Full Application Scoring Cont.

- Criterion 3: Collaboration and Capability of the Applicant and Holistic Project Team (30%): Is the team well-qualified and positioned to successfully complete this project?

| | | |
|---------------|------------------|---------------|
| Collaboration | Capable | Participation |
| Commitment | Past Performance | Access |

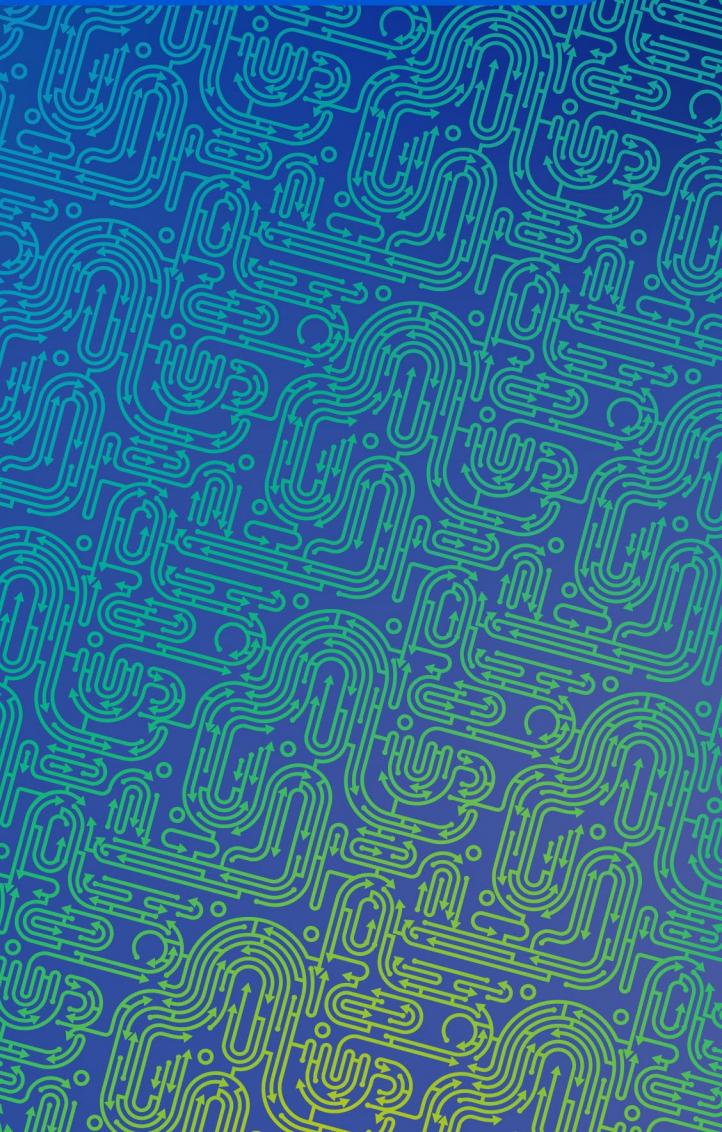
- Criterion 4: Community Benefits Plan: Job Quality and Equity (Community Benefits Plan) (20%)

| | | |
|----------------------------------|----------------------|---|
| Community and Labor Engagement | Community evaluation | Diversity, Equity, Inclusion & Accessibility (DEIA) |
| Equitable - Justice40 Initiative | | |

Proprietary Information

- In general, DOE will use data and other information contained in proposals for evaluation purposes only, unless such information is generally available to the public or is already the property of the government.
- Applicants should not include in their proposals trade secrets or commercial or financial information that is privileged or confidential, unless such information is necessary to convey an understanding of the proposed project or to comply with a requirement in this solicitation.
- Proposals that contain trade secrets or commercial or financial information that is privileged or confidential and that the applicant does not want disclosed to the public or used by the government for any purpose other than proposal evaluation must be marked as described in the solicitation.

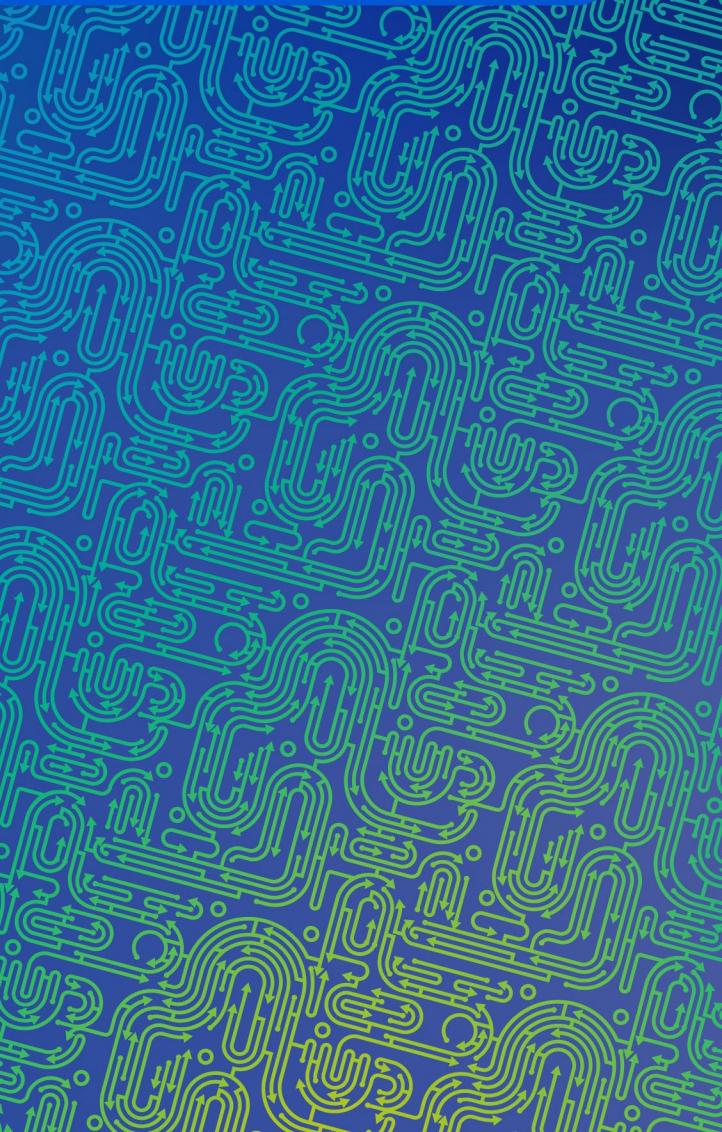
Selection and Notification



Selection and Notification

- **Merit Review and Selection Process:** Selection of winning proposals will be determined based on available funding and input from DOE and external reviewers.
 - DOE carefully considers all information obtained through the selection process. DOE may select or not select a proposal for negotiations. DOE may also postpone a final selection determination on one or more proposals until a later date, subject to availability of funds and other factors. OTT will notify applicants if they are, or are not, selected for award negotiation.
 - DOE will only select proposed projects that support the statutory requirement of the TCF to “promote promising energy technologies for commercial purposes” and advance the goals of BIL provision(s).
- DOE anticipates completing the selection and negotiation process by Q4 FY23 (subject to change). DOE will notify lab leads electronically of selection results. All of DOE’s decisions are final when communicated to applicants.
- Projects selected for award are managed by the DOE facilities in accordance with their requisite policies and procedures. OTT will provide all required project oversight and engagement with TCF project recipients; DOE program offices participating in this lab call are encouraged to engage as well.

Background



Technology Commercialization Fund Overview

- The Department of Energy (DOE) Technology Commercialization Fund (TCF) was established by Congress through the Energy Policy Act of 2005¹ and reauthorized by the Energy Act of 2020² to “promote promising energy technologies for commercial purposes.”
- Within DOE, the Office of Technology Transitions (OTT) is charged with leading policy and programs related to technology commercialization.
- The Base Annual Appropriated TCF uses 0.9 percent of the funding for the Department’s applied energy research, development, demonstration (RD&D) and commercial application³ budget for each fiscal year.
- In November 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA), more commonly known as the Bipartisan Infrastructure Law (BIL), which provided **\$62 billion** in new funding to support a broad array of clean energy activities and programs.
 - As with the Base Annual Appropriated TCF, 0.9% of the RD&D and commercial application funding provided by BIL is allocated to the TCF.

Technology Commercialization Fund

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1. Energy Policy Act of 2005, Public Law 109–58, 109th Cong. (August 8, 2005), *Improved technology transfer of energy technologies*, 42 U.S. Code § 16391 (a).

2. Consolidated Appropriations Act, 2021, Public Law 116–260, 116th Cong. (December 27, 2020), 134 Stat. 2597, Sec. 9003. <https://www.congress.gov/116/plaws/publ260/PLAW-116publ260.pdf>.

3. TCF does not apply to DOE’s budget for deployment activities.

FY23 Bipartisan Infrastructure Law TCF

Under BIL TCF, 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. OTT will achieve this by working collaboratively across relevant DOE program offices, including:

- Office of Clean Energy Demonstrations (OCED)
- Office of Fossil Energy and Carbon Management (FECM)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Office of Manufacturing and Energy Supply Chains (MESC)
- Office of Cybersecurity, Energy Security, and Emergency Response (CESER)

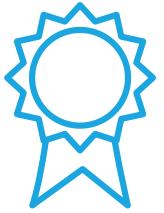
OTT seeks to cultivate a broader innovation network around the BIL provision activities to enable faster replication and scaling of demonstration projects for broader private sector uptake.

OCED Mission

Deliver clean energy technology **demonstration projects at scale** in partnership with the **private sector** to **accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.**"



OCED Mandate



CENTER OF EXCELLENCE

Serve as primary DOE office to deliver full scale clean energy demonstration projects and project management oversight excellence



CLEAN ENERGY & EQUITABLE

Help enable 100% clean electricity by 2035 and net zero emissions by 2050 through an equitable energy transition



FOLLOW ON INVESTMENT

Unlock and scale trillion-dollar clean energy follow on investment from the private sector and other sources of capital



DE-RISK TECHNOLOGY

Maintain risk-based, balanced, and defensible portfolio of investments



ENGAGEMENT & OUTREACH

Leverage private sector and broader energy ecosystem to inform OCED and DOE technology commercialization efforts



Questions?

Specific questions about this lab call should be submitted via e-mail to TCF.BIL@hq.doe.gov.

To ensure fairness across all labs, individual DOE staff cannot answer questions while the lab call remains open.

OTT will post all questions and answers on Exchange.

Questions about Exchange: <https://oced-exchange.energy.gov/FAQ.aspx>