Joint Office of Energy and Transportation
Through the Department of Energy (DOE)

Bipartisan Infrastructure Law (BIL) Joint Office of Energy and Transportation Ride and Drive Electric, Fiscal Year 2023 Funding Opportunity Announcement

Funding Opportunity Announcement (FOA) Number: DE-FOA-0002881
FOA Type: Amendment 000001
Assistance Listing Number: 81.086

FOA Issue Date:	5/18/2023
Submission Deadline for Concept Papers:	6/16/2023, 5:00pm ET
Expected Release Date of Concept Paper Recommendations:	6/28/2023
Submission Deadline for Full Applications:	7/28/2023, 5:00pm ET
Expected Timeframe for DOE Selection Notifications:	September 2023
Expected Timeframe for Award Negotiations:	October 2023 – January 2024

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

AMENDMENTS

All changes to the Funding Opportunity Announcement as a result of this amendment are highlighted as reflected below.

Amendment No.	Date	Description of Amendment
00001	06/07/2023	The purpose of this amendment is the following: - Clarified general requirement listed in Topic 1 - Clarified language in Topic 2A - Removed the strategy listed in Topic 2B: "Development of a registered apprenticeship program approved by the U.S. Department of Labor that focuses on EV charger maintenance" - Corrected Section VII to reflect that questions must be submitted no later than five business days prior to the application due date and time

NOTE: REGISTRATION/SUBMISSION REQUIREMENTS

Registration Requirements

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Universal Entity Identifier (UEI) number, register with EERE eXCHANGE.gov, register with the System for Award Management (SAM), register with Grants.gov, and, if selected for award, be registered in FedConnect). Applicants who are not registered with SAM and Grants.gov, should allow at least 44 days to complete these requirements. It is suggested that the process be started as soon as possible.

Applicants must obtain an UEI from the SAM to uniquely identify the entity. The UEI is available in the SAM entity registration record. NOTE: Subawardees/subrecipients at all tiers must also obtain an UEI from the SAM and provide the UEI to the Prime Recipient before the subaward can be issued.

- **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, 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 address 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.

- More information about SAM registration for applicants is found at: https://www.fsd.gov/gsafsd_sp?id=gsafsd_kb_articles&sys_id=650d493e1bab7c105465eaccac4bcbcb .

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

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

Applicants must register through the EERE eXCHANGE.
EERE eXCHANGE website: https://eere-exchange.energy.gov/

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

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

Applicants must register with the SAM.
SAM website: http://www.sam.gov/ NOTE: Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. The applicant must maintain an active SAM registration with current information at all times during which it has an active federal award or an application under consideration. More information about SAM registration for applicants is found at https://www.fsd.gov/gsafsd_sp?id=gsafsd_kb_articles&sys_id=650d493e1bab7c105465eaccac4bcbcb.

Applicants must register with Grants.gov.
Grants.gov website: http://grants.gov/
Applicants must register with Grants.gov in order to receive automatic updates, in the event that Amendments to this FOA are posted. However, please note that applications will not be accepted through Grants.gov. More information about the registration steps for Grants.gov is provided at **https://www.grants.gov/web/grants/applicants/registration.html**

Applicants must register with FedConnect.
FedConnect website: www.fedconnect.net.
In the event that an application is selected for negotiation of award, Applicants must be registered with FedConnect to receive the award. For more information regarding registration with FedConnect review the FedConnect Ready, Set, Go! Guide at **https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf.**

Submission Requirements
All application submissions are to be made via the EERE eXCHANGE at **https://eere-exchange.energy.gov/**. To gain access to the EERE eXCHANGE system, the applicant must first register and create an account on the main EERE eXCHANGE site. This account will then allow the user to submit an application for open EERE Funding Opportunity Announcements (FOAs) that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, utilize one account as the appropriate contact information for each submission.

Applicants will receive an automated response when the Application is received; this will serve as a confirmation of EERE receipt. Please do not reply to the automated response. A "User Guide" for the EERE eXCHANGE can be found on the EERE website at https://eere-exchange.energy.gov/Manuals.aspx after logging in to the system.

To receive notices via email regarding an FOA in EERE Exchange, such as amendments to the announcement or the posting of new questions and answers from eXCHANGE you must initiate an application submission to the FOA of interest. Please note that you must finalize and submit your application before the specified due date and time to be considered for award.

Questions
Questions related to the use of the EERE eXCHANGE website or technical issues concerning the application submittal should be submitted to EERE-ExchangeSupport@hq.doe.gov.

Questions related to the content of the Funding Opportunity Announcement must be submitted to DE-FOA-0002881@netl.doe.gov and shall be submitted no later than five (5) business days prior to the application due date and time. Questions submitted after that date may not allow the Government sufficient time to respond.

All questions and answers related to the content of this FOA will be posted at https://eere-exchange.energy.gov/FAQ.aspx. Applicants are encouraged to check the FAQ prior to submitting a question. DOE will try to respond to questions within 5 business days. Applicants are encouraged to review the posted questions and answers daily. **Please note that you must first select this FOA Number in order to view the questions and answers specific to this FOA**.

Joint Office of Energy and Transportation

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Overview of Key Information

Agency: Joint Office of Energy and Transportation

Overview: Through this Funding Opportunity Announcement (FOA), the Joint Office will provide funding for:

1. Electric vehicle (EV) charging resiliency planning for continuity of operations and services for all EV users;
2. Equitable business model development and deployment for EV charging;
3. Workforce development to support EV charging;
4. Increased industrial capacity, competition, and redundancy for validation testing and certification in the United States of Alternating Current (AC) Level 2 and/or Direct Current (DC) fast chargers;
5. Assessing performance and reliability of DC fast charging stations.

Deadlines:

• **June 16, 2023 at 5pm ET**: Concept papers due
• **July 28, 2023 at 5pm ET**: Full Applications due

Funding Overview: It is anticipated that this FOA will provide federal funding of $51 million for awards 24-30 months in duration.

Eligible Applicants: The following types of entities are eligible to participate as prime recipients or subrecipients:

1. Institutions of higher education;
2. For-profit entities;
3. Nonprofit entities;
4. State and local governmental entities,
5. Indian tribes;
6. Incorporated Consortia; and
7. Unincorporated Consortia.

DOE/NNSA and non-DOE Federally Funded Research and Development Centers (FFRDCs) are eligible to apply for funding as a subrecipient, with certain restrictions as specified in Section III.A.i. of the FOA. All FFRDCs are excluded from applying as a prime recipient.

Key Benefits:

• Development of specific and actionable plans and strategies that ensure continuity of operations and services of EV charging infrastructure for all EV users in a given region;

• Help communities identify, develop, and test business models, such as for shared mobility or fleet-based services, that complement or integrate operation of EV charging infrastructure;
• Help develop a high-quality workforce within the electrified transportation industry to support the deployment and maintenance of equipment related to EV charging (i.e., electric vehicle service equipment (EVSE);
• Increase industrial capacity, competition, and redundancy for validation testing and certification in the United States of DC fast chargers with rated power capacity between 150 kW and 1 MW;
• Assess the performance and reliability of DC fast charging (DCFC) stations across the United States; and
• Create opportunities for underserved communities and groups, measured through metrics such as new jobs and training resources, partnerships with Minority Serving Institutions and Indian tribes, engagement with labor organizations, community engagement activities, and other relevant indicators from the Community Benefits Plan (see Section IV.D.xvii of the FOA).

Topics: The following five topics are included in this funding opportunity.
See Section I.B. of the FOA for more details on the Topics.

Topic 1: Enhancing EV Charging Resiliency
Topic 2A: Community-Driven Models for Electric Vehicle Charging Deployment
Topic 2B: Workforce Development
Topic 3A: Increasing Commercial Capacity for Testing and Certification of High-Power Electric Vehicle Chargers
Topic 3B: Validating Public EV Charging Infrastructure Real-World Performance and Reliability

Anticipated Award Size, Funding Amount, and Cost Sharing Requirement

Topic	Topic Title	Anticipated Number of Awards	Minimum Required Non-Federal Cost Share (%)	Anticipated Cost Share per Award		Total Anticipated Federal Share
				Award Size (Fed Share)	Applicant Share	
Topic 1	Enhancing EV Charging Resiliency	10 - 15	20%	$1M - 1.5M	$250K - 375K	Up to $17M
Topic 2A	Community-Driven Models for Electric Vehicle Charging Deployment	5 - 8	0% (non-deployment), 50% (deployment)	$250K - 1.5M	$0 - $750K	Up to $10M
Topic 2B	Workforce Development	5 - 10	0%	$1M - 1.5M	N/A	Up to $10M
Topic 3A	Increasing Commercial Capacity for Testing and Certification of High-	2 - 3	50%	$2M - 3M	$2M - 3M	Up to $6M

	Power Electric Vehicle Chargers					
Topic 3B	Validating Public EV Charging Infrastructure Real-World Performance and Reliability	2 - 4	0%	$2M - 4M	N/A	Up to $8M
TOTAL						**Up to $51M**

I. Funding Opportunity Description

A. Background and Context

The Joint Office of Energy and Transportation (Joint Office), through the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy (EERE), is issuing a Funding Opportunity Announcement (FOA) entitled "Joint Office of Energy and Transportation Ride and Drive Electric, Fiscal Year 2023 Funding Opportunity Announcement" (Ride and Drive Electric FOA). Awards made under this FOA will be funded, in whole or in part, with funds appropriated by the Infrastructure Investment and Jobs Act[1], more commonly known as the Bipartisan Infrastructure Law (BIL).

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

The BIL includes a historic $7.5 billion dedicated investment to build out a national network of EV chargers. As part of this investment, the BIL includes $300 million to establish a Joint Office of Energy and Transportation (Joint Office) to study, plan,

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

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

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

coordinate, and implement issues of joint concern between the U.S. Department of Energy and U.S. Department of Transportation. This Ride and Drive Electric FOA and related activities align with the Joint Office mission to provide a modernized and interagency approach to support the deployment of zero-emission, convenient, accessible, equitable transportation infrastructure. The activities to be funded under this FOA support BIL section Title VIII, Division J, Federal Highway Administration - Highway Infrastructure Program.

i. Program Purpose

The Biden Administration has laid out a bold agenda to modernize and transform the nation's infrastructure, tackle the climate crisis, support good-paying American jobs, and ensure a just and equitable transition. Transportation is the sector that contributes most to greenhouse gas emissions in the United States. Transportation electrification has a key role to play in realizing all these outcomes and the Administration has established key targets to achieve by 2030:

1. Build an affordable, reliable, and convenient national network of 500,000 public EV charging ports.
2. Have EVs account for 50% of light-duty vehicle sales in the United States.

With more than 3 million EVs on the road and over 140,000 public charging ports, the transition to electrified transportation is occurring rapidly. Federal investments will accelerate this transition and catalyze additional private sector investment. In Fiscal Year (FY) 2022 alone, the Federal Highway Administration released $1.5 billion in funding under the National Electric Vehicle Infrastructure (NEVI) program to begin the effort to electrify over 75,000 miles of the national highway system, the Federal Transit Administration awarded over $1.1 billion towards projects that will more than double the nation's fleet of zero emission buses, and the Environmental Protection Agency announced $1 billion in funding for Clean School Buses after receiving unprecedented demand in funding applications. The actions build on well over $100 billion that the private sector has invested in EV, battery, and EV charging manufacturing in the United States to date.

It is critical that the transition to electrified transportation be inclusive and equitable in providing benefits to all Americans, while creating high quality jobs. This Ride and Drive Electric FOA and any related activities seek to encourage the

meaningful engagement and participation of underserved communities and underrepresented groups including Tribes. Consistent with Executive Order 14008, this FOA is designed to support the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities in accordance with the President's Justice40 Initiative.

The Ride and Drive Electric FOA will seek to advance the mission and vision of the Joint Office by addressing discrete challenges to a convenient, affordable, reliable, secure, and equitable EV charging network by enhancing institutional capacity, encouraging holistic approaches, fostering inclusive and equitable outcomes, and ensuring a world-class customer experience.

ii. Technology Space and Strategic Goals

This Ride and Drive Electric FOA seeks applications to address discrete barriers to a future where everyone can ride and drive electric. Specifically, this FOA will directly advance the goal of building a national network of EV chargers for all Americans by supporting EV charging reliability, resiliency, equity, and workforce development. Enhancing and expanding EV infrastructure nationwide will also indirectly contribute to the goal of having 50% of all new light-duty vehicle sales be electric by 2030. Detailed technical descriptions of the specific Topics are provided in the sections that follow.

iii. FOA Teaming Partner List (Optional)

DOE is compiling a Teaming Partner List to facilitate the formation of project teams for this FOA. The Teaming Partner List allows organizations that may wish to participate on an application to express their interest to other applicants and to explore potential partnerships.

The Teaming Partner List will be available on EERE eXCHANGE and will be regularly updated to reflect new teaming partners who provide their organization's information.

SUBMISSION INSTRUCTIONS: View the Teaming Partner List by visiting the EERE eXCHANGE homepage and clicking on "Teaming Partners" within the left-hand navigation pane. This page allows users to view published Teaming Partner Lists. To join the Teaming Partner List, submit a request within eXCHANGE. Select the appropriate Teaming Partner List from the drop-down menu, and fill in the

following information: Investigator Name, Organization Name, Organization Type, Topic Area, Background and Capabilities, Website, Contact Address, Contact Email, and Contact Phone.

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

B. Topics

All work for projects selected under this Ride and Drive Electric FOA must be performed in the United States. See Section IV.J.iii. and Appendix C.

Topic	Title
1	Enhancing EV Charging Resiliency
Equitable Access and Opportunity in Electrification	
2A	Community-Driven Models for Electric Vehicle Charging Deployment
2B	Workforce Development
Improving EV Charging Performance and Reliability	
3A	Increasing Commercial Capacity for Testing and Certification of High-Power Electric Vehicle Chargers
3B	Validating Public EV Charging Infrastructure Real-World Performance and Reliability

Topic 1: Enhancing EV Charging Resiliency

Topic 1 Introduction and Background

The U.S. National Blueprint for Transportation Decarbonization states, "the electrification of cars, trucks, and buses and providing the necessary infrastructure to charge them is underway and must accelerate." Resiliency planning for electric charging infrastructure is critical as transportation electrification grows in prevalence and importance. There is an increasing need to ensure that communities and energy systems are appropriately prepared for disruptive events that could compromise access to charging services that they increasingly rely on for

large portions of a localized population. More specifically, there is a growing need for state, regional, and local entities, as well as electric utilities, charging station operators and charging network providers, and automakers, to develop resilience strategies and plans for EV charging networks to ensure adequate and equitable access to reliable EV charging services. These plans will need to account for intermittent or sustained power outages, disruptive and increasingly severe weather (heat storms, snowstorms, fire, flooding, hurricanes, etc.), supply chain constraints, and other failure modes that can lead to electric disruptions. In addition to robust plans and underpinning policies, it is also expected that key technologies and services (e.g., on-site energy storage and generation, microgrids, portable power/charging services, bi-directional power, battery swapping) will need to be demonstrated and validated to inform broader adoption and applicability.

Topic 1 Objective

This topic will establish and fund a cohort of diverse teams from across the United States to develop, share, and refine specific and actionable plans and strategies that ensure continuity of operations and services of EV charging infrastructure for all EV users in a given region. Plans developed in these projects will enhance ongoing federal investments in EV charging and transportation electrification – including the Federal Highway Administration (FHWA) National Electric Vehicle Infrastructure (NEVI) and Charging and Fueling Infrastructure (CFI) Discretionary Grant Programs, Federal Transit Administration's Low or No Emissions Transit Program, and Environmental Protection Agency's Clean School Bus Program – as well as complementary or similar investments at the state and local levels.

Topic 1 General Requirements

Applications must:

- Describe the relevant geographic region and characteristics for which the resiliency plan will be developed;
- Identify both general and unique resiliency risks that widespread transportation electrification will pose to this geographic region and that the plan will address;
- Identify modeling or resiliency tools that will be utilized in the creation of the plan;
- Identify risks and risk mitigation strategies to both plan development and implementation;
- Identify and briefly describe any known existing resiliency plans, either general or specific to EV and traditional fuel infrastructure, and key experiences or lessons learned. If no such plan exists, this should also be stated;
- Describe the overall project approach, including 1) the process and timeline for overall plan development, 2) parties and stakeholders to be engaged, 3) risk assessment

approach, 4) process for developing solutions, 5) potential pathway(s) to implementation, and any goals and metrics to improve infrastructure resiliency;
- Identify disadvantaged and/or underserved portions of the community, discuss how this plan will engage them and be responsive to unique impacts on their communities, as applicable;
- Describe the applicant's experience working on resiliency planning and/or emergency management for transportation and/or electric power sectors as well as additional characteristics and experience that increase the team's likelihood of successful plan development and implementation;
- Describe how the plan will be tested or evaluated, including with the relevant, local, regional, or state authorities with responsibility for providing emergency services;
- Describe how equipment reserves can reduce time to restore service or the duration that distributed energy resources could substitute for grid power; and
- Describe, if relevant, the applicant's role in implementing key infrastructure programs and investments such as the federal National Electric Vehicle Infrastructure (NEVI), Charging and Fueling Infrastructure (CFI) Discretionary Grants, Low or No Emissions Transit, Clean School Bus Programs or additional efforts related to electric grid resiliency, emergency planning, or general community resilience.

Topic 1 Teaming Arrangements

Teams are encouraged to include state, regional, Tribal, and local authorities having jurisdiction (AHJ) concerning resiliency and emergency operations (e.g., emergency management, transportation or energy departments, electric utilities, utility regulators, planning organizations, transit and public mobility service providers, sustainability, or climate offices) and charging station operators. Teams may also include community organizations, national laboratories, labor groups such as unions, Clean Cities Coalitions and/or private sector.

Topic 1 Special Deliverables

None

Topic 1 Other Considerations

- Although it is not anticipated that applicants will deploy new equipment or infrastructure directly as part of this project, it is possible that the plans developed will recommend such equipment. If so, projects teams are encouraged to identify if they anticipate applying for or utilizing other federal, state, or local programs to support such equipment or infrastructure.

Topic 1 Applications Discouraged

- Projects that cannot implement proposed solutions by members of the project team due to lack of jurisdiction or authority.
- Projects that exclusively analyze needs or assess risks without proposed solutions.

Topic 2A: Community-Driven Models for Electric Vehicle Charging Deployment

Topic 2A Introduction and Background

The Joint Office is committed to equitable[4] deployment of EV charging infrastructure and transportation and mobility access options that provide positive outcomes for Justice40[5] and underserved communities.[6] Installing EV chargers in or near Justice40 communities may increase access to clean transportation for community residents. However, new, and novel business models may be needed to ensure that communities reap the full range of benefits of EV charger deployment.[7]

Several efforts have recently been announced that explicitly connect electrification, mobility, and opportunity. These include carsharing programs and a partnership that combines electric vehicle and charger deployment with education and employment opportunities. Similarly innovative business models targeted at Justice40 and underserved communities could support national goals around transportation and equity.

Topic 2A Objective

The objective of this topic is to fund projects that will assess, develop, and/or test business models that integrate EV and/or charger deployment in ways that deliver mobility, economic, or other benefits to Justice40 and underserved communities.

[4] The term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities;

[5] In January 2023, the White House published a memo noting that agencies could shift from using "disadvantaged communities" to "Justice40 communities": https://www.whitehouse.gov/wp-content/uploads/2023/01/M-23-09_Signed_CEQ_CPO.pdf.

[6] The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the definition of "equity" in E.O. 13985. For purposes of this FOA, as applicable to geographic communities, applicants can refer to economically distressed communities identified by the Internal Revenue Service as Qualified Opportunity Zones; communities identified as disadvantaged or underserved communities by their respective States; communities identified on the Index of Deep Disadvantage referenced at https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/, and communities that otherwise meet the definition of "underserved communities" stated above.

[7] https://publications.anl.gov/anlpubs/2022/05/175535.pdf

Projects can be some combination of an analysis, business model development, or limited scale pilot/deployment to provide proof of concept. The project may include limited EV charger deployments (Level 2 or DCFC) to test business models but cannot exceed 50% of the total project budget. Test deployment projects should be designed to inform further deployment of EV chargers and associated mobility systems funded by other taxpayer or ratepayer funding, including federal grant programs and tax incentives.

The Joint Office is interested in business models that benefit targeted communities by, for instance:

- Increasing revenue to local adjacent businesses (particularly small or independent businesses);
- Reducing costs by leveraging a "dig-once" approach for multi-modal hubs;
- Creating good job opportunities, including unionized job opportunities;
- Increasing clean mobility options for carless households and individuals, especially options that improve access to employment, health care, child-care, and other social services;
- Providing affordable, reliable access to EV charging infrastructure;
- Training community organizations and businesses in best practices for acquiring, installing, maintaining, and monetizing EV chargers;
- Reducing charging costs by capturing value that EVs provide through grid services;
- Integrating electric mobility with the delivery of other critical services for community members;
    - Examples include utilizing eligibility criteria for assistance programs (e.g., Low Income Home Energy Assistance Program (LIHEAP), Supplemental Nutrition Assistance Program (SNAP), etc.) or integrating with programs that provide energy, housing, or transit assistance.
- Leveraging partnerships with established organizations, such as community development corporations and affordable housing entities, that provide services to disadvantaged community members.

Topic 2A General Requirements

Applications **must** include:

- A description of how the community will be engaged in defining the project, including a description of the planned community benefits / outcomes of the project;
- An outreach plan for broadly disseminating the project approach and learnings such that other communities can replicate project successes; and
- A plan for projecting, tracking, and reporting metrics quarterly. Metrics should include:

- Metrics for verifying the business sustainability of the operating model;
- Justice40 metrics (see Section IV.D.xvii.4.B) to measure the benefits that flow to underserved communities from the developed business models/opportunities (address in the Community Benefits Plan).

Applications that include demonstration activities **must** also include:

- A description of the business model/s that the project team will analyze, assess, or demonstrate including, as applicable:
  - The transportation/mobility services provided;
  - The infrastructure to be deployed;
  - The operating models for entities involved;
  - The flow of goods and/or services;
  - The financial flows to community members, including those that are underserved.

Topic 2A Specific Requirements

Applications **must** specify:

- For each community committed to participating in the proposed project, describe:
  - Geographic area (e.g., city, county, neighborhood);
  - Project partners representing the community:
    - Whether the partner is committed to participating or prospected (hasn't committed at time of application).
  - If the community is identified as a Tribe and/or Justice40 community by federal tools and definitions (identify the used federal definition, e.g., EV Charging Justice40 Map[8]).

Topic 2A Teaming Arrangements

- Application teams are strongly encouraged to include active participation by community-oriented organizations, community-based organizations or other entities that play critical roles in communities. These organizations should have clearly documented roles, responsibilities, and budgets. Examples of key partners include:
  - Disadvantaged Business Enterprises;
  - Small and disadvantaged businesses;
  - Regional or national transportation, fleet, or mobility service companies that want to partner with local businesses;
  - Faith-based organizations;

[8] https://www.anl.gov/esia/electric-vehicle-charging-equity-considerations

  - Social service organizations, e.g., affordable housing, community development corporations, etc.;
  - Community financing organizations (e.g., Community Development Financial Institutions (CDFIs), credit unions, minority banks);
  - Labor groups such as unions;
  - Native American and Alaskan Native Tribes and affiliated organizations, American Indians, Alaskan Natives, Pacific Islanders, and Native Hawaiians.
- Applicants are encouraged to include strategic partners such as local/regional governments; local transportation entities; utilities, and other electricity suppliers; and EV charging equipment installers, dealers, and manufacturers;
- Application teams are encouraged to include active participation by at least one designated/active Clean Cities coalition with clearly documented roles, responsibilities, and budget (coalition locations are available at https://cleancities.energy.gov/coalitions/).

Topic 2A Special Deliverables

- A publicly releasable Community-Driven EV Charger Business Opportunities Report (due at the end of Budget Period 1 and no longer than 15 pages) that describes the progress of engagement with underserved communities to show evidence that the proposed approach meaningfully engages the communities and is financially viable, including:
  - The resulting community buy-in and decision-making roles in the project delivery;
  - The community identified priorities and concerns for Justice40;
  - The impact of engagement on informing EV infrastructure siting and project design;
  - The identified strategies to maximize economic benefits and EV charging access for communities;
  - The potential business models/opportunities associated with the EV chargers, and the sustainability of the fleet-based mobility services model; and
  - The plan for deploying the identified business opportunity with private partners, community members and organizations.
- Interim Business Models Report (due at the end of Budget Period 1 and no longer than 15 pages) and Final Business Models Report (due at the end of the project and no longer than 30 pages) that describe the preliminary and final results including:
  - Planned vs. actual results;
  - Approach taken to track the financial flows of the project;
  - Other key results such as levelized cost of charging;

- Other ancillary revenue streams;
- Public sector incentives or funding, etc.; and
- Economic and non-economic value (e.g., real estate value, recreational space, etc.) created that benefits the community.

Topic 2A Other Considerations

- None.

Topic 2A Applications Discouraged

- Applications prepared by teams that do not include groups or entities that represent underserved communities are discouraged as the input of these groups is vital to ensuring equitable deployment of community EV charging;
- Applications that include the purchase of land.

Topic 2B: Workforce Development

Topic 2B Introduction and Background

The shift to EVs has the potential to create new, high-paying opportunities for workers in electrical and other trades, while also creating opportunities for the skilled incumbent workforce. A diverse, highly skilled American workforce is a critical pillar of this transition. The Federal Highway Administration's (FHWA) recently published National Electric Vehicle Infrastructure Standards and Requirements establishes a requirement that the workforce installing, maintaining, and operating FHWA funded chargers has appropriate licenses, certifications, and training and that all electricians installing, operating, or maintaining EV supply equipment have a certification from the Electric Vehicle Infrastructure Training Program (EVITP) or graduation or a continuing education certificate from a registered apprenticeship program. While EVITP provides a strong foundation, for electrical training regarding the installation of EV chargers, there are additional needs related to maintenance and operations of chargers that will be necessary to develop in a manner that also facilitates opportunity through good-paying American jobs. Strategies to augment the skills of the workforce in the EV charging industry may benefit from investments in:

- Registered apprenticeship programs;
- Pre-apprenticeship/apprenticeship readiness programs;
- Education programs that provide wrap-around or supportive services for workers facing barriers to career-track training and employment;
- Education programs that introduce students to transportation electrification careers through employment that includes simulated or hands-on training.

By identifying common challenges and opportunities, effective workforce partnerships can better align programs, provide supportive services/wrap-around supports, education and training curriculum, and other resources that serve both employers and employees. Through the partnerships funded by this Topic Area, project teams will be positioned to better understand the workforce needs of the regional labor market and create programs that support local skills training and job placement.

Development of a skilled workforce will help produce a nationwide network of 500,000 EV charging ports by 2030 that provides a convenient, reliable, safe, affordable, equitable, and Made in America charging experience for all users of EVs.

Topic 2B Objective

The objective of this topic is to support a diverse and highly skilled workforce within the electrified transportation industry to support the deployment and maintenance of EV charging related equipment including equipment that will be supported by the FHWA NEVI and CFI grant programs.

The key outcome of interest is expanded access to career-track training and employment in EVSE installation and maintenance work for a diversified pipeline of individuals.

Strategies for achieving this goal include but are not limited to:

- Investments in existing pre-apprenticeship programs and/or other pre-employment training programs, including expansion of supportive services that will make it more likely to graduate underrepresented populations;
- Funding of tuition or program costs for training programs that show a history of leading people into careers or registered apprenticeship that can be scaled;
- Creation of new pathways into registered apprenticeships, including pathways conducted in partnership with registered apprenticeship sponsors;
- Provision of stipends that will help people to thrive in training programs;
- Supportive services for registered apprentices and/or those enrolled in other pre-employment training programs to help expand access to jobs, especially those in underserved communities;
- Development of competency frameworks needed for maintenance of EV chargers with relevant partners including transportation entities, industry associations, training providers, and labor organizations;
- ~~Development of a registered apprenticeship program approved by the U.S. Department of Labor that focuses on EV charger maintenance;~~
- Scaling curriculum or training programs that have been proven to meet industry needs for maintenance of chargers;
- Modifying existing training programs to better meet maintenance needs. This would include an assessment of the differences between competencies required for existing credentials and competencies desired by industry to meet EV charging reliability needs and the curriculum or coursework proposed to address these differences.

Projects selected under this Topic Area will be demand-driven and worker-centric, leverage existing infrastructure and resources, be sustainable and replicable, and prioritize energy justice issues. Projects will employ data-driven strategies to quantify their impacts (such as placement

and retention rates of training graduates) and document best practices for diversifying a skilled workforce.

Topic 2B General Requirements

Applications **should** include:

- Partnerships to address workforce gaps:
  - Participation from a registered apprenticeship sponsor or accredited educational institution;
  - Description of other partnerships that helped to create the workforce strategies included;
  - Identification of specific sub-populations out of the labor market, unemployed, or underemployed that will be the focus of the programs;
  - Detail about how partnerships were used to make decisions about which populations will be a focus and which partners will help recruit and train each population of focus.

- Plans to support the development, expansion, and diversification of registered apprenticeship or education programs for electricians, technicians, laborers, and other crafts involved in EV charging installation and maintenance:
  - Descriptions of pre-apprenticeship programs and/or other pre-employment training programs the project will support, including past data on how successful these programs are at getting participants into registered apprenticeship programs or relevant careers, and plans for monitoring success as applicable;
  - Assessment of gaps in existing pathways into registered apprenticeship or careers for populations of focus and an explanation of how the project plan will address these gaps;
  - An outreach strategy with targeted recruitment and retention to underserved and under-resourced communities as defined by the DOT and DOE Justice40 EV Charging Mapping Tool.

- Plans to support workforce retention:
  - Data on the current retention rates of registered apprenticeship or training programs supporting the EV workforce in the region;
  - Assessment of reasons for low retention, especially of targeted populations;
  - Identification of supportive services that will be made available for registered apprentices, students, or trainees. This includes actions to support fair and safe

workplaces, such as anti-harassment programs or workplace coaching or mentoring programs;
- Targets or goals for retention that applicants hope to achieve.

Topic 2B Special Deliverables

- Recipients must provide an outreach plan for broadly disseminating the project approach and learnings during the project period and at the conclusion of the project such that other institutions can replicate project successes.

Topic 2B Teaming Arrangements

The Joint Office encourages project teams that include the following partners with clearly documented roles, responsibilities, and budgets. Commitment of resources and efforts from teaming partners should be clearly discussed in letters of commitment.

- Public entities that are funding the installation of EV chargers including: states and the District of Columbia; any territory or possession of the United States; a unit of local government; a public agency or publicly chartered authority established by 1 or more States; or a special purpose district or public authority with a transportation function, including a port authority;
- Accredited educational institution or registered pre-apprenticeship/apprenticeship sponsor;
- Industry trade associations or labor unions that have affiliates that sponsor training or apprenticeships for electricians, laborers, and other crafts that are employed on EV charging installation and maintenance jobs;
- Educational and vocational institutions, including those historically serving minority institutions;
- EVSE manufacturers;
- State and local workforce development boards, unions, tradeswomen, and established community groups;
- Transportation entities;
- Utility companies.

Topic 2B Applications Discouraged:

None.

Topic 3 – Improving EV Charging Performance and Reliability

High performance and reliability are foundational tenets of a national EV charging network that provides a positive experience for the customer. EV chargers must consistently be safe, secure, and reliable when produced and throughout their operational lifetime. The Joint Office intends to make foundational investments in projects that will ensure a high-quality, safe, frictionless, and consistent charging experience by a) increasing commercial capacity for testing and certification of high-power EV chargers prior to deployment and b) validating real-world performance and reliability through persistent, statistically relevant, independent field testing.

Topic 3A - Increasing Commercial Capacity for Testing and Certification of High-Power Electric Vehicle Chargers

Topic 3A Introduction and Background

The NEVI and CFI Programs will fund the deployment of charging infrastructure along highways, transportation corridors, and in communities by a variety of charging network operators that will be used by numerous EV models. To ensure that these charging devices operate reliably, safely, and efficiently, they should be rigorously tested and certified prior to market deployment. Consumer surveys indicate that access to reliable charging is one of the main barriers deterring people from buying EVs. In addition, as EV and charger models proliferate, there is a greater need for manufacturers to rigorously test interoperability between vehicles and chargers – particularly the DC fast chargers that will provide the backbone of the public charging network. However, very few independent testing laboratories have the capabilities and tools necessary to appropriately test charging equipment capable of 150 kW or higher output. Furthermore, tools that allow EVSE and automotive manufacturers to self-certify products are limited in supply and costly. This limited capacity creates a bottleneck that will slow deployment, increase the cost of reliable charging infrastructure, and pose a barrier to achieving a convenient national network of EV charging.

Topic 3A Objective

The objective of this Topic is to increase industrial capacity, competition, redundancy, and broad access to validation testing and certification in the United States of DC fast chargers with rated power capacity between 150 kW and 1 MW. Applications for projects are requested to rapidly increase commercial testing capacity and capabilities necessary to validate, improve, and certify the efficiency, safety, security, interoperability, measurement accuracy, and longevity of high-power DC fast chargers. Activities of interest include:

- Upgrades to independent commercial testing facilities;
- Development of new, low-cost tools that test and certify equipment conformance to standards and performance requirements;
- Creation and maintenance of open-source libraries of conformance test cases and procedures;
- Creation and documentation of systems and procedures for testing charging devices to failure across a wide range of real-world conditions; and
- Other innovative approaches to certify and validate DC fast charging equipment performance.

Topic 3A General Requirements

Applications must address testing and certification related to one or more of the following standards, protocols, and procedures:

- ISO/IEC 15118, including the Plug and Charge use case;
- Open Charge Point Protocol (OCPP) version 2.0.1 or greater;
- SAE J1772 (i.e., Combined Charging System [CCS] Type 1);
- National Institute of Standards and Technology (NIST) Handbook 44 Device Code Requirements for EV Fueling;
- Underwriters Laboratory (UL) standard 2202;
- ENERGY STAR EVSE Version 1.1.

Applications must address, but need not be limited to, testing and certification of DC fast chargers with the following specifications:

- Input voltage: 480 VAC 3-phase;
- Output voltage: 250-920 VDC;
- Output current: at least 500 A.

In addition to addressing these technical requirements, applicants must:

- Describe plan to make testing and certification services commercially available;
- Describe the expected testing capacity and capability that will be supported with and without federal funding;
- Describe how federal funding will be used to expand capacity, capability, and access.

Applicants are encouraged to include mechanisms that provide feedback information to standards development organizations or other sponsoring organizations to improve standards.

Topic 3A Teaming Arrangements

Project teams are encouraged to include nationally recognized testing laboratories, DC fast charger manufacturers, charging station operators, charging network providers, labor groups including unions, EV manufacturers, and/or other organizations currently involved in the development of certification testing resources for the standards, protocols, and procedures above.

Topic 3A Special Deliverables

None.

Topic 3A Other Considerations

None.

Topic 3A Applications Discouraged

None.

Topic 3B - Validating Public EV Charging Infrastructure Real-World Performance and Reliability

Topic 3B Introduction and Background

It is imperative that public EV charging infrastructure provide a convenient, reliable, and safe customer experience. To ensure this, the FHWA has issued minimum standards and requirements for charging stations that will be funded through the NEVI Formula Program and other Title 23 federal-aid highway programs.[9] These standards include minimum requirements for performance and reliability after installation. The Joint Office seeks to create the means to independently assess the performance and reliability of charging stations funded through the NEVI Formula Program and other Title 23 programs, as well as other charging stations operating in the United States.

Topic 3B Objective

The objective of this Topic is to establish teams to assess the performance, reliability, and usability of AC Level 2 charging and/or DC fast charging (DCFC) stations across the United States. The teams will develop a scalable, in-field methodology to assess AC Level 2 and/or DCFC performance, reliability, and customer experience. The teams will then use that methodology to conduct field assessments of AC Level 2 and/or DCFC charging performance and reliability by periodically visiting a statistically significant sample of charging stations operated by numerous charging station operators.

Through these in-field assessments, the teams will first establish a national baseline for AC Level 2 and/or DCFC charging performance and reliability. The teams will then track the performance and reliability of an industry-wide sample of AC Level 2 and/or DCFC stations, relative to the national baseline.

To ensure the long-term reliability of the national charging network and to help state departments of transportation manage NEVI and other Title 23 programs, the teams will also develop and execute a training program for states. In this program, the teams will teach state officials how to conduct their own field assessments of AC Level 2 and/or DCFC charging performance and reliability, using a single, nationally consistent methodology. This training program will include curriculum on procedures and tools necessary to measure AC Level 2 and/or DCFC charging metering accuracy and meet any other requirements related to weights

[9] Federal Register :: National Electric Vehicle Infrastructure Standards and Requirements

and measures, as defined in NIST Handbook 44 Device Code Requirements for Electric Vehicle Fueling.

Topic 3B General Requirements

Applications must include detailed test plans, including assessment criteria, methodology, statistical sampling plan, and a description of how data will be managed. Applications must also include a plan to share data and compiled, aggregated results that meets the following requirements:

- Raw data and aggregated results from in-field assessments must be regularly shared with organizations identified by the Joint Office through a centralized data portal that will be provided by the Joint Office;
- Aggregated results must be periodically published to the general public through a centralized data portal that will be provided by the Joint Office;
- Data from in-field assessments must be directly shared to relevant industry stakeholders (e.g., charging station operators) to help them diagnose and resolve performance and reliability problems.

Applications must also include a plan to train officials at state departments of transportation in all 50 States, plus the District of Columbia and Puerto Rico, to conduct in-field performance and reliability assessments following a uniform methodology and rating criteria.

Topic 3B Teaming Arrangements

There are no required teaming arrangements. Proposed project teams may consist of a single organization. Project teams that are regionally distributed are encouraged to reduce travel expenses. Project teams are encouraged to include one or more state departments of transportation, state departments responsible for weighing and measuring devices, and state utilities commissions and energy offices to assist in the development and validation of the state training program.

To ensure independent evaluation, proposed project teams are highly discouraged from including charger manufacturers, charging station operators, charging network providers, or entities owned by those companies. Teams are however encouraged to collaborate with these entities to ensure a technically and logistically sound approach.

Topic 3B Special Deliverables

Raw data and compiled results from field assessments must be submitted at least quarterly to the Joint Office, through a data portal to be provided by the Joint Office, for sharing with stakeholders to be identified by the Joint Office.

Topic 3B Other Considerations

None.

Topic 3B Applications Discouraged

- Applications to develop assessment or testing methodology that do not include conducting in-field assessment or training of state officials are discouraged.

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):

Topic Area 1:

- Funding for technology research and development;
- Applications that include costs for deploying hardware.

Topic Area 3A:

- Applications to develop capabilities or capacity to validate, improve, or certify products produced by a single company or limited group of companies;
- Applications with the primary purpose of developing new DC fast charger standards.

All Topic Areas:

- Applications that fall outside the technical parameters specified in Sections I.A. and I.B. of the FOA;
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics);
- Applications that propose the purchase of land in the scope of the award (as part of the budget);
- Applications that propose the purchase of building(s) in the scope of the award (as part of the budget);
- Applications that propose to subordinate Federal government interest in property or equipment to obtain project financing.

D. Community Benefits Plan: Job Quality and Equity

To support the goal of building a clean and equitable energy economy, the BIL-funded projects are expected to (1) support meaningful community and labor engagement; (2) invest in America's workforce; (3) advance diversity, equity, inclusion, and accessibility (DEIA); 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 to the greatest extent possible.

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.

E. Authorizing Statutes

The programmatic authorizing statute is Public Law 117-58, Bipartisan Infrastructure Law (BIL) under Title VIII, Division J, Federal Highway Administration - Highway Infrastructure Program and Public Law (P. L.) 95-91 DOE Organization Act.

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

F. Notice of Bipartisan Infrastructure Law-Specific Requirements

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

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the internet;
- Access to records by Inspectors General and the Government Accountability Office;

- Requiring all of the iron, steel, manufactured goods, and construction materials used in the infrastructure activities of applicable projects are produced in the United States;
- Ensuring laborers and mechanics employed by contractors or subcontractors on BIL-funded projects are paid wages equivalent to prevailing wages on similar projects in the area;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and registration.

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

II. Award Information

A. Award Overview

i. Estimated Funding

The Joint Office through DOE expects to make a total of approximately $51 million of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 24-40 awards under this FOA. DOE may issue one, multiple, or no awards. Individual awards may vary between $250,000 and $4,000,000.

DOE/Joint Office may issue awards in one, multiple, or none of the following Topics:

Topic Area Number	Topic Area Title	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual Award (Fed Share)	Anticipated Maximum Award Size for Any One Individual Award (Fed Share)	Approximate Total Federal Funding Available for All Awards	Anticipated Period of Performance (months)
1	Enhancing EV Charging Resiliency	10 to 15	$1,000,000	$1,500,000	$17,000,000	24 months
2A	Community-Driven Models for Electric Vehicle Charging Deployment	5 to 8	$250,000	$1,500,000	$10,000,000	24 months
2B	Workforce Development	5 to 10	$1,000,000	$1,500,000	$10,000,000	24 months
3A	Increasing Commercial Capacity for Testing and Certification of High-Power Electric Vehicle Chargers	2 to 3	$2,000,000	$3,000,000	$6,000,000	24 months
3B	Validating Public EV Charging Infrastructure Real-World Performance and Reliability	2 to 4	$2,000,000	$4,000,000	$8,000,000	30 months

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

ii. Period of Performance

DOE anticipates making awards that will run 24 months maximum duration, except for Topic 3B awards that will run 30 months maximum duration, comprised of one or more budget periods. Budget Periods are typically 12 months. 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.xiv.

iii. New Applications Only

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

B. DOE Funding Agreements

Through cooperative agreements and other similar agreements, DOE provides financial and other support to projects that have the potential to realize the FOA objectives. DOE does not use such agreements to acquire property or services for the direct benefit or use of the U.S. government.

i. Cooperative Agreements

DOE generally uses cooperative agreements to provide financial and other support to prime recipients.

Through cooperative agreements, DOE provides financial or other support to accomplish a public purpose of support or stimulation authorized by federal statute. Under cooperative agreements, the government and prime recipients share responsibility for the direction of projects.

DOE has substantial involvement in all projects funded via cooperative agreement. See Section VI.B.x. of the FOA for more information on what substantial involvement may involve.

ii. Funding Agreements with Federally Funded Research and Development Center (FFRDCs)[10]

In most cases, FFRDCs are funded independently of the remainder of the project team. The FFRDC then executes an agreement with any non-FFRDC project team members to arrange work structure, project execution, and any other matters. Regardless of these arrangements, the entity that applied as the prime recipient for the project will remain the prime recipient for the project. See Section III.E.i.

[10] Federally Funded Research and Development Centers (FFRDC) - FFRDCs are public-private partnerships which conduct research for the United States government. A listing of FFRDCs can be found at http://www.nsf.gov/statistics/ffrdclist/.

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. 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. Nonprofit entities; and
4. State and local governmental entities, and Indian tribes.

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 but are not eligible to apply as a prime recipient.

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 and DOT) are eligible to participate as a subrecipient but are not eligible to apply as a prime recipient.

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

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

The National Energy Technology Laboratory is ineligible to participate as a prime applicant or as a team member/sub-recipient on any application because of its role in developing the requirements for this announcement.

ii. 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 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.

B. Cost Sharing

Applicants are bound by the cost share proposed in their Full Applications if selected for award negotiations. Cost share varies by topic as shown in the following table:

Topic	Topic Title	Recipient Cost Share[1] (%)
Topic 1	Enhancing EV Charging Resiliency	20%
Topic 2A	Community-Driven Models for Electric Vehicle Charging Deployment	Blended (0% non-deployment and 50% deployment)
Topic 2B	Workforce Development	0%

Topic 3A	Increasing Commercial Capacity for Testing and Certification of High-Power Electric Vehicle Chargers	50%
Topic 3B	Validating Public EV Charging Infrastructure Real-World Performance and Reliability	0%

To help applicants calculate proper cost share amounts, DOE has included a cost share information sheet and sample cost share calculation as Appendices A and B to this FOA.

Topic 1

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

Topic 2A Cost Share

Cost share may vary by activity. Blended cost share should be computed using the methodology provided in Appendix B "Sample Cost Share Calculation for Blended Cost Share Percentage." Non-deployment activities have a 0% cost share requirement, while deployment activities will require 50%. Deployment costs must not exceed 50% of total project costs. The cost share must come from non-federal sources unless otherwise allowed by law.

Topic 2B Cost Share

Cost share not required.

Topic 3A Cost Share

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

Topic 3B Cost Share

Cost share not required.

i. Legal Responsibility

Although the cost share requirement applies to the project as a whole, including work performed by members of the project team other than the prime recipient, the prime recipient is legally responsible for paying the entire cost share. If the funding agreement is terminated prior to the end of the project period, the

prime recipient is required to contribute at least the cost share percentage of total expenditures incurred through the date of termination.

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

ii. Cost Share Allocation

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

iii. Cost Share Types and Allowability

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

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

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

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

Project teams may use funding 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 cost share obligations including:

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

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

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

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

iv. Cost Share Contributions by FFRDCs

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

v. Cost Share Verification

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

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

C. Compliance Criteria

All applicant submissions must:

- Comply with the applicable content and form requirements listed in Section IV. of the FOA;
- Include all required documents;
- Be uploaded and submitted to EERE Exchange https://eere-Exchange.energy.gov; and
- Be submitted by the deadline stated in the FOA.

DOE will not review or consider submissions submitted through means other than EERE 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 before the submission deadline), applicants should allow at least one hour to submit a Concept Paper or Full Application. Once the Concept Paper or Full Application are submitted in EERE 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:

1. **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.

2. **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.

3. **Funding, Cost Share, and Subaward with FFRDCs**
   The value of and funding for the FFRDC portion of the work will not normally be included in the award. DOE/NNSA FFRDCs participating as a subrecipient on a project will be funded directly through the DOE field work proposal (WP) process. Non-DOE/NNSA FFRDC participating as a subrecipient will be funded through an interagency agreement with the sponsoring agency.

Although the FFRDC portion of the work is excluded from the award to the successful applicant, 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.

Unless instructed otherwise by the DOE Contracting Officer for the DOE award, all FFRDCs are required to enter into a Cooperative Research and Development Agreement[11] (CRADA) or, if the role of the DOE/NNSA FFRDC is limited to technical assistance and intellectual property is not anticipated to be generated from the DOE/NNSA FFRDC's work, a Technical Assistance Agreement (TAA), with at least the prime recipient before any project work begins. Any questions regarding the use of a CRADA or TAA should be directed to the cognizant DOE field intellectual property (IP) counsel.

The CRADA or TAA is used to ensure accountability for project work and provide the appropriate management of IP, e.g., data protection and background IP. The CRADA or TAA must be agreed upon by all parties and submitted to DOE or other sponsoring agency, when applicable, for approval, or submitted to DOE for notice under the Master Scope of Work process, when applicable, using any DOE or other sponsoring agency approved CRADA or TAA template without substantive changes by the time the award is made to the prime recipient.

4. **Limit on FFRDC Effort**

Topics 1, 2A, 2B, and 3A

The FFRDC effort, in aggregate, shall not exceed 25% of the total estimated cost of the project, including the applicant's and the FFRDC's portions of the effort. DOE/NNSA FFRDCs/National Laboratories are excluded as Prime Recipients.

Topic 3B

[11] A cooperative research and development agreement is a contractual agreement between a national laboratory contractor and a private company or university to work together on research and development. For more information, see https://www.energy.gov/gc/downloads/doe-cooperative-research-and-development-agreements

Topic 3B does not have a limitation on the FFRDC effort, except that DOE/NNSA FFRDCs/National Laboratories are excluded as Prime Recipients.

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 and 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 apply in response to this FOA lies solely with the applicant.

IV. Application and Submission Information

A. Application Process

The application process includes two submission phases: Concept Paper, and Full Application. **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 EERE 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 EERE Exchange

EERE Exchange is designed to enforce the deadlines specified in this FOA. The "Apply" and "Submit" buttons will automatically disable at the defined submission deadlines.

Applicants who experience technical difficulties with submission PRIOR to the FOA deadline should contact the EERE Exchange helpdesk for assistance (EERE-ExchangeSupport@hq.doe.gov).

B. Application Forms

To access application forms and instructions available on EERE Exchange, go to https://eere-Exchange.energy.gov and select the appropriate funding opportunity number.

Note: The maximum file size that can be uploaded to the EERE Exchange website is 50MB. Files larger than 50MB cannot be uploaded, and hence cannot be submitted for review. If a file is larger than 50MB 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 50MB.

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 Topic Area being addressed, both the technical (principal investigator/lead project manager) and business points of contact, names of all team member organizations, and any statements regarding confidentiality.
Technical Description and Impacts	3 pages maximum	Applicants are required to describe succinctly: • The problem being addressed by the project and the relevance of this problem to the Topic Area; • The project goal (i.e., what the project will accomplish);

		• The project's approach to accomplishing the goal; • The potential impact that the proposed project would have on the problem being addressed; • The stakeholders/communities that will benefit from the project; • How EERE funding is necessary to achieve the project objectives; • The equipment and facilities necessary to accomplish the effort and/or the applicant's approach to obtain access to the equipment and facilities; and • The project team's qualifications, experience, and capabilities to successfully execute the proposed project. • Applicants may provide graphs, charts, or other data within the 3-page limit.
Community Benefits Plan	2 pages maximum	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 benefits from climate and clean energy investments flow to disadvantaged communities.

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 EERE Exchange website at https://eere-Exchange.energy.gov/.

Applicants will have approximately 30-60 days from receipt of the Concept Paper Encourage/Discourage notification on EERE 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	PDF	1 page each	ControlNumber_LeadOrganization_LOCs
Community Partnership Documentation	PDF	10	ControlNumber_LeadOrganization_PartnerDocs
Statement of Project Objectives	MS Word	7	ControlNumber_LeadOrganization_SOPO
SF-424	PDF	n/a	ControlNumber_LeadOrganization_App424
Budget Justification Workbook	MS Excel	n/a	ControlNumber_LeadOrganization_Budget_Justification
Summary/Abstract for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary
Summary Slide	MS PowerPoint	1	ControlNumber_LeadOrganization_Slide
Subrecipient Budget Justification	MS Excel	n/a	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification
DOE Work Proposal for FFRDC, if applicable (see DOE O 412.1A, Attachment 3)	PDF	n/a	ControlNumber_LeadOrganization_WP
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	PDF	12	ControlNumber_LeadOrganization_CBP
Locations of Work	PDF	n/a	Control Number_LeadOrganization_LOW
Transparency of Foreign Connections (if applicable)	PDF	n/a	ControlNumber_LeadOrganization_TFC
Potentially Duplicative Funding Notice	PDF	n/a	ControlNumber_LeadOrganization_PDFN

Note: The maximum file size that can be uploaded to the EERE Exchange website is 50MB. 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 information in the table below. The applicant should consider the weighting of each of the technical review criteria (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: • Project title; • The specific Topic being addressed; • The technical point of contact (principal investigator/lead project manager); • The business points of contact; • The names and locations (city, state, zip code) of all team member organizations; and • Any additional locations (city, state, zip code) of project work. Also include applicable statements regarding confidentiality.
Project Overview (Approximately 10% of the Technical Volume)	The Project Overview section should contain a brief summary of the proposed project including the following information: **Project Summary:** • Explanation of the project's relevance to the Topic objectives. • The project's end goal(s): Describe what the project will accomplish, including the ways in which the proposed project location and related infrastructure, skilled workforce, community benefits, etc. will contribute to the success of the overall project. • The project approach: Summarize the proposed project activities to achieve the project's end goal(s). • Project outcomes: Describe specific short-term results from the project activities. • Project outputs: Describe specific deliverables or tools to be produced. • Project impacts: Describe expected long-term impacts resulting from the project activities.

	• Community Benefits: Describe the project's engagement with community and labor; investments in job quality and workforce continuity; advances in diversity, equity, inclusion, and accessibility (DEIA); and contributions to the Justice40 Initiative. **Project Team and Qualifications** • Describe the team member organizations' experience with this type of work and any special qualifications of key individuals in relation to the proposed work.
Project Approach and Impact (Approximately 30% of the Technical Volume)	The Project Approach and Impact section should contain the following information: **Project Approach and Impact Description** • Describe the problem being addressed, or the opportunity pursued by the project, using quantifiable metrics. • Describe the current state of the market applicable to the Topic and the market barriers being addressed. This characterization should be specific to the geographic project area being proposed and use quantifiable metrics. • Describe the expected change in the identified market as a result of the project activities. This projection should be specific to the geographic project area being proposed and use quantifiable metrics. • Describe the proposed project approach including what activities will be undertaken to implement the Topic's general and specific requirements and achieve the project's end goal(s). • Describe how community stakeholders affected by the project are involved in the design and implementation of the project activities. • Specify the project's end goal(s), what the project will accomplish by the end of the project period. • Describe the project outcomes, the associated metrics, and the approach to measuring their impact. • Describe the project outputs, specific deliverables, or tools to be produced. **Market Transformation Plan**

	• Describe how project activities would sustain themselves or expand after the completion the project period. • Describe how the project is replicable and the approach for broadly disseminating project learnings, valuable insights, best practices, and outcomes throughout the project period, in order to enable other communities to replicate project successes.

Workplan (Approximately 40% of the Technical Volume)	The Workplan should contain the following information:
	• **Project Summary by Budget Period**: Provide a summary description of the work scope by budget periods.
	  ○ Describe the specific expected outcome(s) of each budget period.
	• **Project Schedule** (Gantt Chart or similar): Provide a schedule for the entire project, including
	  ○ Task and subtask durations.
	  ○ Milestones and deliverable completion dates.
	  ○ Go/No-Go decision points.
	• **Work Breakdown Structure (WBS):** Provide a WBS which:
	  ○ Is structured with a hierarchy of budget periods (approximately annual), tasks, subtasks, and outputs (deliverables).
	  ○ Contains a concise description of the specific activities to be conducted.
	  ○ Describes how the team members will accomplish the work, achieve the milestones, and produce the deliverables in order to meet the final project goal(s).
	  ○ Clearly indicates the responsible party and the location of the work for each work package in the WBS.
	• **Milestone Summary:** Provide a summary of appropriate milestones throughout the project to demonstrate success.
	A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be Specific, Measurable, Achievable, Relevant, and Timely, and must demonstrate a project achievement rather than simply completing a task.
	Completion of a deliverable (a project output such as an analysis report) should be associated with an individual milestone.

	The minimum requirement is that each project must have at least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). Include the following information: ○ Milestone Title; ○ Milestone description; ○ Associated task number; ○ Timeframe for completion (e.g., project month or quarter); ○ How the milestone will be verified. • **Go/No-Go Decision Points**: Provide a summary of project-wide Go/No-Go decision points at appropriate points in the Workplan. A Go/No-Go decision point is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, project 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. ○ Each project must have at least one project-wide Go/No-Go decision point for each budget period (ex: 12 to 15-month period) of the project. See Section VI.B.xiv. ○ Provide the specific criteria to be used to evaluate the project at the Go/No-Go decision point. ○ Go/No-Go decision points are considered "SMART" and can fulfill the requirement for an annual SMART milestone. • **End of Project Goal:** Provide a summary of the end of project goal(s). Each project must have at least one SMART end of project goal. • **Project data:** (if applicable) Provide a description of: ○ The data to be collected from project activities. ○ How the data will be managed. ○ How the data will be shared. • **Project Management and Controls**: Provide an overview of the team's approach to project management and controls, including the following: ○ The overall approach to managing the work.

	○ Financial management practices and systems used to track project costs, invoicing, and payments. ○ Project management practices and systems used to provide oversight of task progress, scope, schedule, and budget management. ○ Process for managing project changes. ○ Describe the internal communication process among project team members. ○ Identification of project risks, mitigation strategies and risk management responsibilities. ○ Quality Assurance/Control process to ensure the quality of services and products (including deliverables) generated by the team. **Project Resources** • Describe the equipment, facilities, and specialized supplies necessary to execute the project activities and the approach to obtain access to, and use of, the equipment, facilities, and supplies. Buy America Requirements for Infrastructure Projects: Within the first 2 pages of the Workplan, include a short statement of on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. See Appendix D for applicable definitions and other information to inform this statement. Note that a SOPO is required as a separate submission in the application (SOPO template is available in EERE Exchange). The tasks, milestones, and go/no-go decision points in the SOPO must be consistent with those proposed in the Workplan.
Project Team and Qualifications (Approximately 20% of the Technical Volume)	The Project Team and Qualifications section should contain the following information: • Describe the unique qualifications, expertise, and experience of the key individuals in the project team in relation to project and Topic objectives. • Describe succinctly the roles and the work to be performed by the principal investigator/lead project manager (LPM) and each key participant in relation to their qualifications, expertise, and experience. • Describe the time commitment of the LPM and key participants to support the project.

	• Describe the alignment between the team organizations' missions/strategic goals with the objectives of the Topic and with the teaming arrangement encouraged or required by the Topic. • Describe the technical services to be provided by DOE/NNSA FFRDCs, if applicable. • Describe how the project team's financial and resource commitments to the project will facilitate the successful achievement of the project's end goals.

iii. Resumes

A resume provides information reviewers can use to evaluate an individual's relevant skills and the experience of the key project personnel. Applicants must submit a three-page resume for each project manager and key personnel that includes the following:

1. Contact Information;
2. Education: 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. Timeline of work and periods of time without work should be indicated, so that there are no lapses in time over the past 10 years or since age 18, whichever period is shorter.

As an alternative to a resume, it is acceptable to use the biographical sketch format approved by the National Science Foundation (NSF). The biographical sketch format may be generated by the Science Experts Network Curriculum Vita (SciENcv), a cooperative venture maintained at https://www.ncbi.nlm.nih.gov/sciencv/, and is also available at https://nsf.gov/bfa/dias/policy/nsfapprovedformats/biosketch.pdf. The use of a

format required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats.

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 one 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 will not be accepted.

v. Community Partnership Documentation

In support of the Community Benefits Plan, applicants may submit documentation to demonstrate existing or planned partnerships with community entities, such as, organizations that work with local stakeholders most vulnerable to or affected by the project. Examples of such entities include organizations that carry out workforce development programs, labor unions, Tribal organizations, and community-based organizations that work with disadvantaged communities. The partnership documentation can be a letter on a partner's letterhead outlining the planned partnership and signed by an officer of the entity, a Memorandum of Understanding, or another 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. Each letter must not exceed one 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".

vi. Statement of Project Objectives (SOPO)

Applicants are required to complete a SOPO. A SOPO template is available on EERE Exchange at https://eere-Exchange.energy.gov/. The SOPO, including the Milestone Table, must not exceed 7 pages when printed using 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".

vii. SF-424: Application for Federal Assistance

Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at 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".

viii. Budget Justification Workbook

Applicants must complete the Budget Justification Workbook, available on EERE Exchange at https://eere-Exchange.energy.gov/. Applicants must complete each tab of the Budget Justification Workbook for the project, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with implementing the various BIL-specific requirements (e.g., Buy America requirements for infrastructure projects, Davis Bacon, Community Benefits Plan, reporting, oversight) and with required annual audits and incurred cost proposals in their proposed budget documents. Such costs may be reimbursed as a direct or indirect cost. All costs associated with the Community Benefits Plan must be clearly identified in the budget justification. 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".

ix. 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 business-sensitive information, as DOE may make it available to the public after selections are made. The summary must not exceed one 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".

x. Summary Slide

Applicants must provide a single slide summarizing the proposed project.

The Summary Slide template is available on EERE eXCHANGE at https://eere-eXCHANGE.energy.gov/ and must include the following information:

- A technology/project summary;
- A description of the technology's/project's impact;
- Proposed project goals;
- Any key graphics (illustrations, charts and/or tables);
- The project's key idea/takeaway;
- Topline community benefits;
- Project title, prime recipient, Principal Investigator/Lead Project Manager, and senior/key personnel information; and
- Requested DOE funds and proposed applicant cost share.

Save the Summary Slide in a single Microsoft PowerPoint file using the following convention for the title "ControlNumber_LeadOrganization_Slide".

xi. 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% of the total work effort, whichever is less. The budget justification must include the same justification information described in the "Budget Justification" section above including costs associated with the Community Benefits Plan. The Community Benefit Plan costs must be clearly identified in the budget justification. Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title "ControlNumber_LeadOrganization_Subrecipient_Budget_Justification".

xii. Budget for DOE/NNSA FFRDC (if applicable)

If a DOE/NNSA FFRDC is to perform a portion of the work, the applicant must provide a DOE work proposal (WP) in accordance with the requirements in DOE Order 412.1A, Work Authorization System, Attachment 3, available at: https://www.directives.doe.gov/directives-documents/400-series/0412.1-BOrder-a-chg1-AdmChg Save the WP in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_WP".

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.J.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. Open-Source Software Distribution Plan

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 four goals: 1) community and labor engagement; 2)

investing in job quality and workforce continuity; 3) advancing DEIA; and 4) contributing to the Justice40 Initiative. The below sections include the requirements for each goal. 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, Attainable, Realistic and Timely (SMART) milestone per budget period to measure progress on the proposed actions. The Plan will be evaluated as part of the technical review process. If DOE selects a project, DOE will incorporate the Community Benefits Plan into the award and the recipient must implement its Community Benefits Plan when carrying out its project. Public transparency around the plan and SMART commitments ensure accountability. 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.

The Community Benefits Plan must not exceed 12 pages. It must be submitted in PDF format using the following convention name for the title: "Control Number_LeadOrganization_CBP." This Plan must address the technical review criterion titled, "Community Benefits Plan: Job Quality & Equity." See Section V. of the FOA.

For additional information, see Community Benefits Plan Frequently Asked Questions (FAQs) | Department of Energy.

The Community Benefits Plan must address the following:
1. Community and Labor Engagement: The Community Benefits Plan must describe the applicant's actions to date and plans to engage with community partners, such as local governments and/or Tribal governments, labor unions, 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 lay the groundwork for the 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, a card check provision, 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 the 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 Job Quality and Workforce Continuity: 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 new and incumbent workers and ensuring jobs are of sufficient quality to attract and retain skilled workers in the industry.

As the 1935 National Labor Relations Act states, 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.

The Plan must include:

A) A summary of the applicant's plan to attract, train, and retain a skilled and well-qualified workforce for 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) It is the policy of the United States to eliminate the causes of certain substantial obstructions to the free flow of commerce by encouraging the practice and procedure of collective bargaining and by protecting the exercise by workers of full freedom of association. Applicant should provide a description of how and if they plan to affirmatively support worker organizing and collective bargaining. This might include a commitment to negotiate pre-hire project labor agreements for construction activity, a pledge to remain neutral during any union organizing campaigns, intention or willingness to permit union recognition through card check (as opposed to requiring union elections), intention or willingness to enter into binding arbitration to settle first contracts, a pledge to allow union organizers access to appropriate onsite non-work places (e.g., lunch rooms), a pledge to refrain from holding captive audience meetings, and other supportive commitments or pledges.

3. DEIA: The Community Benefits Plan must include a section describing how 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 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:

A) Commit to partnering with Minority Business Enterprises, minority-owned businesses, women-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, women, returning citizens, opportunity youth, and veterans;

C) Provide workers with comprehensive support services, such as childcare and transportation, 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. The Justice40 Initiative section must include:

A) Identification of applicable disadvantaged communities to which the anticipated project benefits will flow. It is recommended that the applicant use the EV Charging Justice40 Map.

B) Identification of applicable benefits that are quantifiable, measurable, and trackable, including, at a minimum, a discussion of the relevance of each of the Justice40 Initiative benefits outlined in the NEVI program guidance and FAQs and listed 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:

i. Improving clean transportation access through the location of charging stations;
ii. Decreasing the transportation energy cost burden by enabling reliable access to affordable charging;
iii. Reducing environmental exposures to transportation emissions;
iv. Increasing parity in clean energy technology access and adoption;
v. Increasing energy democracy, including community ownership;

vi. Increasing access to low-cost capital to increase equitable adoption of more costly, clean energy technologies like EV charging;
vii. Increasing the clean energy job pipeline, job training, and enterprise creation in disadvantaged communities;
viii. Increasing energy resilience;
ix. Providing charging infrastructure that can serve transit and shared-ride vehicles;
x. Increasing equitable access to the electric grid; and
xi. Minimizing gentrification-induced displacement result from new EV charging infrastructure.

C) 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(s) 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?

D) 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 tools such as CEJST and the Electric Vehicle Charging Justice 40 Mapping Tool to quantitatively discuss existing environmental impacts in the project area. See https://screeningtool.geoplatform.gov, https://www.anl.gov/es/electric-vehicle-charging-equity-considerations.

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

xviii. Locations of Work

Applicants must complete the Locations of Work Documentation, available on EERE eXCHANGE at https://eere-eXCHANGE.energy.gov/. The applicant must complete the supplied template by listing the city, state, and zip code + 4 digits for each location where project work will be performed by the prime recipient or

subrecipient(s). Save the completed template as a Microsoft Excel file using the following convention for the title: "Control Number_LeadOrganization_LOW."

xix. Transparency of Foreign Connections

Applicants must provide the following as it relates to the proposed recipient and subrecipients. Include a separate disclosure for the applicant and each proposed subrecipient. U.S. National Laboratories, domestic government entities, and institutions of higher education are only required to respond to items 1, 2 and 9, and if applying as to serve as the prime recipient, must provide complete responses for project team members that are not U.S. National Laboratories, domestic government entities, or institutions of higher education.

1. Entity name, website address, and mailing address;
2. The identity of all owners, principal investigators, project managers, and senior/key personnel who are a party to any *Foreign Government-Sponsored Talent Recruitment Program* of a foreign country of risk (i.e., China, Iran, North Korea, and Russia);
3. The existence of any joint venture or subsidiary that is based in, funded by, or has a foreign affiliation with any foreign country of risk;
4. Any current or pending contractual or financial obligation or other agreement specific to a business arrangement, or joint venture-like arrangement with an enterprise owned by a foreign state or any foreign entity;
5. Percentage, if any, that the proposed recipient or subrecipient has foreign ownership or control;
6. Percentage, if any, that the proposed recipient or subrecipient is wholly or partially owned by an entity in a foreign country of risk;
7. Percentage, if any, of venture capital or institutional investment by an entity that has a general partner or individual holding a leadership role in such entity who has a foreign affiliation with any foreign country of risk;
8. Any technology licensing or intellectual property sales to a foreign country of risk, during the 5-year period preceding submission of the proposal;
9. Any foreign business entity, offshore entity, or entity outside the United States related to the proposed recipient or subrecipient;

10. Complete list of all directors (and board observers), including their full name, citizenship and shareholder affiliation, date of appointment, duration of term, as well as a description of observer rights as applicable;
11. Complete capitalization table for your entity, including all equity interests (including LLC and partnership interests, as well as derivative securities). Include both the number of shares issued to each equity holder, as well as the percentage of that series and all equity on a fully diluted basis. Identify the principal place of incorporation (or organization) for each equity holder. If the equity holder is a natural person, identify the citizenship(s). If the recipient or subrecipient is a publicly traded company, provide the above information for shareholders with an interest greater than 5%;
12. A summary table identifying all rounds of financing, the purchase dates, the investors for each round, and all the associated governance and information rights obtained by investors during each round of financing; and
13. An organization chart to illustrate the relationship between your entity and the immediate parent, ultimate parent, and any intermediate parent, as well as any subsidiary or affiliates. Identify where each entity is incorporated.

DOE reserves the right to request additional or clarifying information based on the information submitted.

Save the Transparency of Foreign Connections information in a single PDF file using the following convention for the title:
"ControlNumber_LeadOrganization_TFC."

xx. 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: "ControlNumber_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 list of examples information that may be required:

- Personnel proposed to work on the project and collaborating organizations (See Section VI.B.xviii. Participants and Collaborating Organizations);
- A Data Management Plan (if applicable) describing how all data resulting from the proposed work will be collected, transmitted, secured, stored, and made digitally accessible, and how Personally Identifiable Information will be handled;
- Indirect cost information;
- Other budget information;
- Letters of Commitment from third parties contributing to cost share, if applicable;
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
- Information for the DOE Office of Civil Rights to process assurance reviews under 10 CFR 1040;
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to Davis-Bacon Act requirements;

- Information related to any proposed Workforce and Community Agreement, as defined above in "Community Benefits Plan: Job Quality and Equity," that applicants may have made with the relevant community;
- Any proposed or required Project Labor Agreements; and
- Environmental Questionnaire.

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) Register in the SAM at https://www.sam.gov before submitting an application; (2) provide a valid UEI in the application; and (3) maintain an active SAM registration with current information when the applicant 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. If an applicant has not fully complied with the requirements by the time DOE is ready to make a federal award, 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 use 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 EERE 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 its 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

Foreign travel costs are not allowable under this FOA.

vi. Equipment and Supplies

Property disposition may be required at the end of a project if the current fair market value of property exceeds $5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

vii. Buy America Requirements for Infrastructure Projects

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

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

Whether a given project must apply this requirement is project-specific and dependent on several factors, such as the recipient's entity type, whether the work involves "infrastructure," as defined in Section 70914 of the BIL, and whether the infrastructure in question is publicly owned or serves a public function.

Applicants are strongly encouraged to consult Appendix D of this FOA to determine whether their project may have to apply this requirement, both to make an early determination as to the need of a waiver, as well as to determine what impact, if any, this requirement may have on the proposed project's budget.

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

The DOE financial assistance agreement will require each recipient to: (1) fulfill the commitments made in its application regarding the procurement of U.S.-produced products and (2) fulfill the commitments made in its application regarding the procurement of other key component metals and domestically manufactured products that are deemed available in sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation. Applicants may seek waivers of these requirements in very limited circumstances and for good cause shown. Further details on requesting a waiver can be found in Appendix D and the terms and conditions of an award.

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

viii. Davis-Bacon Act Requirements

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

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

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

(1) Ensuring that the wage determination(s) and appropriate Davis-Bacon clauses and requirements are flowed down to and incorporated into any applicable subcontracts or subrecipient awards;

(2) Ensuring that if wage determination(s) and appropriate Davis-Bacon clauses and requirements are improperly omitted from contracts and subrecipient awards, the applicable wage determination(s) and clauses are retroactively incorporated to the start of performance;

(3) Being responsible for compliance by any subcontractor or subrecipient with the Davis-Bacon labor standards;

(4) Receiving and reviewing certified weekly payrolls submitted by all subcontractors and subrecipients for accuracy and to identify potential compliance issues;

(5) Maintaining original certified weekly payrolls for three years after the completion of the project and making those payrolls available to DOE or the U.S. Department of Labor ("DOL") upon request, as required by 29 CFR 5.6(a)(2);

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

(7) Cooperating with any authorized representative of DOL in its inspection of records, interviews with employees, and other actions undertaken as part of a DOL investigation;

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

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

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

Recipients of funding under this FOA will also be required to undergo Davis-Bacon Act compliance training and maintain competency in Davis-Bacon Act compliance. The Contracting Officer will notify the recipient of any DOE

sponsored Davis-Bacon Act compliance trainings. DOL offers free Prevailing Wage Seminars several times a year that meet this requirement, at https://www.dol.gov/agencies/whd/government-contracts/construction/seminars/events.

For additional guidance on how to comply with the Davis-Bacon provisions and clauses, see https://www.dol.gov/agencies/whd/government-contracts/construction and https://www.dol.gov/agencies/whd/government-contracts/protections-for-workers-in-construction.

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

ix. Lobbying

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

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

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

x. Risk Assessment

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

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

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 180 and must require non-federal entities to comply with these provisions. These provisions restrict federal awards, subawards and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in federal programs or activities.

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

xi. Invoice Review and Approval

DOE employs a risk-based approach to determine the level of supporting documentation required for approving invoice payments. Recipients may be

required to provide some or all of the following items with their requests for reimbursement:

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

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

a. Prohibition

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

b. Definitions

1. **Foreign Government-Sponsored Talent Recruitment Program.** An effort directly or indirectly organized, managed, or funded by a foreign

government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

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

xiii. Affirmative Action and Pay Transparency Requirements

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

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

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

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

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

DOL's Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule compliance evaluations. Consult OFCCP's Technical Assistance Guide[12] to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors, and subcontractors must take. Additional guidance may also be found in the National Policy Assurances, produced by DOE.

xiv. Foreign Collaboration Considerations

a. Consideration of new collaborations with foreign entities and governments. The recipient will be required to provide DOE with advanced written notification of any potential collaboration with foreign entities 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 or government regarding the potential collaboration or negotiating the terms of any potential agreement.

b. Existing collaborations with foreign entities 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

[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

recipient. A thing of value includes but may not be limited to all resources made available to, or from, the recipient in support of and/or related to the DOE award, regardless of whether or not they have monetary value. Things of value also may include in-kind contributions (such as office/laboratory space, data, equipment, supplies, employees, students). In-kind contributions not intended for direct use on the DOE award but resulting in provision of a thing of value from or to the DOE award must also be reported. Collaborations do not include routine workshops, conferences, use of the recipient's services and facilities by foreign investigators resulting from its standard published process for evaluating requests for access, or the routine use of foreign facilities by awardee staff in accordance with the recipient's standard policies and procedures.

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers:

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

Concept Paper Criterion: Overall FOA Responsiveness and Viability of the Project (Weight: 100%)
This criterion involves consideration of the following factors:

- The applicant clearly describes the problem being addressed by the project, the project goal, and what project approach will be used within the scope of the project;
- The applicant demonstrates adequate involvement from intended partnerships;
- The applicant has the qualifications, experience, capabilities, and other resources necessary to complete the proposed project;
- The proposed project clearly meets the requirements of the Topic area; and
- The proposed work, if successfully accomplished, would have a meaningful impact on the problem targeted by the Topic area.

ii. Full Applications

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

Criterion 1: Project Approach and Impact (30%)
This criterion involves consideration of the following factors:

1a. Extent to which the proposed project goals are relevant to the topic area objectives, the project approach meets the general and specific requirements of the Topic and has merit;
1b. Extent to which the application objectively describes the current state of the market applicable to the Topic, and how the project outcomes will measurably and durably advance the state of the market;

1c. Extent to which the community which will be affected by the project is involved in the design and implementation of the project activities; and
1d. Extent to which the project includes activities to produce and share valuable insights, best practices, or other outputs that will effectively enable others to replicate the project successes.

Criterion 2: Project Plan (25%)
This criterion involves consideration of the following factors:

2a. Extent to which the workplan clearly defines the scope, tasks, milestones, and schedule of the project such that the parameters of the project are appropriately defined, the tasks are logically ordered, the task durations are reasonable, and that the overall plan will result in successful achievement of project outputs, outcomes, and goals;
2b. Reasonableness of the team's approach to project management and controls as defined in the technical volume, including the extent to which the involvement of project team organizations/individuals are defined in relation to specific work tasks, milestones and deliverables, the quality of the plan for communication among team members, and the thoroughness of the risk management plan; and
2c. Reasonableness of the proposed plan for collecting, managing, and sharing project data.

Criterion 3: Project Team and Qualifications (25%)
This criterion involves consideration of the following factors:

3a. Extent of key personnel qualifications, expertise, and experience, in relation to project and Topic objectives;
3b. Extent of the alignment between the team organizations' missions/strategic goals with the objectives of the Topic and with the teaming arrangement proposed by the Topic; and
3c. Appropriateness of the resource commitments proposed by project partners or other key participants as validated by letters of commitment.

Criterion 4: Community Benefits Plan (20%)
This criterion involves consideration of the following factors (to be evaluated equally):

4a. 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.

4b. Job Quality and Workforce Continuity

- 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.

4c. 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.

4d. 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 October 1, 2020, which is available at: Merit Review Guide for Financial Assistance and Unsolicited Proposals - Current Guides | Department of Energy

C. Other Selection Factors

i. Program Policy Factors

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

- The degree to which the proposed project exhibits diversity of approach when compared to the existing DOE or program project portfolio and other projects selected from the subject FOA;

- The degree to which the proposed project, including proposed cost share, optimizes the use of available DOE funding to achieve programmatic objectives;
- The level of industry involvement and demonstrated ability to accelerate demonstration and commercialization and overcome key market barriers;
- The degree to which the proposed project is likely to lead to increased high-quality employment and manufacturing in the United States;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications;
- The degree to which the proposed project incorporates applicant or team members from Minority Serving Institutions (e.g., Historically Black Colleges and Universities (HBCUs)/Other Minority Institutions (OMIs)); and partnerships with Minority Business Enterprises, minority-owned businesses, woman-owned businesses, veteran-owned businesses, or Indian tribes;
- 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;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials;
- The degree to which the proposed project collectively represents diverse types and sizes of applicant organizations;
- The degree to which the proposed project has broad public support from the communities most directly impacted by the project;
- The degree to which the proposed project avoids duplication/overlap with other publicly or privately funded work;
- The degree to which the proposed project supports complementary efforts or projects, which, when taken together, will best achieve the research goals and objectives;
- The degree to which the proposed project enables new and expanding market segments;
- The degree to which the project's solution or strategy will maximize deployment or replication; and

- The degree to which the project promotes increased coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer.

D. Evaluation and Selection Process

i. Overview

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

ii. Pre-Selection 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 responses 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.

iii. Recipient Responsibility and Qualifications

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any 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). FAPIIS.gov records are now called Responsibility/Qualification and stored in the SAM.gov data bank.

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.

iv. Selection

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

E. Anticipated Notice of Selection and Award Negotiation Dates

EERE 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 EERE 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 EERE Exchange. DOE may include general comments provided from reviewers on an applicant's Concept Paper in the encourage/discourage notifications.

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 EERE 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. Applicants Selected for Award Negotiations

Successful applicants will receive written notification that they have been selected for award negotiations. 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 nor is it a guarantee of federal government funding. Applicants do not receive an award unless and until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the prime recipient in FedConnect.

The award negotiation process takes approximately 60-90 days. Applicants must designate a primary and a backup point-of-contact in EERE 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.J.ii. of the FOA for guidance on pre-award costs.

v. 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 required one-time actions applicants must take before applying to this FOA. Some of these actions may take several weeks, so it is vital applicants build in enough time to complete them. Failure to complete these

actions could interfere with application or negotiation deadlines or the ability to receive an award if selected. These requirements are as follows:

1. **EERE Funding Opportunity Exchange (eXCHANGE)**
   Register and create an account on EERE eXCHANGE at https://eere-eXCHANGE.energy.gov. This account will allow the user to apply to any open EERE FOAs in EERE eXCHANGE.

   To access EERE eXCHANGE, potential applicants must have a Login.gov account. As part of the eXCHANGE registration process, new users will be directed to create an account in Login.gov. Please note that the email address associated with Login.gov must match the email address associated with the eXCHANGE account. For more information, refer to the eXCHANGE Multi-Factor Authentication (MFA) Quick Guide in the Manuals section of eXCHANGE.

   Each organization or business unit, whether acting as a team or a single entity, should use only one account as the contact point for each submission. Applicants must also designate backup points of contact. **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 in SAM (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 (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. Please note that 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 DOE, including EERE 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

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.

DOE may elect to deny a foreign national's participation in the award. Likewise, DOE may elect to deny a foreign national's access to a DOE site, information, technologies, equipment, programs, or personnel.

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 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, a corporation is any for-profit or nonprofit 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].

3. Nondisclosure and Confidentiality Agreements Representations
In submitting an application 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:

"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."

(1) 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.

(2) 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 U.S. government, may contain provisions appropriate to the 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 during such activity unless specifically authorized to do so by the U.S. 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 U.S. 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. Statement of Substantial Involvement

DOE has substantial involvement in work performed under awards made as a result of this FOA. DOE does not limit its involvement to the administrative requirements of the award. Instead, DOE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

1. DOE shares responsibility with the recipient for the management, control, direction, and performance of the project.

2. DOE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.

3. DOE may redirect or discontinue funding the project based on the outcome of DOE's evaluation of the project at the Go/No-Go decision point(s).

4. DOE participates in major project decision-making processes.

xi. Subject Invention Utilization Reporting

To ensure that prime recipients and subrecipients holding title to subject inventions are taking the appropriate steps to commercialize subject inventions, DOE may require that each prime recipient holding title to a subject invention submit annual reports for ten (10) years from the date the subject invention was disclosed to DOE on the utilization of the subject invention and efforts made by prime recipient or their licensees or assignees to stimulate such utilization. The reports must include information regarding the status of development, date of first commercial sale or use, gross royalties received by the prime recipient, and such other data and information as DOE may specify.

xii. 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.

xiii. Reporting

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

Additional reporting requirements apply to projects funded by BIL. 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, or recycling capacity;
- Jobs data including:
    - Number and types of jobs provided, wages and benefits paid;
    - Workforce demographics including local hires;
    - Efforts to minimize risks of labor disputes and disruptions;
    - Contributions to training; employee certificates and training credentials; ratio of apprentice-to-journey level workers employed; and

  - Number of trainings completed, trainees placed in full-time employment, or number of trainings with workforce partnerships involving employers, community-based organizations, or labor unions.
- Justice and Equity data, including:
  - Minority Business Enterprises, minority-owned businesses, woman-owned businesses, and veteran-owned businesses acting as vendors and subcontractors for bids on supplies, services, and equipment;
  - Stakeholder engagement events, consent-based siting activities; and
  - Other relevant indicators from the Community Benefits Plan;
- Number and type of energy efficient and clean energy equipment installed; and
- Funding leveraged, follow-on-funding, intellectual property generation and utilization.

xiv. 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 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.

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.

[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 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 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.

xv. 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 U.S. government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the U.S. 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.

xvi. 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 million 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.

xvii. Real Property and Equipment

Real property and equipment purchased with project funds (federal share and recipient cost share) are subject to the requirements at 2 CFR 200.310, 200.311, 200.313, and 200.316 (non-federal entities, except for-profit entities) and 2 CFR 910.360 (for-profit entities). For projects selected for awards under this FOA, the recipients 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 when 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 in 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

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

States, local governments, and other public entities may not condition subawards in a manner that would discriminate against or otherwise disadvantage subrecipients based on their religious character.

xix. Participants and Collaborating Organizations

If selected for award negotiations, the selected applicant must submit a list of senior/key personnel who are proposed to work on the project, both at the recipient and subrecipient level and a list of collaborating organizations 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.

xx. U.S. Manufacturing Commitments

A primary objective of DOE's multi-billion-dollar research, development, and demonstration investments are 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 sub-recipient.

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.

xxi. 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 its 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

[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.

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

xxii. Data Management Plan (Required for Topics 2A, 3A and 3B)

Each applicant whose Full Application is selected for award negotiations will be required to submit a Data Management Plan (DMP) during the award negotiations phase. A DMP describes how data resulting from the proposed work will be collected, transmitted, secured, stored, and made digitally accessible, and how Personally Identifiable Information will be handled.

xxiii. 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.

xxiv. 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).

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. Questions regarding this FOA must be submitted to: DE-FOA-0002881@netl.doe.gov no later than five (5) 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 EERE Exchange at: https://eere-exchange.energy.gov. **You must first select this specific FOA Number to view the questions and answers specific to this FOA**. EERE will attempt to respond to a question within three (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 EERE Exchange website should be submitted to EERE-ExchangeSupport@hq.doe.gov.

VIII. Other Information

A. FOA Modifications

Amendments to this FOA will be posted on EERE Exchange 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. EERE recommends that you register as soon after the release of the FOA as possible to ensure you receive timely notice of any amendments or other FOAs.

B. Government Right to Reject or Negotiate

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

C. Commitment of Public Funds

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

D. Treatment of Application Information

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

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

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

> **Notice of Restriction on Disclosure and Use of Data:**
> Pages [list applicable pages] of this document may contain business sensitive, trade secrets, proprietary, or otherwise confidential information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance 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 cancellation of award negotiations;
- The modification, suspension, and/or cancellation 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

DOE expects that the awards made as a result of this FOA will not involve research or development. However, in the event that an award is made that does involve R&D, 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:

Under 42 U.S.C. § 5908, title to subject inventions vests in the United States government and large businesses and foreign entities do not have the automatic right to elect to retain title to subject inventions. However, DOE may issue "class patent waivers" under which large businesses and foreign entities that meet certain stated requirements may elect to retain title to their subject inventions.

- 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.xx. 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 further DECs on the website above 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 U.S. 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 U.S. 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 U.S. 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 U.S. government retains unlimited rights in technical data produced under government financial assistance awards, including the right to distribute to the public. One exception to the foregoing is that 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 use *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. "PII" refers to information that can be used to distinguish or trace an individual's identity, such as their name, Social Security number, or biometric records, alone or combined with other personal or identifying information linked or linkable to a specific individual, such as date and place of birth or 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, nonprofit 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, a Single or Program-Specific Audit is required. For additional information, please refer to 2 CFR 200.501 and Subpart F.

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

APPENDIX A – COST SHARE INFORMATION

Cost Sharing or Cost Matching

The terms "cost sharing" and "cost matching" are often used synonymously. Even the DOE Financial Assistance Regulations, 2 CFR 200.306, use both terms in the titles specific to regulations applicable to cost sharing. DOE almost always uses "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 million in federal funds with a minimum 20% non-federal cost sharing requirement:

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

- Formula: Total Project Cost ($) minus federal share ($) = Non-federal share ($)
  Example: $1,250,000 minus $1,000,000 = $250,000

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

What Qualifies for Cost Sharing

While it is not possible to explain what specifically qualifies for cost sharing in one or two 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, it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, 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 above regulations, other factors may come into play such as timing of donations and length of the project period. For example, the value of 10 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, or equipment for their company with organizational resources. If the cost of the item or service is reimbursed, 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, and 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. Consult your DOE contact if you have questions 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 incur only 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 million 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 / Deployment)	$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 economic 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.xx.); 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:

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

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 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.J.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).

DOE may require additional information before considering the waiver request.

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

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

A. Definitions

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

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

- Non-ferrous metals;
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall.

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

Moreover, according to the OMB guidance document:

> When determining if a program has infrastructure expenditures, federal agencies should interpret the term "infrastructure" broadly and consider the definition provided above as illustrative and not exhaustive. When determining if a particular construction project of a type not listed in the definition above constitutes "infrastructure," agencies should consider whether the project will serve a public function, including whether the project is publicly owned and operated, privately operated on behalf of the public, or is a place of public accommodation, as opposed to a project that is privately owned and not open to

the public. Projects with the former qualities have greater indicia of infrastructure, while projects with the latter quality have fewer. Projects consisting solely of the purchase, construction, or improvement of a private home for personal use, for example, would not constitute an infrastructure project.

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

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

B. Buy America Requirements for Infrastructure Projects ("Buy America" requirements)
In accordance with Section 70914 of the BIL, none of the project funds (includes federal share and recipient cost share) may be used for a project for infrastructure unless:

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

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

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

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

computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

These requirements must flow down to all sub-awards, all contracts, subcontracts, and purchase orders for work performed under the proposed project, except where the prime recipient is a for-profit entity. Based on guidance from the Office of Management and Budget (OMB), the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a State, local government, Indian Tribe, Institution of Higher Education, or nonprofit organization.

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

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

C. Waivers

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

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

> (1) applying the Buy America requirements would be inconsistent with the public interest;
>
> (2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or

(3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

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

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

DOE may require additional information before considering the waiver request.

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

APPENDIX E – LIST OF ACRONYMS

BIL	Bipartisan Infrastructure Law
CETs	Critical and Emerging Technologies
CEJST	Climate and Economic Justice Screening Tool
COI	Conflict of Interest
CRADA	Cooperative Research and Development Agreement
DEC	Determination of Exceptional Circumstances
DEIA	Diversity, Equity, Inclusion, and Accessibility
DMP	Data Management Plan
DOE	Department of Energy
DOI	Digital Object Identifier
DOL	Department of Labor
EERE	Energy Efficiency and Renewable Energy
EVSE	Electric Vehicle Supply Equipment
FAPIIS	Federal Awardee Performance and Integrity Information System
FAR	Federal Acquisition Regulation
FCOI	Financial Conflicts of Interest
FFATA	Federal Funding and Transparency Act of 2006
FOA	Funding Opportunity Announcement
FOIA	Freedom of Information Act
FFRDC	Federally Funded Research and Development Center
GAAP	Generally Accepted Accounting Principles
HBCUs	Historically Black Colleges and Universities
HSRD	Human Subjects Research Database
IPMP	Intellectual Property Management Plan
IRB	Institutional Review Board
M&O	Management and Operating
MFA	Multi-Factor Authentication
MPIN	Marketing Partner ID Number
MSI	Minority-Serving institution
MYPP	Multi-Year Program Plan
NDA	Non-Disclosure Acknowledgement
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration

NSF	National Science Foundation
OFCCP	Office of Federal Contractor Compliance Programs
OHRP	Office of Human Research Protection
OIG	Office of Inspector General
OMB	Office of Management and Budget
OSS	Open-Source Software
OSTI	Office of Scientific and Technical Information
OTA	Other Transactions Authority
PII	Personal Identifiable Information
RD&D	Research, Development, and Demonstration
RFI	Request for Information
RFP	Request for Proposal
SAM	System for Award Management
SciENcv	Science Experts Network Curriculum Vita
SMART	Specific, Measurable, Achievable, Relevant, and Timely
SOPO	Statement of Project Objectives
SPOC	Single Point of Contact
STEM	Science, Technology, Engineering, and Mathematics
TAA	Technical Assistance Agreement
TIA	Technology Investment Agreement
TRL	Technology Readiness Level
UCC	Uniform Commercial Code
UEI	Unique Entity Identifier
WBS	Work Breakdown Structure
WP	Work Proposal