

FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



Department of Energy (DOE) Office of Fossil Energy and Carbon Management (FECM)

BIL - Carbon Utilization Procurement Grants under Bipartisan Infrastructure Law Section 40302

Funding Opportunity Announcement (FOA) Number: DE-FOA-0002829

FOA Type: Initial

Assistance Listing Number: 81.089

FOA Issue Date:	7/24/2023
Submission Deadline for Concept Papers:	A compliant Concept Paper is required and can be submitted anytime during the open application period.
Submission Deadline for Full Applications:	This FOA will remain open until <u>April 30, 2024, 5:00 PM Eastern Time</u> , or until it is amended or succeeded by another issuance, whichever comes first.
Expected Date for DOE Selection Notifications:	Approximately 120 days from submission of Full Application
Expected Timeframe for Award Negotiations:	Approximately 120 days from Notification letter selecting a Full Application for award negotiations

- Applicants must submit a Concept Paper to submit a Full Application. Applicants who do not submit a Concept Paper cannot submit a Full Application. DOE will notify applicants of its

determination to encourage or discourage the submission of a Full Application via a Concept Paper Encourage/Discourage notification. The Concept paper Encourage/Discourage notification will include the Full Application due date.

- To apply to this FOA, applicants must register with and submit application materials through Grants.gov at <https://www.grants.gov/>.
- Applicants must designate primary and backup points-of-contact with whom DOE will communicate to conduct award negotiations. If an application is selected for award negotiations, it is not a commitment to issue an award. It is imperative that the applicant/selectee be responsive during award negotiations and meet negotiation deadlines. Failure to do so may result in cancelation of further award negotiations and rescission of the selection.

Registration Requirements

There are several one-time actions that must be completed before submitting an application in response to this Funding Opportunity Announcement (FOA) (e.g., register with the System for Award Management (SAM), obtain a Unique Entity Identifier (UEI) number, register with Grants.gov, and register with FedConnect.net to submit questions). It is vital that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant's ability to apply to this FOA.

- **SAM** – Applicants must register with SAM at <https://www.sam.gov/> prior to submitting an application in response to this FOA. 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 your organization from applying through Grants.gov. The applicant must maintain an active SAM registration with current information at all times during which it has an active Federal award or application under consideration. More information about SAM registration for applicants is found at: https://www.fsd.gov/gsafsd_sp?id=gsafsd_kb_articles&sys_id=650d493e1bab7c105465eaccac4bcbcb.

NOTE: If clicking the SAM links do not work, please copy and paste the link into your browser.

Due to the high demand of SAM registrations and UEI requests, entity legal business name and address validations are taking longer than expected to process. Entities should start the SAM and UEI registration process as soon as possible. If entities have technical difficulties with the SAM registration or UEI validation process, they should utilize the HELP feature on SAM.gov. SAM.gov will work entity service tickets in the order in which they are received and asks that entities not create multiple service tickets for the same request or technical issue. Additional entity validation resources can be found here: [GSAFSD Tier 0 Knowledge Base - Validating your Entity](#).

- **UEI** – Applicants must obtain an UEI from the SAM to uniquely identify the entity. The UEI is available in the SAM entity registration record.

NOTE: Subawardees/subrecipients at all tiers must also obtain an UEI from the SAM and provide the UEI to the Prime Recipient before the subaward can be issued. Full registration in SAM is not required to obtain an UEI for subaward reporting.

- **Grants.gov** – Applicants must register with Grants.gov and set up your WorkSpace. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately.

- 1) The Authorized Organizational Representative (AOR) must register at:
<https://www.grants.gov/web/grants/register.html>.
- 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>.

In addition:

- *Add a Profile to a Grants.gov Account:* A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the UEI for the organization in the UEI field while adding a profile. For more detailed instructions about creating a profile on Grants.gov, refer to:
<https://www.grants.gov/web/grants/applicants/registration/add-profile.html>.
- *EBiz POC Authorized Profile Roles:* After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the EBiz POC. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been assigned the AOR role.

NOTE: When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The EBiz POC **must** authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; **this step is often missed, and it is crucial for valid and timely submissions.**

For more detailed instructions about creating a profile on Grants.gov, refer to:
<https://www.grants.gov/web/grants/applicants/registration/authorize-roles.html>.

To track your role request, refer to:
<https://www.grants.gov/web/grants/applicants/registration/track-role-status.html>.

Questions relating to the **registration process, system requirements, or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

- **FedConnect.net** – Applicants must register with FedConnect to submit questions.
FedConnect website: <https://www.fedconnect.net/>

See Section IV for Application and Submission Information (including how to create a Workspace).

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I. Funding Opportunity Description

A. Background and Context

The Office of Fossil Energy and Carbon Management (FECM) is issuing this Funding Opportunity Announcement (FOA). Awards made under this FOA will be funded in whole with funds appropriated by the Infrastructure Investment and Jobs Act¹, more commonly known as the Bipartisan Infrastructure Law (BIL).

The BIL is a once-in-a-generation investment in infrastructure, designed to modernize and upgrade American infrastructure to enhance United States competitiveness, drive the creation of good-paying union jobs, tackle the climate crisis, and ensure stronger access to economic, environmental, and other benefits for disadvantaged communities.² The BIL appropriates more than \$62 billion to the Department of Energy (DOE)³ to invest in American manufacturing and workers; expand access to energy efficiency and clean energy; deliver reliable, clean and affordable power to more Americans; and demonstrate and deploy the technologies of tomorrow through clean energy demonstrations.

DOE's BIL investments will support efforts to build a clean and equitable energy economy that achieves a zero-carbon electricity system by 2035, and to put the United States on a path to achieve net-zero emissions economy-wide by no later than 2050⁴ to benefit all Americans.

The BIL will invest up to \$100 million for the Utilization Procurement Grants program (hereafter referred to as UPGrants). The UPGrants program will span a four-year period encompassing fiscal years 2023 through 2026. The UPGrants are demonstration grants that will allow eligible entities to procure and use commercial or industrial products that are derived from anthropogenic carbon oxides.

¹ Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021), <https://www.congress.gov/bill/117th-congress/house-bill/3684>. This FOA uses the more common name "Bipartisan Infrastructure Law (BIL)".

² Pursuant to Executive Order (E.O.) 14008, "Tackling the Climate Crisis at Home and Abroad," January 27, 2021, and the Office of Management and Budget's Interim Justice40 Implementation Guidance M-21-28 and M-23-09, DOE recognizes disadvantaged communities as defined and identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), which can be located at <https://screeningtool.geoplatform.gov/>. DOE's Justice40 Implementation Guidance is located at <https://www.energy.gov/sites/default/files/2022-07/Final%20DOE%20Justice40%20General%20Guidance%20072522.pdf>.

³ U.S. Department of Energy. November 2021. "DOE Fact Sheet: The Bipartisan Infrastructure Deal Will Deliver For American Workers, Families and Usher in the Clean Energy Future." <https://www.energy.gov/articles/doe-fact-sheet-bipartisan-infrastructure-deal-will-deliver-american-workers-families-and-0>

⁴ [EO 14008](#), "Tackling the Climate Crisis at Home and Abroad," January 27, 2021.

Anthropogenic carbon oxides are defined as carbon dioxide and carbon monoxide emissions concentrated through human activity, such as power and industrial operations, as well as legacy emissions already present within the atmosphere that have been concentrated through capture technologies (e.g. direct air capture). These products must demonstrate significant net reductions relative to incumbent products on average in life cycle greenhouse gas emissions, which will be satisfied by critical review of the product's life cycle analysis.

The activities to be funded under this FOA support BIL section 40302 "Carbon Utilization Program" (which amended Section 969A of the Energy Policy Act of 2005) and the broader government-wide approach to strengthen critical adoption, domestic manufacturing, and supply chains for carbon conversion (interchangeable with carbon utilization for this FOA) products will maximize the benefits of the clean energy transition as the nation works to curb the climate crisis, empower workers, and advance environmental justice. BIL section 40302 is focused on awarding grant funding to eligible entities to procure and use commercial or industrial products that (i) use or are derived from anthropogenic carbon oxides; and (ii) demonstrate significant net reductions in life cycle greenhouse gas emissions compared to incumbent technologies, processes, and products.

i. Program Purpose

This FOA supports administration goals to significantly reduce greenhouse gas emissions by demonstrating that several business-as-usual products can be replaced or supplemented with alternatives that are derived from the utilization of anthropogenic carbon oxides. These grants will show that more sustainable alternatives are viable and will support a market through grants to eligible entities to procure and use commercial or industrial carbon conversion products. Public procurement incentives for carbon conversion products can support a nascent market for building materials, fuels, chemicals, and other carbon conversion products that have verified lower life-cycle CO₂ emissions than conventional products. Lifecycle emissions under the UPGrants Program are calculated on a cradle to gate basis, which begins with the utilization process (cradle) and truncates at the point of functional equivalence (gate) with an incumbent product.

States, units of local governments, and public utilities and agencies have significant procurement activities, and federal funding can encourage recipients to institute procurement preferences to advance key policy objectives.⁵ The scope and scale of public procurement makes it one of the most effective mechanisms available to drive emissions reductions. For example, the Federal Buy Clean Initiative is for the first time prioritizing the use of American-made,

⁵ Eric Dunford, Robert Nivern, Christopher Neidl (2021). *Deploying Low Carbon Public Procurement to Accelerate Carbon Removal*. Front. Clim. 3:686787. doi: 10.3389/fclim.2021.686787.

lower-carbon construction materials in Federal procurement and Federally-funded projects. Furthermore, the Federal-State Buy Clean Partnership is engaging a dozen states who are committing to collaborate with each other and the Federal government to enhance adoption, implementation, and harmonization of Buy Clean policies. Executive Order policies prioritizing sustainable procurement (E.O. 14030 and 14057) demonstrate that public procurement dollars can work to achieve net-zero emissions while supporting environmental benefits and increasing the sustainability of supply chains .

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining,^{6, 7, 8} and in alignment with BIL sections 40302, this FOA and any related activities will seek to encourage meaningful engagement and participation of workforce organizations, including labor unions, as well as underserved communities and underrepresented groups, including consultation with Tribal Nations.⁹ Consistent with Executive Order (E.O.) 14008,¹⁰ this FOA is designed to help meet the goal that 40% of the overall benefits from the Administration's investments in clean energy and climate solutions flow to disadvantaged communities, as defined by the Climate and Economic Justice Screening Tool (CEJST) pursuant to E.O. 14008 and to drive the creation of accessible good-paying jobs with the free and fair chance for workers to join a union.

ii. Technology Space and Strategic Goals

This FOA seeks applications to address a programmatic desire to show that carbon conversion products can complement or replace incumbent products while simultaneously reducing greenhouse gas emissions. Funded activities will support eligible entities that are pursuing greenhouse gas emissions reductions; provide a ready market for manufacturers of carbon conversion products; and provide data concerning the technical viability, customer experience, and environmental benefits of these products. Detailed technical descriptions of the specific Topic Area is provided in the following section.

⁶ [EO 13985](#), "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government," January 20, 2021. EO 14091 "Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (February 16, 2023).

⁷ [EO 14025](#), "Worker Organizing and Empowerment," April 26, 2021.

⁸ [EO 14052](#), "Implementation of the Infrastructure Investment and Jobs Act," November 18, 2021.

⁹ [EO 13175](#), November 6, 2000 "Consultation and Coordination With Indian Tribal Governments" charges all executive departments and agencies with engaging in regular, meaningful, and robust consultation with Tribal officials in the development of Federal policies that have Tribal implications. [Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships | The White House](#).

¹⁰ [EO 14008](#), "Tackling the Climate Crisis at Home and Abroad," January 27, 2021.

B. Topic Area

i. Topic Area 1 – “Demonstration Grants Supporting the Procurement and Use of Carbon Conversion Products Derived from Anthropogenic Carbon Oxide Emissions”

The UPGrants FOA is a multi-year effort to award demonstration grants to eligible entities so that they may procure and use commercial or industrial products derived from anthropogenic carbon oxides. The demonstration grants will support the procurement and use of commercial or industrial products that both:

1. Use or are derived from anthropogenic carbon oxides; and
2. Demonstrate significant net reductions in life cycle greenhouse gas emissions compared to incumbent technologies, processes, and products.

Concerning the first item, anthropogenic carbon oxides include carbon dioxide and carbon monoxide emissions concentrated through human activity, such as power and industrial operations, as well as legacy emissions already present within the atmosphere that have been concentrated through capture technologies. Eligible commercial or industrial products could include, but are not limited to, animal and fish food, carbon cured concrete, synthetic aggregates, etc. Concerning the second item, significant net reductions in greenhouse gas emissions must be demonstrated by a life cycle analysis (LCA) that compares the product derived from anthropogenic carbon oxides to an incumbent product. Obtaining a validated LCA is not the responsibility of the eligible entity, it is the responsibility of the carbon conversion product manufacturer (vendor) from whom the eligible entity intends to procure products. DOE’s National Energy Technology Laboratory (NETL) maintains a website where carbon conversion product manufacturers can submit their product’s LCA for critical review (<https://netl.doe.gov/upgrants>). If the LCA passes critical review, the vendor will be included on the list of UPGrants vendors (<https://netl.doe.gov/upgrants/vendors>). A letter of commitment and a quote¹¹ from an UPGrants listed vendor are required and must be included with the eligible entity’s application. The letter of commitment must be signed by a person authorized to commit resources on behalf of the organization. Vendors owned by, controlled by, or subject to the jurisdiction or direction of a government of a country of risk¹² are ineligible to participate.

¹¹ See 2 CFR Part 200, Subpart D, Procurement Standards.

¹² DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

Applicants will only propose costs associated with execution of the grant, and the procurement and evaluation of the commercial or industrial product. Costs associated with product installation, product related engineering, and product research and development activities, are not considered allowable and responsive to the FOA. Commercial or industrial products procured under the grant must not cost more than twice as much as an equivalent incumbent product (as shown by including quotes for the carbon conversion product and a minimum of two quotes from equivalent incumbent products. The baseline cost is the highest quote from equivalent incumbent products.).

Applications should include a plan to procure and use the commercial or industrial product within twenty-four months from the award date. The application should describe the end use for the carbon conversion product in the context of the applicant's operations. This description should include a discussion of the incumbent product that will be displaced by the carbon conversion product. The application should also describe how the carbon conversion product's technical performance will be evaluated, and what level of performance is considered acceptable.

Applications should include a discussion on community benefits (additional details are provided in Section I.D). All work for projects selected under this FOA must be performed in the United States. See Section IV.I.iii. and Appendix B.

Vendors are limited in the total DOE funding that they may receive over the course of the UPGrants program, and applications that, if selected, would cause the vendor to exceed their cap value will be considered non-responsive. The total DOE funding received to date and the cap value of vendors will be tracked on the UPGrants website (<https://netl.doe.gov/upgrants/vendors>).

Initially, if a vendor's LCA demonstrates that their product, in comparison to the incumbent, reduces greenhouse gas emissions by at least 10% from the incumbent baseline then that vendor will be eligible to receive up to \$3MM in DOE funding. If a vendor has received over 80% of their \$3MM cap in DOE funding, they may resubmit their LCA with additional operational data for an increase in the vendor funding cap. If the vendor's resubmitted LCA demonstrates that their product reduces greenhouse gas emissions by at least 25% from the incumbent baseline, then that vendor will be eligible to receive up to an additional \$5MM in DOE funding. DOE may increase the total DOE funding a vendor will be eligible to receive for carbon conversion products that demonstrate even greater reductions in greenhouse gas emissions. Vendors may only have one product active in the UPGrants Program at a time.

Technical Elements that Must be Included in Applications

Applications must describe how the commercial or industrial product will be utilized and evaluated. The eligible entity should describe the end use for the carbon utilization product in the context of their operations. This should include a discussion of what incumbent product will be displaced by the carbon utilization product. The application should also describe how the carbon utilization product performance will be evaluated, and what level of performance is considered acceptable.

Applications are required to include a letter of commitment from a vendor. The letter of commitment should document the vendor's commitment to provide a commercial or industrial product to the applicant, attest that the commercial or industrial product uses or is derived from anthropogenic carbon oxides, state that the vendor has an LCA that has passed critical review by NETL, and attest that the vendor is not owned by, controlled by, or subject to the jurisdiction or direction of a government of a country of risk. The letter of commitment must be signed by a person authorized to commit resources on behalf of the vendor. A list of vendors with critically reviewed LCAs is maintained on NETL's website: (<https://netl.doe.gov/upgrants/vendors>).

Applications are required to include multiple quotes for concept commercial or industrial products.¹³ A minimum of three quotes are required: one from the vendor for the commercial or industrial product derived from anthropogenic carbon oxides, and two for equivalent incumbent products. The three quotes should be as comparable as practicable: for an interchangeable product, in similar quantity, delivered to similar locations, etc. All quotes should be provided as Freight on Board destination and should contain expiration dates and signatures.

Applications should describe, if applicable, how the procurement and use of the commercial or industrial product supports their sustainable procurement objectives. The eligible entity should describe the extent to which the procurement and use of the product would assist in meeting any sustainable procurement targets or objectives. This could include, but is not limited to, voluntary targets, organizational goals, state laws, or any other mandates that incentivize the procurement and use of more sustainable products.

Applications should include eligible entity justification. Entities applying as prime recipients for this FOA must certify they classify as either a State, unit of local government, and/or a public utility or agency. Applicants shall do this by completing and certifying the Project Description and Assurances Document (PDAD) in the format provided in Appendix H of the FOA. The PDAD must be

¹³ *Ibid.*

signed by the Authorized Organizational Representative (AOR) on behalf of the organization and be submitted in PDF format with the full application.

All work for projects selected under this FOA must be performed in the United States. See Section IV.I.iii. and Appendix B.

ii. Teaming Partner List

DOE is compiling a “Teaming Partner List” to facilitate the formation of new project teams for this FOA. 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 FedConnect (<https://www.fedconnect.net/>) website. The Teaming Partner List will be regularly updated to reflect new teaming partners who provide their organization’s information. Applicants must register with FedConnect to have access to the Teaming Partner List (and any updates to it) in FedConnect.

SUBMISSION INSTRUCTIONS: Any organization that would like to be included on this list should submit the following information: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities. Interested parties should complete the Excel file titled DOE-FOA-0002829 Teaming Partner List provided as an attachment to this announcement and email it to FOA2829@netl.doe.gov with the subject line “Teaming Partner Information.”

DISCLAIMER: By submitting a request to be included on the Teaming Partner List, the requesting organization consents to the publication of the above-referenced information. By facilitating the Teaming Partner List, DOE is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations that are self-identifying themselves for placement on this Teaming Partner List. DOE will not pay for the provision of any information, nor will it compensate any applicants or requesting organizations for the development of such information.

C. Applications Specifically Not of Interest

The following types of applications will be deemed nonresponsive and will not be reviewed or considered (See Section III.D. of the FOA):

- Applications lacking a letter of commitment or quote from a vendor on the UPGGrants vendor list (<https://netl.doe.gov/upgrants/vendors>).

- Applications to procure and use products other than commercial or industrial products (including but not limited to CO₂ derived gemstones, perfumes, spirits, etc.)
- Applications to procure and use commercial or industrial products that are not derived from anthropogenic carbon oxides.
- Applications that propose using CO₂ as a working fluid (including, but not limited to: enhanced oil recovery, beverage carbonation, fire suppression, etc.)
- Applications for research and development having a main goal of discovery and or fundamental knowledge generation.
- Applications for the research and development of carbon conversion products.
- Applications to procure and use products that are priced more than twice as much as incumbent products.
- Applications where selection would cause the vendor to exceed their aggregate funding limit under this FOA (\$3M DOE share for products demonstrating at least 10% reduction in life cycle greenhouse gas emissions, and at a later time an additional \$5M for products demonstrating at least 25% reduction in life cycle greenhouse gas emissions).
- Applications that fall outside the technical parameters specified in Sections I.A. and I.B. of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Applications that propose procurement and use of incumbent products or products that are created through well-established industrial processes.

D. Community Benefits Discussion: Job Quality and Equity

To support the goal of building a clean and equitable energy economy, the BIL-funded projects are expected to (1) support meaningful community and labor engagement; (2) invest in America's workforce; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative).¹⁴ To ensure these goals are met, applications must include a Community Benefits Discussion that describes how the proposed project would incorporate the four objectives stated above.

The development and deployment of all carbon management technology, extending to the procurement of carbon conversion products, will be more successful if community benefits and partnership development—including equity, justice, and quality job principles—are integrated into funding opportunities. Since UPGrants differ substantially from previous funding opportunities, the requirements for what applicants should include in their Community Benefits Discussion are described below:

¹⁴ [See](#) footnote 2.

- A brief summary of how the commercial or industrial product will be used, including but not limited to, the purpose and timeframe for which the product will be used.
- A comprehensive assessment of the community impacts of the product's intended use, including the potential benefits and negative impacts of using the carbon conversion product. A comprehensive assessment should also consider both the use case of incumbent products as well as the case of not procuring and using the product at all. Reference the process chapter in "Guidance for Creating a Community Benefits Plan for Regional Direct Air Capture Hubs", pages 39 to 51 for guiding principles.¹⁵
- Justice40 considerations: Bipartisan Infrastructure Law programs are expected to contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative).¹⁶ Applicant narratives should address the following requirements:
 - Identify whether the eligible entity submitting the application (the prime) is an eligible entity within the defined disadvantaged communities;
 - Determine if the use of any carbon conversion product may occur in or potentially impact disadvantaged communities;
 - Provide details on the scale, scope, and magnitude of the potential product use and impact; and
 - Describe any potential of the project to support workforce development or workforce opportunities for underrepresented groups and members of disadvantaged communities.

E. Authorizing Statutes

The programmatic authorizing statutes are:

- Public Law (PL) 95-91, DOE Organization Act, as amended;
- PL 109-58, Energy Policy Act of 2005 Section 969A, as amended, including by PL 117-58, Infrastructure Investment and Jobs Act (IIJA), Section 40302 (codified at 42 U.S.C. § 16298a).

Awards made under this announcement will fall under the purview of 2 Code of Federal Regulation (CFR) Part 200 as amended by 2 CFR Part 910.

¹⁵ <https://www.energy.gov/media/287457>

¹⁶See footnote 2.

F. Notice of Bipartisan Infrastructure Law-Specific Requirements

Be advised that special terms and conditions apply to projects funded by the BIL relating to:

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;
- Requiring all of the iron, steel, manufactured goods, and construction materials used in the infrastructure activities of applicable projects are produced in the United States;
- Ensuring laborers and mechanics employed by contractors or subcontractors on BIL-funded projects are paid wages equivalent to prevailing wages on similar projects in the area;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

Recipients of funding appropriated by the BIL must comply with requirements of all applicable Federal, State, and local laws, regulations, DOE policy and guidance, and instructions in this FOA. Recipients must flow down the requirements to subrecipients to ensure the recipient's compliance with the requirements.

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to provide up to \$100M of federal funding for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 50 awards per year in fiscal years 2023 – 2026; that is 200 awards in total under this FOA. DOE may issue one, multiple, or no awards. Individual awards may vary between \$50K and \$500K.

Topic Area Number	Topic Area Title	Fiscal Year	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual Award (Fed Share)	Anticipated Maximum Award Size for Any One Individual Award (Fed Share)	Approximate Total Federal Funding Available for All Awards	Anticipated Period of Performance (months)
1	“Demonstration Grants Supporting the Procurement and Use of Carbon Conversion Products Derived from Anthropogenic Carbon Oxide Emissions”	2023/2024	100	\$50K	\$500K	\$50M	12-24 months
		2025	50	\$50K	\$500K	\$25M	12-24 months
		2026	50	\$50K	\$500K	\$25M	12-24 months

DOE may establish more than one budget period for each award and fund only the initial budget period(s). Funding for all budget periods, including the initial budget period, is not guaranteed.

ii. Period of Performance

DOE anticipates making awards that are 12-24 months in duration and are comprised of one co-extensive budget and project period.

iii. New Applications Only

DOE will accept only new applications under this FOA. DOE will not consider applications for renewals of existing DOE-funded awards through this FOA.

B. DOE Funding Agreements

Through grants and other similar agreements, DOE provides financial and other support to projects that have the potential to realize the FOA objectives. DOE

does not use such agreements to acquire property or services for the direct benefit or use of the United States government.

i. Grants

DOE has the authority to provide financial support to prime recipients through grants. DOE anticipates funding projects selected under this FOA through grants.

III. Eligibility Information

To be considered for substantive evaluation, an applicant's submission must meet the criteria set forth below. If the application does not meet these eligibility requirements, it will be considered ineligible and removed from further evaluation.

A. Eligible Applicants

i. Restricted Eligibility

In accordance with 2 CFR 910.126, Competition, eligibility for award as a prime recipient is restricted to the following:

- a State¹⁷;
- a unit of local government; or
- a public utility or agency.¹⁸

DOE is restricting eligibility as required by BIL, Section 40302 (which amended Section 969A of EPOA 2005).

ii. Individuals

U.S. citizens and lawful permanent residents are eligible to apply for funding as a subrecipient.

iii. Domestic Entities

The proposed prime recipient and subrecipient(s) must be domestic entities. The following types of domestic entities are eligible to participate as a subrecipient of this FOA:

1. Institutions of higher education;
2. For-profit entities;
3. Non-profit entities; and
4. State and local governmental entities, and Tribal Nations.

To qualify as a domestic entity, the entity must be organized, chartered, or incorporated (or otherwise formed) under the laws of a particular state or

¹⁷"State means any state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any agency or instrumentality thereof exclusive of local governments." 2 CFR 200.1.

¹⁸ Where a public utility functions as both a government corporation and a public utility, it could be considered eligible under this provision. The entity would need to satisfy the cost-share requirement from non-Federal sources pursuant to EPOA 2005, § 988.

territory of the United States; have majority domestic ownership and control; and have a physical place of business in the United States.

DOE/National Nuclear Security Administration (NNSA) Federally Funded Research and Development Centers (FFRDCs) are eligible to apply for funding as a subrecipient but are not eligible to apply as a prime recipient. **NETL is not eligible for award under this announcement and may not be proposed as a subrecipient on another entity's application. An application that includes NETL as a prime recipient or subrecipient will be considered non-responsive.**

Non-DOE/NNSA FFRDCs are eligible to participate as a subrecipient but are not eligible to apply as a prime recipient.

Federal agencies and instrumentalities (other than DOE) are eligible to participate as a subrecipient but are not eligible to apply as a prime recipient.

Entities banned from doing business with the United States government such as entities debarred, suspended, or otherwise excluded from or ineligible for participating in Federal programs are not eligible.

Nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, are **not** eligible to apply for funding.

iv. Foreign Entities

In limited circumstances, DOE may approve a waiver to allow a foreign entity to participate as a subrecipient. If the applicant seeks to include a foreign entity as a subrecipient, the applicant must submit a separate explicit written waiver request in the Full Application for each proposed foreign subrecipient.

Appendix B lists the information that must be included in a foreign entity waiver request. The applicant does not have the right to appeal DOE's decision concerning a waiver request.

v. Incorporated Consortia

Domestic incorporated consortia are eligible to participate as a subrecipient. For consortia incorporated (or otherwise formed) under the laws of a state or territory of the United States, please refer to "Domestic Entities" above. For consortia incorporated (or otherwise formed) in a foreign country, please refer to the requirements in "Foreign Entities" above.

Each consortium must have an internal governance structure and a written set of internal rules. Upon request, the consortium must provide a written description

of its internal governance structure and its internal rules to the DOE Contracting Officer.

If the consortium includes foreign members, the applicant must submit a separate explicit written waiver request in the Full Application for each foreign member. See Appendix B.

B. Cost Sharing

Applicants are bound by the cost share proposed in their Full Applications if selected for award negotiations.

Cost Share 50%

The cost share must be at least 50% of the total project costs¹⁹ for demonstration projects.²⁰ The cost share must come from non-federal sources unless otherwise allowed by law.

To assist applicants in calculating proper cost share amounts, DOE has included a cost share information sheet and sample cost share calculation as Appendix A to this FOA.

i. Legal Responsibility

Although the cost share requirement applies to the project as a whole, including work performed by members of the project team other than the prime recipient, the prime recipient is legally responsible for paying the entire cost share. If the funding agreement is terminated prior to the end of the project period, the prime recipient is required to contribute at least the cost share percentage of total expenditures incurred through the date of termination.

The prime recipient is solely responsible for managing cost share contributions by the project team and enforcing cost share obligation assumed by project team members in subawards or related agreements.

ii. Cost Share Allocation

Each project team is free to determine how best to allocate the cost share requirement among the team members. The amount contributed by individual project team members may vary, as long as the cost share requirement for the project as a whole is met.

¹⁹ Total project costs is the sum of the government share, including FFRDC costs if applicable, and the recipient share of project costs.

²⁰ EPC Act Section 2005, Sec. 988. *See also* 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

iii. Cost Share Types and Allowability

Every cost share contribution must be allowable under the applicable federal cost principles, as described in Section IV.I.i. of the FOA. In addition, cost share must be verifiable upon submission of the Full Application. Cost share may be provided in the form of cash or cash equivalents, or in-kind contributions. Cost share must come from non-federal sources (unless otherwise allowed by law), such as project participants, state or local governments, or other third-party financing. DOE Loan Guarantee, cannot be leveraged by applicants to provide the required cost share or otherwise support the same scope that is proposed under a project.

Cost share may be provided by the prime recipient, subrecipients, or third parties (entities that do not have a role in performing the scope of work). Vendors/contractors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Cash contributions include, but are not limited to: personnel costs, fringe costs, supply and equipment costs, indirect costs and other direct costs.

In-kind contributions are those where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. Allowable in-kind contributions include but are not limited to: the donation of volunteer time or the donation of space or use of equipment.

Project teams may use funding or property received from state or local governments to meet the cost share requirement, so long as the federal government did not provide the funding to the state or local government (unless otherwise authorized by law).

The recipient may not use the following sources to meet its cost share obligations including, but not limited to:

- Revenues or royalties from the prospective operation of an activity beyond the project period;
- Proceeds from the prospective sale of an asset of an activity;
- Federal funding or property (e.g., federal grants, equipment owned by the federal government); or
- Expenditures that were reimbursed under a separate federal program.

Project teams may not use the same cash or in-kind contributions to meet cost share requirements for more than one project or program.

Cost share contributions must be specified in the project budget, verifiable from the prime recipient's records, and necessary and reasonable for proper and efficient accomplishment of the project. As all sources of cost share are considered part of total project cost, the cost share dollars will be scrutinized under the same federal regulations as federal dollars to the project. Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred.

Applicants are encouraged to refer to 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

iv. Cost Share Contributions by FFRDCs

Because FFRDCs are funded by the federal government, costs incurred by FFRDCs generally may not be used to meet the cost share requirement. FFRDCs may contribute cost share only if the contributions are paid directly from the contractor's Management Fee or another non-federal source.

v. Cost Share Verification

Applicants are required to provide written assurance of their proposed cost share contributions in their Full Applications.

Upon selection for award negotiations, applicants are required to provide additional information and documentation regarding their cost share contributions. Please refer to Appendix A of the FOA.

C. Compliance Criteria

All Concept Papers and Full Applications must meet all compliance criteria listed below or they will be considered noncompliant. DOE will not review or consider noncompliant submissions. DOE will not extend the submission deadline for applicants that fail to submit Full Applications by the applicable deadline due to server/connection congestion.

i. Concept Papers

Concept Papers are deemed compliant if:

- The Concept Paper complies with the content and form requirements in Section IV.C. of the FOA; and
- The applicant successfully emailed all required documents to FOA2829@netl.doe.gov.

ii. Full Applications

Full Applications are deemed compliant if:

- The Full Application complies with the content and form requirements in Section IV.D. of the FOA; and
- The applicant successfully uploaded all required documents and clicked the “Submit” button in Grants.gov by the deadline stated in the Concept Paper notification Encourage/Discourage notification letter.

D. Responsiveness Criteria

All “Applications Specifically Not of Interest,” as described in Section I.C. of the FOA, are deemed nonresponsive and are not reviewed or considered.

E. Other Eligibility Requirements

i. Requirements for DOE/NNSA and non-DOE/NNSA FFRDCs Included as a Subrecipient

DOE/NNSA and non-DOE/NNSA FFRDCs may be proposed as a subrecipient on another entity’s application subject to the following guidelines:

i. Authorization for non-DOE/NNSA FFRDCs

The federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with its authority under its award.

ii. Authorization for DOE/NNSA FFRDCs

The cognizant Contracting Officer for the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization:

Authorization is granted for the Laboratory to participate in the proposed project. The work proposed for the Laboratory is consistent with or complementary to the missions of the Laboratory and will not adversely impact execution of the DOE assigned programs at the Laboratory.

iii. Value/Funding

DOE will NOT fund DOE/NNSA FFRDCs participating as a subrecipient through the DOE field work authorization process. DOE will NOT fund non-DOE/NNSA FFRDCs through an interagency agreement with the sponsoring agency. Therefore, the prime recipient and FFRDC are responsible for entering into an appropriate subaward that will govern, among other things, the funding of the FFRDC portion of the work from the prime recipient under its DOE

award. Such an agreement must be entered into before any project work begins.

iv. *Cost Share*

The applicant should prepare the budgets utilizing rates appropriate for funding the FFRDCs through subawards. The applicant's cost share requirement will be based on the total cost of the project, including the applicant's, the subrecipient's, and the FFRDC's portions of the project.

v. *Responsibility*

The prime recipient will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues including, but not limited to disputes and claims arising out of any agreement between the prime recipient and the FFRDC.

vi. *Limit on FFRDC Effort*

The scope of work to be performed by the FFRDC may not be more significant than the scope of work to be performed by the applicant.

F. Limitation on Number of Concept Papers and Full Applications Eligible for Review

An entity may submit more than one Concept Paper and Full Application to this FOA, provided that a compliant Concept Paper was submitted for each Full Application.

G. Questions Regarding Eligibility

DOE will not make eligibility determinations for potential applicants prior to the date on which applications to this FOA must be submitted. The decision whether to submit an application in response to this FOA lies solely with the applicant.

IV. Application and Submission Information

A. Application Process

The application process includes two phases: a Concept Paper phase and a Full Application phase. **Only applicants who have submitted a compliant Concept Paper will be eligible to submit a Full Application.**

All submissions must conform to the form and content requirements described below, including maximum page lengths.

- Each must be submitted in Adobe PDF format unless stated otherwise;
- Each must be written in English;
- All pages must be formatted to fit on 8.5 x 11-inch paper with margins not less than one inch on every side. Use Calibri typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be 10-point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement;
- Page numbers must be included in the footer of every page; and
- Each submission must not exceed the specified maximum page limit, including cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.

B. Application Forms

The application forms and instructions are available on Grants.gov at <https://www.grants.gov/>.

Note: The maximum file size that can be uploaded to the Grants.gov website is 10MB. Files in excess of 10MB cannot be uploaded, and hence cannot be submitted for review. If a file exceeds 10MB but is still within the maximum page limit specified in the FOA, it must be broken into parts and denoted to that effect. For example:

TechnicalVolume_Part_1
TechnicalVolume_Part_2

DOE will not accept late submissions that resulted from technical difficulties due to uploading files that exceed 10MB.

C. Content and Form of the Concept Paper

Each Concept Paper must be limited to a single use of an eligible product. The Concept Paper must conform to the requirements listed below, including the stated page limits. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.

Applicants should include the Concept Paper Title and Applicant name in the subject line of the email that includes the concept paper submission. Applicants should include page numbers in the footer of each page.

Section	Page Limit	File Format	Description
Cover Page	1 page maximum	PDF	The cover page should include the project title, the Lead Project Manager (LPM), business points of contact (if applicable), names of all team member organizations, the project location(s), the points of contact of the vendor(s) who provide(s) the products, and any statements regarding confidentiality.
Procurement and Use Plan	4 pages maximum	PDF	Applicants are required to describe succinctly: <ul style="list-style-type: none">• How the commercial or industrial product will be used, including but not limited to: the purpose for which the product will be used, the location(s) where the product will be used, and the timeframe in which the product will be used;• The plan to evaluate the carbon conversion product(s) performance;• The total volume and value of product that could be displaced if all incumbent product used by the applicant were displaced by the equivalent carbon conversion product;• The potential impact that the carbon conversion products would have on the relevant field and application;• The key technical risks/issues associated with the procurement and use of carbon conversion product(s); and• The impact that DOE funding would have on the proposed project.
Community Benefits Discussion	1 page maximum	PDF	Applicants are required to describe succinctly the approach to be taken with the Community Benefits Discussion, addressing the core elements: <ul style="list-style-type: none">• A brief summary of how the commercial or industrial product will be used;

			<ul style="list-style-type: none"> • An assessment of the community impacts of the product's intended use, including the potential benefits or negative impacts of using the carbon conversion product; • Justice40 considerations: Bipartisan Infrastructure Law programs are expected to contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative); • Identify whether the eligible entity submitting the application (the prime) is an eligible entity within the defined disadvantaged communities; and • Determine if the use of any carbon conversion product may occur in, and/or potentially impact, disadvantaged communities. • Describe any potential of the project to support workforce development or workforce opportunities for underrepresented groups and members of disadvantaged communities.
Technical and Management Capabilities	1 page maximum	PDF	<p>Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including:</p> <ul style="list-style-type: none"> • Whether the Lead Project Manager (LPM) and Project Team have the skill and expertise needed to successfully execute the project plan; • Whether the LPM has prior experience which demonstrates an ability to perform tasks of similar risk and complexity; • Whether the LPM has worked together with its teaming partners on prior projects or programs; and • Whether the project team has adequate access to equipment and facilities necessary to accomplish the effort and/or clearly explain how it intends to obtain access to the necessary equipment and facilities.
Addendum	10 page maximum		<p>Applicants may provide documents that can support the application. For example:</p> <ul style="list-style-type: none"> • Resumes for LPM and key personnel; and • Graphs, charts, or other data to supplement their Procurement and Use Plan.

DOE makes an independent assessment of each Concept Paper based on the criteria in Section V. of the FOA. DOE will encourage a subset of applicants to

submit Full Applications. Other applicants will be discouraged from submitting a Full Application. See Section VI.A.

D. Content and Form of the Full Application

Applicants must complete the following application forms found on the Grants.gov website at <https://www.grants.gov/>.

Applicants will have approximately 45 days from receipt of the Concept Paper Encourage/Discourage notification to prepare and submit a Full Application. The Concept paper Encourage/Discourage notification will include the exact full application due date.

i. Full Application Content Requirements

Each Full Application must be limited to a single concept. Full Applications must conform to the following requirements and must not exceed the stated page limits.

Component	File Format	Page Limit	File Name
SF-424	Form	N/A	N/A
Project/Performance Site Location(s)	Form	N/A	N/A
Technical Volume	PDF	20	TechnicalVolume.pdf
Resumes	PDF	2 pages each	Resumes.pdf
Letters of Commitment	PDF	1 page each	LOC.pdf
Vendor Commitment Letter	PDF	1 page each	VCL.pdf
Vendor Product Quote	PDF	1 page each	VPQ.pdf
Two Incumbent Product Quotes	PDF	1 page each	IPQ.pdf
Community Partnership Documentation	PDF	10	PartnershipDocs.pdf
Budget Justification Workbook	MS Excel	N/A	Budget_Justification.xls or.xlsx
Summary for Public Release	PDF	1	Summary.pdf
Subrecipient Budget Justification (if applicable)	MS Excel	N/A	Subrecipient_Budget_Justification.xls or.xlsx
Authorization for non-DOE/NNSA or DOE/NNSA FFRDCs (if applicable)	PDF	N/A	FFRDCAuth.pdf
SF-LLL: Disclosure of Lobbying Activities	Form	N/A	N/A
Waiver Requests (if applicable)	PDF	N/A	FN_Waiver.pdf

Community Benefits Discussion: Job Quality and Equity	PDF	3	CBenefits.pdf
Locations of Work	PDF	N/A	LOW.xls or xlsx
Potentially Duplicative Funding Notice (if applicable)	PDF	N/A	PDFN.pdf
Environmental Questionnaire	PDF	N/A	Env.pdf
Project Management Plan (PMP)	PDF	10	PMP.pdf
Project Description and Assurances Document (PDAD)	PDF	N/A	PDAD.pdf

Note: The maximum file size that can be uploaded to the Grants.gov website is 10MB.

DOE provides detailed guidance on the content and form of each component below.

ii. SF-424: Application for Federal Assistance

Complete the SF 424 form first to populate data in other forms. Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at <https://www.energy.gov/management/financial-assistance-forms-and-information-applicants-and-recipients>, under Certifications and Assurances.

Note: The dates and dollar amounts on the SF-424 are for the complete project period of performance and not just the first project year, first phase or other subset of the project period of performance.

iii. Project/Performance Site Location(s)

Indicate the primary site where the work will be performed by the prime recipient or subrecipient(s). If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2-digit state code followed by a dash and a 3-digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

iv. Technical Volume

The Technical Volume must conform to the following content and form requirements. This volume must address the technical review criteria as

discussed in Section V. of the FOA. Save the Technical Volume in a single PDF file using the following convention for the title “TechnicalVolume.pdf” and click on "Add Mandatory Other Attachment" to attach.

Applicants must provide sufficient citations and references to the primary research literature to justify the claims and approaches made in the Technical Volume. However, DOE and reviewers are under no obligation to review cited sources.

The Technical Volume to the Full Application may not be more than 20 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all the information in the table below. The applicant should consider the weighting of each of the technical review criterion (see Section V. of the FOA) when preparing the Technical Volume.

The Technical Volume should clearly describe and expand upon information provided in the Concept Paper.

Technical Volume Content Requirements	
SECTION/PAGE LIMIT	DESCRIPTION
Cover Page (No more than 1 page)	The cover page should include the project title, the specific FOA Topic Area being addressed (if applicable), both the technical and business points of contact, names of all team member organizations, names of project managers, senior/key personnel and their organizations, the project location(s), and any statements regarding confidentiality.
Project Overview (Approximately 10% of the Technical Volume)	<p>The Project Overview should contain the following information:</p> <ul style="list-style-type: none"> • Background: The applicant should discuss the background of their organization, including the history, successes, and current research and development status (i.e., the technical baseline) relevant to the technical topic being addressed in the Full Application. • Project Goal: The applicant should explicitly identify the targeted improvements to the baseline technology and the critical success factors in achieving that goal, including the ways in which the proposed project location and related infrastructure, skilled workforce, community benefits, etc. will contribute to the success of the overall project. • DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to achieve the project objectives.

<p>Plan to Procure and Use Commercial or Industrial Products (Approximately 40% of the Technical Volume)</p>	<p>The Plan to Procure and Use Commercial or Industrial Products should contain the following information:</p> <ul style="list-style-type: none"> • Description of how the commercial or industrial product will be used, including but not limited to: the purpose for which the product will be used, the location(s) where the product will be used, and the timeframe in which the product will be used. • A thorough plan to evaluate the commercial or industrial product performance, including but not limited to: what is the acceptable performance level (including a comparison to the incumbent product), how will the product performance be evaluated, and how will differences in handling/installation/use be identified and characterized. • Discussion of the total volume and value of product that could be displaced if all incumbent product used by the applicant were displaced by an equivalent carbon conversion product. • Description of how the procurement and use of the commercial or industrial product meets the stated objectives of the FOA. • Discussion surrounding the feasibility of the proposed procurement and use of the commercial or industrial product. • If the carbon conversion product is not a one-for-one replacement of the incumbent product; the adequacy and feasibility of the applicant's plan to account for differences between the incumbent product and the carbon conversion product. • Identification of the key technical risks/issues associated with the procurement and use of carbon conversion product(s). • Statement explaining the impact that DOE funding would have on the proposed project. • Description of the plan to procure and use the commercial or industrial product within twenty-four months from the award date. The application should describe the end use for the carbon conversion product in the context of the applicant's operations. • A Community Benefits Discussion that describes how the project will support community benefits including job quality and equity. This should include a description of the overall approach to community benefits; community and labor engagement; job quality; diversity, equity, inclusion, and accessibility; and Justice40. • Inclusion of a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. See Appendix C for applicable definitions and other information to inform this statement.
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<p>Statement of Project Objectives (SOPO) (Approximately 30% of the Technical Volume)</p>	<p>The SOPO should include a summary of the Project Objectives, Technical Scope, Tasks, and Deliverables. The SOPO should contain the following information:</p> <ul style="list-style-type: none"> • Project Objectives: The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes. • Technical Scope Summary: Applications must describe how the commercial or industrial product will be utilized and evaluated. The eligible entity should describe the end use for the carbon conversion product in the context of their operations. This should include a discussion of what incumbent product will be displaced by the carbon conversion product. The application should also describe how the carbon conversion product performance will be evaluated, and what level of performance is considered acceptable. • Applicability: Applications should describe, if applicable, how the procurement and use of the carbon conversion product supports their sustainable procurement objectives. The eligible entity should describe the extent to which the procurement and use of the product would assist in meeting any sustainable procurement targets or objectives. This could include but is not limited to voluntary targets, organizational goals, state laws, or any other mandates that incentivize the procurement and use of more sustainable products. • Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask duration, and milestones. • Within the first 2 pages of the SOPO, include a short statement on whether the project will involve construction, alteration, and/or repair of infrastructure in the United States. See Appendix C for applicable Definitions and other information to inform this statement. <p>NOTE: Successful applicants will be required to submit a SOPO prior to award in a similar format as the sample provided in Appendix D.</p>
<p>Technical Qualifications and Resources (Approximately 20% of the Technical Volume)</p>	<p>The Technical Qualifications and Resources should contain the following information:</p> <ul style="list-style-type: none"> • Describe the project team's unique qualifications and expertise, including those of key subrecipients. • Describe the project team's existing equipment and facilities, or equipment or facilities already in place on the proposed project site, that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project. • Describe the time commitment of the key team members to support the project. • Describe the technical services to be provided by DOE/NNSA FFRDCs, if applicable.

	<ul style="list-style-type: none"> • Describe the skills, certifications, or other credentials of the construction and ongoing operations workforce. • For multi-organizational projects, describe succinctly: <ul style="list-style-type: none"> ○ The roles and the work to be performed by each project manager and senior/key personnel at the prime and sub levels; ○ Business agreements between the applicant and sub; ○ How the various efforts will be integrated and managed; ○ Process for making decisions on technical direction; ○ Publication arrangements; ○ Intellectual Property issues; and ○ Communication plans.
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v. Resumes

A resume provides information that can be used by reviewers to evaluate the individual's relevant skills and experience of the key project personnel.

Applicants must submit a two-page resume for each project manager and key personnel that includes the following:

1. Contact information;
2. Education: Include all academic institutions attended, major/area, degree;
3. Training: (e.g.,) Certification or credential from a Registered Apprenticeship or Labor Management Partnership;
4. Professional Experience: Beginning with the current position, list professional/academic positions in chronological order with a brief description;
5. List all current academic, professional, or institutional appointments, foreign or domestic, at the applicant institution or elsewhere, whether or not remuneration is received, and, whether full-time, part-time, or voluntary; and
6. There should be no lapses in time over the past ten years or since age 18, whichever time period is shorter.

Save the resumes in a single PDF file using the following naming convention for the title "Resumes.pdf" and click on "Add Optional Other Attachment" to attach.

vi. Letters of Commitment

Submit letters of commitment from all subrecipient and third-party cost share providers. If applicable, the letter must state that the third party is committed to providing a specific minimum dollar amount or value of in-kind contributions allocated to cost sharing. The following information for each third party contributing to cost sharing should be identified: (1) the name of the organization; (2) the proposed dollar amount to be provided; and (3) the proposed cost sharing type – (cash or in-kind contributions). Each letter must not exceed 1 page.

Save the letters of commitment in a single PDF file using the following naming convention for the title "LOC.pdf" and click on "Add Optional Other Attachment" to attach.

Letters of support or endorsement for the project from entities that do not have a substantive role in the project are not accepted.

vii. Vendor Commitment Letter

The Vendor Commitment Letter should document the vendor's commitment to provide a commercial or industrial product to the applicant and attest that the commercial or industrial product is derived from anthropogenic carbon oxides, and should also attest that the vendor is not owned by, controlled by, or subject to the jurisdiction or direction of a government of a country of risk.

The letter should also state that the vendor has warranted inclusion onto NETL's list of UPGrants vendors (<https://www.netl.doe.gov/upgrants>) through submission of a life cycle analysis that has satisfactorily completed critical review by NETL. The letter of commitment must be signed by a person authorized to commit resources on behalf of the organization.

The following information for each vendor contributing to project should be identified: (1) the name of the vendor; (2) the satisfactory critical review of vendor LCA by NETL; and (3) the products that the vendor provides. Each letter must not exceed 1 page.

Save the Vendor Commitment Letter in a single PDF file using the following naming convention for the title "VCL.pdf" and click on "Add Optional Other Attachment" to attach.

viii. Vendor Product Quote

The Vendor Product Quote should be provided as Freight on Board destination and should contain expiration dates (valid at the time of Concept Paper Submission) and signatures. Product installation costs, product related engineering costs, or any other ancillary costs that are outside of the procurement and use of the product should not be included.

Save the Vendor Product Quote in a single PDF file using the following naming convention for the title "VPQ.pdf" and click on "Add Optional Other Attachment" to attach.

ix. Incumbent Product Quotes

A minimum of two quotes from equivalent incumbent products should also be provided as Freight on Board destination, containing similar expiration dates and valid signatures as described above. The Incumbent Product Quotes should be comparable as practical to the carbon conversion product in similar quantity and quality.

Save the Incumbent Product Quotes in a single PDF file using the following naming convention for the title "IPQ.pdf" and click on "Add Optional Other Attachment" to attach.

x. Community Partnership Documentation

In support of the Community Benefits Discussion, applicants may submit documentation to demonstrate existing or planned partnerships with community entities, such as organizations that work with local stakeholders most vulnerable to or affected by the project; organizations that carry out workforce development programs, labor unions, Tribal organizations; and community-based organizations that work with disadvantaged communities. The Partnership Documentation could be in the form of a letter on the partner's letterhead outlining the planned partnership signed by an officer of the entity, a Memorandum of Understanding, or other similar agreement. Such letters must state the specific nature of the partnership and must not be general letters of support. If the applicant intends to enter into Workforce and Community Agreements as part of the Community Benefits Discussion, please include letters from proposed partners as appropriate. Each letter must not exceed 1 page. In total, the partnership documentation must not exceed 10 pages.

Save the Community Partnership Documentation in a single PDF file using the following naming convention for the title "PartnershipDoc.pdf" and click on "Add Optional Other Attachment" to attach.

xi. Budget Justification Workbook

This Budget Justification Workbook is included as an attachment to this announcement for use and to describe the level of detail required in the budget justification. Although the data requested is mandatory, the use of the budget justification workbook is not. Applicants must complete each tab of the Budget Justification Workbook for the project, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with implementing the various BIL-specific requirements (e.g., Buy America Requirements for Infrastructure projects, Davis Bacon, Community Benefits Discussion, reporting, oversight) and with required annual audits and incurred cost proposals in their proposed budget documents. Such costs may be reimbursed as direct or indirect. The "Instructions and Summary" included with the Budget Justification Workbook will auto-populate as the applicant enters information into the Workbook. Applicants must carefully read the "Instructions and Summary" tab provided within the Budget Justification Workbook.

Save the Budget Justification Workbook in a single Microsoft Excel file using the following naming convention for the title "Recipient_Budget_Justification.xls or.xlsx" and click on "Add Optional Other Attachment" to attach.

xii. Summary for Public Release

Applicants must submit a one-page summary of their project that is suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the lead project manager/project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), major participants (for collaborative projects), and the project's commitments and goals described in the Community Benefits Discussion. This document must not include any proprietary or sensitive business information as DOE may make it available to the public after selections are made. The summary must not exceed 1 page when printed using standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right). The formatting is contained in Section IV. A.

Save the Summary for Public Release in a single PDF file using the following naming convention for the title "Summary.pdf" and click on "Add Optional Other Attachment" to attach.

xiii. Subrecipient Budget Justification (if applicable)

Applicants must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than \$250,000 or 25 percent of the total work effort (whichever is less). The budget justification must include the same justification information described in the "Budget Justification Workbook" section above.

Save each subrecipient budget justification in a Microsoft Excel file using the following naming convention for the title "Subrecipient_Budget_Justification.xls or.xlsx" and click on "Add Optional Other Attachment" to attach.

xiv. Authorization for non-DOE/NNSA or DOE/NNSA FFRDCs (if applicable)

The federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with the contractor's authority under its award.

Save the Authorization in a single PDF file using the following naming convention for the title "FFRDCAuth.pdf" and click on "Add Optional Other Attachment" to attach.

xv. SF-LLL: Disclosure of Lobbying Activities

Recipients and subrecipients may not use any federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters.

Recipients and subrecipients are required to complete and submit SF-LLL, “Disclosure of Lobbying Activities” to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

- An officer or employee of any federal agency;
- A member of Congress;
- An officer or employee of Congress; or
- An employee of a member of Congress.

xvi. Waiver Requests (if applicable)

i. Foreign Entity Participation

For projects selected under this FOA, as set forth in Section III., all recipients and subrecipients must qualify as domestic entities. See Section III. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix B lists the information that must be included in a waiver request.

ii. Foreign Work Waiver Request

As set forth in Section IV.I.iii., all work for projects selected under this FOA must be performed in the United States. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix B lists the information that must be included in a foreign work waiver request.

Save the Waivers in a single PDF file using the following naming convention for the title “FN_Waiver.pdf” and click on “Add Optional Other Attachment” to attach.

xvii. Community Benefits Discussion: Job Quality and Equity

The Community Benefits Discussion must not exceed 3 pages. It must be submitted in PDF format. This discussion must address the technical review criterion titled, “Community Benefits Discussion.” See Section I.D of the FOA.

Save the Community Benefits Discussion in a single PDF file using the following naming convention for the title “CBenefits.pdf” and click on “Add Optional Other Attachment” to attach.

xviii. Locations of Work

The applicant must complete the supplied template by listing the city, state, and zip code + 4 for each location where project work will be performed by the prime recipient or subrecipient(s). This template is included as an attachment to this announcement for use.

Save the Location of Work in a single Microsoft Excel file using the following naming convention for the title "LOW.xls or.xlsx" and click on "Add Optional Other Attachment" to attach.

xix. Potentially Duplicate Funding Notice (if applicable)

If the applicant or project team member has other active awards of federal funds, the applicant must determine whether the activities of those awards potentially overlap with the activities set forth in its application to this FOA. If there is a potential overlap, the applicant must notify DOE in writing of the potential overlap and state how it will ensure any project funds (i.e., recipient cost share and federal funds) will not be used for identical cost items under multiple awards. Likewise, for projects that receive funding under this FOA, if a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded the DOE award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award. If there are identical cost items, the recipient must promptly notify the DOE Contracting Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Save the Potentially Duplicative Funding Notice in a single PDF file using the following naming convention for the title "PDFN.pdf" and click on "Add Optional Other Attachment" to attach.

xx. Environmental Questionnaire

The Applicant must submit an environmental questionnaire providing for the work of the entire project. The Applicant is also responsible for submitting a separate environmental questionnaire for each proposed subrecipient performing work at a different location. The environmental questionnaire is available at http://www.netl.doe.gov/File%20Library/Business/forms/451_1-1-3.pdf.

Save the questionnaire in a single file named "Env.pdf" (or "Env-FILL IN TEAM MEMBER.pdf" if more than questionnaire is submitted) and click on "Add Optional Other Attachment" to attach.

NOTE: If selected for an award and if a subrecipient's location is not known at the time of application, a subsequent environmental questionnaire will be needed prior to them beginning work at an alternate location.

xxi. Project Management Plan

The Project Management Plan (PMP) must not exceed 10 pages including cover page, table of contents, footnotes/endnotes, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) single spaced with font no smaller than 11 points. Applicants shall prepare the PMP in the format provided in Appendix F of the FOA.

Save this information in a file named "PMP.pdf," and click on "Add Optional Other Attachment" to attach.

xxii. Project Description and Assurances Document (PDAD)

Applicants shall prepare and submit the PDAD in the format provided in Appendix H of the FOA. The PDAD must be signed by the Authorized Organizational Representative (AOR) on behalf of the organization and be submitted in PDF format.

Save the PDAD in a single PDF file using the following convention for the title "PDAD.pdf".

E. Post Selection Information Requests

If selected for award negotiations, DOE reserves the right to require that selected applicants provide additional or clarifying information regarding the application submissions, the project, the project team, the award requirements, and any other matters related to anticipated award. The following is a non-exhaustive list of examples of information that may be required:

- Indirect cost information;
- Other budget information;
- Letters of Commitment from third parties contributing to cost share, if applicable;
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
- Information for the DOE Office of Civil Rights to process assurance reviews under 10 CFR 1040;
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to Davis-Bacon Act Requirements;

- Information related to any proposed Workforce and Community Agreement, as defined above in “Community Benefits Discussion: Job Quality and Equity,” that applicants may have made with the relevant community;
- Updated Vendor Product Quote; and
- Updated Environmental Questionnaire(s).

F. Unique Entity Identifier (UEI) and System for Award Management (SAM)

Each applicant (unless the applicant is an individual or federal awarding agency that is excepted from those requirements under 2 CFR 25.110(b) or (c), or has an exception approved by the federal awarding agency under 2 CFR 25.110(d)) is required to: (1) Be registered in the SAM at <https://www.sam.gov> before submitting its application; (2) provide a valid UEI number in its application; and (3) continue to maintain an active SAM registration with current information at all times during which it has an active federal award or an application or plan under consideration by a federal awarding agency. DOE may not make a federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements and, if an applicant has not fully complied with the requirements by the time DOE is ready to make a federal award, the DOE will determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant.

NOTE: Due to the high demand of UEI requests and SAM registrations, entity legal business name and address validations are taking longer than expected to process. Entities should start the UEI and SAM registration process as soon as possible. If entities have technical difficulties with the UEI validation or SAM registration process, they should utilize the **HELP** feature on **SAM.gov**. SAM.gov will work entity service tickets in the order in which they are received and asks that entities not create multiple service tickets for the same request or technical issue. Additional entity validation resources can be found here: [GSAFSD Tier 0 Knowledge Base - Validating your Entity](#).

G. Submission Dates and Times

All full applications must be submitted as specifically stated in the respective Concept paper Encourage/Discourage notification.

H. Intergovernmental Review

This FOA is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

I. Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles. Pursuant to 2 CFR 910.352, the cost principles in the Federal Acquisition Regulations (48 CFR 31.2) apply to for-profit entities. The cost principles contained in 2 CFR Part 200; Subpart E apply to all entities other than for-profits.

ii. Pre-Award Costs

Applicants selected for award negotiations (selectee) must request prior written approval to charge pre-award costs. Pre-award costs are those incurred prior to the effective date of the federal award directly pursuant to the negotiation and in anticipation of the federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the federal award and **only** with the written approval of the federal awarding agency, through the DOE Contracting Officer.

Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis.

Pre-award expenditures are made at the selectee's risk. DOE is not obligated to reimburse costs: (1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the selectee anticipated.

1. National Environmental Policy Act (NEPA) Requirements Related to Pre-Award Costs

DOE's decision whether and how to distribute federal funds under this FOA is subject to NEPA. Applicants should carefully consider and should seek legal counsel or other expert advice before taking any action related to the proposed project that would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE completing the NEPA review process.

DOE does not guarantee or assume any obligation to reimburse pre-award costs incurred prior to receiving written authorization from the Contracting Officer. If the applicant elects to undertake activities that DOE determines may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the applicant is doing so at risk of not receiving federal funding for their project and such costs may not be recognized as allowable

cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override the requirement to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives. Likewise, if an application is selected for negotiation of award, and the prime recipient elects to undertake activities that are not authorized for federal funding by the Contracting Officer in advance of DOE completing a NEPA review, the prime recipient is doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

iii. Performance of Work in the United States (Foreign Work Waiver)

1. Requirement

All work performed under DOE awards issued under this FOA must be performed in the United States. The prime recipient must flow down this requirement to its subrecipients.

2. Failure to Comply

If the prime recipient fails to comply with the Performance of Work in the United States requirement, DOE may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable recipient cost share. The prime recipient is responsible should any work under this award be performed outside the United States, absent a waiver, regardless of whether the work is performed by the prime recipient, subrecipients, contractors or other project partners.

3. Waiver

To seek a foreign work waiver, the applicant must submit a written waiver request to DOE. Appendix B lists the information that must be included in a request for a foreign work waiver.

iv. Construction

Recipients are required to obtain written authorization from the Contracting Officer before incurring any major construction costs.

v. Foreign Travel

Foreign travel costs are not allowable under this FOA.

vi. Equipment and Supplies

Property disposition may be required at the end of a project if the current fair market value of property exceeds \$5,000. For-profit entity disposition

requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

vii. Buy America Requirements for Infrastructure Projects

Pursuant to the Build America Buy America Act, subtitle IX of BIL (Buy America, or “BABA”), Federally assisted projects that involve infrastructure work, undertaken by applicable recipient types, require that:

- all iron, steel, and manufactured products used in the infrastructure work are produced in the United States; and
- all construction materials used in the infrastructure work are manufactured in the United States.

Whether a given project must apply this requirement is project-specific and dependent on several factors, such as the recipient’s entity type, whether the work involves “infrastructure,” as that term is defined in Section 70914 of the Bipartisan Infrastructure Law, and whether the infrastructure in question is publicly owned or serves a public function.

Please note that, based on the implementation guidance from the Office of Management and Budget (OMB) issued on April 18, 2022, the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a “non-Federal entity,” e.g., a State, local government, Indian tribe, Institution of Higher Education, or nonprofit organization. Subawards should conform to the terms of the prime award from which they flow; in other words, for-profit prime recipients are not required to flow down these Buy America requirements to subrecipients, even if those subrecipients are non-Federal entities as defined above. Conversely, prime recipients which are non-Federal entities must flow the Buy America requirements down to all subrecipients, even if those subrecipients are for-profit entities. Finally, for all applicants—both non-Federal entities and for-profit entities—DOE is including a Program Policy Factor that the Selection Official may consider in determining which Full Applications to select for award negotiations that considers whether the applicant has made a commitment to procure U.S. iron, steel, manufactured products, and construction materials in its project.

The DOE financial assistance agreement will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products and (2) to fulfill the commitments made in its application regarding the procurement of other key component metals and manufactured products domestically that are deemed available in sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation.

Applicants may seek waivers of these requirements in very limited circumstances and for good cause shown. Further details on requesting a waiver can be found in Appendix C and the terms and conditions of an award.

Applicants are strongly encouraged to consult Appendix C for more information.

viii. Davis-Bacon Act Requirements

Projects awarded under this FOA will be funded under Division D of the Bipartisan Infrastructure Law. Accordingly, per section 41101 of that law, all laborers and mechanics employed by the recipient, subrecipients, contractors or subcontractors in the performance of construction, alteration, or repair work funded in whole or in part under this FOA shall be paid wages at rates not less than those prevailing on similar projects in the locality, as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code commonly referred to as the “Davis-Bacon Act” (DBA).

Applicants shall provide written assurance acknowledging the DBA requirements above, and confirming that the laborers and mechanics performing construction, alteration, or repair work on projects funded in whole or in part by awards made as a result of this FOA are paid or will be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of Title 40, United States Code (Davis-Bacon Act).

Applicants acknowledge that they will comply with all of the Davis-Bacon Act requirements, including but not limited to:

- (1) ensuring that the wage determination(s) and appropriate Davis-Bacon clauses and requirements are flowed down to and incorporated into any applicable subcontracts or subrecipient awards.
- (2) ensuring that if wage determination(s) and appropriate Davis-Bacon clauses and requirements are improperly omitted from contracts and subrecipient awards, the applicable wage determination(s) and clauses are retroactively incorporated to the start of performance.
- (3) being responsible for compliance by any subcontractor or subrecipient with the Davis-Bacon labor standards.
- (4) receiving and reviewing certified weekly payrolls submitted by all subcontractors and subrecipients for accuracy and to identify potential compliance issues.
- (5) maintaining original certified weekly payrolls for 3 years after the completion of the project and must make those payrolls available to the

DOE or the United States Department of Labor (DOL) upon request, as required by 29 CFR 5.6(a)(2).

(6) conducting payroll and job-site reviews for construction work, including interviews with employees, with such frequency as may be necessary to assure compliance by its subcontractors and subrecipients and as requested or directed by the DOE.

(7) cooperating with any authorized representative of the Department of Labor in their inspection of records, interviews with employees, and other actions undertaken as part of a DOL investigation.

(8) posting in a prominent and accessible place the wage determination(s) and DOL Publication: WH-1321, Notice to Employees Working on Federal or Federally Assisted Construction Projects.

(9) notifying the Contracting Officer of all labor standards issues, including all complaints regarding incorrect payment of prevailing wages and/or fringe benefits, received from the recipient, subrecipient, contractor, or subcontractor employees; significant labor standards violations, as defined in 29 CFR 5.7; disputes concerning labor standards pursuant to 29 CFR parts 4, 6, and 8 and as defined in FAR 52.222-14; disputed labor standards determinations; DOL investigations; or legal or judicial proceedings related to the labor standards under this Contract, a subcontract, or subrecipient award.

(10) preparing and submitting to the Contracting Officer, the Office of Management and Budget Control Number 1910-5165, Davis Bacon Semi-Annual Labor Compliance Report, by April 21 and October 21 of each year. Form submittal will be administered through the iBenefits system (<https://doeibenefits2.energy.gov>), its successor system, or other manner of compliance as directed by the Contracting Officer.

Recipients of funding under this FOA will also be required to undergo Davis-Bacon Act compliance training and to maintain competency in Davis-Bacon Act compliance. The Contracting Officer will notify the recipient of any DOE sponsored Davis-Bacon Act compliance trainings. The DOL offers free Prevailing Wage Seminars several times a year that meet this requirement, at <https://www.dol.gov/agencies/whd/government-contracts/construction/seminars/events>.

For additional guidance on how to comply with the Davis-Bacon provisions and clauses, see <https://www.dol.gov/agencies/whd/government->

[contracts/construction](#) and <https://www.dol.gov/agencies/whd/government-contracts/protections-for-workers-in-construction>.

DOE anticipates contracting with a third party for a Davis-Bacon Act electronic payroll compliance software application. Recipients of funding under this FOA must ensure the timely electronic submission of weekly certified payrolls through this software as part of its compliance with the Davis-Bacon Act unless a waiver is granted to a particular contractor or subcontractor because it is unable or limited in its ability to use or access. Applicants should indicate if they will seek a waiver.

ix. Lobbying

Recipients and subrecipients may not use any federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters.

Recipients and subrecipients are required to complete and submit SF-LLL, "Disclosure of Lobbying Activities" (<https://www.grants.gov/web/grants/forms/sf-424-individual-family.html>) to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

- An officer or employee of any federal agency;
- A Member of Congress;
- An officer or employee of Congress; or
- An employee of a Member of Congress.

x. Risk Assessment

Pursuant to 2 CFR 200.206, DOE will conduct an additional review of the risk posed by applications submitted under this FOA. Such risk assessment will consider:

1. Financial stability;
2. Quality of management systems and ability to meet the management standards prescribed in 2 CFR 200 as amended and adopted by 2 CFR 910;
3. History of performance;
4. Audit reports and findings; and
5. The applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-federal entities.

6. Possible threats to United States research, technology, and economic security from undue foreign government influence.

DOE may make use of other publicly available information and the history of an applicant's performance under DOE or other federal agency awards.

Depending on the severity of the findings and whether the findings were resolved, DOE may elect not to fund the applicant.

In addition to this review, DOE must comply with the guidelines on government-wide suspension and debarment in 2 CFR Part 180 and must require non-federal entities to comply with these provisions. These provisions restrict federal awards, subawards and contracts with certain parties that are debarred, suspended or otherwise excluded from or ineligible for participation in federal programs or activities.

Further, as DOE invests in critical infrastructure and funds critical and emerging technology areas, DOE also considers possible threats to United States research, technology, and economic security from undue foreign government influence when evaluating risk. If high risks are identified and cannot be sufficiently mitigated, DOE may elect to not fund the applicant.

xi. Invoice Review and Approval

DOE employs a risk-based approach to determine the level of supporting documentation required for approving invoice payments. Recipients may be required to provide some or all of the following items with their requests for reimbursement:

- Summary of costs by cost categories;
- Timesheets or personnel hours report;
- Proof of compliance with Davis-Bacon and electronic submittals of certified payroll reports;
- Invoices/receipts for all travel, equipment, supplies, contractual, and other costs;
- UCC filing proof for equipment acquired with project funds by for-profit recipients and subrecipients;
- Explanation of cost share for invoicing period;
- Analogous information for some subrecipients; and
- Other items as required by DOE.

xii. Prohibition related to Foreign Government-Sponsored Talent Recruitment Programs

a. Prohibition

Persons participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk* are prohibited from participating in projects selected for federal funding under this FOA. Should an award result from this FOA, the recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an individual on the project team is or is believed to be participating in a foreign government talent recruitment program of a foreign country of risk. DOE may modify and add requirements related to this prohibition to the extent required by law.

b. Definitions

- 1. Foreign Government-Sponsored Talent Recruitment Program.** An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of Federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.
- 2. Foreign Country of Risk.** DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

xiii. Affirmative Action and Pay Transparency Requirements

All applicants must comply with all applicable federal labor and employment laws, including but not limited to Title VII of the Civil Rights Act of 1964, the Fair Labor Standards Act, the Occupational Safety and Health Act, and the National Labor Relations Act, which protects employees' right to bargain collectively and engage in concerted activities for the purpose of workers' mutual aid or protection.

All federally assisted construction contracts exceeding \$10,000 annually will be subject to the requirements of Executive Order 11246 Equal Employment Opportunity:

(1) Recipients, subrecipients, contractors, and subcontractors are prohibited from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin.

(2) Recipients and contractors are required to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment. This includes flowing down the appropriate language to all subrecipients contractors, and subcontractors.

(3) Recipients, subrecipients, contractors, and subcontractors are prohibited from taking adverse employment actions against applicants and employees for asking about, discussing, or sharing information about their pay or, under certain circumstances, the pay of their co-workers.

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule compliance evaluations. Consult OFCCP's Technical Assistance Guide²¹ to gain an understanding of the requirements and possible required actions the recipients, subrecipients, contractors and subcontractors must take. Additional guidance may also be found in the National Policy Assurances, produced by DOE.

xiv. Foreign Collaboration Considerations

- a. Consideration of new collaborations with foreign organizations and governments. The recipient will be required to provide DOE with advanced written notification of any potential collaboration with foreign organizations or governments in connection with its DOE-funded award scope. The recipient will then be required to await further guidance from

²¹ See OFCCP's Technical Assistance Guide at:

<https://www.dol.gov/sites/dolgov/files/ofccp/Construction/files/ConstructionTAG.pdf?msclkid=9e397d68c4b111ec9d8e6fecb6c710ec>. Also see the National Policy Assurances <http://www.nsf.gov/awards/managing/rtc.jsp>

DOE prior to contacting the proposed foreign organization or government regarding the potential collaboration or negotiating the terms of any potential agreement.

- b. Existing collaborations with foreign organizations and governments. The recipient will be required to provide DOE with a written list of all existing foreign collaborations in which has entered in connection with its DOE-funded award scope.
- c. Description of collaborations that should be reported. In general, a collaboration will involve some provision of a thing of value to, or from, the recipient. A thing of value includes but may not be limited to all resources made available to, or from, the recipient in support of and/or related to the DOE award, regardless of whether or not they have monetary value. Things of value also may include in-kind contributions (such as office/laboratory space, data, equipment, supplies, employees, students). In-kind contributions not intended for direct use on the DOE award but resulting in provision of a thing of value from or to the DOE award must also be reported. Collaborations do not include routine workshops, conferences, use of the recipient's services and facilities by foreign investigators resulting from its standard published process for evaluating requests for access, or the routine use of foreign facilities by awardee staff in accordance with the recipient's standard policies and procedures.

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

Concept Papers are evaluated based on consideration the following factors. All sub-criteria are of equal weight.

Concept Paper Criterion: Overall FOA Responsiveness and Viability of the Project (Weight: 100%)

- The applicant clearly describes the proposed project, describes how the project will procure and use commercial or industrial products derived from anthropogenic carbon oxides, and how the project will demonstrate that these products can supplement or displace incumbent products;
- The applicant has identified risks and challenges, and ability to address various risks (technical, market, regulatory, community, etc.) to procure and use commercial or industrial products derived from anthropogenic carbon oxides. Clearly articulating what those risks are and making a case for how they are addressing them throughout the project phasing;
- The applicant has demonstrated the team's credibility/ability to execute on this demo project and the wherewithal to finance it, especially if costs escalate over time;
- The applicant has shown the solidness of their envisioned facility/system in reference to engineering designs developed, locations identified, permitting/regulatory challenges addressed, off take agreements, and feedstock agreements;
- The applicant describes their relationship with a vendor who has an LCA that has satisfied critical review by NETL (vendor commitment letter and quote are not required for concept papers).

ii. Full Applications

Applications will be evaluated against the technical review criteria shown below. All sub-criteria are of equal weight.

Criterion 1: Plan to Procure and Use Commercial or Industrial Products (40%)

This criterion involves consideration of the following factors:

- Description of how the commercial or industrial product will be used, including but not limited to: the purpose for which the product will be used, the location(s) where the product will be used, and the timeframe in which the product will be used.

- Thoroughness of plan to evaluate commercial or industrial product performance, including but not limited to: what is the acceptable performance level (including a comparison to the incumbent product), how will the product performance be evaluated, and how will differences in handling/installation/use be identified and characterized.
- Extent to which the provided vendor quotes are comparable, including but not limited to: product quantity, product type, delivery location, and delivery transfer point (i.e., freight on board destination).
- Discussion of the total volume and value of product that could be displaced if all incumbent product used by the applicant were displaced by an equivalent carbon conversion product.
- Degree to which the procurement and use of the commercial or industrial product meets the stated objectives of the FOA.
- Feasibility of the proposed procurement and use of the commercial or industrial product.
- If the carbon conversion product is not a one for one replacement of the incumbent product, the adequacy and feasibility of the applicant's plan to account for differences between the incumbent product and the carbon conversion product.

Criterion 2: Technical Approach and Understanding (20%)

This criterion involves consideration of the following factors:

- Adequacy and feasibility of the Applicant's approach to achieving the objectives of the FOA.
- Feasibility, appropriateness, rationale, and completeness of the proposed Statement of Project Objectives, such that there is a logical progression of work.
- The adequacy and completeness of the Project Management Plan (PMP) in establishing baselines (technical scope, budget, schedule) and in managing project performance relative to those baselines; defining the actions that will be taken when these baselines must be revised; and identification of project risks and strategies for mitigation.

Criterion 3: Technical and Management Capabilities (20%)

This criterion involves consideration of the following factors:

- Demonstrated experience of the applicant in procuring and using the type of product described in the application.
- Demonstrated experience of the applicant and partnering organizations (if applicable) in the technology areas addressed in the application and in managing projects of similar size, scope, and complexity.

- Credentials, capabilities, and experience of key personnel and partnering organizations.
- Clarity and likely effectiveness of the project organization, including sub-recipients or partners, to successfully complete the project.
- Adequacy and availability of proposed personnel, facilities, and equipment to perform project tasks.

Criterion 4: Community Benefits Discussion (20%)

This criterion involves consideration of the following factors:

- The extent to which applicant's Community Benefits Discussion assesses product use, community impacts, and Justice40 considerations with sufficient quality and support. Responses are thorough and include measurable actions and/or meet requirements as defined within each assessment.
- Adequacy and completeness of integrating the community benefits discussion into key project management documents, such as the Project Management Plan, including project milestone(s) that describe actualized community impacts relative to assessments provided in the community benefits discussion.
- Extent to which this project supports workforce development and/or workforce opportunities specifically for underrepresentation groups and members of disadvantaged communities.

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA and the guidance provided in the "DOE Merit Review Guide for Financial Assistance," effective September 2020, which is available at:

<https://energy.gov/management/downloads/merit-review-guide-financial-assistance-and-unsolicited-proposals-current>.

For efficiency, full applications to this open FOA will be reviewed and processed as received until maximum funding is exhausted. Applications still in process when funding is exhausted may be considered for funding under the subsequent fiscal year.

C. Other Selection Factors

i. Program Policy Factors

In addition to the above criteria, the Selection Official may consider the following program policy factors in determining which Full Applications to select for award negotiations:

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available DOE funding to achieve programmatic objectives;
- The level of industry involvement and demonstrated ability to accelerate demonstration and commercialization and overcome key market barriers;
- The degree to which the proposed project is likely to lead to increased high-quality employment and manufacturing in the United States;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications);
- The degree to which the proposed project incorporates applicant or team members from Minority Serving Institutions (e.g., Historically Black Colleges and Universities (HBCUs)/Other Minority Serving Institutions); and partnerships with Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, or Tribal Nations;
- The degree to which the proposed project, when compared to the existing DOE project portfolio and other projects to be selected from the subject FOA, contributes to the total portfolio meeting the goals reflected in the Community Benefits Discussion criteria; and
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials.

D. Evaluation and Selection Process

i. Overview

The evaluation process consists of multiple phases; each includes an initial eligibility review and a thorough technical review. Rigorous technical reviews of eligible submissions are conducted by reviewers that are experts in the subject matter of the FOA. Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as program policy factors, in determining which applications to select.

ii. Pre-Selection Interviews

As part of the evaluation and selection process, DOE may invite one or more applicants to participate in Pre-Selection Interviews. Pre-Selection Interviews are distinct from and more formal than pre-selection clarifications (See Section V.D.iii. of the FOA). The invited applicant(s) will meet with DOE representatives

to provide clarification on the contents of the Full Applications and to provide DOE an opportunity to ask questions regarding the proposed project. The information provided by applicants to DOE through Pre-Selection Interviews contributes to DOE's selection decisions.

DOE will arrange to meet with the invited applicants in person at DOE's offices or a mutually agreed upon location. DOE may also arrange site visits at certain applicants' facilities. In the alternative, DOE may invite certain applicants to participate in a one-on-one conference with DOE via webinar, videoconference, or conference call.

DOE will not reimburse applicants for travel and other expenses relating to the Pre-Selection Interviews, nor will these costs be eligible for reimbursement as pre-award costs.

Participation in Pre-Selection Interviews with DOE does not signify that applicants have been selected for award negotiations.

iii. Pre-Selection Clarification

DOE may determine that pre-selection clarifications are necessary from one or more applicants. Pre-selection clarifications are distinct from and less formal than pre-selection interviews. These pre-selection clarifications will solely be for the purposes of clarifying the application. The pre-selection clarifications may occur before, during or after the merit review evaluation process. Information provided by an applicant that is not necessary to address the pre-selection clarification question will not be reviewed or considered. Typically, a pre-selection clarification will be carried out through either written response to DOE's written clarification questions or video or conference calls with DOE representatives.

The information provided by applicants to DOE through pre-selection clarifications is incorporated in their applications and contributes to the merit review evaluation and DOE's selection decisions. If DOE contacts an applicant for pre-selection clarification purposes, it does not signify that the applicant has been selected for negotiation of award or that the applicant is among the top ranked applications.

DOE will not reimburse applicants for expenses relating to the pre-selection clarifications, nor will these costs be eligible for reimbursement as pre-award costs.

iv. Recipient Responsibility and Qualifications

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any responsibility and qualification information about the applicant that is in the entity information domain in SAM.gov) (see 41 U.S.C. § 2313).

The applicant, at its option, may review information in the entity information domain in SAM.gov and comment on any information about itself that a federal awarding agency previously entered and is currently in the entity information domain in SAM.gov.

DOE will consider any written comments by the applicant, in addition to the other information in the entity information domain in SAM.gov, in making a judgment about the applicant's integrity, business ethics, and record of performance under federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.206.

v. Selection

The Selection Official may consider the technical merit, the Federal Consensus Board's recommendations, program policy factors, and the amount of funds available in arriving at selections for this FOA.

E. Anticipated Notice of Selection and Award Negotiation Dates

DOE anticipates notifying applicants selected for negotiation of award and negotiating awards in accordance with the schedule provided on the cover page of this FOA.

VI. Award Administration Information

A. Award Notices

i. Ineligible Submissions

Ineligible Concept Papers and Full Applications will not be further reviewed or considered for award. The Contracting Officer will send a notification letter by email to the technical and administrative points of contact designated by the applicant. The notification letter will state the basis upon which the Concept Paper or the Full Application is ineligible and not considered for further review.

ii. Concept Paper Notifications

DOE will notify applicants of its determination to encourage or discourage the submission of a Full Application. DOE will send a notification letter by email to the technical and administrative points of contact designated by the applicant on the Concept Paper cover page.

Applicants may submit a Full Application even if they receive a notification discouraging them from doing so. By discouraging the submission of a Full Application, DOE intends to convey its lack of programmatic interest in the proposed project. Such assessments do not necessarily reflect judgments on the merits of the proposed project. The purpose of the Concept Paper phase is to save applicants the considerable time and expense of preparing a Full Application that is unlikely to be selected for award negotiations. Concept Paper notifications will include the full application due date.

A notification encouraging the submission of a Full Application does not authorize the applicant to commence performance of the project. Please refer to Section IV.I.ii. of the FOA for guidance on pre-award costs.

iii. Full Application Notifications

DOE will notify applicants of its determination via a notification letter by email to the technical and administrative points of contact designated by the applicant in Grants.gov. The notification letter will inform the applicant whether or not its Full Application was selected for award negotiations. Alternatively, DOE may notify one or more applicants that a final selection determination on particular Full Applications will be made at a later date, subject to the availability of funds or other factors.

iv. Successful Applicants

Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an

application is selected for award negotiations, it is not a commitment by DOE to issue an award. Applicants do not receive an award until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the prime recipient in FedConnect.

The award negotiation process will take approximately 120 days. Applicants must designate a primary and a backup point-of-contact in Grants.gov with whom DOE will communicate to conduct award negotiations. The applicant must be responsive during award negotiations (i.e., provide requested documentation) and meet the negotiation deadlines. If the applicant fails to do so or if award negotiations are otherwise unsuccessful, DOE will cancel the award negotiations and rescind the Selection. DOE reserves the right to terminate award negotiations at any time for any reason.

Please refer to Section IV.I.ii. of the FOA for guidance on pre-award costs.

v. Alternate Selection Determinations

In some instances, an applicant may receive a notification that its application was not selected for award and DOE designated the application to be an alternate. As an alternate, DOE may consider the Full Application for federal funding in the future. A notification letter stating the Full Application is designated as an alternate does not authorize the applicant to commence performance of the project. DOE may ultimately determine to select or not select the Full Application for award negotiations.

vi. Unsuccessful Applicants

DOE shall promptly notify in writing each applicant whose application has not been selected for award or whose application cannot be funded because of the unavailability of appropriated funds.

B. Administrative and National Policy Requirements

i. Registration Requirements

There are several one-time actions before submitting an application in response to this FOA, and it is vital that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant's ability to apply to this FOA, or to meet the negotiation deadlines and receive an award if the application is selected. These requirements are as follows:

1. System for Award Management

Register with the SAM at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called

a Marketing Partner ID Number (MPIN) are important steps in SAM registration. Please update your SAM registration annually.

2. FedConnect

Register in FedConnect at <https://www.fedconnect.net>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at <https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect Ready Set Go.pdf>.

3. Grants.gov

Register in Grants.gov (<https://www.grants.gov/>) to receive automatic updates when Amendments to this FOA are posted. However, please note that Letters of Intent, Concept Papers, and Reply to Reviewer Comments will not be accepted through Grants.gov.

4. Electronic Authorization of Applications and Award Documents

Submission of an application and supplemental information under this FOA through electronic systems used by the DOE, including Grants.gov and FedConnect.net, constitutes the authorized representative's approval and electronic signature.

ii. Award Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

iii. Foreign National Participation (April 2023)

All applicants selected for an award under this FOA and project participants (including subrecipients and contractors) who anticipate involving foreign nationals in the performance of an award, will be required to provide DOE with specific information about each foreign national to satisfy requirements for foreign national participation and access approvals. The volume and type of information collected may depend on various factors associated with the award. DOE concurrence may be required before a foreign national can participate in the performance of any work under an award.

Approval for foreign nationals in Principal Investigator/Co-Investigator roles from countries of risk (i.e., China, Iran, North Korea, and Russia), or from countries identified on the U.S. Department of State's list of State Sponsors of Terrorism (<https://www.state.gov/state-sponsors-of-terrorism/>) may require written authorization from DOE before they can participate in the performance of any work under an award.

A “foreign national” is defined as any person who is not a United States citizen by birth or naturalization. DOE may elect to deny foreign national’s participation in the award. Likewise, DOE may elect to deny a foreign national’s access to a DOE sites, information, technologies, equipment, programs, or personnel.

Applicants selected for award negotiations must include this requirement in subawards.

iv. Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR Part 170. Prime recipients must register with the new FFATA Subaward Reporting System database and report the required data on their first tier subrecipients. Prime recipients must report the executive compensation for their own executives as part of their registration profile in SAM.

v. National Policy Requirements

The National Policy Assurances that are incorporated as a term and condition of award are located at: <http://www.nsf.gov/awards/managing/rtc.jsp>.

vi. Environmental Review in Accordance with National Environmental Policy Act (NEPA)

DOE’s decision whether and how to distribute federal funds under this FOA is subject to NEPA (42 U.S.C. § 4321, *et seq.*). NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE’s NEPA website, at <https://www.energy.gov/nepa>.

While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all recipients selected for an award will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their proposed project. If DOE determines certain records must be prepared to complete the NEPA review process (e.g., biological evaluations or environmental assessments), the recipient may be required to prepare the records and the costs to prepare the necessary records may be included as part of the project costs.

vii. Applicant Representations and Certifications

1. Lobbying Restrictions

By accepting funds under this award, the prime recipient agrees that none of the funds obligated on the award shall be expended, directly or indirectly, to influence Congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

2. Corporate Felony Conviction and Federal Tax Liability Representations

In submitting an application in response to this FOA, the applicant represents that:

- a. It is **not** a corporation that has been convicted of a felony criminal violation under any federal law within the preceding 24 months; and
- b. It is **not** a corporation that has any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

For purposes of these representations the following definitions apply:

A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

3. Nondisclosure and Confidentiality Agreements Representations

In submitting an application in response to this FOA the applicant represents that:

- a. It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- b. It **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:

(1) *“These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities*

created by existing statute or Executive Order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive Orders and statutory provisions are incorporated into this agreement and are controlling.”

- (2) The limitation above shall not contravene requirements applicable to Standard Form 312 Classified Information Nondisclosure Agreement (<https://fas.org/sgp/othergov/sf312.pdf>), Form 4414 Sensitive Compartmented Information Disclosure Agreement (<https://fas.org/sgp/othergov/intel/sf4414.pdf>), or any other form issued by a federal department or agency governing the nondisclosure of classified information.
- (3) Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

viii. Statement of Federal Stewardship

DOE will exercise normal federal stewardship in overseeing the project activities performed under DOE awards. Stewardship Activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing assistance and/or temporary intervention in unusual circumstances to correct deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

ix. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>. Resulting awards will be treated as non-R&D for intellectual property purposes.

x. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist and Instructions, DOE F 4600.2, attached to the award agreement. A sample checklist is available at:

<https://www.netl.doe.gov/sites/default/files/netl-file/4600.2-FE.pdf>.

Additional reporting requirements apply to projects funded by BIL.— DOE may require specific data collection to track progress toward key departmental goals: ensuring justice and equity, investing in the American workforce, boosting domestic manufacturing, reducing greenhouse gas emissions, and advancing a pathway to private sector deployment. Examples of data that may be collected include:

- New manufacturing production or recycling capacity.
- Jobs data including:
 - Number and types of jobs provided, wages and benefits paid;
 - Workforce demographics including local hires.
 - Efforts to minimize risks of labor disputes and disruptions.
 - Contributions to ratio of apprentice-to-journey level workers employed.
 - Number of trainings completed, trainees placed in full-time employment, or number of trainings with workforce partnerships involving employers, community-based organizations, or labor unions.
- Justice and Equity data, including:
 - Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses and Veteran Owned Businesses acting as vendors and sub-contractors for bids on supplies, services and equipment.
 - Value, number, and type of partnerships with MSIs.
 - Stakeholder engagement events, consent-based siting activities.
 - Other relevant indicators from the Community Benefits Discussion.
- Number and type of energy efficient and clean energy equipment installed.
- Funding leveraged, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization.

xi. Conference Spending

The recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States government would otherwise exceed \$20,000, thereby circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

xii. Uniform Commercial Code (UCC) Financing Statements

Per 2 CFR 910.360 (Real Property and Equipment) when a piece of equipment is purchased by a for-profit recipient or subrecipient with federal funds, and when the federal share of the financial assistance agreement is more than \$1,000,000, the recipient or subrecipient must:

Properly record, and consent to the Department's ability to properly record if the recipient fails to do so, UCC financing statement(s) for all equipment in excess of \$5,000 purchased with project funds. These financing statement(s) must be approved in writing by the Contracting Officer prior to the recording, and they shall provide notice that the recipient's title to all equipment (not real property) purchased with federal funds under the financial assistance agreement is conditional pursuant to the terms of this section, and that the government retains an undivided reversionary interest in the equipment. The UCC financing statement(s) must be filed before the Contracting Officer may reimburse the recipient for the federal share of the equipment unless otherwise provided for in the relevant financial assistance agreement. The recipient shall further make any amendments to the financing statements or additional recordings, including appropriate continuation statements, as necessary or as the Contracting Officer may direct.

xiii. Implementation of Executive Order 13798, Promoting Free Speech and Religious Liberty

States, local governments, or other public entities may not condition sub-awards in a manner that would discriminate, or disadvantage sub-recipients based on their religious character.

xiv. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)²² is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. The term “Investigator” means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. Recipients must flow down the requirements of the interim COI Policy to any subrecipient non-Federal entities. Further, for DOE funded projects, the recipient must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/unmanageable) in their initial and ongoing FCOI reports.

It is understood that non-Federal entities and individuals receiving DOE financial assistance awards will need sufficient time to come into full compliance with DOE’s interim COI Policy. To provide some flexibility, DOE allows for a staggered implementation. Specifically, prior to award, applicants selected for award negotiations must: ensure all Investigators complete their significant financial disclosures; review the disclosures; determine whether a FCOI exists; develop and implement a management plan for FCOIs; and provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/unmanageable). Recipients will have 180 days from the date of the award to come into full compliance with the other requirements set forth in DOE’s interim COI Policy. Prior to award, the applicant must certify that it is, or will be within 180 days of the award, compliant with all requirements in the COI Policy.

xv. Fraud, Waste and Abuse

The mission of the DOE Office of Inspector General (OIG) is to strengthen the integrity, economy and efficiency of the Department’s programs and operations including deterring and detecting fraud, waste, abuse and mismanagement. The OIG accomplishes this mission primarily through investigations, audits, and inspections of DOE activities to include grants, cooperative agreements, loans, and contracts.

The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit <https://www.energy.gov/ig/ig-hotline>.

²² DOE’s interim COI Policy can be found at [PF 2022-17 FAL 2022-02 Department of Energy Interim Conflict of Interest Policy Requirements for Financial Assistance](#).

Additionally, recipients of DOE awards must be cognizant of the requirements of [2 CFR 200.113 Mandatory disclosures](#), which states:

The non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM . Failure to make required disclosures can result in any of the remedies described in [2 CFR 200.339](#). (See also [2 CFR part 180](#), [31 U.S.C. § 3321](#), and [41 U.S.C. § 2313](#).) [[85 FR 49539](#), Aug. 13, 2020]

Applicants and subrecipients (if applicable) are encouraged to allocate sufficient costs in the project budget to cover the costs associated for personnel and data infrastructure needs to support performance management and program evaluation needs including but not limited to independent program and project audits to mitigate risks for fraud, waste, and abuse.

xvi. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with DOE funding is subject to the requirements of DOE Order 443.1C, Protection of Human Research Subjects, 45 CFR Part 46, Protection of Human Subjects (subpart A which is referred to as the “Common Rule”), and 10 CFR Part 745, Protection of Human Subjects.

Additional information on the DOE Human Subjects Research Program can be found at: [HUMAN SUBJECTS Human Subjects Pr... | U.S. DOE Office of Science \(SC\) \(osti.gov\)](#).

xvii. Real Property and Equipment

Real property and equipment purchased with project funds (federal share and recipient cost share) are subject to the requirements at 2 CFR 200.310, 200.311, 200.313, and 200.316 (non-Federal entities, except for-profit entities) and 2 CFR 910.360 (for-profit entities). For projects selected for award under this FOA, the recipient may (1) take disposition action on the real property and equipment; or (2) continue to use the real property and equipment after the conclusion of the award period of performance, with Contracting Officer approval.

The recipient's written Request for Continued Use must identify the property and include: a summary of how the property will be used (must align with the authorized project purposes); a proposed use period, (e.g., perpetuity, until fully depreciated, or a calendar date where the recipient expects to submit disposition instructions); acknowledgement that the recipient shall not sell or encumber the property or permit any encumbrance without prior written DOE approval; current fair market value of the property; and an Estimated Useful Life or depreciation schedule for equipment.

When the property is no longer needed for authorized project purposes, the recipient must request disposition instructions from DOE. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310-200.316.

VII. Questions/Agency Contacts

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted through the FedConnect portal. You must register with FedConnect to submit questions as an interested party, and to view responses to questions. It is recommended that you register as soon as possible after release of the FOA to have the benefit of all responses. Applicants are encouraged to review previously issued Questions and Answers prior to the submission of questions.

Questions and comments concerning this FOA may be submitted any time during this open FOA. Please note, feedback on individual concepts will not be provided through Q&A.

All questions and answers related to this FOA will be posted on the FedConnect portal at: <https://www.FedConnect.net>. DOE will attempt to respond to a question within 3 business days unless a similar question and answer has already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE cannot answer these questions.

VIII. Other Information

A. FOA Modifications

Amendments to this FOA will be posted on the Grants.gov system and the FedConnect portal. However, you will only receive an email when an amendment or a FOA is posted on these sites by registering with FedConnect as an interested party for this FOA. DOE recommends that you register as soon after the release of the FOA as possible to ensure you receive timely notice of any amendments or other FOAs.

B. Government Right to Reject or Negotiate

DOE reserves the right, without qualification, to reject any or all applications received in response to this FOA and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. Commitment of Public Funds

The Contracting Officer is the only individual who can make awards or commit the government to the expenditure of public funds. A commitment by anyone other than the Contracting Officer, either express or implied, is invalid.

D. Treatment of Application Information

Applicants should not include business sensitive (e.g., commercial or financial information that is privileged or confidential), trade secrets, proprietary, or otherwise confidential information in their application unless such information is necessary to convey an understanding of the proposed project or to comply with a requirement in the FOA. Applicants are advised to not include any critically sensitive proprietary detail.

If an application includes business sensitive, trade secrets, proprietary, or otherwise confidential information, it is furnished to the Federal Government (Government) in confidence with the understanding that the information shall be used or disclosed only for evaluation of the application. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for merit review of the application or as otherwise authorized by law. This restriction does not limit the Government's right to use the information if it is obtained from another source.

If an applicant chooses to submit business sensitive, trade secrets, proprietary, or otherwise confidential information, the applicant must provide **two copies** of the submission (e.g., Concept Paper, Full Application). The first copy should be

marked, “non-confidential” with the information believed to be confidential deleted. The second copy should be marked “confidential” and must clearly and conspicuously identify the business sensitive, trade secrets, proprietary, or otherwise confidential information and must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose as authorized by law.

The cover sheet of the Full Application, and other applicant submission must be marked as follows and identify the specific pages business sensitive, trade secrets, proprietary, or otherwise confidential information:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this document may contain business sensitive, trade secrets, proprietary, or otherwise confidential information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source. [End of Notice]

In addition, (1) the header and footer of every page that contains business sensitive, trade secrets, proprietary, or otherwise confidential information must be marked as follows: “Contains Business Sensitive, Trade Secrets, Proprietary, or Otherwise Confidential Information Exempt from Public Disclosure,” and (2) every line or paragraph containing such information must be clearly marked with double brackets or highlighting. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

E. Evaluation and Administration by Non-Federal Personnel

In conducting the merit review evaluation and Peer Reviews, the government may seek the advice of qualified non-federal personnel as reviewers. The government may also use non-federal personnel to conduct routine, nondiscretionary administrative activities, including DOE contractors. The applicant, by submitting its application, consents to the use of non-federal reviewers/administrators. Non-federal reviewers must sign conflict of interest (COI) and non-disclosure acknowledgements (NDA) prior to reviewing an application. Non-federal personnel conducting administrative activities must sign an NDA.

F. Notice Regarding Eligible/Ineligible Activities

Eligible activities under this FOA include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

G. Notice of Right to Conduct a Review of Financial Capability

DOE reserves the right to conduct an independent third-party review of financial capability for applicants that are selected for negotiation of award (including personal credit information of principal(s) of a small business if there is insufficient information to determine financial capability of the organization).

H. Requirement for Full and Complete Disclosure

Applicants are required to make a full and complete disclosure of all information requested. Any failure to make a full and complete disclosure of the requested information may result in:

- The termination of award negotiations;
- The modification, suspension, and/or termination of a funding agreement;
- The initiation of debarment proceedings, debarment, and/or a declaration of ineligibility for receipt of federal contracts, subcontracts, and financial assistance and benefits; and
- Civil and/or criminal penalties.

I. Retention of Submissions

DOE expects to retain copies of all Full Applications and other submissions. No submissions will be returned. By applying to DOE for funding, applicants consent to DOE's retention of their submissions.

J. Rights in Technical Data

Data rights differ based on whether data is first produced under an award or instead was developed at private expense outside the award.

“Limited Rights Data”: The United States government will not normally require delivery of confidential or trade secret-type technical data developed solely at private expense prior to issuance of an award, except as necessary to monitor technical progress and evaluate the potential of proposed technologies to reach specific technical and cost metrics.

Government Rights in Technical Data Produced Under Awards: The United States government retains unlimited rights in technical data produced under

government financial assistance awards, including the right to distribute to the public.

K. Copyright

The prime recipient and subrecipients may assert copyright in copyrightable works, such as software, first produced under the award without DOE approval. When copyright is asserted, the government retains a paid-up nonexclusive, irrevocable worldwide license to reproduce, prepare derivative works, distribute copies to the public, and to perform publicly and display publicly the copyrighted work. This license extends to contractors and others doing work on behalf of the government.

L. Export Control

The United States government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the United States to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as “Export Controls”. All recipients and subrecipients are responsible for ensuring compliance with all applicable United States Export Control Laws and regulations relating to any work performed under a resulting award.

The recipient must immediately report to DOE any export control violations related to the project funded under the DOE award, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

M. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal funds and recipient cost share) to procure or obtain; extend or renew a contract to procure or obtain; or Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses *covered telecommunications equipment or services* as a substantial or essential component of any system, or as critical technology as part of any system. As described in section 889 of Public Law 115-232, *covered telecommunications equipment* is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

See Public Law 115-232, section 889, 2 CFR 200.216, and 2 CFR 200.471 for additional information.

N. Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. The term “PII” refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name. (See OMB Memorandum M-07-16 dated May 22, 2007, found at: <https://georgewbush-whitehouse.archives.gov/omb/memoranda/fy2007/m07-16.pdf>).

By way of example, applicants must screen resumes to ensure that they do not contain PII such as personal addresses, personal landline/cell phone numbers, and personal emails. **Under no circumstances should Social Security Numbers (SSNs) be included in the application.** Federal agencies are prohibited from the collecting, using, and displaying unnecessary SSNs. (See, the Federal Information Security Modernization Act of 2014 (Pub. L. No. 113-283, Dec 18, 2014; 44 U.S.C. § 3551).

O. Annual Independent Audits

If a for-profit entity is a prime recipient and has expended \$750,000 or more of DOE awards during the entity's fiscal year, an annual compliance audit performed by an independent auditor is required. For additional information, please refer to 2 CFR 910.501 and Subpart F.

If an educational institution, non-profit organization, or state/local government is a prime recipient or subrecipient and has expended \$750,000 or more of federal awards during the non-federal entity's fiscal year, then a Single or Program-Specific Audit is required. For additional information, please refer to 2 CFR 200.501 and Subpart F.

Applicants and subrecipients (if applicable) should propose sufficient costs in the project budget to cover the costs associated with the audit. DOE will share in the cost of the audit at its applicable cost share ratio.

APPENDIX A – COST SHARE INFORMATION

Cost Sharing or Cost Matching

The terms “cost sharing” and “cost matching” are often used synonymously. Even the DOE Financial Assistance Regulations, 2 CFR 200.306, use both of the terms in the titles specific to regulations applicable to cost sharing. DOE almost always uses the term “cost sharing,” as it conveys the concept that non-federal share is calculated as a percentage of the Total Project Cost. An exception is the State Energy Program Regulation, 10 CFR 420.12, State Matching Contribution. Here “cost matching” for the non-federal share is calculated as a percentage of the federal funds only, rather than the Total Project Cost.

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. FFRDC costs must be included in Total Project Costs. The following is an example of how to calculate cost sharing amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

- Formula: Federal share (\$) divided by federal share (%) = Total Project Cost
Example: \$1,000,000 divided by 80% = \$1,250,000
- Formula: Total Project Cost (\$) minus federal share (\$) = Non-federal share (\$)
Example: \$1,250,000 minus \$1,000,000 = \$250,000
- Formula: Non-federal share (\$) divided by Total Project Cost (\$) = Non-federal share (%)
Example: \$250,000 divided by \$1,250,000 = 20%

What Qualifies For Cost Sharing

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under a DOE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the federal government under another award unless authorized by federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

- FAR Part 31 for For-Profit entities, (48 CFR Part 31); and
- 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, DOE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, DOE generally does not allow pre-award costs prior to the signing of the Selection Statement by the DOE Selection Official.

General Cost Sharing Rules on a DOE Award

1. **Cash Cost Share** – encompasses all contributions to the project made by the recipient or subrecipient(s), for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project.
2. **In-Kind Cost Share** – encompasses all contributions to the project made by the recipient or subrecipient(s) that do not involve a payment or reimbursement and represent donated items or services. In-Kind cost share items include volunteer personnel hours, donated existing equipment, donated existing supplies. The cash value and calculations thereof for all In-Kind cost share items must be justified and explained in the Cost Share section of the project Budget Justification. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out the In-Kind cost share section of the Budget Justification.
3. **Funds from other federal sources MAY NOT be counted as cost share.** This prohibition includes FFRDC subrecipients. Non-federal sources include any source not originally derived from federal funds. Cost sharing commitment letters from subrecipients must be provided with the original application.
4. **Fee or profit, including foregone fee or profit, are not allowable as project costs (including cost share) under any resulting award.** The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

DOE Financial Assistance Rules 2 CFR Part 200 as amended by 2 CFR Part 910

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

(A) Acceptable contributions. All contributions, including cash contributions and third-party in-kind contributions, must be accepted as part of the prime recipient's cost sharing if such contributions meet all of the following criteria:

- (1)** They are verifiable from the recipient's records.
- (2)** They are not included as contributions for any other federally assisted project or program.
- (3)** They are necessary and reasonable for the proper and efficient accomplishment of project or program objectives.
- (4)** They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:
 - a.** For-profit organizations. Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A-122 is determined in accordance with the for-profit cost principles in 48 CFR Part 31 in the FAR, except that patent prosecution costs are not allowable unless specifically authorized in the award document. (v) Commercial Organizations. FAR Subpart 31.2—Contracts with Commercial Organizations; and
 - b.** Other types of organizations. For all other non-federal entities, allowability of costs is determined in accordance with 2 CFR Part 200 Subpart E.
- (5)** They are not paid by the federal government under another award unless authorized by federal statute to be used for cost sharing or matching.
- (6)** They are provided for in the approved budget.

(B) Valuing and documenting contributions

- (1)** Valuing recipient's property or services of recipient's employees. Values are established in accordance with the applicable cost principles, which mean that amounts chargeable to the project are determined on the basis of costs incurred. For real property or equipment used on the project, the cost principles authorize depreciation or use charges. The full value of the item may be applied when the item will be consumed in the performance of the award or fully depreciated by the end of the award. In cases

where the full value of a donated capital asset is to be applied as cost sharing or matching, that full value must be the lesser or the following:

- a.** The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or
 - b.** The current fair market value. If there is sufficient justification, the Contracting Officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The Contracting Officer may accept the use of any reasonable basis for determining the fair market value of the property.
- (2)** Valuing services of others' employees. If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.
- (3)** Valuing volunteer services. Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.
- (4)** Valuing property donated by third parties.
 - a.** Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share must be reasonable and must not exceed the fair market value of the property at the time of the donation.
 - b.** Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the Contracting Officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:
 - i.** The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of

comparable space and facilities in a privately-owned building in the same locality.

- ii. The value of loaned equipment must not exceed its fair rental value.

(5) Documentation. The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:

- a. Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
- b. The basis for determining the valuation for personal services and property must be documented.

APPENDIX B – WAIVER REQUESTS FOR: 1. FOREIGN ENTITY PARTICIPATION; AND 2. FOREIGN WORK

1. Waiver for Foreign Entity Participation

Many of the technology areas DOE funds fall in the category of critical and emerging technologies (CETs). CETs are a subset of advanced technologies that are potentially significant to United States national and economy security.²³ For projects selected under this FOA, all subrecipients must be organized, chartered or incorporated (or otherwise formed) under the laws of a state or territory of the United States; have majority domestic ownership and control; and have a physical location for business operations in the United States. To request a waiver of this requirement, an applicant must submit an explicit waiver request in the Full Application.

Waiver Criteria

Foreign entities seeking to participate in a project funded under this FOA must demonstrate to the satisfaction of DOE that:

- a. Its participation is in the best interest of the United States industry and United States economic development;
- b. The project team has appropriate measures in place to control sensitive information and protect against unauthorized transfer of scientific and technical information;
- c. Adequate protocols exist between the United States subsidiary and its foreign parent organization to comply with export control laws and any obligations to protect proprietary information from the foreign parent organization;
- d. The work is conducted within the United States and the entity acknowledges and demonstrates that it has the intent and ability to comply with the U.S. Competitiveness Provision; and
- e. The foreign entity will satisfy other conditions that may be deemed necessary by DOE to protect United States government interests.

Content for Waiver Request

A Foreign Entity waiver request must include the following:

- a. Information about the entity: name, point of contact, and proposed type of involvement in the project;
- b. Country of incorporation, the extent of the ownership/level control by foreign entities, whether the entity is state owned or controlled, a summary of the ownership breakdown of the foreign entity and the percentage of

²³ See [Critical and Emerging Technologies List Update \(whitehouse.gov\)](https://www.whitehouse.gov/etl/).

- ownership/control by foreign entities, foreign shareholders, foreign state or foreign individuals;
- c. The rationale for proposing a foreign entity participate (must address criteria above);
- d. A description of the project's anticipated contributions to the United States economy;
 - How the project will benefit the United States, including manufacturing, contributions to employment in the United States and growth in new markets and jobs in the United States;
 - How the project will promote domestic American manufacturing of products and/or services;
- e. A description of how the foreign entity's participation is essential to the project;
- f. A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP; and
- g. Countries where the work will be performed (Note: if any work is proposed to be conducted outside the United States, the applicant must also complete a separate request foreign work waiver).

DOE may also require:

- A risk assessment with respect to IP and data protection protocols that includes the export control risk based on the data protection protocols, the technology being developed and the foreign entity and country. These submissions could be prepared by the project lead (if not the prime recipient), but the prime recipient must make a representation to DOE as to whether it believes the data protection protocols are adequate and make a representation of the risk assessment – high, medium, or low risk of data leakage to a foreign entity.
- Additional language be added to any agreement or sub-agreement to protect IP, mitigate risk or other related purposes.

DOE may require additional information before considering the waiver request.

DOE's decision concerning a waiver request is not appealable.

2. **Waiver for Performance of Work in the United States (Foreign Work Waiver)**

As set forth in Section IV.I.iii., all work under funding under this FOA must be performed in the United States. To seek a waiver of the Performance of Work in the United States requirement, the applicant must submit an explicit waiver request in the Full Application. A separate waiver request must be submitted for each entity proposing performance of work outside of the United States.

Overall, a waiver request must demonstrate to the satisfaction of DOE that it would further the purposes of this FOA and is otherwise in the economic interests of the

United States to perform work outside of the United States. A request for a foreign work waiver must include the following:

1. The rationale for performing the work outside the United States (“foreign work”);
2. A description of the work proposed to be performed outside the United States;
3. An explanation as to how the foreign work is essential to the project;
4. A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the United States economy;
5. The associated benefits to be realized and the contribution to the project from the foreign work;
6. How the foreign work will benefit the United States, including manufacturing, contributions to employment in the United States and growth in new markets and jobs in the United States;
7. How the foreign work will promote domestic American manufacturing of products and/or services;
8. A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
9. The total estimated cost (DOE and recipient cost share) of the proposed foreign work;
10. The countries in which the foreign work is proposed to be performed;
11. The name of the entity that would perform the foreign work; and
12. Information about the entity(ies) involved in the work proposed to be conducted the United States. (i.e., entity seek a waiver and the entity(ies) that will conduct the work).

DOE may require additional information before considering the waiver request.

DOE’s decision concerning a waiver request is not appealable.

APPENDIX C – REQUIRED USE OF AMERICAN IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS BUY AMERICA REQUIREMENT FOR INFRASTRUCTURE PROJECTS

A. Definitions

For purposes of the Buy America Requirement, based both on the statute and OMB Guidance Document dated April 18, 2022, the following definitions apply:

Construction materials includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives²⁴—that is or consists primarily of:

- non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- glass (including optic glass);
- lumber; or
- • drywall.

Infrastructure includes, at a minimum, the structures, facilities, and equipment for, in the United States, Roads, highways, and bridges; public transportation; Dams, ports, harbors, and other maritime facilities; Intercity passenger and freight railroads; Freight and intermodal facilities; airports; Water systems, including drinking water and wastewater systems; Electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

Moreover, according to the OMB guidance document:

When determining if a program has infrastructure expenditures, Federal agencies should interpret the term “infrastructure” broadly and consider the definition provided above as illustrative and not exhaustive. When determining if a particular construction project of a type not listed in the definition above constitutes “infrastructure,” agencies should consider whether the project will serve a public function, including whether the project is publicly owned and operated, privately operated on behalf of the public, or is a place of public accommodation, as opposed to a project that is privately owned and not open to the public. Projects with the former qualities have greater indicia of infrastructure, while projects with the latter quality have fewer. Projects consisting

²⁴ BIL, § 70917(c)(1).

solely of the purchase, construction, or improvement of a private home for personal use, for example, would not constitute an infrastructure project.

The Agency, not the applicant, will have the final say as to whether a given project includes infrastructure, as defined herein. Accordingly, in cases where the “public” nature of the infrastructure is unclear, but the other relevant criteria are met, DOE strongly recommends that applicants complete their full application with the assumption that Buy America requirements will apply to the proposed project.

Project means the construction, alteration, maintenance, or repair of infrastructure in the United States.

B. Buy America Requirement for Infrastructure Projects (Buy America Requirements)

In accordance with section 70914 of the BIL, none of the project funds (includes federal share and Recipient cost share) may be used for a project for infrastructure unless:

(1) all iron and steel used in the project are produced in the United States--This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;

(2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and

(3) all construction materials²⁵ are produced in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

The Buy America Requirement only apply to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does the Buy America Requirement apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

These requirements must flow down to all sub-awards, all contracts, subcontracts and purchase orders for work performed under the proposed project, except where the prime recipient is a

²⁵ Excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

for-profit entity. Based on guidance from the Office of Management and Budget (OMB), the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a State, local government, Indian tribe, Institute of Higher Education, or nonprofit organization.

For additional information related to the application and implementation of these Buy America requirements, please see OMB Memorandum M-22-11, issued April 18, 2022:
<https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>

Note that for all applicants – both non-Federal entities and for-profit entities – DOE is including a Program Policy Factor that the Selection Official may consider in determining which Full Applications to select for award negotiations that considers whether the applicant has made a commitment to procure U.S. iron, steel, manufactured products, and construction materials in its project.

C. Waivers

The DOE financial assistance agreement will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products and (2) to fulfill the commitments made in its application regarding the procurement of other key component metals and manufactured products domestically that are deemed available in sufficient and reasonable available quantities or of a satisfactory quality at the time of award negotiation.

In limited circumstances, DOE may waive the application of the Buy America Requirement where DOE determines that:

- (1) applying the Buy America requirements would be inconsistent with the public interest;
- (2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
- (3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

If an applicant or recipient is seeking a waiver of the Buy America requirements, it may submit a waiver request after it has been notified of its selection for award negotiations. A waiver request must include:

- A detailed justification for the use of “non-domestic” iron, steel, manufactured products, or construction materials to include an explanation as to how the non-domestic item(s) is essential to the project;

- A certification that the applicant or recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with potential suppliers;
- Applicant /Recipient name and Unique Entity Identifier (UEI)
- Total estimated project cost, DOE and cost-share amounts
- Project description and location (to the extent known)
- List and description of iron or steel item(s), manufactured goods, and construction material(s) the applicant or recipient seeks to waive from Domestic Content Procurement Preference requirement, including name, cost, country(ies) of origin (if known), and relevant Product Service Codes (PSC) and North American Industry Classification System (NAICS) code for each
- Waiver justification including due diligence performed (e.g., market research, industry outreach) by the applicant or recipient
- Anticipated impact if no waiver is issued.

DOE may require additional information before considering the waiver request.

Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver described at [DOE Buy America Requirement Waiver Requests | Department of Energy](#).

DOE's decision concerning a waiver request is not appealable.

APPENDIX D – STATEMENT OF PROJECT OBJECTIVES

STATEMENT OF PROJECT OBJECTIVES

Title of Project

(Insert the title of the work to be performed. Be concise and descriptive)

This should be a standalone document that states the work to be conducted and should not include any proprietary/confidential information.

A. OBJECTIVES

Include one paragraph on the overall objective(s) of the work. Note: if the project will be performed in phases, include specific objective(s) for each phase of the work.

B. SCOPE OF WORK

This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work. Note: if the project will be performed in phases, includes specific scope statement(s) for each phase.

C. TASKS TO BE PERFORMED

This section provides a brief summary of the planned approach to this project. Tasks/subtasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project, as appropriate. In writing the Statement of Project Objectives (SOPO), avoid 1) the use of proper nouns to minimize SOPO modifications in the event of changes to the project team, facilities, etc.; 2) figures and equations; 3) references to other documents and publications; and 4) details about past work and discussion of technical background (which should be covered elsewhere in the application narrative).

Task 1.0 - Project Management and Planning (REQUIRED; APPLICANT INSERT THE LANGUAGE PROVIDED BELOW IN QUOTES)

Subtask 1.1 – Project Management Plan

“The Recipient shall manage and direct the project in accordance with a Project Management Plan to meet all technical, schedule and budget objectives and requirements. The Recipient will coordinate activities in order to effectively accomplish the work. The Recipient will ensure that project plans, results, and decisions are appropriately documented, and project reporting and briefing requirements are satisfied.

The Recipient shall update the Project Management Plan 30 days after award and as necessary throughout the project to accurately reflect the current status of the project. Examples of when it may be appropriate to update the Project Management Plan include: (a) project management policy and procedural changes; (b) changes to the technical, cost, and/or schedule baseline for the project; (c) significant changes in scope, methods, or approaches; or (d) as otherwise required to ensure that the plan is the appropriate governing document for the work required to accomplish the project objectives.

Management of project risks will occur in accordance with the risk management methodology delineated in the Project Management Plan in order to identify, assess, monitor and mitigate technical uncertainties as well as schedule, budgetary and environmental risks associated with all aspects of the project. The results and status of the risk management process will be presented during project reviews and in quarterly progress reports with emphasis placed on the medium- and high-risk items.”

APPLICANT continue with tasks/sub-tasks as necessary. If the project is structured in Phases, clearly delineate which tasks/subtasks are in each Phase.

Task 2.0 - (Title)

Task descriptions should include a concise description of the work to be conducted for each task. If the task includes subtasks, provide a general description of how each subtask is related to the overall scope of the task.

Subtask 2.1 - (Title)

Subtask descriptions should include a concise description of the work to be conducted for each subtask.

Subtask 2.2 - (Title)

D. DELIVERABLES (Required: Applicant insert the Language provided below in quotes and continue to complete.)

“The periodic and final reports shall be submitted in accordance with the “Federal Assistance Reporting Checklist” and the instructions accompanying the checklist. In addition to the reports specified in the “Federal Assistance Reporting Checklist”, the Recipient must provide the following to the NETL Project Manager (identified in Block 15 of the Assistance Agreement as the Program Manager).”

Task / Subtask Number	Deliverable Title	Due Date
1.0	Project Management Plan	Update due 30 days after award. Revisions to the PMP shall be submitted as requested

		by the NETL Project Manager. See Appendix F for requirements and formatting.
X.X	Final Project Report	Due 90 days after completion of the project. See Appendix E for requirements and formatting.
X.X	Project Summary Slide (The slide must not include any proprietary or sensitive business information as DOE plans to make it available to the public.)	Due 90 days after the project end date. Populate the template provided in Appendix G.

APPLICANT continue to identify deliverables (other than those identified on the “Federal Assistance Reporting Checklist”) that will be delivered using the format provided in the table above. Ensure the delivery date to NETL is also identified. For examples: Delivery to NETL X months after completion of task/subtask X.

NOTE: If the application is selected for award, DOE may require the Recipient to include additional deliverables, provided that such deliverables are consistent with the budget, schedule, and scope of the project.

E. BRIEFINGS/TECHNICAL PRESENTATIONS (Required: Applicant insert the language provided below in quotes and continue to complete.)

“The Recipient shall prepare detailed briefings for presentation to the NETL Project Manager at their facility located in Pittsburgh, PA, Morgantown, WV, Albany, OR, or via remote meeting. The Recipient shall make a presentation to the NETL Project Manager at a project kick-off meeting held within ninety (90) days of the project start date. At a minimum, annual briefings shall also be given by the Recipient at the NETL/DOE sponsored meetings to explain the plans, progress, and results of the technical effort and a final project briefing at the close of the project shall also be given.”

At the Applicant’s discretion, other briefings/presentations may be added to Section E of the SOPO.

NOTE: If the application is selected for award, DOE may require the Recipient to include additional briefings/presentations, provided that such briefings/presentations are consistent with the budget, schedule, and scope of the project.

APPENDIX E – FINAL PROJECT REPORT

FINAL PROJECT REPORT

TITLE OF PROJECT

(INSERT THE TITLE OF THE WORK PERFORMED. BE CONCISE AND DESCRIPTIVE)

THIS SHOULD BE A STANDALONE DOCUMENT THAT STATES THE WORK HAS BEEN ACCOMPLISHED AND SHOULD NOT INCLUDE ANY PROPRIETARY/CONFIDENTIAL INFORMATION.

The final report should include following:

- a. **Commercial or industrial product performance, including:**
 - i. Product performance relative to expectations
 - ii. Cost relative to incumbent technology
 - iii. Experience with vendor delivering on time and within costs
 - iv. Total GHG equivalent emissions avoided as determined by product consumption and manufacturer provided LCA metrics after procurement
- b. **Overall experience with Utilization Procurement Grants Program including:**
 - i. Feedback to improve the program
 - ii. Likelihood to submit future applications
 - iii. Likelihood to purchase additional product(s) based on this experience
- c. **If applicable, the effects relative to state/local/organizational goals including:**
 - i. Sustainable procurement targets and or mandates
 - ii. Diversity, Equity, Inclusion, and Accessibility
 - iii. Impact on job creation or sustainment

APPENDIX F – PROJECT MANAGEMENT PLAN

The Recipient's Project Management Plan (PMP) is an approved document that defines how the Recipient will execute, monitor, and control the project to accomplish the objectives. The specific contents, level of detail, and inclusion of subsidiary planning documents are tailored according to the needs of the project. Consequently, every PMP will be different based on the risk, visibility, and/or complexity of the project and the Recipient's established processes, procedures, and systems.

PROJECT MANAGEMENT PLAN

{Insert Project Title}

{Date Prepared}

SUBMITTED BY

{Organization Name}

{Organization Address}

{City, State, Zip Code}

PRINCIPAL INVESTIGATOR

{Phone Number}

{E-mail}

SUBMITTED TO

U.S. Department of Energy National Energy Technology Laboratory

This plan should be formatted to include the following sections with each section to include the information as described below:

{Name}

- A. **Executive Summary:** Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information is included in the Project Narrative and should be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document.
- B. **Project Organization and Structure:** Provide the following information in this section:
 - Organizational Chart(s): Include a complete project organizational chart and sub-organization charts (if applicable), accompanied by a discussion of how the organizational structure will facilitate the performance of the Tasks and achievement of the objectives described in the SOPO within the time frame specified in the application.
 - Roles and Responsibilities of Participants: Provide a discussion of key project team members, and the capacity in which each team member will assist in achieving the overall objective(s) of the proposed project. For multi-organizational or multi-investigator projects, describe the roles to be performed by each participant/investigator within the context of the Task/subtask structure contained in the SOPO. Include descriptions of any business agreements or intellectual property issues between the recipient and other members of the project team, and how these agreements will be integrated and managed.
 - Decision-making and Communication Strategy: Provide a discussion of how communication and decision-making will occur within the context of the organizational structure, with particular emphasis on scientific/technical direction and mechanisms for controlling project scope, cost, and schedule. Include a discussion of how the project team will communicate with DOE and external stakeholders during the performance of the project.
 - Management Capabilities: Provide information relevant to the capabilities and experience of the PI and key project team members in managing technical projects of similar nature and complexity. If applicable, include examples that demonstrate the ability to successfully meet research objectives within scope, budget and schedule.

- C. **Risk Management Plan:** Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. Risk is inherent to all projects regardless of complexity, cost, or visibility. An effective Risk Management Plan will identify perceived risks and explain mitigation strategies for each risk. At a minimum, the Risk Management Plan shall include the initial identification of significant financial, cost/schedule, technical/scope, management, planning and oversight, ES&H, external factors, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues.

The following table format is provided but is not required:

Perceived Risks and Mitigation Strategies

Perceived Risk	Risk Rating			Mitigation/Response Strategy
	Probability	Impact	Overall	
	(Low, Med, High)			
Financial Risks:				
Cost/Schedule Risks:				
Technical/Scope Risks:				
Management, Planning, and Oversight Risks:				
ES&H Risks:				
External Factor Risks:				

- D. **Milestone Log:** Provide milestones for each budget period of the project. Each milestone should be linked to a specific Task or Subtask and include a title, planned completion date, and a description of the method/process/measure used to verify completion. Milestones should be quantitative and show progress toward budget period and/or project goals.

Conversely, periodic, mandatory progress reports are not considered to be Milestones.

Milestones are presumed to lie on the critical path of the project, i.e., unless all milestones are achieved, the Objectives as defined in the SOPO cannot be met completely. Recipients must provide at least two milestones per year throughout the course of the project.

The applicant should provide a summary of appropriate milestones throughout the project to demonstrate success. A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be Specific, Measurable, Achievable, Relevant, and Timely, and must demonstrate a technical achievement rather than simply completing a task. Unless otherwise specified in the FOA, the minimum requirement is that each project must have at least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). The applicant should also provide the means by which the milestone will be verified.

Milestone Format

Task/ Subtask	Milestone Title & Description	Planned Completion Date	Verification method

[Note: During project performance, the Recipient will report the Milestone Status as part of the required quarterly progress report as prescribed under the Federal Assistance Reporting Checklist. The Milestone Status will present actual performance in comparison with Planned Milestones, and include:

1. the actual status and progress of the project,
2. specific progress made toward achieving the project's milestones, and

3. any proposed changes in the project's schedule required to complete milestones.]

E. **Costing Profile:** Provide a table (the Spend Plan) that projects the expenditures of government funds by fiscal year for each project team member.

Spend Plan by Fiscal Year Format

	FY 20XX		FY 20XX		FY 20XX		FY 20XX		Total	
	DOE Funds	Cost Share	DOE Funds	Cost Share	DOE Funds	Cost Share	DOE Funds	Cost Share	DOE Funds	Cost Share
Recipient										

Sub-recipient A, if proposed										
Sub-recipient B, if proposed										
FFRDC/NL, if proposed										
Total (\$)										
Total Cost Share %										

F. **Project Timeline:** Provide a timeline of the project (similar to a Gantt chart) broken down by each task and subtask, as described in the Statement of Project Objectives. The timeline should include for each task, a start date, and end date. The timeline should show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section C).

Project Timeline (Gantt Chart) Example

G. **Success Criteria:** Success criteria are used by the DOE to determine if specific goals and objectives were met at the end of budget period(s), go/no-go decision points, and/or

project completion. The success criteria should be objective and stated in terms of specific, measurable, and repeatable data. Usually, the success criteria pertain to desirable outcomes, results, and observations from the project.

[Note: As the first task in the Statement of Project Objectives, successful recipients will revise the version of the Project Management Plan that is submitted with their applications by including details from the negotiation process. This Project Management Plan will be updated by the Recipient as the project progresses, and the Recipient must use this plan to report scope, schedule, and budget variances.]

APPENDIX G – PROJECT SUMMARY SLIDE

The slide must not include any proprietary or sensitive business information as DOE plans to make it available to the public.

UPGrants Project Title
(DOE Award Number)



Eligible Entity Name (City, State):

Carbon Product Name:

Carbon Product Application & Quantity Used:

Performance Period and Project Cost Shares:

Carbon Product Vendor Name (City, State):

Carbon Product Description:



Demonstration Performed & Accomplishments

Benefits

- Product Performance
- Cost Relative To Incumbent Technology
- Avoided CO₂ Emissions

Carbon Product Related Picture (required)

For Public Release



Project Under DE-FOA-0002829

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APPENDIX H – PROJECT DESCRIPTION AND ASSURANCES DOCUMENT TEMPLATE (PDAD)

Project Title:

Applicant Name:

Applicant Address:

Names of all team member organizations (if applicable):

Principal Investigator (Name, Address if different than Applicant's, Phone Number, E-mail):

Business Point of Contact (Name, Address if different than Applicant's, Phone Number, E-mail):

Include any statements regarding confidentiality.

Federal Share:

Cost Share:

Total Estimated Project Cost:

Item 1: Specify (mark with "X") the entity type of the applicant organization:

_____ a State

_____ a unit of local government

_____ a public utility or agency

Item 2:

Authorized Organizational Representative (AOR): please provide name, address, phone number and e-mail address for the authorized agent to bind the entity.

Authorized Organizational Representative (AOR):

Name:

Address:

Phone:

E-mail:

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this PDAD is true, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812).

Item 8: Signature of Certification of Organizational Representative (AOR)
