Department of Energy (DOE)
Office of Manufacturing and Energy Supply Chains (MESC)

DOE Heat Pump Defense Production Act Program

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FOA Amendment 000001 Issue Date:	7/21/2023
FOA Amendment 000002 Issue Date:	2/14/2024
Submission Deadline for Round 2 Concept Papers:	3/15/2024
Submission Deadline for Round 2 Full Applications:	4/29/2024
Expected Date for DOE Round 2 Selection Notifications:	July 2024
Expected Timeframe for Round 2 Award Negotiations:	July-Sep 2024

***Round 2: This FOA is being re-opened to solicit applications for new Topic Areas:**

- **Topic Area 3. Residential Heat Pump Production Capability**
- **Topic Area 4. Heat Pump Water Heater Production Capability**
- **Topic Area 5. All Other Heat Pump and Component Production Capability**

Complete details for how to apply to this FOA opening are contained herein.

- Applicants must submit a Concept Paper by 5:00pm ET on the due date listed above to be eligible to submit a Full Application.

- To apply to this FOA, applicants must register with and submit application materials through Exchange at https://infrastructure-exchange.energy.gov/, the online application portal.

- **Unique Entity Identifier (UEI) and System for Award Management (SAM)** - Each applicant (unless the applicant is excepted from those requirements under 2 CFR 25.110) 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.

- Applicants must designate primary and backup points-of-contact in Exchange with whom MESC 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.

Amendments

Amend. No.	Date	Description of Amendment
000001	7/21/2023	This Amendment is to revise Section IV.D.ii. The Engineering, Procurement, Construction and Operations (EPC&O) project documents should now be submitted as an attachment to the Technical Volume. The EPC&O project documents will not be included in the Technical Volume page limitation. Text that is revised or newly incorporated with this amendment is highlighted in yellow.
000002	2/14/2024	The purpose of this amendment is to revise the following: • Add the submission deadline for Round 2 Concept Papers. • Add the date of the second closing of 4/29/2024. • Update the Program Goals (Section I.A.i.). • Update Topic Areas to close Topic Areas 1&2 and include Topic Areas 3, 4, and 5 (Section I.B.). • Update the Estimated Award Funding language and table (Section II.A.i.). • Update the Period of Performance table (Section II.A.ii.). • Update the Full Application Content Requirements to remove the Data Management Plan requirement (Section IV.D.i.). • Update the Technical Volume Content Requirements (Section IV.D.ii.). • Update the Community Benefits Plan requirement (Section IV.D.xvii.). • Update the Current & Pending Support language and links (Section IV.D.xviii.). • Update the Risk Assessment language (Section IV.I.ix.). • Update Criterion 1: Technical Merit, Innovation, and Impact (Section V.A.ii.). • Incorporate Appendix E Community Benefits Plan template. • Remove language regarding Data Management Plans. • Remove language regarding Davis-Bacon Act Requirements. • Various administrative and formatting changes.

		Text that is revised or newly incorporated with this amendment is highlighted in blue. Removal of text within the FOA document will not be highlighted.

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I. Funding Opportunity Description

A. Background and Context

The Office of Manufacturing and Energy Supply Chains (MESC) is issuing this Funding Opportunity Announcement (FOA). Awards made under this FOA will be funded, in whole or in part, with funds appropriated by the Inflation Reduction Act (IRA) of 2022.

U.S. manufacturing output of electric heat pumps, which include ground-source and air-source heat pumps, as well as both space heating and water heating equipment, is not yet at the rate or volume needed to fully achieve U.S. climate and energy security goals. Buildings, homes, offices, schools, hospitals, military bases, and other critical facilities drive more than 40% of all U.S. energy consumption. U.S. energy supplies are largely dependent on fossil fuels that remain susceptible to geopolitical impacts from nations that are not U.S. strategic partners or allies.

Electric heat pumps are industrial resources, materials, or critical technology items essential to the national defense. Increased usage of electric heat pumps will allow the United States and its allies to reduce its reliance on fossil fuels from adversaries, and thus strengthen U.S. energy security and national defense. Electric heat pumps also allow consumers and businesses to cut energy use and costs, reduce climate risks, and create jobs.

The Bipartisan Infrastructure Law (BIL) of 2021 (Pub. L. 117-58), and the Inflation Reduction Act (IRA) of 2022 (Pub. L. 117-169) included several incentives that are expected to increase demand of electric heat pumps in retrofit and new markets but may not ensure domestic capacity of electric heat pumps at the speed and scale required to meet the anticipated demand. In June 2022, President Biden issued five determinations under the Defense Production Act (DPA) of 1950 (50 U.S.C. 4501 et seq.), including a presidential determination to allow DOE to use its delegated DPA authorities to expand the domestic production capability for electric heat pumps.[1]

Section 30001 of the IRA appropriated $500 million to carry out the DPA, of which $250 million was subsequently allocated to the Department of Energy to support the growth of manufacturing needed to meet the anticipated growing demand for electric heat pumps. This funding could help scale up U.S. heating, ventilation, and air conditioning (HVAC) and water heating (WH) manufacturing; accelerate installation of high-efficiency electric heat pumps in homes, qualified buildings; and

[1] Presidential Determination No. 2022-18, "Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as Amended, on Electric Heat Pumps," June 6, 2022

industrial settings, and complement investment coming through other BIL and IRA provisions described earlier.

i. Program Purpose and Strategic Goals

The main goal of this program is to ensure national security by accelerating the growth of domestic production capability of electric heat pumps to meet the anticipated increased demand for clean energy technologies as the economy transitions to net-zero emissions. The program will also aim to:

- Expand United States electric heat pump manufacturing to reduce the amount of energy needed in our buildings, leading to less reliance by the U.S. and allies on adversaries, such as Russia, for oil and gas.
- Strengthen heat pump system, components, and material supply chains
- Create economic prosperity for communities, especially underserved communities, by ensuring access to federal resources
- Support the creation of good-paying jobs

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining,[2,3,4] 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.[5] Consistent with Executive Order 14008,[6] this FOA is designed to help meet the goal that 40% of the overall benefits of federal investments in clean energy and climate solutions flow to disadvantaged communities, as identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), located at https://screeningtool.geoplatform.gov/, and to drive the creation of accessible good-paying jobs with the free and fair chance for workers to join a union.

Additionally, applications to this FOA could consider heat pumps that support other Federal government efforts such as the Affordable Home Energy Shot (https://www.energy.gov/eere/affordable-home-energy-shot) goals by considering

[2] EO 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government," January 20, 2021.
[3] EO 14025, "Worker Organizing and Empowerment," April 26, 2021.
[4] EO 14052, "Implementation of the Infrastructure Investment and Jobs Act," November 18, 2021.
[5] 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.
[6] EO 14008, "Tackling the Climate Crisis at Home and Abroad," January 27, 2021.

technologies with company designs to reduce costs, weight, size, and complexity of installation.

ii. Technology Space and Strategic Goals

This FOA seeks applications to expand domestic production capability of efficient electric heat pump systems, components, and materials in the United States. Detailed technical descriptions of the specific Topic Areas are provided in the sections that follow.

B. Topic Areas

Topic Areas: The following requirements apply to all ~~both~~ topic areas.

Projects must include plans for investment in workforce needed to support that corresponding production capability.

A portion of the project may propose using Defense Production Act funding for workforce development to the extent it is necessary for the development of heat pump production capabilities; however, Defense Production Act funding for workforce development is limited to a one-time investment and cannot provide wage subsidies or cover other recurring wage and benefits costs. General examples of workforce investment could include, but are not limited to, partnerships with labor unions or other workforce groups, apprenticeship programs, pre-apprenticeship programs, technical training programs, or other skilled labor training programs.

~~**Topic Area 1: New or additional domestic production capability:** The objective of this topic area is to construct new commercial-scale facilities or expand existing facilities to create new or additional domestic production capability for electric heat pump materials, heat pump components, and heat pump systems (air- or ground-source heat pump, heat pump water heaters) where domestic production capability would address clear supply chain vulnerabilities.~~ **Topic Area 1 is now closed.**

~~**Topic Area 2: Retrofit an existing production capability:** The objective of this topic area is to retool or retrofit existing commercial-scale facilities to transition manufacturing from non-heat pump HVAC systems and/or water heating equipment to produce electric heat pump materials, heat pump components, and heat pump systems (air- or ground-source heat pump, heat pump water heaters) where domestic production capability would address clear supply-chain vulnerabilities. This topic area also considers retooling and retrofits to existing heat pump materials, components, and systems facilities that would significantly increase~~

~~heat pump efficiency and/or expand market to cold climates~~. **Topic Area 2 is now closed.**

Topic Area 3: Residential Heat Pump Production Capability: The objective of this topic area is to create new or additional domestic production capability for heat pumps and components serving single dwelling residential units by constructing new commercial-scale facilities, expanding existing facilities, or retrofitting an existing production capability.

Topic Area 4: Heat Pump Water Heater Production Capability: The objective of this topic area is to create new or additional domestic production capability for heat pump water heaters and components by constructing new commercial-scale facilities, expanding existing facilities, or retrofitting an existing production capability.

Topic Area 5: All Other Heat Pump and Component Production Capability: The objective of this topic area is to create new or additional domestic production capability for all other heat pumps and components outside of Topic Areas 3 or 4 (for example, heat pumps serving multifamily dwelling units, commercial and industrial heat pumps) by constructing new commercial-scale facilities, expanding existing facilities, or retrofitting an existing production capability.

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 that fall outside the technical parameters specified in Sections I.A. and I.B. of the FOA.
- Applications that focus on installation and deployment of heat pumps.
- Applications that are based on research, development, or pilot-scale activities.

D. Community Benefits Plan: Job Quality and Equity

To support the goal of building a clean and equitable energy economy, the IRA-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). To ensure these goals are met, applications must include a Community Benefits Plan that describes how the proposed project would incorporate the four objectives stated above.

Applicants are encouraged to submit Community and Labor Partnership Documentation from established labor and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan. Within the Community Benefits Plan, the applicant is encouraged to provide specific detail on how to ensure the delivery of measurable community and jobs benefits, ideally through the use of negotiated agreements between the applicant and the community, and/or the applicant and labor unions referred to collectively here as "Workforce and Community Agreements." These include good neighbor agreements, community benefits agreements, community workforce agreements, project labor agreements, and other collective bargaining agreements. See Section IV.D.xvii. for the Community Benefits Plan content requirements.

DOE recognizes the similarities between workforce investment as a component of the Topic Areas (see Section I.B) and workforce as a part of the Community Benefits Plan. Applicants may use some or all of their workforce investment as a component of the Topic Areas to support the objectives of a Community Benefits Plan. Applicants should: (i) clearly explain how the proposed workforce investment is consistent with the characteristics and limitations described in the Topic Areas; and (ii) identify any overlap between the Topic Areas and the Community Benefits Plan.

E. Authorizing Statutes

The programmatic authorizing statute is:

Section 30001 of the Inflation Reduction Act of 2022 (Pub. L. 117-169) and Title III of the Defense Production Act of 1950, as amended (50 U.S.C. 4501 et seq).

Awards made under this announcement will fall under the purview of 2 CFR Part 200 as amended by 2 CFR Part 910.

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to make a total of approximately $63,000,000 of federal funding available for new awards under Round 2 of this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 3-12 awards under Round 2 of this FOA. DOE may issue one, multiple, or no awards. The awards are anticipated to vary between $5,000,000 and $50,000,000. DOE awards will not exceed $50,000,000.

DOE may issue awards in one, multiple, or none of the following Round 2 topic areas:

Topic Area Number	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual Award (Fed Share)	Maximum Award Size for Any One Individual Award (Fed Share)*	Approximate Total Federal Funding Available for All Awards **
3	1-4	$5,000,000	$50,000,000	$21,000,000
4	1-4	$5,000,000	$50,000,000	$21,000,000
5	1-4	$5,000,000	$50,000,000	$21,000,000
Note *: Federal award values will not exceed this amount. **Note **: These values are estimates, selections may result in more funding or less funding per Topic Area.**				

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

Anticipated project durations are provided in the table below. Project continuation will be contingent upon several elements, including satisfactory performance and DOE's Go/No-Go decision. For a complete list and more information on the Go/No-Go review, see Section VI.B.xii.

Topic Area Number	Anticipated Award Period
3	Up to 48 months
4	Up to 48 months
5	Up to 48 months

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

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. Individuals

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

ii. 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 prime recipient or subrecipient of this FOA:

1. Institutions of higher education;
2. For-profit entities;
3. Non-profit entities; and
4. State, territorial, 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 territory of the United States; have majority domestic ownership and control; and have a physical place of business in the United States.

DOE/NNSA FFRDCs are eligible to apply for funding as a subrecipient. **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 to apply for funding.

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.

iii. Foreign Entities

In limited circumstances, DOE may approve a waiver to allow a foreign entity to participate as a prime recipient or subrecipient. A foreign entity may submit a Concept Paper and Full Application to this FOA, but the Full Application must be accompanied by an explicit written waiver request. Likewise, 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 C 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.

iv. Incorporated Consortia

Domestic incorporated consortia are eligible to participate as a prime recipient or 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 C.

v. Unincorporated Consortia

Unincorporated Consortia must designate one member of the consortium to serve as the prime recipient/consortium representative. The prime recipient/consortium representative must qualify as a domestic entity.

Upon request, unincorporated consortia must provide the DOE Contracting Officer with a collaboration agreement, commonly referred to as the articles of collaboration, which sets out the rights and responsibilities of each consortium member. This agreement binds the individual consortium members together and should include the consortium's:

- Management structure;
- Method of making payments to consortium members;
- Means of ensuring and overseeing members' efforts on the project;
- Provisions for members' cost sharing contributions; and
- Provisions for ownership and rights in intellectual property developed previously or under the agreement.

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 C.

B. Cost Sharing

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

For all ~~both~~ topic areas, the cost share must be at least 50% of the total project costs[7] for demonstration or commercial application projects.[8] The cost share must come from non-federal sources unless otherwise allowed by law.

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.

[7] Total project costs is the sum of the government share, including FFRDC costs if applicable, and the recipient share of project costs.
[8] Energy Policy Act of 2005, Pub.L. 109-58, sec. 988. Also see 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

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.

iii. Cost Share Types and Allowability

An applicant selected under this FOA cannot use, designate, or provide leverage federal financing, such as DOE Loan Guarantees, to provide the required cost share or to otherwise support the same scope that is proposed in response to this FOA. Additionally, the achievement of MESC project objectives must not rely upon a current or future DOE Loan Guarantee for another project.

An applicant selected under this FOA cannot subordinate DOE's interest in property or equipment for any purpose.

Also, in general, deferred or avoided costs such as tax credits may be considered in the overall project business case but cannot be counted towards the cost share requirements.

An applicant selected under this FOA cannot propose the value of previously acquired equipment, buildings, or land as cost share.

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.

Project teams may provide cost share in the form of cash or in-kind contributions. 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.

To the extent applicable to an Application, DOE will consider data that is commercially available at an established market price to be an allowable cost under the project (either as DOE share or non-federal cost share) but DOE will not consider in-kind data (e.g., data, owned by an entity, that is not routinely sold commercially but is instead donated to the project and assigned a value) to be an allowable cost under the project, including as recipient cost share. Estimation methods used by the recipient to assign a value to in-kind data cannot be objectively verified by DOE and therefore will not be accepted by DOE as an allowable cost under any project selected from this FOA. Consequently, DOE will not recognize in-kind data costs in any resulting approved DOE budget.

Project teams may use funding or property received from state or local governments to meet the cost share requirement, so long as the funding was not provided to the state or local government by the federal government.

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.

vi. Cost Share Payment

DOE requires prime recipients to contribute the cost share amount incrementally over the life of the award. Specifically, the prime recipient's cost share for each billing period must always reflect the overall cost share ratio negotiated by the parties (i.e., the total amount of cost sharing on each invoice when considered cumulatively with previous invoices must reflect, at a minimum, the cost sharing percentage negotiated).

In limited circumstances, and where it is in the government's interest, the DOE Contracting Officer may approve a request by the prime recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. Regardless of the interval requested, the prime recipient must be up to date on cost share at each interval. Such requests must be sent to the Contracting Officer during award negotiations and include the following information: (1) a detailed justification for the request; (2) a proposed schedule of payments, including amounts and dates; (3) a written commitment to meet that schedule; and (4) such evidence as necessary to demonstrate that the prime recipient has complied with its cost share obligations to date. The Contracting Officer must approve all such requests before they go into effect.

C. Compliance Criteria

All applicant submissions must:

- comply with the applicable content and form requirements listed in Section IV. of the FOA;
- include all required documents;

- be successfully uploaded in Exchange https://infrastructure-exchange.energy.gov/, including clicking the "Submit" button; and
- be submitted by the deadline stated in the FOA.

DOE will not review or consider submissions submitted through means other than Exchange, submissions submitted after the applicable deadline, or incomplete submissions.

Applicants are strongly encouraged to submit their Concept Papers and Full Applications at least 48 hours in advance of the submission deadline. Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Concept Paper or Full Application. Once the Concept Paper or Full Application is submitted in Exchange, applicants may revise or update that submission until the expiration of the applicable deadline. If changes are made to any of these documents, the applicant must resubmit the Concept Paper or Full Application before the applicable deadline. DOE will not extend the submission deadline for applicants that fail to submit required information by the applicable deadline due to server/connection congestion.

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:

a. 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.

b. 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.

c. Funding, Cost Share and Subaward with FFRDCs
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.

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.

d. 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.

e. 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 each application describes a unique, scientifically distinct project; provided that each application is only submitted to one topic area; and provided that an eligible 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 multiple phases: a Concept Paper phase, and a Full Application phase. **Only applicants who have submitted an eligible 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;
- A **control number** will be issued when an applicant begins the Exchange application process. The control number must be included with all application documents. Specifically, the control number must be prominently displayed on the upper right corner of the header of every page and included in the file name (i.e., *Control Number_Applicant Name_Full Application*);
- 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.

i. Additional Information on Exchange

Exchange is designed to enforce the deadlines specified in this FOA. The "Apply" and "Submit" buttons will automatically disable at the defined submission deadlines. Should applicants experience problems with Exchange, the following information may be helpful.

Applicants that experience issues with submission PRIOR to the FOA deadline: In the event that an applicant experiences technical difficulties with a submission, the

applicant should contact the Exchange helpdesk for assistance (InfrastructureExchangeSupport@hq.doe.gov). The Exchange helpdesk and/or the Exchange system administrators will assist applicants in resolving issues.

B. Application Forms

The application forms and instructions are available on Exchange. To access these materials, go to https://infrastructure-exchange.energy.gov/ and select the appropriate funding opportunity number.

Note: The maximum file size that can be uploaded to the Exchange 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 concept or technology. The Concept Paper must conform to the requirements listed below, including the stated page limits.

Section	Page Limit	Description
Cover Page	1 page maximum	The cover page should include the project title, the specific announcement Topic Area being addressed, both the technical and business points of contact, names of all team member organizations, the project location(s), and any statements regarding confidentiality.
Project Description	4 pages maximum	Applicants must succinctly describe the following: • **Small Business Status:** The applicant must identify whether they are applying as a small business and the planned use of small businesses for the award. • **Scope and Objectives:** The overall scope and objectives of the proposed project. • **Project Location:** The project location, including the address of the project location

		• **Production Capacity:** The product(s) to be produced, the targeted annual manufacturing[9] and information or data to support the targeted annual manufacturing capacity.
		• **Market Overview:** The market segment(s) the project will fulfill (e.g., heat pump material/components, or heat pump systems), the stability of that market segment(s), the growth potential of that market segment(s), and the competitiveness of the project in the market segment(s).
		• **Domestic Supply Chain Impact:** The impact that the project will have in bolstering the relevant domestic supply chain, including analysis of how the project will impact or improve the current baseline by increasing domestic capacity to meet current or projected demand and/or by onshoring capacity to enhance national security, resilience, and economic competitiveness.
		• **Community Benefits Plan:** Applicants are required to describe succinctly the approach to be taken with the Community Benefits Plan, addressing the four core elements:
		  ○ community and labor engagement leading to negotiated agreements;
		  ○ investing in job quality and workforce continuity;
		  ○ advancing diversity, equity, inclusion, and accessibility; and
		  ○ contributing to the Justice40 Initiative goal that 40% of the overall climate and clean energy investments flow to disadvantaged communities.
		• **Project Impacts:** The anticipated substantial impact of the proposed project to meet heat pump demand; to support local economy and jobs – quantifying where possible – and to reduce greenhouse gas emissions.
		• **Impact of DOE Funding:** How the proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

Addendum	2 page maximum	Applicants must succinctly describe the following:

[9] The annual manufacturing capacity of the proposed project represents projected (not peak) annual product output of the project. The applicant will be required to justify the claimed production by providing yield loss and throughput data wherever applicable and possible. In particular, taxpayers should discuss previous production experience on similar or identical production equipment.

		• **Team qualification:** The qualifications, experience, capabilities, and other resources necessary to complete the proposed project including:
		  ○ Skill and expertise of the project lead and Project Team in relation to the project plan;
		  ○ Describe prior experience performing tasks of similar risk and complexity;
		  ○ Describe how the applicant has worked together with its teaming partners on prior projects or programs;
		  ○ Describe the equipment and facilities necessary to accomplish the effort, and the plan to obtain access to them; and
		• **Cost Share:** The concept paper must identify the amount and sources of cost share.
		• **Risk mitigation plan:** The applicant must identify risks and challenges of the project, as well as strategies for mitigating and managing those risks.

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 Exchange website at https://infrastructure-exchange.energy.gov/.

Applicants will have approximately 30 days from receipt of the Concept Paper Encourage/Discourage notification on Exchange to prepare and submit a Full Application. Regardless of the date the applicant receives the Encourage/Discourage notification, the submission deadline for the Full Application remains the date and time stated on the FOA cover page.

All Full Application documents must be marked with the control number issued to the applicant.

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
Technical Volume	PDF	30	ControlNumber_LeadOrganization_TechnicalVolume
Resumes	PDF	3 pages each	ControlNumber_LeadOrganization_Resumes
Letters of Commitment (Cost Share)	PDF	1 page each	ControlNumber_LeadOrganization_LOCs
Offtake Agreement Letters of Commitment	PDF	1 page each	ControlNumber_LeadOrganization_OffTake
Community Partnership Documentation Letter(s)	PDF	10	ControlNumber_LeadOrganization_PartnerDocs
Statement of Project Objectives	MS Word	8	ControlNumber_LeadOrganization_SOPO
SF-424: Application for Federal Assistance	PDF	n/a	ControlNumber_LeadOrganization_App424
Budget Justification Workbook	MS Excel	n/a	ControlNumber_LeadOrganization_Budget_Justification
Summary for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary
Summary Slides	MS PowerPoint	5	ControlNumber_LeadOrganization_Slides
Subrecipient Budget Justification	MS Excel	n/a	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification
Authorization from cognizant Contracting Officer for FFRDC	PDF	n/a	ControlNumber_LeadOrganization_FFRDCAuth
SF-LLL Disclosure of Lobbying Activities	PDF	n/a	ControlNumber_LeadOrganization_SF-LLL
Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	n/a	ControlNumber_LeadOrganization_Waiver
Community Benefits Plan: Job Quality and Equity (not inclusive of Community Partnership Documentation Letter(s))	PDF	n/a	ControlNumber_LeadOrganization_CBenefits
Current and Pending Support	PDF	n/a	ControlNumber_LeadOrganization_CPS
Locations of Work	MS Excel	n/a	Control Number_LeadOrganization_LOW
Environmental Considerations Summary	PDF	n/a	ControlNumber_LeadOrganization_EnvSum
Potentially Duplicative Funding Notice (if applicable)	PDF	n/a	ControlNumber_LeadOrganization PDFN

Note: The maximum file size that can be uploaded to the Exchange website is 10MB. See Section IV.B.

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

ii. 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 "ControlNumber_LeadOrganization_TechnicalVolume".

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 30 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of 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	The cover page should include the project title, the specific FOA Topic Area being addressed, 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)	The Project Overview should include the information set forth below, as well as clear, unambiguous, and quantified data and measures to support any included analysis and projected impacts. Information provided in the Project Overview should be consistent with and supported by other sections of the application. • **Scope and Objectives:** The overall scope and objectives of the proposed project. • **Project Location:** The project location, including the address of the project location. • **Production capacity:** The product(s) to be produced, the targeted annual manufacturing capacity[10] and information or data to support the targeted annual manufacturing capacity. • **Market Overview:** The market segment(s) the project will fulfill (e.g., heat pump material/components, or heat pump systems), the stability of that market segment(s), the growth potential of that market segment(s), and the competitiveness of the project in the market segment(s). • **Domestic Supply Chain Impact:** The impact that the project will have in bolstering the relevant domestic supply chain, including analysis of how the project will impact or improve the current baseline by increasing domestic capacity to meet current or projected demand and/or by onshoring capacity to enhance national security, resilience, and economic competitiveness. • **Project Impacts:** The applicant clearly describes substantial impact the proposed project is anticipated to have in meeting anticipated heat pump demand; supporting local economy and jobs, including how the project will meet the workforce requirements described in section 1.B., quantifying where possible; and reducing greenhouse gas emissions. • **Impact of DOE Funding:** Applicant describe clearly how the proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

[10] The annual manufacturing capacity of the proposed project represents projected (not peak) annual product output of the project. The applicant will be required to justify the claimed production by providing yield loss and throughput data wherever applicable and possible. In particular, taxpayers should discuss previous production experience on similar or identical production equipment.

Technical Description, Innovation, and Impact (Approximately 30% of the Technical Volume)	The Technical Description should contain the following information:
	• **Feasibility:** The applicant should describe the proposed project's capability of achieving the anticipated performance targets, including a description of previous work done and prior results. This section should also address the project's access to necessary infrastructure (e.g., transportation, water, electricity transmission), including any use of existing infrastructure, as well as to a skilled workforce.
	• **Supply Chain Impacts:** The applicant should describe how the project will address domestic supply chain issues, which includes the following:
	  ○ Current or projected gaps in secure, resilient domestic supply chains of heat pumps, including ratio of capacity added relative to federal funding requested
	  ○ Ability of the supply chain to support production of the projected market share as supported through supply chain analysis and supporting mitigation strategies for supply chain vulnerabilities, risks, or issues revealed
	  ○ Ability to satisfy multiple critical supply chain segments – components, systems, testing
	  ○ Ability to produce products for multiple applications (e.g., residential, commercial, district heating, or industrial use)
	  ○ Quantitative measure of the manufactured product domestic content.
	• **Technical Innovation:** The applicant should describe how the project will improve production processes including reduction of production cost and improvement of the facility energy efficiency, consistent with ISO 50001 or strategies described in DOE's Industrial Decarbonization Roadmap, and/or incorporates innovative approaches such as retrofitting an existing manufacturing capability from internal combustion engine automobile components to heat pumps or heat pump components.
	• **Technology Impact:** The applicant should describe how the project will contribute to increased electrification and reduction in energy use, cost, and greenhouse gas emissions, including projected equipment performance in cold climates, and use of refrigerants with low global warming potential.

Business Development & Management Plan (Approximately 45% of the Technical Volume)	The Business Development & Management Plan should address the items listed below, as well as any other pertinent information. Information provided in the Business Development & Management Plan should be consistent with and supported by other sections of the application.

BUSINESS PLAN

Site Selection: If application is building a new facility, the plan should include (i) the rationale for selection of the project site; (ii) evidence of control over the site or the plan to establish control over the site; (iii) specific information about how the project will leverage existing facilities and regional assets, including regional economic development plans, infrastructure, workforce, and workforce training assets, to foster commercial viability, sustainability, and future growth of the project; (iv) discussion of the benefits and impacts to disadvantaged communities/populations; and (v) discussion of climate impacts and extreme weather patterns (such as tornadoes, hurricanes, heat and freezing temperatures, drought, wildfire, and floods) that may impact the resilience/sustainability of the project.

Supply Arrangements: The plan should provide analysis of the relevant markets for and plans to ensure an adequate supply of essential input needed for successful operation of the project. This analysis should include the strategy to leverage existing U.S. supply chains and support growth of domestic capabilities in keeping with U.S. job creation goals.

Market Analysis: The plan should include an analysis of the current and projected target market for manufactured product(s), including the sufficiency of the existing target market(s); the stability of the target market – that the product(s) will be competitive based on a data-based market assessment, including with respect to average selling prices, strength of current and potential competitors, and forward-looking market trend; the market entry strategy (e.g. product differentiation, barriers to entry, intellectual property rights, first mover advantage, etc.); and the plan for marketing the product(s).

Growth Plan: The plan should describe the strength of the project's economic viability, sustainability, and potential growth beyond DOE funding, including the ability to achieve follow-on investments beyond the award performance period. Applicants are encouraged to submit a description (potentially including letter(s) of commitment) of an off-take agreement(s) with state, local, and/or private companies/organizations (contractors, utilities, retail, and/or otherwise).

Risk Analysis and Mitigation: The applicant should provide a comprehensive Risk Management Plan (RMP) that is accompanied by a corresponding risk register that can be used for ongoing risk management. DOE expects award recipients to understand and actively manage risks.

MANAGEMENT PLAN

	Organizational Structure: The plan should include an organizational chart of key entities and senior/key personnel for the project. The organizational chart and related description should show the prime recipient and any major project partners, subsidiaries, affiliates, parent organizations, or joint ventures associated with the project as well as an explanation of the legal structure (e.g., corporation, partnership, LLC) and the roles and responsibilities held by each organization. The level of participation by project participants should be supported by letter(s) of commitment and integrated into the Workplan. The application should also identify any foreign owned entities involved in the project, if applicable, and how the applicant will request a waiver, see Section III.A.iii. **Management:** The plan should describe management and operations strategies for the project, including the names, positions or titles, and percentage of time that will be dedicated to the project by senior/key personnel. If any key management and staff are not expected to spend 100 percent of their time executing on the project, the plan should provide a brief description of their other responsibilities or other activities outside of the project. **Experience:** The plan should detail the unique capabilities and expertise of the applicant and any major project partners or subrecipients, debt or equity sponsors, contractors/vendors (if known), and any other counterparty that the applicant believes will enable the project to be successful. In addition, the plan should summarize the prior experience of the applicant and any major project partners in similar undertakings to the proposed project. **Pending Investigations:** The plan should provide a summary of any pending or threatened (in writing) action, suit, proceeding, or investigation, including any action or proceeding by or before any governmental authority, that relates to the senior/key personnel, and the status of any appeals. **FINANCIAL PLAN** The financial plan should include the proposed budget and spend plan covering both DOE funding and non-federal cost share. It may reference the Budget Justification Workbook. It should include: (i) the amount of cost share proposed in proportion to the Federal award requested; (ii) the proposed cost share and initial capital stack, including the availability, credibility, and risk/terms of non-federal cost share sources; (iii) the plan and schedule to achieve long-term financial viability, beyond federal funding; and (iv) the ability to provide contingency funding to meet unexpected project cost overruns, including the source of such funding **Total Project Cost**: Applications should include a current Total Project Cost (TPC) estimate that covers the entirety of the project, including

	construction, capital, labor, and finance costs associated with the Community Benefits Plan, and other cost categories as appropriate for individual project plans. Cost estimates should meet industry standards for the size and complexity of the proposed project and should explain what assumptions were used and why they were deemed appropriate. DOE may require use of standard cost estimating assumptions, including escalation assumptions in future project activities. An overview of the project's current TPC estimate should be included in the Financial Plan. Supporting itemized data can be provided as part of the "Budget Justification Workbook." During award negotiations, DOE may conduct a third-party review of the project TPC. The rationale for all estimates and the approach for arriving at the estimates must be discussed. **Applicant and Project Partners:** In line with the Management Plan section, the application should describe the financial relationship of the prime recipient to major project partners, including any Foreign Owned Entities, who are contributing cost share and/or performing work. It should include a table that identifies the name of the organization or entity that is expected to contribute debt or equity financing and any person, organization, or entity who owns or will own five percent (5%) or more of the facility funded by the project. The plan should indicate the applicant, project partners, and other debt or equity contributors by listing the organization or entity name, website address, mailing address, city and state, and postal code. The applicant must also identify whether they are applying as a small business and the planned use of small businesses for the award. **Financial Strength:** The plan should describe the financial strength of the applicant and major project partners, as well as the project's financial significance to the prime recipient and major project partner involved. **Other Federal Support:** Federal financing, such as grants, investment tax credits, or loan guarantees from federal agencies, cannot be leveraged by applicants to provide the required project cost share or to otherwise support the same scope of the project. However, an award under this FOA does not preclude the prime recipient or subrecipients from obtaining other forms of federal support for projects with separate scope. **Non-Federal Support:** The plan should identify other non-federal governmental (including state or local) incentives or other assistance on which the proposed project relies to support the financing, construction, and operation of the project. It should indicate the terms of such support which could result in termination or reduction of anticipated/actual non-Federal support, and whether any such

	incentives or assistance are subject to clawback and the circumstances under which a clawback could occur.
Workplan (Approximately 25% of the Technical Volume)	The Workplan should include a summary of the Project Objectives, Technical Scope, Work Breakdown Structure (WBS), Milestones, Go/No-Go decision points, and Project Schedule. A detailed Statement of Project Objectives (SOPO) is separately requested. The Workplan should contain the following information: • **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**: The applicant should provide a summary description of the overall work scope and approach to achieve the objective(s). The overall work scope is to be divided by performance periods that are separated by discrete, approximately annual decision points (see below for more information on Go/No-Go decision points). The applicant should describe the specific expected result of each performance period, including milestones in the Community Benefits Plan. The applicant should also address how the applicant will fulfill the workforce requirements described in 1.B, including description of necessary the skills, certifications, or other credentials of the construction and ongoing operations workforce. • **Work Breakdown Structure (WBS) and Task Description Summary**: The Workplan should describe the work to be accomplished and how the applicant will achieve the milestones, will accomplish the final project goal(s), and will produce all deliverables. The Workplan is to be structured with a hierarchy of performance period (approximately annual), task and subtasks, which is typical of a standard WBS for any project. The Workplan shall contain a concise description of the specific activities to be conducted over the life of the project. The description shall be a full explanation and disclosure of the project being proposed (i.e., a statement such as "we will then complete a proprietary process" is unacceptable). It is the applicant's responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this FOA. The summary provided should be consistent with the SOPO. The SOPO will contain a more detailed description of the WBS and tasks. • **Key Contracts, Permits, and Agreements:** The Workplan should provide a top-level description, schedule, and status, of critical path contracts and agreements relevant to the project, encompassing permits, National Environmental Policy Act (NEPA), design, engineering, technology licensing, financing, construction, startup, commissioning, shakedown, operation, and maintenance. • **Go/No-Go Decision Points (See Section VI.B.xii. for more information on the Go/No-Go Review):** The applicant should provide a summary of

	project-wide Go/No-Go decision points at appropriate points in the Workplan. At a minimum, each project must have at least one project-wide Go/No-Go decision point for each budget period (12 to 18-month period) of the project. The applicant should also provide the specific technical and community benefits plan criteria to be used to evaluate the project at the Go/No-Go decision point. The summary provided should be consistent with the SOPO. Go/No-Go decision points are considered Specific, Measurable, Achievable, Relevant, and Timely (SMART) and can fulfill the requirement for an annual SMART milestone. • **End of Project Goal:** The applicant should provide a summary of the end of project goal(s). At a minimum, each project must have one SMART end of project goal. The summary provided should be consistent with the SOPO. • **Integrated Project Schedule (IPS):** The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and Go/No-Go decision points. The initial IPS should include all major project activities and milestones (consistent with the overall Workplan), including engineering, design, procurement construction, and Community Benefits Plan activities. The applicant should also include the sufficiency of the Earned Value Management Plan to use total project costs and schedule to enable timely and accurate project performance monitoring and prediction as a means to make project adjustments. This IPS will be revised, expanded, and updated in future project activities. By the end of award negotiation, it is expected that the IPS will be execution ready and reflect comprehensive schedule risk and uncertainty analyses. During each budget period, projects will report actual progress against their execution schedule or schedules as part of regular project management reporting requirements.
Attachment(s) (not included in page count)	**Engineering, Procurement, Construction, and Operations:** Applications should include initial versions of Engineering, Procurement, Construction and Operations (EPC&O) project documents. The EPC&O project documents should provide detailed technical data and/or information to show how the targeted annual manufacturing capacity of the proposed project could be met.

iii. 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, maximum, a three-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, which ever time period is shorter.

Save the resumes in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_Resumes".

iv. 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 convention for the title "ControlNumber_LeadOrganization_LOCs".

Letters of support or endorsement for the project from entities that do not have a substantive role in the project are not required nor desired.

v. Off-Take Agreement Letters of Commitment

Submit Offtake Agreement Letters of Commitment from state, local, and/or private companies/organizations (contractors, utilities, retail, and/or otherwise) (one-page maximum per letter). Save the Offtake Agreement Letters of Commitment in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_OffTake".

vi. Community Partnership Documentation Letter(s)

In support of the Community Benefits Plan, applicants are encouraged to 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, such as 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 Plan, 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 partnership documentation in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_PartnerDoc".

vii. Statement of Project Objectives (SOPO)

Applicants are required to complete a SOPO. A SOPO template is available on Exchange at https://infrastructure-exchange.energy.gov/. The SOPO, including the Milestone Table, must use standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right) with font not smaller than 12 point (except in figures or tables, which may be 10 point font). Save the SOPO in a single Microsoft Word file using the following convention for the title "ControlNumber_LeadOrganization_SOPO".

viii. SF-424: Application for Federal Assistance

Complete all required fields in accordance with the instructions on the form. The form is available on Exchange at https://infrastructure-exchange.energy.gov/.The list of certifications and assurances in Field 21 can be found at http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms, under Certifications and Assurances. Note: The dates and dollar amounts on the SF-424 are for the complete project period and not just the first project year, first phase or other subset of the project period. Save the SF-424 in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_424".

ix. Budget Justification Workbook

Applicants must complete the Budget Justification Workbook, which is available on Exchange at https://infrastructure-exchange.energy.gov/. Applicants must complete each tab of the Budget Justification Workbook for the project as a whole, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with implementing the various FOA-specific requirements (e.g., Davis Bacon (if applicable), Community Benefits Plan, 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 convention for the title "ControlNumber_LeadOrganization_Budget_Justification".

x. 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/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 Plan. 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) with font not smaller than 12 point. Save the Summary for Public Release in a single PDF file using the following naming convention "ControlNumber_LeadOrganization_Summary".

xi. Summary Slides

Applicants must provide slides summarizing the proposed project. The Summary Slides template is available on Exchange at https://infrastructure-exchange.energy.gov/. Save the Summary Slides in a single Microsoft PowerPoint file using the following convention for the title "ControlNumber _LeadOrganization _Slides".

xii. 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), which is available on Exchange at https://infrastructure-exchange.energy.gov/. The budget justification must include the same justification information described in the "Budget Justification" section above. Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title "ControlNumber_LeadOrganization_Subrecipient_Budget_Justification".

xiii. 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 convention for the title "ControlNumber_LeadOrganization_FFRDCAuth".

xiv. SF-LLL: Disclosure of Lobbying Activities (required)

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.

Save the SF-LLL in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_SF-LLL".

xv. Waiver Requests (if applicable)

Foreign Entity Participation

For projects selected under this FOA, 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 C lists the information that must be included in a waiver request.

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 C lists the information that must be included in a foreign work waiver request.

Save the Waivers in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_Waiver".

xvi. Reserved

xvii. Community Benefits Plan: Job Quality and Equity

The Community Benefits Plan: Job Quality and Equity (Community Benefits Plan or Plan) must set forth the applicant's approach to ensuring that Federal investments advance the following four goals: 1) community and labor engagement; 2) investing in quality jobs 3) advancing diversity, equity, inclusion, and accessibility (DEIA); and 4) contributing to the Justice40 Initiative. The below sections set forth the Plan requirements for each of the foregoing goals. At this stage of the application process, the Community Benefits Plan should indicate the applicant's intention to engage meaningfully with labor and community stakeholders on these goals, including the potential of entering into formal Workforce and Community Agreements. Given project complexity and sensitivities, applicants should consider pursuing multiple agreements.

The applicant's Community Benefits Plan must include at least one Specific, Measurable, Achievable, Relevant and Timely (SMART) milestone per budget period in order to measure progress on the proposed actions. The Community Benefits Plan will be evaluated as part of the technical review process. If DOE selects a project, the selectee is responsible for developing a Community Benefits Outcomes and Objectives (CBOO) document. DOE will incorporate the CBOO into the award and the recipient must implement its CBOO when carrying out its project. Public transparency around the plan and SMART commitments ensure accountability. As such, DOE plans to make the content of each CBOO available publicly. In addition, DOE will evaluate the recipient's progress during the award period of performance, including as part of the Go/No-Go review process.

For your convenience, a Community Benefits Plan template is available in Appendix E. Applicants are strongly encouraged to use the template to complete their specific Plan. If the template is not used, the Plan must address all of the elements described below, and as outlined in the template. The Community Benefits Plan must be submitted in PDF format using the following convention name for the title: "Control Number_LeadOrganization_CBenefits." This Plan must address the technical review criterion titled, "Community Benefits Plan." See Section V. of the FOA.

For additional information, see Community Benefits Plan Frequently Asked Questions (FAQs) | Department of Energy. In addition, please refer to the program-specific Community Benefits Plan Guidance (if applicable).

1. Community and Labor Engagement: The Community Benefits Plan must describe the applicant's actions to date and future plans to engage with Tribal governments, labor unions and community stakeholders – such as local governments, and community-based organizations that support or work with underserved communities, including disadvantaged communities as defined for purposes of the Justice40 Initiative. By facilitating community input, social buy-in, and accountability, such engagement can substantially reduce or eliminate stalls or slowdowns, litigation, and other risks associated with project implementation.

Community and labor engagement should ideally lay the groundwork for the eventual negotiation of Workforce and Community Agreements, which could take the form of one or more kinds of negotiated agreements with communities, labor unions, or, ideally, both. Registered apprenticeship programs, labor-management training partnerships, quality pre-apprenticeship programs, card check neutrality, and local and targeted hiring goals are all examples of provisions that Workforce and Community Agreements could cover that would increase the success of a DOE-funded project.

Applicants should also provide Community and Labor Partnership Documentation from representative organizations reflecting substantive engagement and feedback on applicant's approach to community benefits including job quality and workforce continuity; diversity, equity, inclusion, and accessibility; and the Justice40 Initiative detailed below.

2. Investing in Quality Jobs: A well-qualified, skilled, and trained workforce is necessary to ensure project stability, continuity, and success, and to meet program goals. High-quality jobs are critical to attracting and retaining the qualified workforce required.

The Plan must describe the applicant's approach to investing in workforce education and training of both new and incumbent workers and ensuring jobs are of sufficient quality to attract and retain skilled workers in the industry.

Specific components of the Plan must include:

A) A summary of the applicant's plan to attract, train, and retain a skilled and well-qualified workforce for both construction *and* ongoing operations/production activities. A collective bargaining agreement, labor-management partnership, or other similar agreement would provide evidence of such a plan. Alternatively, applicants may describe:

i. wages, benefits, and other worker supports to be provided benchmarking against prevailing wages for construction and local median wages for other occupations;
ii. commitments to invest in workforce education and training, including measures to reduce attrition, increase productivity from a committed and engaged workforce, and support the development of a resilient, skilled, and stable workforce for the project; and
iii. efforts to engage employees in the design and execution of workplace safety and health plans.

B) A description of employees' ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them contributes to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits. In the description, explain whether workers can form and join unions of their choosing, and how they will have the opportunity to organize with the purposes of exercising collective voice in the workplace.

3. DEIA: The Community Benefits Plan must include a section describing how diversity, equity, inclusion, and accessibility (DEIA) objectives will be incorporated into the project. The section should detail how the applicant will partner with underrepresented businesses, educational institutions, and training organizations that serve workers who face barriers to accessing quality jobs, and/or other project partners to help address DEIA.

The following is a non-exhaustive list of potential DEIA actions that could be included in a Plan. This list is offered to provide guidance to applicants and is not intended to be comprehensive or mandatory.

A) Commitment to partner with Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses for contractor support needs;

B) To fill open positions for the DOE-funded project, partner with workforce training organizations serving underrepresented communities and those facing systemic barriers to quality employment such as those with disabilities, returning citizens, opportunity youth, and veterans; In addition, applicant should consider providing comprehensive support services to increase representation and access in project's construction and operations jobs.

4. Justice40 Initiative: Applicants must provide an overview of benefits to disadvantaged communities that the project can deliver, supported by measurable milestones.

Specifically, the Justice40 Initiative section must include:

1. *Identification of applicable disadvantage communities to which the anticipated project benefits will flow*.

2. *Identification of applicable benefits that are quantifiable, measurable, and trackable, including, at a minimum, a discussion of the relevance of each of the eight DOE Justice40 Initiative benefits outlined below.*

   Benefits include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in disadvantaged communities: (1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in high-quality job creation, the clean energy job pipeline, and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or disadvantaged business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience. In addition, applicants should also discuss how the project will maximize all of the benefits listed in #4.

3. *A description of how and when anticipated benefits are expected to flow to disadvantaged communities.* For example, will the benefits be provided directly within the disadvantaged communities identified in the Justice40 Initiative section, or are the benefits expected to flow in another way? Further, will the benefits flow during project development or after project completion, and how will applicant track benefits delivered?

4. *A discussion of anticipated negative and cumulative environmental impacts on disadvantaged communities*. Are there anticipated negative or positive environmental impacts associated with the project, and how will the applicant mitigate any negative impacts? Within the context of cumulative impacts created by the project, applicants should use Environmental Protection Agency EJSCREEN tool to quantitatively discuss existing

environmental impacts in the project area. See EJScreen: Environmental Justice Screening and Mapping Tool | US EPA.

For projects funded under this FOA, DOE will provide specific reporting guidance for the benefits described above.

xviii. Current and Pending Support

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. As part of the application, the principal investigator or lead project manager and all senior/key personnel at the applicant and subrecipient level must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All connections with foreign government-sponsored talent recruitment programs must be identified in current and pending support.

For every activity, list the following items:

- The sponsor of the activity or the source of funding;
- The award or other identifying number;
- The title of the award or activity. If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research;
- The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending proposals, provide the total amount of requested funding;
- The award period (start date – end date); and
- The person-months of effort per year being dedicated to the award or activity.

To identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support.

Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided on request to either the applicant institution or DOE. Supporting documents of any identified source of support must be provided to DOE on request, including certified translations of any document.

PIs and senior/key personnel must provide a separate disclosure statement listing the required information above regarding current and pending support. Each individual must sign and date their respective disclosure statement and include the following certification statement:

> I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement 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). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

The information may be provided in the approved common disclosure format available at Common Form for Current and Pending (Other) Support (nsf.gov).

Save the Current and Pending Support in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_CPS".

Definitions:

Current and pending support – (a) All resources made available, or expected to be made available, to an individual in support of the individual's RD&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for an award or directly to the individual; or (iii) whether the resource has monetary value; and (b) includes in-kind contributions requiring a commitment of time and directly supporting the individual's RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning as the term Other Support as applied to researchers in NSPM-33: For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes

resource and/or financial support from all foreign and domestic entities, including but not limited to, gifts provided with terms or conditions, financial support for laboratory personnel, and participation of student and visiting researchers supported by other sources of funding.

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 United States 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.

Senior/key personnel – an individual who contributes in a substantive, meaningful way to the scientific development or execution of a research, development and demonstration (RD&D) project proposed to be carried out with DOE award.[11]

xix. Locations of Work

The applicant must complete the supplied template, which is available on Exchange at https://infrastructure-exchange.energy.gov/, 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). Save the completed template as a MS Excel file using the following convention for the title "Control Number_LeadOrganization_LOW."

xx. Environmental Considerations Summary

[11] Typically, these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level may be considered senior/key personnel if their involvement meets this definition. Consultants, graduate students, and those with a postdoctoral role also may be considered senior/key personnel if they meet this definition.

See Appendix D for information to include in the Environmental Considerations Summary. Save the completed Environmental Considerations Summary in a PDF file using the following convention for the title "Control Number_LeadOrganization_EnvSum."

xxi. Potentially Duplicate Funding Notice

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 under 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 convention for the title "Control Number_LeadOrganization_PDFN."

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 information that may be required:

- Personnel proposed to work on the project and collaborating organizations (See Section VI.B.xvii. Participants and Collaborating Organizations);
- Current and Pending Support (See Sections IV.D.xviii. and VI.B.xviii. Current and Pending Support);
- Information related to Foreign National Participation, Foreign Government-Sponsored Talent Recruitment Programs, Foreign Entity Participation, and Foreign Entities of Concern;
- Information for the DOE Office of Civil Rights to process assurance reviews under 10 CFR 1040;
- Environmental / NEPA Questionnaire;

- Project Management Plan;
- 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);
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to any proposed Workforce and Community Agreement, as defined above in "Community Benefits Plan: Job Quality and Equity," that applicants may have made with the relevant community.

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 required submissions must be submitted in Exchange no later than 5 p.m. ET on the dates provided on the cover page of this FOA.

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 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 C lists the information that must be included in a request for a foreign work waiver.

   Save the waiver request(s) in a single PDF file. The applicant does not have the right to appeal DOE's decision concerning a waiver request.

iv. Construction

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

v. Foreign Travel

If international travel is proposed for your project, please note that your organization must comply with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. § 40118), commonly referred to as the "Fly America Act," and implementing regulations at 41 CFR 301-10.131 through 301-10.143. The law and regulations require air transport of people or property to, from, between, or within a country other than the United States, the cost of which is supported under this award, to be performed by or under a cost-sharing arrangement with a United

States flag carrier, if service is available. Foreign travel costs are allowable only with the written prior approval of the Contracting Officer assigned to the award.

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.

However, pursuant to the FY23 Consolidated Appropriations Act (Pub. L. No. 117-328), Division D, Title III, Section 309, the Secretary or a designee of the Secretary may, at their discretion, vest unconditional title or other property interests acquired under this project regardless of the fair market value of the property at the end of the award period.

vii. Reserved

viii. 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.

ix. 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.

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 vectors of undue foreign influence in evaluating risk. If high risks are identified and cannot be sufficiently mitigated, DOE may elect to not fund the applicant. As part of the research, technology, and economic security risk review, DOE may contact the applicant and/or proposed project team members for additional information to inform the review.

x. 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, if applicable;
- 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.

xi. 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.

xii. Affirmative Action and Pay Transparency Requirements

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

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

(2) Recipients must 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 and contractors.

(3) Recipients 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. OFCCP's Technical Assistance Guide[12] should be consulted to gain an understanding of the requirements and possible required actions.

xiii. Foreign Collaboration Considerations

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

[12] 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

government regarding the potential collaboration or negotiating the terms of any potential agreement.

b. Existing collaborations with foreign entities, 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 polies and procedures.

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

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

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

This criterion involves consideration of the following factors:

- **Small Business Participation:** The degree to which the project incorporates the participation of small businesses.
- **Supply chain impact:** The applicant clearly describes the project and how the produced heat pump product(s) will meet anticipated annual targeted production capability in an accelerated time frame; the relevant market; and how the proposed project is anticipated to support secure, resilient domestic clean energy supply chains for heat pumps.
- **Community Benefits Plan Approach:** The applicant clearly describes the approach planned for the four core elements.
- **Project impact:** The applicant clearly describes what impact the proposed project is anticipated to have in meeting anticipated heat pump demand; enhancing workforce capabilities; supporting local economy and jobs – quantify where possible – and reducing greenhouse gas emissions.
- **Risk mitigation plan:** The applicant has identified risks and challenges of the project, as well as strategies for mitigating and managing those risks;
- **Team qualification:** The applicant has demonstrated that it has the qualifications, experience, capabilities and other resources necessary to complete the proposed project.
- **Cost Share:** Extent and strength of cost share sources.

- **Meeting program goals:** The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

ii. Full Applications

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

Criterion 1: Technical Merit, Innovation, and Impact (25%)

This criterion involves consideration of the following factors:

- **Supply chain security:** The extent to which the project resolves current or projected gaps in secure, resilient domestic supply chains of heat pumps, extent of end product domestic content, including ratio of capacity added relative to federal funding requested.

- **Supply chain strength:** Strength of the supply chain to support production of the projected market share as supported through supply chain analysis and supporting mitigation strategies for supply chain vulnerabilities, risks, or issues revealed.

- **Supply chain coverage:** Ability to satisfy multiple critical supply chain segments – components, (e.g., compressors or control boards) or whole systems (e.g., heat pumps or heat pump water heaters).

- **Supply chain applications:** Ability to produce products for multiple applications (e.g., residential, commercial, district heating, or industrial use).

- **Feasibility:** Extent to which the project can achieve commercial production within two years.

- **Technical innovation:** The extent to which project compared to baseline will improve production processes including reduction of production cost, reduction of facility/process GHG emission, and energy improvement efficiency of the production facility, or demonstrates an innovative approach to production such as retrofitting an existing manufacturing capability from internal combustion engine automobile components to heat pumps or heat pump components.

- **Technology impact:** Extent to which project will contribute to reduction in energy use, cost, fossil fuels, and greenhouse gas emissions, including projected equipment performance in regions reliant on propane/heating oil

(especially cold climates), and use of refrigerants with low global warming potential.

Criterion 2: Financial and Market Viability (25%)
This criterion involves consideration of the following factors:

- **Business viability**: The degree to which the application justifies the proposed project's economic viability, sustainability, and potential growth, to include replicability, beyond DOE funding.

- **Budget reasonableness**: The reasonableness of the proposed project budget and spend plan for the proposed project and objectives, including the level of contingency proposed to address risk.

- **Market viability**: The extent to which the applicant demonstrates potential market for manufactured product including that the heat pump product will be competitive based on a data-based market assessment, including with respect to average selling prices, competition, off-take agreement(s), and forward-looking market trend.

- **Regional impacts**: The extent to which the proposed project utilizes and leverages available regional resources to meet the FOA objectives.

- **Financial availability**: The ability to leverage state and local incentives and private financing in addition to DOE funding, including the availability, credibility, capability, strength, and risk/terms of non-federal cost share sources to meet ongoing need.

In assessing each item above, the following will be considered: (a) the comprehensiveness, specificity, and accuracy of the information and plans provided; (b) the reasonableness of assumptions used in making estimations and projections; and (c) the extent to which the applicant demonstrates an understanding of relevant risks (e.g., technical, siting, market, and/or project management risks) and the quality of the strategies put forward to mitigate and manage those risks.

Criterion 3: Project Workplan (15%)
This criterion involves consideration of the following factors:

- The degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan will succeed in meeting the project goals.

- The adequacy, reasonableness, and soundness of the project metrics, project schedule, milestones, and track process.

- The soundness of the plan to address environmental, siting, and other regulatory requirements for the project in a timely manner.

- The extent to which the Community Benefits Plan is integrated into the project management schedule and provides mechanisms with measurable actions.

- The extent to which the proposed site and facilities are suited for the proposed project.

Criterion 4: Management Team and Project Partners (15%)
This criterion involves consideration of the following factors:

- The capability of the project team to address all aspects of the proposed work with a high probability of success, including the qualifications, relevant experience and expertise, and time commitment of the individuals on the team. The degree to which the project incorporates the participation of small businesses.

- The extent of evidence of the project team's and key personnel's experience and success in industry and/or in similar projects.

- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan.

- The degree to which the application defines a project management structure and plan, including clear and appropriate roles for team members, that gives confidence in a high likelihood of success.

Criterion 5: Community Benefits Plan (20%)
This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project;
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements--with labor unions, Tribal entities, and

community-based organizations that support or work with disadvantaged communities and other affected stakeholders;
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments; and
- Extent to which the applicant demonstrates that community and labor engagement will lead to the delivery of high-quality jobs, minimal environmental impact, and allocation of project benefits to disadvantaged communities.

Investing in Quality Jobs
- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work;
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits; and
- Extent to which applicant demonstrates that they are a responsible employer, with ready access to a sufficient supply of appropriately skilled labor, and an effective plan to minimize the risk of labor disputes or disruptions.

Diversity, Equity, Inclusion, and Accessibility
- Extent to which the Community Benefits Plan includes specific and high-quality actions to meet DEIA goals, which may include DEIA recruitment procedures, supplier diversity plans, and other DEIA initiatives; and
- Quality of any partnerships and agreements with apprenticeship readiness programs, or community-based workforce training and support organizations serving workers facing systematic barriers to employment to facilitate participation in the project's construction and operations.

Justice40 Initiative
- Extent to which the Community Benefits Plan identifies: specific, measurable benefits for disadvantaged communities, how the benefits will flow to disadvantaged communities, and how negative environmental impacts affecting disadvantaged communities would be mitigated; and
- Extent to which the project would contribute to meeting the objective that 40% of the overall benefits of climate and clean energy investments flow to disadvantaged communities.

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA, by the standards set forth in EERE's Notice of Objective Merit Review Procedure (76 Fed. Reg. 17846, March 31, 2011), 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.

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 is likely to lead to increased high-quality employment and manufacturing in the United States;
- 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 Plan criteria; and
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials.

ii. Strengthening Secure, Domestic, Clean Energy Supply Chains

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

- DOE may consider whether proposed projects address specific gaps, vulnerabilities, or risks in the domestic production of clean energy products.

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 and risk reviews, 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 Integrity and Performance Matters

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 information about the applicant that is in the designated integrity and performance system accessible through SAM (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) (see 41 U.S.C. § 2313).

The applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

DOE will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, 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, risk reviews, and the amount of funds available in arriving at selections for this FOA.

E. Anticipated Notice of Selection and Award Negotiation Dates

MESC anticipates notifying applicants selected for negotiation of award and negotiating awards by the dates 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 in Exchange. 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 post these notifications to Exchange.

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.

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 Exchange. 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 Exchange 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. **Exchange**
   Register and create an account on Exchange at https://infrastructure-exchange.energy.gov/. This account will then allow the user to register for any open MESC FOAs that are currently in Exchange. It is recommended that each

organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission. Applicants should also designate backup points of contact so they may be easily contacted if deemed necessary. **This step is required to apply to this FOA.** The Exchange registration does not have a delay; however, **the remaining registration requirements below could take several weeks to process and are necessary for a potential applicant to receive an award under this FOA.**

2. **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.

3. **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.

4. **Grants.gov**
   Register in Grants.gov (http://www.grants.gov) to receive automatic updates when Amendments to this FOA are posted. However, please note that Letters of Intent, Concept Papers, and Full Applications will not be accepted through Grants.gov.

5. **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 Exchange 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 (September 2021)

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, may be required to provide DOE with specific

information about each foreign national to satisfy requirements for foreign national participation. A "foreign national" is defined as any person who is not a United States citizen by birth or naturalization. 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 from countries identified on the U.S. Department of State's list of State Sponsors of Terrorism must be obtained from DOE before they can participate in the performance of any work under an award.

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. Flood Resilience

Applications should indicate whether the proposed project location(s) is within a floodplain, how the floodplain was defined, and how future flooding will factor into the project's design. The base floodplain long used for planning has been the 100-year floodplain, that is, a floodplain with a 1.0 percent chance of flooding in any given year. As directed by Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (2015), Federal agencies, including DOE, continue to avoid development in a floodplain to the extent possible. When doing so is not possible, Federal agencies are directed to "expand management from the current base flood level to a higher vertical elevation and corresponding horizontal floodplain to address current and future flood risk and ensure that projects funded with taxpayer dollars last as long as intended." The higher flood elevation is based on one of three approaches: climate-informed science (preferred), freeboard value, or 0.2 percent annual flood change (500-year floodplain). EO 13690 and related information is available at https://www.energy.gov/nepa/articles/eo-13690-establishing-federal-flood-risk-management-standard-and-process-further.

viii. 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 contactors 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.

ix. 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.

x. 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. It is expected that awards resulting from this FOA will be treated as R&D awards for intellectual property purposes.

xi. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, attached to the award agreement.

As part of tracking 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 – DOE may require specific data collection. Examples of data that may be collected include:

- New manufacturing production capacity
- Jobs data including:

  - Number and types of jobs provided, wages and benefits paid
  - Demographics of workforce including local hires
  - Efforts to minimize risks of labor disputes and disruptions
  - Contributions to training; certificates and training credentials received by employees; ratio of apprentice-to-journey level workers employed
- 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 Plan
- Number and type of energy efficient and clean energy equipment installed
- Funding leveraged, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization

xii. Go/No-Go Review

Each project selected under this FOA will be subject to a periodic project evaluation referred to as a Go/No-Go Review. A Go/No-Go Review is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, technical success is definitively achieved and potential for success in future phases or periods of performance is evaluated, prior to actually beginning the execution of future phases. At the Go/No-Go decision points, DOE will evaluate project performance, project schedule adherence, the extent milestone objectives are met, compliance with reporting requirements, and overall contribution to the program goals and objectives. Federal funding beyond the Go/No-Go decision point (continuation funding) is contingent upon (1) availability of federal funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 of the award; (4) recipient's submittal of required reports; (5) recipient's compliance with the terms and conditions of the award; (6) DOE's Go/No-Go decision; (7) the recipient's submission of a continuation application[13]; and (8) written approval of the continuation application by the Contracting Officer.

[13] A continuation application is a non-competitive application for an additional budget period within a previously approved project period. At least ninety (90) days before the end of each budget period, the recipient must submit its continuation application, which includes the following information:

i. A progress report on the project objectives, including significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated

As a result of the Go/No-Go Review, DOE may, at its discretion, authorize the following actions: (1) continue to fund the project, contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority; (2) recommend redirection of work under the project; (3) place a hold on federal funding for the project, pending further supporting data or funding; or (4) discontinue funding the project because of insufficient progress, change in strategic direction, or lack of funding.

The Go/No-Go decision is distinct from a non-compliance determination. In the event a recipient fails to comply with the requirements of an award, DOE may take appropriate action, including but not limited to, redirecting, suspending or terminating the award.

xiii. 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.

xiv. Indemnity

Awards resulting from this FOA will contain the following provision reminding recipients of DOE's right of indemnification.

The recipient shall indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorney's fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault Awards resulting from this FOA will contain the following provision reminding recipients of DOE's right of indemnification.

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balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.

ii. A detailed budget and supporting justification if there are changes to the negotiated budget, or a budget for the upcoming budget period was not approved at the time of award.

iii. A description of any planned changes from the SOPO and/or Milestone Summary Table.

The recipient shall indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorney's fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of Government officers, agents or employees, or to the extent such liability may not be covered by applicable allowable costs provisions.

xv. 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.

xvi. 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 subrecipients based on their religious character.

xvii. Participants and Collaborating Organizations

If selected for award negotiations, the selected applicant must submit a list of personnel who are proposed to work on the project, both at the recipient and subrecipient level and a list of proposed collaborating organizations prior to award. Recipients will have an ongoing responsibility to notify DOE of changes to the

personnel and collaborating organizations and submit updated information during the life of the award.

xviii. Current and Pending Support

If selected for award negotiations, within 30 days of the selection notice, the selectee must submit 1) current and pending support disclosures and resumes for any new PIs or senior/key personnel, and 2) updated disclosures if there have been any changes to the current and pending support submitted with the application. Throughout the life of the award, the recipient has an ongoing responsibility to submit 1) current and pending support disclosure statements and resumes for any new PI and senior/key personnel, and 2) updated disclosures if there are changes to the current and pending support previously submitted to DOE. Also See Section IV.D.xviii.

xix. U.S. Manufacturing Commitments

A primary objective of DOE's multi-billion-dollar research, development, and demonstration investments is to cultivate new research and development ecosystems, manufacturing capabilities, and supply chains for and by United States industry and labor. Therefore, in exchange for receiving taxpayer dollars to support an applicant's project, the applicant must agree to a U.S. Competitiveness provision requiring that any products embodying any subject invention or produced through the use of any subject invention will be manufactured substantially in the United States unless the Recipient can show to the satisfaction of DOE that it is not commercially feasible. Award terms, including the specific U.S. Competitiveness Provision applicable to the various types of recipients and projects, are available at https://www.energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards.

Please note that a subject invention is any invention conceived or first actually reduced to practice in performance of work under an award. An invention is any invention or discovery which is or may be patentable. The recipient includes any awardee, recipient, sub-awardee, or subrecipient.

As noted in the U.S. Competitiveness Provision, if an entity cannot meet the requirements of the U.S. Competitiveness Provision, the entity may request a modification or waiver of the U.S. Competitiveness Provision. For example, the entity may propose modifying the language of the U.S. Competitiveness Provision in order to change the scope of the requirements or to provide more specifics on the application of the requirements for a particular technology. As another example, the entity may request that the U.S. Competitiveness Provision be waived in lieu of a net benefits statement or United States manufacturing plan. The statement or plan would contain specific and enforceable commitments that would be beneficial to

the United States economy and competitiveness. Examples of such commitments could include manufacturing specific products in the United States, making a specific investment in a new or existing United States manufacturing facility, keeping certain activities based in the United States or supporting a certain number of jobs in the United States related to the technology. DOE may, in its sole discretion, determine that the proposed modification or waiver promotes commercialization and provides substantial United States economic benefits, and grant the request. If granted, DOE will modify the award terms and conditions for the requesting entity accordingly.

More information and guidance on the waiver and modification request process can be found in the DOE Financial Assistance Letter on this topic, available at https://www.energy.gov/management/pf-2022-09-fal-2022-01-implementation-doe-determination-exceptional-circumstances-under. Additional information on DOE's Commitment to Domestic Manufacturing for DOE-funded R&D is available at https://www.energy.gov/gc/us-manufacturing.

The U.S. Competitiveness Provision is implemented by DOE pursuant to a Determination of Exceptional Circumstances (DEC) under the Bayh-Dole Act and DOE Patent Waivers. See Section VIII.J. Title to Subject Inventions of this FOA for more information on the DEC and DOE Patent Waivers.

xx. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)[14] 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

[14] 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.

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.

xxi. 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.

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 (currently FAPIIS). 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.

xxii. 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).

xxiii. 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. However, pursuant to the FY23 Consolidated Appropriations Act (Pub. L. No. 117-328), Division D, Title III, Section 309, the Secretary or a designee of the Secretary may, at their discretion, vest unconditional title or other property interests acquired under this project regardless of the fair market value of the property at the end of the award period.

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 to: FOA2987@netl.doe.gov. Questions must be submitted not later than 3 business days prior to the application due date and time. 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 Exchange at: https://infrastructure-exchange.energy.gov/. **You must first select this specific FOA Number to view the questions and answers specific to this FOA**. MESC 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 related to the registration process and use of the Exchange website should be submitted to: InfrastructureExchangeSupport@hq.doe.gov.

VIII. Other Information

A. FOA Modifications

Amendments to this FOA will be posted on the Exchange website and the Grants.gov system. However, you will only receive an email when an amendment or a FOA is posted on these sites if you register for email notifications for this FOA in Grants.gov. MESC 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 , 5 U.S.C. §552, as amended by the OPEN Government Act of 2007, Pub. L. No. 110-175 (FOIA). It is the applicant's responsibility to review FOIA and its exemptions to understand (1) what information may be subject to public disclosure and (2) what information that applicants submit to the Government that are protected by law. 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 submissions 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 agreement 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, the Go/No-Go Reviews 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. Title to Subject Inventions

Ownership of subject inventions is governed pursuant to the authorities listed below:

- Domestic Small Businesses, Educational Institutions, and Nonprofits: Under the Bayh-Dole Act (35 U.S.C. § 200 et seq.), domestic small businesses, educational institutions, and nonprofits may elect to retain title to their subject inventions;

- All other parties: The federal Non-Nuclear Energy Act of 1974, 42. U.S.C. § 5908, provides that the government obtains title to new inventions unless a waiver is granted (see below);
- Class Patent Waiver:

DOE anticipates a class waiver that applies to this FOA will be granted prior to award of the grants resulting from this FOA. Under this class waiver, domestic large businesses may elect title to their subject inventions similar to the right provided to the domestic small businesses, educational institutions, and nonprofits by law. In order to avail itself of the class waiver, a domestic large business must agree that any products embodying or produced through the use of a subject invention first created or reduced to practice under this program will be substantially manufactured in the United States.

- Advance and Identified Waivers: For an applicant not covered by a Class Patent Waiver or the Bayh-Dole Act, the applicant may request a patent waiver that will cover subject inventions that may be invented under the award, in advance of or within 30 days after the effective date of the award. Even if an advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver for identified inventions, i.e., individual subject inventions that are disclosed to DOE within the timeframes set forth in the award's intellectual property data terms and conditions. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

- DEC: On June 07, 2021, DOE approved a DETERMINATION OF EXCEPTIONAL CIRCUMSTANCES (DEC) UNDER THE BAYH-DOLE ACT TO FURTHER PROMOTE DOMESTIC MANUFACTURE OF DOE SCIENCE AND ENERGY TECHNOLOGIES. In accordance with this DEC, all awards, including sub-awards, under this FOA shall include the U.S. Competitiveness Provision in accordance with Section VI.B.xix. U.S. Manufacturing Commitments of this FOA. A copy of the DEC can be found at https://www.energy.gov/gc/determination-exceptional-circumstances-decs. Pursuant to 37 CFR 401.4, any nonprofit organization or small business firm as defined by 35 U.S.C. § 201 affected by any DEC has the right to appeal it by providing written notice to DOE within 30 working days from the time it receives a copy of the determination.

- DOE may issue and publish on the website above further DECs prior to the issuance of awards under this FOA. DOE may require additional submissions or requirements as authorized by any applicable DEC.

K. Government Rights in Subject Inventions

Where prime recipients and subrecipients retain title to subject inventions, the United States government retains certain rights.

Government Use License

The United States government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world. This license extends to contractors doing work on behalf of the government.

March-In Rights

The United States government retains march-in rights with respect to all subject inventions. Through "march-in rights," the government may require a prime recipient or subrecipient who has elected to retain title to a subject invention (or their assignees or exclusive licensees), to grant a license for use of the invention to a third party. In addition, the government may grant licenses for use of the subject invention when a prime recipient, subrecipient, or their assignees and exclusive licensees refuse to do so.

DOE may exercise its march-in rights only if it determines that such action is necessary under any of the four following conditions:

- The owner or licensee has not taken or is not expected to take effective steps to achieve practical application of the invention within a reasonable time;
- The owner or licensee has not taken action to alleviate health or safety needs in a reasonably satisfied manner;
- The owner has not met public use requirements specified by federal statutes in a reasonably satisfied manner; or
- The United States manufacturing requirement has not been met.

Any determination that march-in rights are warranted must follow a fact-finding process in which the recipient has certain rights to present evidence and witnesses, confront witnesses and appear with counsel and appeal any adverse decision. To date, DOE has never exercised its march-in rights to any subject inventions.

L. 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 normally retains unlimited rights in technical data produced under government financial assistance awards, including the right to distribute to the public. However, pursuant to special statutory authority, certain categories of data generated under DOE awards may be protected from public disclosure for up to five years after the data is generated ("Protected Data"). For awards permitting Protected Data, the protected data must be marked as set forth in the awards intellectual property terms and conditions and a listing of unlimited rights data (i.e., non-protected data) must be inserted into the data clause in the award. In addition, invention disclosures may be protected from public disclosure for a reasonable time in order to allow for filing a patent application.

M. 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.

N. 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.

O. 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.

P. 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://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2007/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).

Q. 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.

R. Informational Webinar

DOE will conduct one informational webinar during the FOA process. It will be held after the initial FOA release but before the due date for Concept Papers.

Attendance is not mandatory and will not positively or negatively impact the overall review of any applicant submissions. As the webinar will be open to all applicants who wish to participate, applicants should refrain from asking questions or communicating information that would reveal confidential and/or proprietary information specific to their project. Specific dates for the webinar can be found on the cover page of the FOA.

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 50% non-federal cost sharing requirement:

- Formula: Federal share ($) divided by federal share (%) = Total Project Cost
  Example: $1,000,000 divided by 50% = $2,000,000

- Formula: Total Project Cost ($) minus federal share ($) = Non-federal share ($)
  Example: $2,000,000 minus $1,000,000 = $1,000,000

- Formula: Non-federal share ($) divided by Total Project Cost ($) = Non-federal share (%)
  Example: $1,000,000 divided by $2,000,000 = 50%

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 – SAMPLE COST SHARE CALCULATION FOR BLENDED COST SHARE PERCENTAGE

The following example shows the math for calculating required cost share for a project with $2,000,000 in federal funds with four tasks requiring different non-federal cost share percentages:

Task	Proposed Federal Share	Federal Share %	Recipient Share %
Task 1 (R&D)	$1,000,000	80%	20%
Task 2 (R&D)	$500,000	80%	20%
Task 3 (Demonstration)	$400,000	50%	50%
Task 4 (Outreach)	$100,000	100%	0%

Federal share ($) divided by federal share (%) = Task Cost

Each task must be calculated individually as follows:

Task 1
$1,000,000 divided by 80% = $1,250,000 (Task 1 Cost)
Task 1 Cost minus federal share = non-federal share
$1,250,000 - $1,000,000 = $250,000 (non-federal share)

Task 2
$500,000 divided 80% = $625,000 (Task 2 Cost)
Task 2 Cost minus federal share = non-federal share
$625,000 - $500,000 = $125,000 (non-federal share)

Task 3
$400,000 / 50% = $800,000 (Task 3 Cost)
Task 3 Cost minus federal share = non-federal share
$800,000 - $400,000 = $400,000 (non-federal share)

Task 4
Federal share = $100,000
Non-federal cost share is not mandated for outreach = $0 (non-federal share)

The calculation may then be completed as follows:

Tasks	$ Federal Share	% Federal Share	$ Non-Federal Share	% Non-Federal Share	Total Project Cost
Task 1	$1,000,000	80%	$250,000	20%	$1,250,000
Task 2	$500,000	80%	$125,000	20%	$625,000
Task 3	$400,000	50%	$400,000	50%	$800,000
Task 4	$100,000	100%	$0	0%	$100,000
Totals	$2,000,000		$775,000		$2,775,000

Blended Cost Share %
Non-federal share ($775,000) divided by Total Project Cost ($2,775,000) = 27.9% (non-federal)
Federal share ($2,000,000) divided by Total Project Cost ($2,775,000) = 72.1% (federal)

APPENDIX C – 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.[15] For projects selected under this FOA, all recipients and 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 (see Section VI.B.xix.); 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

[15] See Critical and Emerging Technologies List Update (whitehouse.gov).

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 manufacturing of products and/or services in the United States;
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 subagreement 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 manufacturing of products and/or services in the United States;
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; and
11. The name of the entity that would perform the foreign work. Information about the entity(ies) involved in the work proposed to be conducted outside the United States. (i.e., entity seek a waiver and the entity(ies) that will conduct the work).
12. Information about the entity(ies) involved in the work proposed to be conducted in the United States (i.e., entity seeks 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 D – ENVIRONMENTAL CONSIDERATIONS SUMMARY

DOE's decision whether and how to distribute federal funds under this FOA is subject to the National Environmental Policy ACT (NEPA) (42 U.S.C. 4321, *et seq.*). Your responses will assist DOE in determining the appropriate level of NEPA review (if your proposal is selected) and in preparing an environmental impact statement (EIS), if necessary. While not all information may be available at the proposal state, please provide as much detail and information as is currently available. Consultation with experts or advisors in your organization to assist with your responses is highly recommended.

1. **Please provide a brief summary of the proposed project**. *Describe proposed activities (not goals and objectives) and specify if this project is part of a larger project or connected to another project.*

2. **Is there ongoing or anticipated federal government involvement in any aspect of this project (e.g., funding, permitting, technical assistance, project located on federally administered land)?** *If "yes," please list the agency and describe the nature of the involvement.*

3. **Is the project fully defined (i.e., all sites and activities are known)?** *If "no", please describe the sites and/or activities/tasks that are yet to be defined.*

4. **Complete the table below for each location where the proposed project activities would take place:**

Proposed location (physical address or coordinates)	Setting of the proposed (e.g., urban, industrial, suburban, agricultural, university campus, manufacturing facility, etc.) and the current condition or use of the site	General description of the proposed activities	Land administration (e.g., federal [specify BLM, USFS, etc.], Tribal, state, local, private)

5. **Attach a map showing the location(s) of the proposed project, and a site layout map showing the proposed facilities and associated infrastructure.** *(A GIS shapefile is preferable, if available.)*

6. **Describe new facilities to be constructed, any modifications of existing facilities, and any new infrastructure or facilities necessary for the construction or operation of the proposed project.** *(e.g., access roads, laydown areas, off-site parking areas, railroad links, docks, water outfalls and intakes, pipelines, electrical transmission, waste treatment facilities, etc.)*

7. **Identify and describe any existing, modifications to, or new permits, licenses, or authorizations that would be required to perform project activities.** *(e.g., environmental permits, operating permits, or drilling permits)*

8. **Provide a brief description of the existing environmental burdens at the proposed project location(s) and surrounding areas, including those contributed to or exacerbated by existing facilities the project will leverage or modify.** *Existing environmental burdens can be identified using available tools, such as DOE's Energy Justice Dashboard (beta) (*https://www.energy.gov/diversity/energy-justice-dashboard-beta *or the U.S. Environmental Protection Agency's EJSCREEN (https://www.epa.gov/ejscreen).*

9. **Would any of the following have the potential to be impacted (directly or indirectly) by the proposed project?** *If "yes", provide a detailed description of: (1) the resources that could be affected, and (2) how project activities may affect those resources (including potential direct and indirect [visual, noise, etc.] impacts).*

a) Tribal lands or resources of Tribal Interest and/or sensitivity
b) Environmental Justice (EJ) Populations *(EJ populations include minority, low Income, and Tribal populations)*
c) Historic, archeological, or cultural resources *(includes listed and eligible resources over 50 years old or of cultural Significance)*
d) Areas having a special designation (e.g., *federal and state designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and federal wildlife refuges, and marine sanctuaries)*
e) Threatened or endangered species *(whether proposed or listed by state or Federal governments),* including their habitat
f) Land resources *(e.g., prime farmland, unique farmland, or other farmland of statewide or local importance, tundra, rainforests)*
g) Floodplains
h) Wetlands
i) Air quality *(indoor and/or outdoor)*
j) Greenhouse gas emissions
k) Water quality *(surface and/or ground water and/or special sources of water including sole source aquifers)*

l) Ocean resources (e.g., coral reefs)
m) Coastal zones
n) Marine mammal or essential fish
o) Land use
p) Socioeconomic conditions
q) Sensitive receptors *(e.g., hospitals, schools, daycare facilities, elderly housing)*
r) Navigable Airspace
s) Transportation Infrastructure

10. **Please describe:**

a) any coordination or discussions that have been initiated or the plan to coordinate with state and/or federal agencies *(e.g., State Historic Preservation Office, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Nuclear Regulatory Commission, etc.);*
b) any coordination or discussions that have been initiated with any Tribal Governments;
c) any issues that would generate public controversy regarding proposed project;
d) any studies, reviews, and/or plans that have been completed for the proposed project *(e.g., environmental site assessments, waste management plans, health and safety plans, cultural resource surveys, identification of prime or unique farmland, wildlife surveys, etc.);*
e) any environmental considerations and/or mitigation strategies that have been incorporated into the proposed project *(e.g., measures to reduce and/or avoid greenhouse gas emissions, and/or impacts to cultural resources, historic properties, state or federally protected species, wetlands, floodplains, traffic, ambient noise, etc.);*
f) any discussions with affected communities.

APPENDIX E – COMMUNITY BENEFITS PLAN TEMPLATE

Community Benefits Plan Template for Demonstration and Deployment

Applicant should insert here:

FOA Number and FOA Title

Organization Name

Project Title

Instructions for Use of this Template:

The purpose of this document is to summarize the **specific** objectives the Applicant is committing to in its Community Benefits Plan (CBP).

Important information about using this template:

- **The instructional textboxes within each section can be removed when submitting the application. The information below the instructional textboxes is intended to provide examples of commitments that may be relevant to each section, proposed project, or program. Not all information provided may apply.**

- **All information included in this CBP Template must be consistent with other parts of the application.** The CBP should accurately define the work that is planned and the progress that will be expected throughout the project to be achieved.

- **Wherever possible, the objectives laid out in the CBP should be in quantifiable terms with SMART milestones**: **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**imely – and include timelines. The Community Benefits Plan may include multiple milestones but should have at least one SMART milestone per budget period as well as one SMART end of project goal.

- The information provided in the Community Benefits Objectives and Outcomes (CBOO) summary table in the final section should be consistent with the commitments made throughout the CBP Template and broader application.

- By submitting this form, Applicant acknowledges and agrees that the information provided may be distributed or made publicly available, without any restrictions or obligations to maintain confidentiality, as required by applicable laws, rules and regulations. If Applicant wishes to protect proprietary or trade secret information submitted with this CBP Template, every line and paragraph containing such information must be clearly marked as "CONFIDENTIAL" and designated with double brackets or highlighting to indicate the confidential information.

A. General Project Information

Instructions: This section asks for the applicant to provide general information on the project, including a high-level description of the CBP and how it integrates with the project, including critical information on the construction components, identification of potential risks, and the locations and communities affected. Applicant should also provide a description of the project personnel overseeing the community benefits plan, their qualifications, and time allocated for the activities proposed.

1. High-level description of the CBP and project

Please provide description here.

2. Construction Information

For each planned project location identified in the Location(s) of Work document (included with the application package), **please address each of the following:**

a. any known construction risks that could cause delays to the schedule, such as availability of skilled workers, permitting delays, materials or supply delays, etc.:
b. potential public and worker health and safety risks and hazards:
c. known possibilities of labor disruption:
d. plans for coordination among various employers (i.e., prime contractors and subcontractors):
e. plans for resolution mechanism to avoid potential project delays (including issues that may arise among contractors and subcontractors as well as employees):
f. the general contractor or Engineering, Procurement, and Construction contractor, if known:
g. the primary business of the general contractor or EPC contractor:

3. Locations and Communities Affected

For each location identified in the Location(s) of Work document (included in the application package), **please identify each known location served or impacted by the project, including:**

a. the location(s) of construction or alteration activity listed above,
b. communities geographically near the Applicant's proposed project,
c. communities that are part of the proposed project's supply or waste life cycle (e.g., where raw materials are being sourced and where waste is planned to be sent),

d. communities impacted that are disadvantaged communities.[16]

Instructions for Sections B through E:

Sections B through E below should summarize the specific objectives the applicant is committing to, broken into specific commitments and tasks.

Wherever possible and relevant, each commitment or task should be stated in quantifiable or measurable terms and SMART (**S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**imely) milestones with timelines should be identified. The CBP may include multiple milestones but should have at least one SMART milestone per budget period as well as one SMART end of project goal.

If awarded, the progress towards meeting the objectives and milestones set forth in the CBPs will be included as part of the Go/No-go evaluation.

B. Community and Labor Engagement

1. Community and Labor Entities Engaged to Date

Instructions: This section should describe the specific stakeholders and organizations already engaged by the project. Examples include local governments, Tribal governments, labor unions, and community-based organizations that support or work with disadvantaged communities described in section A3 above.

If the project has received support from any of these entities, describe the nature of the support (e.g., verbal, written, financial, etc.) and commitments that the project has made to the organization that provided the support. For funded projects, funding recipients will be required to report on these activities.

[16] Justice40 sets the goal that 40% of the overall benefits from certain federal investments flow to "disadvantaged communities." Pursuant to EO 14008 and the Office of Management and Budget Memorandums M-21-28 (https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf) and M-23-09. (https://www.whitehouse.gov/wp-content/uploads/2023/01/M-23-09_Signed_CEQ_CPO.pdf), DOE recognizes disadvantaged communities as identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), located at https://screeningtool.geoplatform.gov/.

[Example]
Name of Organization or Community of Interest Already Engaged:
Type of Engagement (e.g., Meeting, Community-Engaged Project Development, Research & Design, Reporting, Project Decision Making, Community Input, Reporting Back, Technical Assistance, Other):
Date of Engagement:
Outcome of Engagement (e.g., Memorandums of Understanding, Letters of Support, concerns or opposition, ongoing discussion, survey data or other qualitative/quantitative data, other):

2. **Community and Labor Entities to be Engaged.**

Instructions: This section should list entities that the project has engaged or plans to engage. Examples include local governments, Tribal governments, labor unions, and community-based organizations that support or work with disadvantaged communities described in section A3 above. For funded projects, funding recipients will be required to report on these activities.

[Example]
Name of Organization or Community of Interest Engaged:
Type of Engagement (e.g., Meeting, Community-Engaged Project Development, Research & Design, Reporting, Project Decision Making, Community Input, Reporting Back, Technical Assistance, Other):
Frequency of Engagement:
Outcome of Engagement (e.g., Memorandums of Understanding, Letters of Support, concerns or opposition, ongoing discussion, survey data or other qualitative/quantitative data, other):

3. Workforce and Community Agreements

Instructions: This section should identify whether the applicant is committing to negotiate workforce and/or community agreements and what type of agreements the applicant is committing to negotiate. If the applicant is not committing to negotiate any workforce or community agreements, applicant should note that a Workforce Continuity Plan may be required and should refer to the Community Benefits Plan webpage. If applicant has no entries for this section, continue to section 4 below.

A non-exhaustive list of relevant optional examples of workforce and community agreements are listed below. The applicant should modify, add, or delete to reflect the specific agreements committed to. If negotiating multiple agreements, provide this detail for each agreement.

For each agreement:

- The summary should describe the intended parties to the agreement and the intended scope of the agreement in concrete and specific terms.
- List key tasks and sub-tasks involved in finalizing the agreement (Milestones), with associated budget periods.

[Example]

Agreement A: Good Neighbor Agreement or Community Benefits Agreement

Agreement Summary:

Examples of intended scope include:

The community benefits to be delivered, including those for disadvantaged communities (as discussed in the Justice40 section that follows)

i. Access to jobs and business opportunities for local residents
ii. Investments in training for local workers
iii. Commitments to pay wages and benefits above the required prevailing rates for construction workers
iv. Commitments to pay above average wages and benefits for hourly non-construction workers
v. Remedies for non-compliance
vi. Commitments to make investments in subsidies for caregiving (e.g., childcare subsidies) and/or in transportation services for workers to access the worksite
vii. Other: [Describe]

Budget Period to be completed:

Milestones with timelines:

[Example]

Agreement B: Collective Bargaining Agreement (pertains to non-construction work)

If the project is in the operation phase, a summary of any existing collective-bargaining agreement(s), in specific terms, can be included here. Additionally, a copy of any applicable collective-bargain agreements can be attached to the applicant's CBP.

Agreement Summary:

Examples of intended scope include:

i. Access to jobs and business opportunities for local residents
ii. Investments in training for local workers
iii. Wages, hours, working conditions
iv. Guarantees against strikes, lockouts, and similar job disruptions
v. Effective, prompt, and mutually binding procedures for resolving labor disputes arising during the term of the agreement
vi. Mechanisms for labor-management cooperation on matters of mutual interest and concern, including productivity, quality of work, safety, and health
vii. Utilization of registered apprentices
viii. Other: [Describe]

Budget Period to be completed:

Milestones with timelines:

[Example]

Agreement C: Community Workforce Agreement

Agreement Summary:

Example of intended scope include:

i. Access to jobs and business opportunities for local residents
ii. Investments in training for local workers (e.g., support of registered apprenticeship programs, contributions to training institutions to assist in the provision of workforce training)
iii. Commitments to make investments in subsidies for caregiving (e.g., childcare subsidies) and/or in transportation services for workers to access the worksite
iv. Commitments to pay upper quintile wages and benefits for the industry
v. Broad recruitment activities, particularly with strategies to reach underrepresented demographic groups
vi. Other: [Describe]

[Example]
Agreement D: Project Labor Agreement or Community Workforce Agreement (pertains to construction work)

Agreement Summary:
Examples of intended scope include:

i. Access to jobs and business opportunities for local residents
ii. Investments in training for local workers
iii. Commitments to pay wages and benefits above required prevailing rates for construction
iv. Guarantees against strikes, lockouts, and similar job disruptions
v. Effective, prompt, and mutually binding procedures for resolving labor disputes arising during the term of the agreement
vi. Provide mechanisms for labor-management cooperation on matters of mutual interest and concern, including productivity, quality of work, safety, and health
vii. Utilization of registered apprentices
viii. Other

Budget Period to be completed:

Milestones with timelines:

[Example]
Agreement E: Other Type of Agreement

Agreement Summary:
Scope:
Budget Period to be completed:
Milestones with timelines:

4. Other Community and Labor Engagement Goals, Commitments, and Milestones

Instructions: This section should describe any additional key goals and milestones.

If the applicant is not, at this stage, committing to negotiate any workforce or community agreements, this section should describe the overall goal of community and labor engagement and key milestones, with budget periods and timelines, that will be used to monitor progress toward successful community and labor engagement.

C. Investing in Quality Jobs

1. Worker Organizing and Collective Bargaining

Instructions: If the applicant plans to support worker organizing and collective bargaining beyond their legal obligations consistent with the National Labor Relations Act, those commitments should be listed below.

The applicant should add or delete commitments to reflect their specific plan.

Please describe the plan to support worker organizing and collective bargaining related to the following commitments:

[Examples]
Commitment C1.1: Commitment to negotiate a Project Labor Agreement (PLA) for construction activity (as summarized above in Section B)
Commitment C1.2: Pledge to remain neutral during any union organizing campaigns
Commitment C1.3: Intention or willingness to permit union recognition through card check (as opposed to requiring union elections)
Commitment C1.4: Intention to enter into binding arbitration to settle first contracts
Commitment C1.5: Pledge to allow union organizers access to appropriate onsite non-work spaces (e.g. lunch rooms)
Commitment C1.6: Pledge to refrain from holding captive audience meetings[17]
Commitment C1.7: Other commitments or pledges:

2. Union support

Please list any unions supporting the project and any commitments made to unions that aren't listed above in C1.

3. Job Quality and Workforce Continuity

[17] "Captive audience" meetings refer to the practice among employers of meeting with employees during union organizing campaigns to express the employer's view of the possible negative effects that unionizing may have on the general workforce. Some employers have structured such meetings as mandatory and held them on company property during working hours.

Instructions: This section should stipulate commitments made regarding wages and benefits, education and training investments, and involvement of workers in health and safety committees. These commitments may also be covered by workforce agreements described in section B.

The applicant should add or delete commitments, provide quantitative values where appropriate, and re-number appropriately to reflect their specific plan.

Funding recipients will be required to report on job creation, wages, and benefits.

Please note that (a) pertains to ongoing operations and production jobs and (b) pertains to construction jobs.

Please describe the applicant's plan to ensure that jobs created by this project are good quality, to attract and retain a skilled workforce, including the following commitments to wages and benefits, education and training investments, and worker involvement in health and safety:

a. Ongoing Operations and Production Jobs

[Examples]

Commitment C3a.1: Applicant will provide above-average wages and benefits, benchmarked to industry and occupation reported by BLS:

- The minimum starting wage for production workers is $_____ per hour compared to the [75th or 90th] percentile of $____per hour for the [_____] industry.
- The minimum value of the following benefits offered to hourly workers is
  - Health insurance: $_____ per ___
  - Retirement contributions: $_____ per ___
  - PTO: ____hours per _____
  - Paid sick or family leave: _____ days per _____
  - Childcare or other caregiving financial assistance: $_____per worker or provision of on/near-site care
  - Transportation assistance: $ _____per worker_
  - Education/tuition reimbursement or financial contribution: $_____
  - Other: $_____per worker___

Commitment C3a.2: Applicant will provide workforce education and training through:

- Establishment of or contribution to labor-management training partnership(s)[18]
- [Insert minimum number of hours per worker] hours of paid on-the-job training
- Sponsoring registered apprenticeships: [insert goal number of apprentices]
- Covering costs and paid time for professional development and continuing education: [Enter certifications]
- Other:

Commitment C3a.3: Applicant will ensure workers are engaged in the design and implementation of workplace safety and health plans. Specifics include:

- [insert number of hourly workers] will participate in health and safety committee and will be paid [insert time and rate paid] for their time participating.
- Indicate which of the following, if any, the training provided will include:
  - worksite safety analysis
  - hazard prevention and control
  - safety and health training
  - anti-harassment and by-stander intervention training
  - Other: [Describe]
- Indicate the frequency of these health and safety committee planning meetings will be held.
- Indicate plans for how these safety and health plans will be considered by the company's management (e.g., when they will be reviewed and by when a decision to incorporate the recommendations will be made).

b. Construction Jobs

[Examples]

Commitment C3b.1 Applicant commits to pay competitive wage and benefit rates benchmarked against local Davis Bacon prevailing wages as follows:

- %____above posted prevailing wage per hour for base wages
- Health insurance: $_____ per ___
- Retirement contributions: $_____ per ___
- PTO: ____hrs per _____

Commitment C3b.2 Applicant will provide workforce education and training through:

- Utilization of registered apprentices at [insert percentage] of total project labor hours.

[18] For more information on labor-management partnership, see this resource.

Commitment C3b.3: Recipient will ensure highest standards of construction site health and safety, including site free of harassment and discrimination. Specifics include:

- [insert percent] of onsite workers that will have OSHA 30 certification
- [insert percent] of onsite workers that will have OSHA 10 certification
- The training provided will include [indicate which applies]
    - worksite analysis
    - hazard prevention and control
    - safety and health training
    - anti-harassment training
    - Other: [Describe]_____

D. Diversity, Equity, Inclusion, and Accessibility

Instructions: This section should summarize the applicant's plan to incorporate diversity, equity, inclusion, and accessibility (DEIA) objectives into the project. A non-exhaustive list of possible commitments is provided below.

Each commitment may include a brief summary of the plan and should enumerate specific elements as sub-commitments below.

The applicant should add or delete commitments to reflect their specific plan.

For funded projects, funding recipients will be required to report on partnerships described.

[Examples]

Commitment D1. The applicant commits to partnering with Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses for contractor support needs.

Please describe your approach to partnering with Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses and Veteran Owned Businesses.

Commitment D1.1: [Name of partnership]
Summary of scope of work: [insert here]

Contract amount: $_____
Overall value of partnership: $_____

Commitment D2. Applicant commits to implementing a plan to reduce barriers and improve access to jobs for local and underrepresented workers, including disadvantaged community residents, those with disabilities, returning citizens, opportunity youth, and veterans.

Commitment D2.1: Applicant will partner with quality pre-apprenticeship or apprenticeship readiness programs[19] to foster improved access for underrepresented workers to career-track training and employment.
Please indicate how, if applicable, partnering programs specifically work to improve access for underrepresented workers.

Name and description of readiness program(s): [insert here]

- Partnerships and financial contributions to community-based organizations to provide support services to workers or people in relevant training (e.g., childcare supports, transportation vouchers, employability skills training, etc.): [Describe]

Commitment D2.2: Applicant will partner with training and placement programs [other than pre-apprenticeship programs] for underrepresented workers.

Name of training and placement programs: [insert here]
Establishing and executing an inclusive recruitment strategy (e.g., a strategy to support broad recruitment for the apprenticeship programs, outreach to community-based organizations that work with prospective workers/apprentices): [Describe]

Commitment D2.3: Applicant will provide ($_____) in supports/subsidies for workers to access affordable, reliable and high-quality childcare, or other types of care.

Description of services: [insert here]

Commitment D2.4: Applicant will provide flexible work schedules.

Description of flexible work schedule program: [insert here]

Commitment D2.5: Applicant will provide of ($_____) in transportation assistance to and from work and training sites.

Description of assistance provided, including any cost to employee, contractor, or trainee: [insert here]

Commitment D2.6: Applicant will provide emergency cash assistance for items such as tools, work clothing, etc.

[19] Explore Pre-Apprenticeship | Apprenticeship.gov See https://www.apprenticeship.gov/employers/explore-pre-apprenticeship

Commitment D2.7: Applicant will hire local, disadvantaged, or underrepresented workers for % [insert percent] of construction work hours.

Commitment D2.8: Applicant will adopt local and economic hiring preferences as follows: [insert description here]

E. Justice40 Initiative

Instructions: This section should reflect the Justice40 benefits and plan for identifying and mitigating any anticipated negative impacts on disadvantaged communities. Justice40 benefits are grouped by category of benefit, with space to add additional benefits for benefits that do not fit in categories provided.

For each benefit, the applicant should indicate:

- which disadvantaged community is to benefit;
- how and when planned or anticipated benefits are expected to flow to communities;
- SMART milestones to indicate progress toward benefit delivery;
- metrics to be used to track and report on benefits; and
- community-based organizations involved in identifying, negotiating, or delivering benefits. [1]

The applicant should add or delete commitments (and re-number accordingly) to reflect their specific plan.

[Examples]

E.1. A decrease in energy burden (energy costs for low-income households)

Benefit E1.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Unanticipated barriers and strategies to address barriers:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.2. A decrease in environmental exposure and burdens

Benefit E2.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.3. An increase in access to low-cost capital

Benefit E3.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.4. An increase in quality job creation, the clean energy job pipeline, and job training for individuals

This section should clarify any quality jobs-related commitments that are specific to a disadvantaged community and are distinct from more general quality jobs commitments noted in section C or D above.

Benefit E4.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.5. Increases in clean energy enterprise creation and contracting (e.g., minority-owned or diverse business enterprises)

Benefit E5.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):

- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.6. Increases in energy democracy, including community ownership of project assets

Benefit E6.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.7. Increased parity in clean energy technology access and adoption

Benefit E7.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.8. An increase in energy resilience

Benefit E8.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.9. Other: Please identify additional, measurable benefits here.

Benefit E9.1: [Description of benefit]

- Disadvantaged community that will benefit:
- How benefit will be delivered (e.g., direct or indirect, who will deliver):
- When benefit will be delivered:
- Milestones toward benefit delivery:
- Metrics to track and report on benefits:
- Community-based organization(s) involved in identifying or negotiating benefit or developing plan for benefit delivery:

E.10. Anticipated or potential negative environmental impacts

Instructions: This section should summarize anticipated environmental impacts on disadvantaged community, including projects geographically near the project or directly affected by project construction or operations, as well as known impacts upstream (in the supply chain, e.g., raw material extraction) or downstream (e.g., waste disposal).

This section should also summarize the applicant's plan to monitor and mitigate negative impacts.

F. Summary Table: Community Benefits Outcomes and Objectives

Instructions: This section should be filled in to reflect the commitments and relevant time-based milestones covered throughout this document.
The applicant should add or delete rows and columns so the table summarizes commitments and timelines from sections above. Red text indicates examples and should be deleted or modified to reflect applicant's plan. The following items should not be included in the CBOO:
· Specific dates (only include general time frames (i.e. Demonstrate XYZ result by Month 3, not Demonstrate XYZ by June 8th, 2013).
· Subcontractors, vendors or individuals by name. The award is with the prime and, as such, the CBOO should not generally reference the subcontractors.

Category and Commitment	**Existing or Planned**	**Budget Period 1 milestone**	**Budget period 2 milestone**	**Budget period 3 milestone**	**Budget period 4 milestone**
Community and Labor Engagement					
Good neighbor/community benefits agreement	☐ Yes ☐ Not at this time	*Parties and scope identified*	*Agreement signed*		
Collective bargaining agreement (operating jobs)	☐ Yes ☐ Not at this time	*Parties and scope identified*	*Agreement signed*		
Project Labor Agreement (construction jobs)	☐ Yes ☐ Not at this time	*Initial meeting*	*MOU signed*	*Agreement signed*	
[Other community and labor engagement					

commitments, e.g. # and type of engagements, etc.] (applicant should take note if there is a requirement for Workforce Continuity Plan)					
Community feedback and data incorporated into the project	☐ Yes ☐ Not at this time (If "Not at this time", please provide an explanation in this cell).				
Investing in Quality Jobs	Total Number of Permanent Operations Jobs: [#] Number of Construction phase jobs: [#]				
Minimum starting wage for permanent hourly jobs:	$__/hr				
Pay upper quintile wages for industry and occupation	☐ Yes ☐ No				
Fringe Benefits	☐ Employer-sponsored health insurance ☐ Contributions to retirement ☐ Transportation assistance ☐ Childcare assistance				
Training	☐ Contributions to labor-				

	management training partnership ☐ Utilization of registered apprentices for at least 15% of construction jobs ☐ Paid training ☐ Tuition support or reimbursement				
Health and Safety Committee with Hourly Worker Representation	☐ Yes ☐ Not at this time				
Support for Worker Organizing/Collective Bargaining	☐ Pledge to remain neutral during any union organizing campaigns ☐Pledge to permit union recognition through card check ☐ Intention to enter into binding arbitration to settle first contracts ☐ Pledge to allow union organizers access to appropriate onsite non-work spaces (e.g. lunch rooms) ☐ Pledge to refrain from holding captive				

	audience meetings[20]				
Other Job Quality and Workforce					
Diversity, Equity, Inclusion, and Accessibility	☐ Local and/or targeted recruitment efforts ☐ MWBE contracting ☐ Partner with quality pre-apprenticeship or apprenticeship readiness program[21]	*Partnerships with community-based organizations and ed/training providers for workforce needs planned.*			
Other DEIA					
Justice40 Initiative					
Identifies benefits/impacts to disadvantaged communities	☐ Yes (If yes, list communities here) ☐ No				
Reduction in energy costs	☐ Yes ☐ No				
A decrease in environmental exposure and burdens	☐ Yes ☐ No				
An increase in access to low-cost capital	☐ Yes ☐ No				
An increase in quality job creation, the clean energy job pipeline,	☐ Yes ☐ No				

[20] "Captive audience" meetings refer to the practice among employers of meeting with employees during union organizing campaigns to express the employer's view of the possible negative effects that unionizing may have on the general workforce. Some employers have structured such meetings as mandatory and held them on company property during working hours.

[21] Explore Pre-Apprenticeship | Apprenticeship.gov https://www.apprenticeship.gov/employers/explore-pre-apprenticeship

and job training for individuals					
Increases in clean energy enterprise creation and contracting (e.g., minority-owned or diverse business enterprises)	☐ Yes ☐ No				
Increases in energy democracy, including community ownership of project assets	☐ Yes ☐ No				
Increased parity in clean energy technology access and adoption	☐ Yes ☐ No				
An increase in energy resilience	☐ Yes ☐ No				
Other Justice40					