MESC
OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS

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

Bipartisan Infrastructure Law: Advanced Energy Manufacturing and Recycling Grant Program (Section 40209)

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FOA Amendment 000002 Issue Date:	6/2/2023
Informational Webinar:	2/21/2023 2:00pm ET
Submission Deadline for Concept Papers:	3/14/2023 5:00pm ET
Submission Deadline for Full Applications:	6/8/2023 5:00pm ET
Expected Submission Deadline for Replies to Reviewer Comments:	8/1/2023 5:00pm ET
Expected Timeframe for DOE Selection Notifications:	November 2023
Expected Timeframe for Award:	January – March 2024

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

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

- Applicants must designate primary and backup points-of-contact in OCED Exchange with whom MESC will communicate to conduct award negotiations. If an application is selected for award negotiations, it is not a commitment to issue an award. It is imperative that the applicant/selectee be responsive during award negotiations and meet negotiation deadlines. Failure to do so may result in cancelation of further award negotiations and rescission of the selection.

Modifications

Modification 000001 changes to the Funding Opportunity Announcement (FOA) are HIGHLIGHTED in the body of the FOA.

Mod. No.	Date	Description of Modification
000001	**03/08/2023**	***Updates to Section I. includes:*** **- Information pertaining to the NREL Technical Assistance Program;** ***Updates to Section III. include:*** **- Clarifications regarding eligibility under III.A.i; and;** **- Clarifications regarding compliance criteria under III.C.** ***Updates to Section IV. include:*** **- Clarification to the "Background/Resources Addendum in Section C.;** **- Adjustments to the requirements of the Full Application Content Requirements in Section D.i.;** **- Inclusion of Section D. xix Census Tract Evidence of Filing (if applicable) and Section D. xx. Required Eligibility Certification Form and Addendum; and** **- Adjustments to Section E. Post Selection Information Requests** ***Updates to the Appendices include:*** **- Incorporation of "Appendix H – Required Eligibility Certification Form and Addendum"**
000002	**06/02/2023**	**Update Section V.B. to add a merit review procedure reference**

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, the DOE will determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant. **GSAFSD Tier 0 Knowledge Base - Validating your Entity.**

Registration Requirements

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

SAM: Applicants must register with the System for Award Management (SAM) at https://www.sam.gov/ prior to submitting an application in response to this FOA. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called a Marketing Partner ID Number (MPIN) are important steps in SAM registration. Failure to register with SAM will prevent your organization from applying through OCED Exchange. The applicant must maintain an active SAM registration with current information at all times during which it has an active Federal award or application under consideration. More information about SAM registration for applicants is found at: https://www.fsd.gov/gsafsd.

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

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

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

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

Grants.gov: Applicants must register with Grants.gov 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.

1) The Authorized Organizational Representative (AOR) must register at: https://apply07.grants.gov/apply/register.faces.

2) An email is sent to the E-Business (E-Biz) POC listed in SAM. The E-Biz POC must approve the AOR registration using their MPIN from their SAM registration.

More information about the registration steps for Grants.gov is provided at: https://www.grants.gov/web/grants/applicants/registration.html.

In addition:

- Add a Profile to a Grants.gov Account: A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the UEI for the organization in the UEI field while adding a profile. For more detailed instructions about creating a profile on Grants.gov, refer to: https://www.grants.gov/web/grants/applicants/registration/add-profile.html.

- *EBiz POC Authorized Profile Roles*: After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the EBiz POC. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been assigned the AOR role.

  NOTE: When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application, serving as the electronic signature.

The EBiz POC **must** authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; **this step is often missed and it is crucial for valid and timely submissions**.

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

FedConnect: 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.

OCED Exchange: Applicants must register through the OCED Exchange. OCED Exchange website: https://oced-exchange.energy.gov/.

SUBMISSION REQUIREMENTS

- **OCED Exchange:** All application submissions are to be made via the OCED Exchange at https://oced-exchange.energy.gov/. To gain access to the OCED Exchange system, the applicant must first register and create an account on the main OCED Exchange site. This account will allow the user to register for any open OCED FOAs that are currently in OCED Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission. Applicants should also designate backup points of contact so they may be easily contacted if deemed necessary.

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

  To receive notices via email regarding an FOA in OCED Exchange, such as amendments to the announcement or the posting of new questions and answers from OCED 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

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted to: mesc_foa2907@netl.doe.gov.

Questions and comments concerning this FOA shall be submitted not later than three (3) business days prior to the application due date. Please note, feedback on individual concepts will not be provided through Q&A.

NOTE: Please be as clear and concise when asking a question about the FOA and be as specific as possible about the topic area to which your question refers. If it is not clear DOE will be required to ask for additional information and clarity on the question to provide an accurate response which will take additional time.

All questions and answers relating to the content of this FOA will be posted in OCED exchange. Specifically, under the FOA Documents, there will be an Excel file labeled "FOA 2907 Q&A" which will contain questions and responses that have been released to date. The Q&A will be updated periodically as DOE receives questions and has provided responses (Financial Opportunities: Funding Opportunity Exchange (energy.gov)). Please note that you must first select this specific FOA Number in order to view the questions and answers specific to this FOA. DOE 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. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. Applicants are encouraged to review previously issued Questions and Answers prior to the submission of questions.

Questions related to the registration process and use of the OCED Exchange website should be submitted to: OCED-ExchangeSupport@hq.doe.gov.

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I. Funding Opportunity Description

A. Background and Context

The Office of Manufacturing and Energy Supply Chains (MESC) is issuing this Funding Opportunity Announcement (FOA). Awards made under this FOA will be funded, in whole or in part, with funds appropriated by the 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 infrastructure, designed to modernize and upgrade American infrastructure to enhance United States (U.S.) competitiveness, drive the creation of good-paying union jobs, tackle the climate crisis, and ensure stronger access to economic, environmental, and other benefits for disadvantaged communities.[2] The BIL appropriates more than $62 billion to the Department of Energy (DOE)[3] to invest in American manufacturing and workers; expand access to energy efficiency and clean energy; deliver reliable, clean, and affordable power to more Americans; and demonstrate and deploy the technologies of tomorrow through clean energy demonstrations.

As part of and in addition to upgrading and modernizing infrastructure, DOE's BIL investments will support efforts to build a clean and equitable energy economy that achieves a zero-carbon electricity system by 2035, and to put the United States on a path to achieve net-zero emissions economy-wide by no later than 2050[4] to benefit all Americans.

The BIL invests appropriations of $750 million over Fiscal Years (FYs) 2022 through 2026 to establish the Advanced Energy Manufacturing and Recycling Grant Program (the Program), which will support industrial projects in eligible energy communities.[5]

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[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 and the Office of Management and Budget's Interim Justice40 Implementation Guidance M-21-28, DOE has developed a definition and tools to locate and identify disadvantaged communities. These resources can be located at https://energyjustice.egs.anl.gov/. DOE will also recognize disadvantaged communities as defined and identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), which can be located at https://screeningtool.geoplatform.gov/. DOE's current Justice40 Implementation Guidance is located at https://www.energy.gov/sites/default/files/2022-07/Final%20DOE%20Justice40%20General%20Guidance%20072522.pdf.

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

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

[5] As set forth in Section III.A.i. below, for purposes of this Program, an eligible energy community is defined as a census tract (a) in which, after December 31, 1999, a coal mine closed; (b) in which, after December 31, 2009, a coal-fired electricity generating unit had been retired; or (c) that is immediately adjacent to a census tract described in (a) or (b).

Through this FOA, the Program will provide up to $350 million in support of projects by small- and medium-sized manufacturing firms (SMMs)[6] to establish new or re-equip or expand existing industrial facilities in eligible energy communities to produce or recycle advanced energy property.

The activities to be funded under this FOA support BIL section 40209 and the broader government-wide approach to reinvigorating and reinvesting in the American industrial base; establishing secure, resilient domestic energy supply chains; and revitalizing economies in energy communities to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis, empower workers, and advance environmental justice.

i. Program Purpose and Strategic Goals

The United States faces broad exposure to a climate crisis that threatens the American people and communities, public health, and economy.[7] In responding to this crisis, the nation also encounters a once-in-a-generation economic opportunity to enhance American global competitiveness; create and sustain jobs, including well-paying union jobs; support a just transition to a more sustainable economy for American workers; strengthen America's communities; protect public health; and advance environmental justice.[8] This Program is one part of an all-of-government approach to responding to the global climate crisis while seizing upon the opportunities created by transition to a carbon pollution-free electricity sector by 2035 and net-zero emissions economy-wide by no later than 2050.

Reinvigorating and Reinvesting in the American Industrial Base

The global market for clean energy and carbon reduction technologies is anticipated to reach a minimum of $23 trillion by 2030. Many proven clean energy technologies poised for significant market share in a global clean energy economy exist today. These include but are not limited to carbon capture utilization and storage (CCUS), electric vehicles, energy efficiency, energy storage, geothermal, hydrogen, hydropower, industrial decarbonization, nuclear, solar, and wind technologies.

BIL § 40209 (a)(2). A mapping tool displaying such census tracts is available here: MESC Energy Transitions (doe.gov). This map can also be found under Program Resources on the Program information page: Advanced Energy Manufacturing and Recycling Grants | Department of Energy.

[6] For purposes of this Program, a small- or medium-sized manufacturing firm (SMM) must have (1) gross annual sales of less than $100,000,000; (2) fewer than 500 employees at the plant site of the manufacturing firm; and (3) annual energy bills that total more than $100,000 but less than $2,500,000. BIL § 40209(a)(3).

[7] Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021).

[8] Executive Order 14030*, Climate-Related Financial Risk* (May 20, 2021). Executive Order 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability* (December 8, 20212021).

The United States has the opportunity to enhance its global competitiveness and national security by building supply chains for these and emerging technologies in America, built with American labor and materials.[9]

This Program seeks to ensure that the domestic industrial sector – and SMMs in particular – seize upon the opportunities at hand. SMMs account for approximately 99 percent of U.S. manufacturing enterprises, contribute more than $1 trillion in gross revenue, and provide more than five million U.S. jobs.[10] But SMMs often fall behind larger firms in technology and other capital investments due to financing and knowledge challenges. By providing financial assistance to SMMs to invest in projects to build new or transition existing facilities to take advantage of opportunities created by the clean energy economy, the Program seeks to catalyze follow-on private investment and contribute to a future that is not only led by but also made in America.

In doing so, the Program also recognizes that responding to the climate crisis and seizing on the opportunities of the clean energy transition requires reconsideration not only of what, but also of how, the domestic industrial sector produces products.[11] The Program seeks projects that incorporate advanced manufacturing practices that apply innovative technologies to produce new products and improve production of existing products; that train a highly skilled and diverse American workforce; that create products through economically-sound processes that minimize negative environmental impacts while conserving energy and natural resources; and that cut pollution and reduce carbon emissions to zero or near-zero via industrial decarbonization practices and technologies.[12] By increasing secondary use and supporting manufacturing and recycling that is cleaner and more energy efficient, the Program seeks to support projects that will reduce energy costs and emissions while increasing productivity, wages, and jobs.

Establishing Secure, Resilient Domestic Clean Energy Supply Chains

In deploying Program funds, the Program will further seek to invest in projects that will contribute to the establishment of secure, resilient domestic clean energy supply chains

[9] U.S. Department of Energy, *America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition: U.S. Department of Energy Response to Executive Order 14017, America's Supply Chains* (Feb. 24, 2022) ("*America's Strategy to Secure the Supply Chain*"). In the 1990s, for example, the United States pioneered and led commercial solar PV; but, in the absence of strong, systematic, and consistent policy to support the solar industry, other countries took over global leadership in solar PV manufacturing. See *America's Strategy to Secure the Supply Chain* at 5.

[10] U.S. Small Business Administration Manufacturing Office, https://www.sba.gov/about-sba/organization/sba-initiatives/support-manufacturing-businesses.

[11] In this respect, the Program seeks to have a complementary impact with DOE's Industrial Decarbonization Roadmap, DOE's Industrial Decarbonization and Emissions Reduction Demonstration-to-Deployment Program, and the Federal Buy Clean Initiative, all of which seek to reduce industrial emissions and rebuild U.S. leadership in manufacturing as countries, companies, and consumers around the world shift to low- to no-carbon commodities.

[12] Subcommittee on Advanced Manufacturing Committee on Technology, National Science and Technology Council, National Strategy for Advanced Manufacturing, October 2022.

that are essential to providing affordable, reliable energy for the American people. The United States needs resilient, diverse, and secure clean energy supply chains to ensure economic prosperity and national security in the face of climate shocks, cyber-attacks, geopolitical and economic competition, and other threats.[13]

While a wide variety of advanced energy property is eligible to be produced in projects supported by the Program,[14] the Program aims to increase domestic production capacity of advanced energy property that will strengthen the national security and economic competitiveness of the United States and its allies by resolving current gaps and needs and reducing dependence of the domestic energy sector industrial base on vulnerable supply chains and foreign competitors.

On February 24, 2021, President Biden signed Executive Order (E.O.) 14017, "America's Supply Chains," in which he directed the U.S. government to undertake a comprehensive review of critical U.S. supply chains to identify risks, address vulnerabilities and develop a strategy to promote resilience. In response, DOE published "America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition," the first comprehensive U.S. government plan to build an Energy Sector Industrial Base. The report is supported by deep-dive supply chain assessments highlighting key risks and opportunities across the following supply chains:

- Carbon capture materials
- Electric grid, including transformers and High-Voltage Direct Current (HVDC)
- Energy storage
- Fuel cells and electrolyzers
- Hydropower, including pumped storage
- Neodymium magnets
- Nuclear energy
- Platinum group metals and other catalysts
- Semiconductors
- Solar photovoltaics
- Wind

[13] *America's Strategy to Secure the Supply Chain.*

[14] See BIL § 40209(a)(1) (defining advanced energy property as including Property designed to be used to produce energy from the sun, water, wind, geothermal or hydrothermal resources, enhanced geothermal systems, or other renewable resources; fuel cells, microturbines, or energy storage systems and components; electric grid modernization equipment or components; property designed for use in carbon capture, transport, removal, use, or sequestration / storage; equipment designed to refine, electrolyze, or blend any fuel, chemical, or product that is renewable or low-carbon and low-emission; property designed to produce energy conservation technologies (including for residential, commercial, and industrial applications); light-, medium-, or heavy-duty electric or fuel cell vehicles, electric or fuel cell locomotives, electric or fuel cell maritime vessels, or electric or fuel cell planes; technologies, components, and materials of those vehicles, locomotives, maritime vessels, or planes; and charging or refueling infrastructure associated with those vehicles, locomotives, maritime vessels, or planes; hybrid vehicles with a gross vehicle weight rating of not less than 14,000 pounds; and technologies, components, and materials for those vehicles; and other property designed to reduce greenhouse gas emissions).

In addition, the Administration has issued determinations under the Defense Production Act[15] citing the critical need to strengthen domestic production capacity of large-capacity batteries, to increase domestic mining and processing of critical materials for the large-capacity battery supply chain,[16] and to accelerate progress in establishing secure domestic supply chains for: (1) solar panel parts like photovoltaic modules and module components; (2) critical power grid infrastructure like transformers; (3) heat pumps; (4) building insulation; and (5) equipment for making and using clean-electricity-generated fuels, including electrolyzers, fuel cells, and related platinum group metals.[17] These determinations further signal the need to bolster these clean energy supply chains in order to strengthen U.S. national and climate security while also reducing energy costs for American families.

Based on the above and additional analysis, DOE has identified priority needs to bolster domestic clean energy supply chains in the following areas:

Advanced Nuclear	• component manufacturing
Electric Grid	• electric steel or alloys used in transformer cores • continuously transposed conductors • copper wire • copper windings • large power transformers (LPTs) • pole-mounted and pad-mounted transformers • high voltage direct current transmission lines • LPT bushings • conservator tanks • conservator bladders
Hydrogen	• polytetraflouro-ethylene • electrolyte membranes • bipolar plates

[15] 50 U.S.C. § 4533.

[16] See Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended (Mar. 31, 2022).

[17] See Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended, on Solar Photovoltaic Modules and Module Components (June 6, 2022); Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended, on Transformers and Electric Power Grid Components (June 6, 2022); Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended, on Electric Heat Pumps (June 6, 2022); Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended, on Insulation (June 6, 2022); Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as amended, on Electrolyzers, Fuel Cells, and Platinum Group Metals (June 6, 2022).

	• membrane electrodes • gas diffusion layers • polymer electrolyte membrane (PEM) fuel cells and electrolyzers • solid oxide fuel cells and electrolyzers
Solar Photovoltaic (PV)	• polysilicon • rolled glass • aluminum • ingots • wafers • cells • supports • modules • inverters • systems
Wind	• Nd and Dy alloys • Nd magnets • semiconductors • large castings • forged rings and shafts • wind turbines • blades • towers • nacelles • monopiles • floating foundations • electric balance of system hardware

Modern clean energy supply chains also typically comprise digital components, which can include firmware, software, and cloud-based services. Appropriate cybersecurity considerations should be addressed in managing risks associated with digital supply chains. Supply chain analysis remains dynamic. Public and private investments in clean energy projects and clean energy supply chains may resolve priority needs listed above and/or may demonstrate additional needs, including needs across additional eligible supply chains.

Revitalizing Economies in Energy Communities

On January 27, 2021, the President issued Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, to direct federal agencies to avoid the most catastrophic impacts of the climate crisis and seize the opportunity that tackling climate change

presents. This Executive Order established an Interagency Working Group on Coal and Power Plant communities and Economic Revitalization (Interagency Working Group) to coordinate the identification and delivery of Federal resources to revitalize the economies of coal, oil and gas, and power plant communities. In doing so, it recognized that:

> Mining and power plant workers drove the industrial revolution and the economic growth that followed and have been essential to the growth of the United States. As the Nation shifts to a clean energy economy, Federal leadership is essential to foster economic revitalization of and investment in these communities, ensure the creation of good jobs that provide a choice to join a union, and secure the benefits that have been earned by workers.[18]

Projects supported under this FOA must take place in energy communities—defined by statute as a census tract where a coal mine has closed since December 31, 1999, a coal-fired power plant has closed since December 31, 2009, or an immediately adjacent census tract.[19] Consistent with this geographic requirement included in the BIL, the Program will seek to invest in projects that strengthen place-based economic development strategies and that utilize existing assets in these communities. In doing so, DOE aims to contribute to restoration of local tax bases, stronger, more resilient communities, improved public health, and transition for dislocated workers.

As investment in the global clean energy economy continues to accelerate, regional economic development strategies and economic clusters are emerging that hold potential to augment and multiply the economic contributions of individual projects in energy communities. Working collaboratively with the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization and with the U.S. Department of Commerce Economic Development Administration, DOE will seek to align investments made under this FOA with regional economic development priorities, recognizing that sustained economic revitalization is most likely to flow from long-term, place-based, coordinated, and collaborative economic development strategies that leverage Federal funding in coordination with other public and private sector resources.

In support of a resilient transition for energy communities, the Program further seeks projects that utilize and bring value from existing assets in energy communities. Those may include, but need not be limited to, efforts to turn idled properties, such as brownfields, into new hubs for economic growth, and that utilize existing industrial sites and infrastructure. Projects should further invest in dislocated workers. Reinvigorating

[18] Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021).
[19] BIL § 40209 (a)(2).

and reinvesting in the American industrial base in this moment of opportunity offers considerable benefits for American workers. Manufacturing jobs, and especially those in advanced technologies, provide better pay, more consistent hours, and stronger worker protection than the labor market as a whole and have broad impacts on jobs in other sectors.[20] Projects funded under this Program should include training dislocated workers for jobs in the new economy and creating family-sustaining jobs with high labor standards, including paying prevailing wages and offering the free and fair chance to join a union.

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining,[21,22,23] and in alignment with BIL section 40209, this FOA and any related activities will seek to encourage meaningful engagement and participation of workforce organizations, including labor unions, as well as underserved communities and underrepresented groups, including consultation with Tribal Nations.[24] Consistent with Executive Order 14008,[25] this FOA is designed to help meet the goal that 40% of the overall benefits of certain investments in clean energy and climate solutions flow to disadvantaged communities and to drive the creation of accessible good-paying jobs with the free and fair chance for workers to join a union.[26]

B. Topic Areas

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

Through this FOA, the Program will support projects by SMMs to establish new or re-equip or expand existing industrial facilities in eligible energy communities to produce or recycle advanced energy property. Eligible advanced energy property is defined pursuant to BIL Section 40209(a)(1) and further defined by DOE as:

[20] Subcommittee on Advanced Manufacturing Committee on Technology, National Science and Technology Council, *National Strategy for Advanced Manufacturing*, October 2022.
[21] EO 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government," January 20, 2021.
[22] EO 14025, "Worker Organizing and Empowerment," April 26, 2021.
[23] EO 14052, "Implementation of the Infrastructure Investment and Jobs Act," November 18, 2021.
[24] EO 13175, November 6, 2000 "Consultation and Coordination With Indian Tribal Governments", charges all executive departments and agencies with engaging in regular, meaningful, and robust consultation with Tribal officials in the development of federal policies that have Tribal implications.
[25] EO 14008, "Tackling the Climate Crisis at Home and Abroad," January 27, 2021.
[26] While projects under the Program must take place in eligible energy communities, the Program also intends to support the Justice40 initiative's goal that 40 percent of the overall benefits from Federal investments in climate and clean energy flow to Justice40 communities. Resources that can be used to identify Justice40 communities are provided in footnote 2. In addition, Justice40 communities that overlap with eligible energy communities can be found using the filtering tool in the eligible energy communities map available here.

• *Property designed to be used to produce energy from the sun, water, wind, geothermal deposits (within the meaning of 26 U.S.C. § 613 (e)(2)), or other renewable resources*. Examples of eligible property include solar panels and their specialized support structures; wind turbines, towers, floating offshore platforms, and related equipment; power electronics designed for use with eligible solar or wind property; equipment to concentrate sunlight to generate heat for industrial processes or to convert it to electricity; geothermal turbines and heat pumps; hydropower turbines; and other products directly used to generate electrical and/or thermal energy from renewable resources, as well as the specialized components, subcomponents, and materials incorporated into any such eligible property, including equipment for sensing, communication, and control. Examples of *in*eligible property include equipment for applications other than the conversion of energy from renewable resources for delivering electricity, building heat, or industrial process heat such as a gas turbine generator set which burns natural gas, or building that houses a boiler to heat water from fossil fuel.
• *Fuel cells, microturbines, or energy storage systems and components.* Examples of eligible property include stationary batteries, stationary hydrogen fuel cells, hydrogen storage vessels, microturbines for combined heat and power systems, pumps and turbines for pumped hydropower storage systems, and the specialized components of any such equipment, including equipment for sensing, communication, and control. Examples of *in*eligible property include heavy gas turbines. For electric vehicle batteries and fuel cells for vehicles, see the "light-, medium-, or heavy-duty electric or fuel cell vehicles" project type.
• *Electric grid modernization equipment or components.* Examples of eligible property includes grid equipment for electricity delivery; power flow control and conversion such as transformers, power electronics, advanced cables and conductors, advanced meters, breakers, switchgears, composite poles, converters, MVDC and HVDC lines, grid enhancing technologies and electrical steel or alloys used in transformer cores, and the specialized components of any such grid modernization equipment, including components for sensing, communication, and control. Storage technologies for grid applications qualify under the "fuel cells, microturbines, or energy storage systems and components" project types. Electric vehicle supply equipment qualifies under the "light-, medium-, or heavy-duty electric or fuel cell vehicles" project types.
• *Property designed to capture, transport, remove, use, or sequester carbon oxide emissions.* Examples of eligible property include carbon capture equipment necessary to compress, treat, process, liquefy, pump, or perform some other physical action to capture carbon oxides, including solvents, membranes, sorbents, chemical processing equipment, compressors,

monitoring equipment, and injection equipment; and well components such as packers, casing strings, steel tubulars, well head, valves, and sensors suitable for use in Underground Injection Control (UIC) Class VI wells. Eligible property also includes transportation equipment, as in a system of gathering and distribution pipelines, including pipelines that collect carbon oxide captured from an industrial facility or multiple facilities for the purpose of transporting that carbon oxide. Examples of *in*eligible property include scrubbers for conventional air pollutants, except those that are required to remove pollutants upstream of the carbon capture equipment for technical performance reasons; energy generation equipment, except as related to energy recovery at carbon capture systems; and refining equipment.

- *Equipment designed to refine, electrolyze, or blend any fuel, chemical, or product which is renewable, or low-carbon and low-emission.* For the purposes of this Program, such renewable, low-carbon, low-emission fuels, chemicals, and products include:
  (a) Renewable transportation fuel which:
  (i) is suitable for use as a fuel in a vehicle, marine vessel, or aircraft,
  (ii) is derived from or co-processed with:
  (1) a biomass feedstock, or
  (2) hydrogen produced from renewable energy and inputs, and
  (iii) is not derived from palm fatty acid distillates or fossil fuels, including coal, natural gas, and petroleum.
  A qualifying advanced energy project does not include any portion of a project for the production of any property which is used in the refining or blending of any transportation fuel (other than renewable fuels, as described herein).
  (b) Clean hydrogen produced with a well-to-gate carbon intensity of less than 4 kgCO2e/kgH2, in accordance with the definition of qualified clean hydrogen under the § 45V tax credit program
  (c) Other fuel which:
  (i) is derived from or co-processed with a renewable feedstock or achieves at least a 50 percent lifecycle greenhouse gas emissions reduction in comparison with the conventional alternative,
  (ii) is not a transportation fuel, and
  (iii) is not derived from palm fatty acid distillates or fossil fuels, including coal, natural gas, and petroleum
  (d) Product or chemical which:
  (i) is derived from or co-processed with a renewable feedstock or achieves at least a 50 percent lifecycle greenhouse gas emissions reduction in comparison with the conventional alternative,
  (ii) is suitable for use as an industrial feedstock, and

(iii) is not derived from palm fatty acid distillates or fossil fuels, including coal, natural gas, and petroleum.

Examples of eligible property include electrolyzers, mixing devices, pumps, separation devices, bioprocessing equipment, biomass preprocessing equipment, and reactors, so long as they are intended for use to produce eligible fuels, chemical, and products, as demonstrated through engineering specifications or offtake agreements.

Examples of eligible fuels, chemicals, and products produced by eligible equipment include hydrogen produced through electrolysis powered by low- or zero-emissions energy; low-emissions ammonia; renewable biofuels, including sustainable aviation fuel and fuels intended to displace petroleum fuel in on-road and off-road applications; and low-emission chemicals, basic organic chemicals, and polymer resins.

Examples of *in*eligible fuels and chemicals would include those derived solely from fossil resources produced through conventional petroleum and natural gas refining.

- *Property designed to produce energy conservation technologies (including for residential, commercial, and industrial applications).* Examples of eligible energy conservation property include technologies and grid-interactive devices eligible for residential or commercial efficiency improvements for purposes of the § 25C credit or the § 179D tax deduction, as well as equipment that directly reduces net energy use in industrial applications, such as ultra-efficient heat pumps, insulation, ultra-efficient hot water systems, sensors, controls, and similar advanced efficiency technologies. Examples of *in*eligible energy conservation property include those that reduce electricity usage by increasing direct natural gas or other fossil fuel use and/or lead to increased system-level emissions.

- *Light-, medium-, or heavy-duty electric or fuel cell vehicles, as well as technologies, components, or materials for such vehicles, and associated charging or refueling infrastructure.* Examples of eligible property include battery electric, plug-in hybrid electric, or fuel cell cars, trucks, and buses, as well as the specialized components of those vehicles, such as batteries, electric drive systems, fuel cells, and materials and subcomponents therein. Examples of eligible charging or refueling infrastructure include electric vehicle supply equipment (EVSE), components from the grid connection to the vehicle, components used in hydrogen refueling stations (e.g., hydrogen

compressors, pumps, storage vessels, and dispensing equipment), and bidirectional charging equipment. Examples of *in*eligible equipment include internal combustion engine vehicles of all sizes, non-plug-in hybrid vehicles of less than 14,000 pounds gross vehicle weight rating, and their components, as well as associated refueling infrastructure, such as petroleum gas, liquefied or compressed natural gas, or ethanol refueling stations. Examples of ineligible equipment also include components of charging or refueling stations, such as signage, that are not directly involved in the transfer of fuel or power to the vehicle.
• *Hybrid vehicles with a gross vehicle weight rating of not less than 14,000 pounds as well as technologies, components, or materials for such vehicles.* Examples of eligible property include traction batteries, converters, power electronics, and assembled hybrid vehicles themselves, but components and materials must be designed for large hybrid vehicles with a gross vehicle weight rating of not less than 14,000 pounds, as demonstrated through engineering specifications and/or offtake agreements.
• *Other advanced energy property designed to reduce greenhouse gas emissions as may be determined by the Secretary*. Examples of eligible advanced energy property include specialized components and equipment for nuclear power reactors or their fuels, and equipment used to reduce the emissions of industrial processes.

i. Topic Area 1: Building New Facilities

Introduction:

New facility builds may, in some cases, offer advantages for American competitiveness in the form of opportunities to resolve critical gaps in the establishment of secure, resilient domestic clean energy supply chains or to seize on opportunities for emerging and projected market share. New facilities may also offer unique opportunities to incorporate advanced manufacturing practices that apply innovative technologies to produce new products and improve production of existing products; that train a highly skilled and diverse American workforce; that create products through economically-sound processes that minimize negative environmental impacts while conserving energy and natural resources; and that cut pollution and reduce carbon emissions to zero or near-zero via industrial

decarbonization practices and technologies.[27] Even where such advantages present themselves in connection with the building of new facilities, brownfield[28] siting should be considered, and projects should draw upon existing skills of or seek to retrain dislocated workers.

Objective:
The objective of this topic area is to build a new[29] manufacturing or recycling facility for the production or recycling, as applicable, of advanced energy property.

ii. Topic Area 2: Re-Equipping or Expanding Existing Facilities

Introduction:
Projects may include, for example, repurposing of shuttered coal plants; repurposing of coal plant boilers and turbines for combined heat and power; secondary use of existing waste streams; retooling of existing lines or expansion of existing facilities to take advantage of new economic opportunities presented by the clean energy transition; and equipping industrial facilities to electrify energy uses, use low-carbon fuels, perform carbon capture, or perform smart energy management in conjunction with re-equipping the facility to produce or recycle advanced energy property. By utilizing existing facilities, these projects may present benefits such as reduced costs and time to production resulting from use of existing infrastructure, ease of transition for existing workforce, siting in connection with existing supply chain and community assets, and sustainability and environmental justice benefits arising from reuse rather than new builds.

Objective:
The objective of this topic area is to re-equip[30] or expand[31] a manufacturing or recycling facility for the production or recycling, as applicable, of advanced energy property.

[27] Subcommittee on Advanced Manufacturing Committee on Technology, National Science and Technology Council, National Strategy for Advanced Manufacturing, October 2022.
[28] Brownfields are sites where future development could be impeded by pollution, such as industrial waste. (EPA 2022a).
[29] For the purposes of this Program, a new manufacturing or recycling facility refers to a new construction project on vacant land. This would include the construction of a new facility by an entity with other existing facilities at other location(s).
[30] For the purposes of this Program, re-equipping a manufacturing or recycling facility may mean (i) repurposing a vacant or shuttered facility to produce or recycle advanced energy property or (ii) altering current production or recycling lines for the purpose of newly producing or recycling advanced energy property.
[31] For the purposes of this Program, expanding a manufacturing or recycling facility may mean (i) a physical expansion of an existing manufacturing or recycling facility to accommodate new or additional production or recycling lines; (ii) the addition of production or recycling lines to increase the output of a current facility; or (iii) any other demonstrated change to an existing facility that increases capacity through new or additional equipment at the project site.

iii. Teaming Partner List

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

Updates to the Teaming Partner List will be available on the OCED Exchange website. The Teaming Partner List will be regularly updated to reflect new teaming partners who provide their organization's information.

SUBMISSION INSTRUCTIONS: Any organization that would like to be included on this list should submit the following information: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, Brief Description of Capabilities, and Area of Interest. Interested parties should email the information to mesc_foa2907@netl.doe.gov with the subject line "Teaming Partner Information."

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

C. Applications Specifically Not of Interest

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

- Applications that fall outside the parameters specified in Sections I.A., I.B., or III.A. of the FOA, including applications from firms that do not qualify as eligible entities, applications for projects that do not take place in eligible energy communities, and applications that do not propose production or recycling of eligible advanced energy property as defined pursuant to BIL Section 40209.
- Applications that are based on research, development, or pilot-scale activities.
- Applications that propose the purchase or donation of land in the scope of the federal award or as part of the proposed cost share contribution.
- Applications that propose the value of previously acquired equipment as cost share.

D. Community Benefits Plan: Job Quality and Equity

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

Applicants are also 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.xvi for the Community Benefits Plan content requirements.

E. Authorizing Statute

The programmatic authorizing statute is:

Section 40209 of the BIL (codified at 42 U.S.C. § 18742).

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.

G. Technical Assistance Program

In accordance with BIL § 40209(e), DOE is offering technical assistance to small- and medium-sized manufacturers who meet the requirements of eligible entities under the FOA. The program, which is being offered on a competitive application basis, will support project planning activities for the development of future projects that will build new, re-equip, or expand existing facilities to manufacture or recycle advanced energy property and support the transition of dislocated workers in former coal communities into energy manufacturing jobs.

This technical assistance is not intended to support applications to this particular FOA.

DOE is collaborating with the National Renewable Energy Lab (NREL) to implement this technical assistance program. Information regarding eligibility, types of technical assistance, and selection criteria to be used in reviewing applications for technical assistance is located at: https://www.nrel.gov/manufacturing/recycling-grant-program.html. Up to 15 applicants will be accepted for participation in the technical assistance program. All future technical assistance opportunities will be announced by DOE.

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to make a total of approximately $350 million of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 6-35 awards under this FOA.

DOE may issue one, multiple, or no awards. Individual awards may vary between $10,000,000 and $100,000,000.

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

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	Maximum Period of Performance (months)
1	Building New Facilities	3 - 15	$10,000,000	$100,000,000	$150,000,000	36
2	Re-Equipping or Expanding Existing Facilities	3 - 20	$5,000,000	$100,000,000	$200,000,000	36

* **Applications that propose a DOE share in excess of the maximum limits will not be evaluated and will be considered noncompliant to the FOA.**

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 in the form of cooperative agreements. The Awardees must complete their projects not later than three years after the date of receipt of federal funds.[32] The period of performance will be comprised of one or more budget periods. 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.xiii.

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.

[32] BIL § 40209(d)(1)(A).

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 United States government.

i. Cooperative Agreements

DOE generally uses cooperative agreements to provide financial and other support to prime recipients. DOE anticipates that Cooperative Agreements will be issued under this FOA.

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)[33]

If an FFRDC is part of the project team, the FFRDCs will be funded through the prime recipient as a member of the project team.

iii. Grants

Although DOE has the authority to provide financial support to prime recipients through grants, DOE generally does not fund projects through grants. DOE may fund a limited number of projects through grants, as appropriate.

[33] 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

A. Eligible Applicants

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.

i. Restricted Eligibility

The proposed prime recipient must be a small- or medium-sized manufacturing firm as defined by BIL Section 40209. To demonstrate eligibility, applicants must provide evidence to demonstrate that they fall within North American Industry Classification System (NAICS) codes 31-33 and that, at the time of application, they meet the following eligibility criteria:

1. Gross annual sales of less than $100,000,000;[34]
2. Fewer than 500 employees at the plant site of the manufacturing firm;[35] and
3. Annual energy bills that total more than $100,000 but less than $2,500,000.[36]

In demonstrating eligibility with respect to the criteria above, a prime recipient is defined to include its affiliates, as affiliation is defined in 13 CFR § 121.702(c).

4. The proposed project must be located in (a) a census tract in which a coal mine closed after December 31, 1999, (b) a census tract in which a coal-fired electricity generating power plant unit closed after December 31, 2009, or (c) a census tract immediately adjacent to (a) or (b). To assist potential applicants in identifying eligible project locations, DOE has made a map showing relevant coal mine and coal-fired electricity generating power plant unit closures, as well as immediately adjacent census tracts, available here. Potential applicants can also access this map under Program Resources here: Advanced Energy Manufacturing and Recycling Grants | Department of Energy.

[34] BIL § 40209(a)(3)(A).
[35] BIL § 40209(a)(3)(B). To calculate the number of employees at the applicant's existing plant site(s), the applicant must use the principles set forth in 13 CFR § 121.106. If the applicant has more than one plant site, each plant site must have fewer than 500 employees.
[36] BIL § 40209(a)(3)(C).

Regarding eligibility:

At the time of Full Application, a prime applicant will be required to submit a "*Required Eligibility Certification Form and Addendum*" which will certify and demonstrate that an applicant is eligible.

To create a combined *Required Eligibility Certification Form and Addendum* an applicant must:

- Complete the "*Required Eligibility Certification Form and Addendum*" located in Appendix H; and

- Provide documentation that demonstrates a prime applicant meets each eligibility requirement. The prime applicant may choose to utilize the resource titled, "*FOA2907 _ Eligibility Assistance Document*" which can be located at: https://oced-exchange.energy.gov/Default.aspx#FoaIde39932fe-955e-450b-858d-5372701d486e under "Documents" which will assist an applicant in determining practical examples of documentation to support evidence of eligibility.

For further details, an Applicant should utilize the detail and instructions set forth in *Section IV.D.i. and xx.*

Regarding Census Tract:

There may be instances where a qualified census tract is not represented in the Mapping Tool. As part of the Concept Paper content requirements set forth in Section IV.C., an applicant must provide, "the project location, including the address of the project location and the census tract(s) of the project location". Should an applicant receive a Concept Paper Notification which discourages the Concept Paper based on the proposed census tract location, an applicant must submit a "Census Tract Evidence of Filing Addendum" during the Full Application phase. A determination of eligibility regarding the proposed census tract location will be provided through the "Full Application Notification" process.

If applicable, an applicant must utilize the "*Census Tract Evidence of Filing Addendum*" instructions set forth in *Section IV.D.i.* and *xix.*

See *Section VI.* for further details regarding Award Notices.

ii. Individuals

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

iii. Priority Eligibility for Minority-Owned Firms

In accordance with BIL Section 40209, priority will be given to minority-owned firms.[37] To qualify for this priority, an applicant must provide evidence that the prime recipient is a firm "not less than 51% of which is owned by one or more individuals who are: (A) citizens of the U.S.; and (B) Asian American, Native Hawaiian, Pacific Islander, African American, Hispanic, Puerto Rican, Native American, or Alaska Native."[38] Applications from minority-owned firms are highly encouraged.

iv. Domestic Entities

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

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

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

The National Energy Technology Laboratory (NETL) and the National Renewable Energy Laboratory (NREL) *are not eligible* for award under this announcement and may not be proposed as a subrecipient on another entity's application. An application that includes NETL or NREL as a prime recipient or subrecipient will be considered non-responsive.

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

[37] BIL § 40209(c)(2)(B).
[38] BIL § 40209(a)(4).

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

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

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

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

vi. Incorporated Consortia

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

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

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

vii. Unincorporated Consortia

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

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

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

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

B. Cost Sharing

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

The cost share must be at least 50% of the total project costs[39] ***for demonstration projects***.[40] The cost share must come from non-federal sources unless otherwise allowed by law.

Cost share may come from project participants, state or local governments or other third-party financing. An applicant selected under this FOA cannot use, designate, or leverage federal financing, such as DOE Loan Guarantees, to provide the required cost share or to otherwise support the same scope that is proposed in response to this FOA.

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

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

This policy does not limit your organization's ability to apply for, obtain, or execute a project funded with a DOE Loan that is outside the scope of the BIL funded project. Additionally, the achievement of MESC project objectives must not rely upon a current or future DOE Loan Guarantee for another project.

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

i. Legal Responsibility

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

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

ii. Cost Share Allocation

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

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.

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

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

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

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

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

- Revenues or royalties from the prospective operation of an activity beyond the project period;
- Proceeds from the prospective sale of an asset of an activity;
- Federal funding or property (e.g., federal grants, equipment owned by the federal government);
- Expenditures that were reimbursed under a separate federal program; or
- Deferred or avoided costs such as tax credits.[41]

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

[41] An investment tax credit cannot be used to support the same project supported by a grant under this FOA. (An applicant may apply for both a grant under this FOA and certification for an investment tax credit. However, applicants will be required to disclose applications pending and will not be permitted to receive an award under this FOA and also certification for an investment tax credit in support of the same project.) This FOA does not preclude an applicant or awardee from seeking a production tax credit.

accomplishment of the project. As all sources of cost share are considered part of total project cost, the cost share dollars will be scrutinized under the same federal regulations as federal dollars to the project. Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred.

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

iv. Cost Share Contributions by FFRDCs

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

v. Cost Share Verification

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

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

vi. Cost Share Payment

DOE requires prime recipients to contribute the cost share amount incrementally over the life of the award. Specifically, the prime recipient's cumulative cost share for each billing period should reflect at least the overall cost share ratio negotiated by the parties (i.e., the total amount of cost sharing on each invoice when considered cumulatively with previous invoices must reflect, at a minimum, the cost sharing percentage negotiated). Prime recipients will be required to provide project cost share at a percentage commensurate with the FFRDC costs, on a budget period basis, resulting in a higher interim invoicing cost share ratio than the total award ratio.

C. Compliance Criteria

Concept Papers and Full Applications must meet all compliance criteria listed below or they will be considered noncompliant. MESC will not review or consider noncompliant submissions.

All Concept Papers must:

- Comply with the applicable content and form requirements listed in Section IV. of the FOA;

- Include all required documents;
- Be successfully uploaded in OCED Exchange https://OCED-Exchange.energy.gov, including clicking the "Submit" button; and
- Be submitted by the deadline stated in the FOA.

All Full Applications must:

- Submit a compliant Concept Paper;
- Comply with the maximum DOE share of the Individual Award Size in Section II.A of the FOA;
- Comply with the applicable content and form requirements listed in Section IV. of the FOA;
- Include all required documents, including the Census Tract Evidence of Filing Addendum, if applicable;
- Be successfully uploaded in OCED Exchange https://OCED-Exchange.energy.gov, including clicking the "Submit" button; and
- Be submitted by the deadline stated in the FOA.

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

Applicants are strongly encouraged to submit their Concept Papers, Full Applications, and Replies to Reviewer Comments at least 48 hours in advance of the submission deadline. Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Concept Paper, Full Application, or Reply to Reviewer Comments. Once the Concept Paper, Full Application, or Reply to Reviewer Comments is submitted in OCED 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, Full Application, or Reply to Reviewer Comments 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

A review of all submitted documents and information is performed to determine if the submissions are responsive to the FOA requirements.

All submitted information and documents must meet all of the Responsiveness Criteria listed below to be eligible for review or the submission will be considered non-responsive. DOE will NOT review or consider non-responsive submissions.

Full Applications are deemed responsive if:

- The application meets the technical requirements as described in the "Objectives/Topic Areas "contained in Section I.B of the FOA; and
- The Applicant/application meets the Eligibility Criteria in Section III. of the FOA.

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

Only compliant/responsive applications will be eligible for a comprehensive merit review.

E. Other Eligibility Requirements

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

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

a. *Authorization for non-DOE/NNSA FFRDCs*
The federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with its authority under its award.

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

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

c. *Funding, Cost Share, and Subaward with FFRDCs*
DOE will NOT fund DOE/NNSA FFRDCs participating as a subrecipient through the DOE field work authorization process. DOE will NOT fund non-DOE/NNSA FFRDCs through an interagency agreement with the sponsoring agency. Therefore, the prime recipient and FFRDC are responsible for entering into an appropriate subaward that will govern, among other things, the funding of the FFRDC portion of the work from the prime recipient under its DOE award. Such an agreement must be entered into before any project work begins.

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

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

e. *Limit on FFRDC effort*
The scope of work to be performed by the FFRDC may not be more significant than the scope of work to be performed by the applicant.

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

An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, distinct project and provided that an eligible Concept Paper was submitted for each Full Application.

G. Questions Regarding Eligibility

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

IV. Application and Submission Information

A. Application Process

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

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

- Each must be submitted in Adobe PDF format unless stated otherwise;
- Each must be written in English;

- All pages must be formatted to fit on 8.5 x 11 inch paper with margins not less than one inch on every side. Use Calibri typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be 10 point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement;
- A **control number** will be issued when an applicant begins the OCED 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 OCED Exchange

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

Applicants that experience issues with submission PRIOR to the FOA deadline: In the event that an applicant experiences technical difficulties with a submission, the applicant should contact the OCED Exchange helpdesk for assistance (OCED-ExchangeSupport@hq.doe.gov). The OCED Exchange helpdesk and/or the OCED Exchange system administrators will assist applicants in resolving issues.

B. Application Forms

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

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

For example:

TechnicalVolume_Part_1
TechnicalVolume_Part_2

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

C. Content and Form of the Concept Paper

Each Concept Paper must be limited to a single project. The Concept Paper must conform to the requirements listed below, including the stated page limits.

Section	Page Limit	Description
Cover Page	1 page maximum	The cover page should include the project title, the specific announcement Topic Area being addressed, both the technical and business points of contact, names of all team member organizations, the project location(s), and any statements regarding confidentiality.

Project Description	4 pages maximum	Applicants are required to describe succinctly: • **Scope and Objectives:** The overall scope and objectives of the proposed project. • **Project Location:** The project location, including the address of the project location and the census tract(s) of the project location. • **Specific Advanced Energy Property (SAEP):** The SAEP to be produced, the targeted annual manufacturing / recycling capacity of the proposed project,[42] and information or data to support the targeted annual manufacturing / recycling capacity. • **Market Overview:** The market segment(s) for the SAEP, the stability of that market segment(s), the growth potential of that market segment(s), and the competitiveness of the SAEP in the market segment. • **Domestic Supply Chain Impact:** The impact that the project will have in bolstering the relevant domestic supply chain, including analysis of how the project will impact or improve the current baseline by increasing domestic capacity to meet current or projected demand and/or by onshoring capacity to enhance national security, resilience, and economic competitiveness. • **Innovation**: Any innovative aspects of the project, such as whether the project will, as compared to the current market baseline, measurably (i) reduce the production cost or carbon intensity of the SAEP or (ii) improve the performance of the SAEP in the end market as measured by, for example, reducing the levelized cost of energy stored or generated.[43]

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

[43] "Levelized cost of electricity (LCOE) and levelized cost of storage (LCOS) represent the average revenue per unit of electricity generated or discharged that would be required to recover the costs of building and operating a generating plant and a battery storage facility, respectively, during an assumed financial life and duty cycle." See U.S. Energy Information Administration, Levelized Costs of New Generation Resources in the Annual Energy Outlook 2022, (March 2022).

		• **Economic Development Impact:** How the project will identify, make use of, enhance, and/or create regional assets and infrastructure that will support regional economic growth; how the project will catalyze economic growth in alignment with specific state, local, regional, and/or Tribal economic development plans; and how the project will otherwise contribute to long-term economic recovery, revitalization, and diversification and economic revitalization in the vicinity of the project (including, for example, as indicated by clear, unambiguous, and quantified measures of projected tax revenue increases). • **Impact of DOE Funding:** The impact of DOE funding on the proposed project; how the DOE funding is necessary to achieve project objectives relative to prior, current or anticipated funding from other public and private sources; and how, if successful, the project will unlock follow-on funding from the private sector to continue and/or expand operation at the end of federal funding.
Community Benefits Plan: Job Quality and Equity	1 page 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.
Background/Resources Addendum	1 page maximum	Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including: • Whether the Lead Project Manager (LPM) and Project Team have the skill and expertise needed to successfully execute the project plan;

		• Whether the applicant has prior experience that demonstrates an ability to complete projects of similar risk and complexity; • Whether the applicant has worked together with its teaming partners on prior projects or programs; • Whether the applicant has adequate access to equipment and facilities necessary to accomplish the objectives of the project and/or how the applicant intends to obtain access to the necessary equipment and facilities. • Applicants may provide charts or other data to supplement their Project Description, including, for example, a summary schematic (e.g., Process Flow Diagram) that depicts the project, a high-level Gantt Chart for the schedule, and/or a chart depicting market analysis of the relevant energy supply chain and the project's intended impact on that supply chain. The documentation must be provided as an Addendum to the Content of the Concept Paper titled, "Background/Resources Addendum". The Addendum should not exceed 1 page.

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 OCED Exchange website at https://OCED-Exchange.energy.gov/.

Applicants will have approximately 60 days from receipt of the Concept Paper Encourage/Discourage notification on OCED 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
Environmental Considerations Summary	PDF	N/A	ControlNumber_LeadOrganization_EnvSum
Resumes	PDF	3 pages each	ControlNumber_LeadOrganization_Resumes
Letters of Commitment (includes Offtake Arrangement)	PDF	1 page each	ControlNumber_LeadOrganization_LOCs
Community Partnership Documentation	PDF	10	ControlNumber_LeadOrganization_PartnerDoc
SF-424	PDF	N/A	ControlNumber_LeadOrganization_424
Budget Justification Workbook	MS Excel	N/A	ControlNumber_LeadOrganization_Budget_Justification
Summary for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary
Summary Slides	MS PowerPoint	4	ControlNumber_LeadOrganization_Slide
Subrecipient Budget Justification(s)	MS Excel	N/A	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification
Authorization from Cognizant Contracting Officer for FFRDC, if applicable	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, if applicable	PDF	N/A	ControlNumber_LeadOrganization_Waiver
Data Management Plan	PDF	N/A	ControlNumber_LeadOrganization_DMP
Community Benefits Plan: Job Quality and Equity	PDF	12	ControlNumber_LeadOrganization_CBenefits
Current and Pending Support	PDF	N/A	ControlNumber_LeadOrganization_CPS.pdf
Locations of Work (Applicants must use the Template in OCED Exchange	PDF	N/A	Control Number_LeadOrganization_LOW
Potentially Duplicative Funding Notice (if applicable)	PDF	N/A	ControlNumber_LeadOrganization_PDFN.pdf
Census Tract Evidence of Filing Addendum (if applicable)	PDF	N/A	ControlNumber_LeadOrganization_ Census Tract.pdf
Required Eligibility Certification Form and Addendum	PDF	N/A	ControlNumber_LeadOrganization_ RECert_Addendum

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

Detailed guidance on the content and form of each application component is provided below. Per Section V., part D.ii, Pre-Selection Clarifications, MESC reserves the right to request, from applicants, additional information required to verify and/or validate technical or economic claims made in application materials.

i. Technical Volume

The Technical Volume must be submitted in PDF format and must conform to the following content and form requirements, including maximum page lengths. This volume must address the requirements described in Section I.B. and the technical review criteria as discussed in Section V.A 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 justify the claims and approaches made in the Technical Volume. However, DOE and reviewers are under no obligation to review cited sources.

The Technical Volume to the Full Application may ***not be more than 30 pages***, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of the information in the table below. The applicant should consider the weighting of each of the technical review criterion (see Section V. of the FOA) when preparing the Technical Volume.

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

Technical Volume Content Requirements	
SECTIONS	**DESCRIPTION**
Cover Page	The cover page should include the project title, the specific FOA Topic Area being addressed, both the technical and business points of contact, names of all team member organizations, names of project managers, senior/key personnel and their organizations, the project location(s), and any statements regarding confidentiality.
Project Overview, Including Innovation & Impact (Approximately 30% of the Technical Volume)	The Project Overview should include the information set forth below, as well as clear, unambiguous, and quantified data and measures to support any included analysis and projected impacts. Information provided in the Project Overview should be consistent with and supported by other sections of the application, including the Business Development & Management Plan; Engineering, Procurement, Construction, & Operations Documents; Workplan; Integrated Project Schedule; and Community Benefits Plan. **Scope and Objectives:** The overall scope and objectives of the proposed project, including the ways in which the proposed project location and related infrastructure, skilled workforce, and community benefits will contribute to the success of the overall project. **Project Location:** A detailed description of the project location, including the address of the project location, the census tract(s) of the project location, and a map of the project location. **Specific Advanced Energy Property (SAEP):** A detailed description of the SAEP to be produced and the targeted annual manufacturing / recycling capacity of the proposed project. The annual manufacturing / recycling capacity of the proposed project must represent projected (not peak) annual product output of the project. The applicant will be required to justify the claimed production by providing yield loss and throughput data wherever applicable and possible. In particular, taxpayers should discuss previous production experience on similar or identical production equipment. **Market Overview**: An overview of the market for the SAEP, including the market segment(s) the SAEP will support, the stability of that market segment(s), the growth potential of that market segment(s), and the competitiveness of the SAEP in the market segment.

	Domestic Supply Chain Impact: A detailed analysis accompanied by clear, unambiguous, and quantified measures of the impact that the project will have in bolstering the relevant domestic supply chain, including analysis of how the project will impact or improve the current domestic supply chain baseline by increasing capacity to meet current or projected demand and/or by onshoring capacity to enhance domestic security, resilience, and economic competitiveness. **Innovation**: Any innovative aspects of the project, such as whether the project demonstrates potential to, as compared to the current market baseline, (i) measurably reduce the production cost or carbon intensity of the SAEP and/or (ii) measurably improve the performance of the SAEP in the end market as measured by, for example, reduction of the levelized cost of energy stored or generated. **Impact on Air Pollution and Anthropogenic Emissions of Greenhouse Gases:** Applicants should provide data and analysis to demonstrate any measurable impact the project is anticipated to have in avoiding or reducing air pollutants or anthropogenic emissions of greenhouse gases at an existing industrial facility. To calculate baseline emissions at an existing facility, applicants are expected to follow the EPA Greenhouse Gas Reporting Protocol (GHGRP). Facilities are defined according to Subpart A of the GHG reporting protocol. For facilities with existing reports, they can submit their greenhouse gas emissions figures from the most recent calendar year, expressed in metric tons of CO2 equivalent, as available in the FLIGHT tool. For facilities with no existing GHGRP report on file, including smaller facilities not subject to GHGRP rules, they should still calculate their annual emissions using the reporting protocol outlined on the EPA website. **Economic Development Impact:** A specific and detailed analysis of how the project will identify, make use of, enhance, and/or create regional assets that will support regional economic growth; how the project will catalyze economic growth in alignment with specific state, local, regional, and/or Tribal economic development plans; and how the project will otherwise contribute to long-term economic recovery, revitalization, and diversification and economic revitalization in the vicinity of the project (including, for example, as indicated by clear, unambiguous, and quantified measures of, for example, projected tax revenue increases).
Business Development & Management Plan (Approximately 20% of the Technical Volume)	The Business Development & Management Plan should address the items listed below, as well as any other pertinent information to understand the proposed business, management, and financial plans. Information provided in the Business Development & Management Plan should be consistent with and supported by other sections of the application, including the Project Overview; Engineering, Procurement, Construction, & Operations Documents; Workplan; Integrated Project Schedule; and Community Benefits Plan.

BUSINESS PLAN

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

Feedstock and Supply Arrangements: The plan should provide analysis of the relevant markets for and plans to ensure an adequate supply of feedstock and essential supplies needed for successful operation of the project. This analysis should include the strategy to leverage existing U.S. supply chains and support growth of domestic capabilities in keeping with U.S. job creation goals. See Section IV.J.vii. If available, the application should provide letters of commitment or term sheets for prospective feedstocks and other suppliers.

Market Analysis: The plan should include an analysis of the current and projected target market for the SAEP, including the sufficiency of the existing target market(s) for the SAEP; the stability of the target market; prevailing trends in the target market; projected market growth; the competitiveness of the SAEP in the target market (including price and the strength of current and potential competitors); the market entry strategy (e.g., product differentiation, barriers to entry, intellectual property rights, first mover advantage, etc.); and the plan for marketing the SAEP; and any potential for sale of the SAEP into multiple markets. The plan should also include justification for revenue and cost projections (price and volume) for the SAEP.

Offtake Arrangements: Offtake contracts, term sheets or letters of commitment or term sheets from binding or prospective customers and/or offtakers should be provided, if available. These should be submitted as a separate attachment in OCED Exchange (see Section IV.D.v. "Letters of Commitment" for more information). The business plan should indicate the percentage of annual manufacturing / recycling capacity that is covered by binding offtake arrangements.

Growth Plan: The plan should demonstrate the strength of the project's economic viability, sustainability, and potential growth beyond DOE funding, including the ability to achieve follow-on investments beyond the award performance period.

MANAGEMENT PLAN

Organizational Structure: The plan should include an organizational chart of key entities and senior/key personnel for the project. The organizational chart and related description should show the prime recipient and any major project partners, subsidiaries, affiliates, parent organizations, or joint ventures associated with the project as well as an explanation of the legal structure (e.g., corporation, partnership, LLC) and the roles and responsibilities held by each organization. The level of participation by project participants should be supported by letter(s) of commitment and integrated into the Workplan. The application should also identify any foreign owned entities involved in the project and how the applicant will request a waiver, if needed, per Section III.A.v.

Management: The plan should describe management and operations strategies for the project, including the names, positions or titles, and percentage of time that will be dedicated to the project by senior/key personnel. If any key management and staff are not expected to spend 100 percent of their time executing on the project, the plan should provide a brief description of their other responsibilities or other activities outside of the project.

Experience: The plan should detail the unique capabilities and expertise of the applicant and any major project partners or subrecipients, debt or equity sponsors, contractors/vendors (if known), and any other counterparty that the applicant believes will enable the project to be successful. In addition, the plan should summarize the prior experience of the applicant and any major project partners in similar undertakings to the proposed project.

Pending Investigations: The plan should provide a summary of any pending or threatened (in writing) action, suit, proceeding, or investigation, including any action or proceeding by or before any governmental authority, that relates to the senior/key personnel, and the status of any appeals.

FINANCIAL PLAN

The financial plan should include the proposed budget and spend plan covering both DOE funding and non-federal cost share. It may reference the Budget Justification Workbook (see Sections IV.D.viii and IV.D.xi). It should include: (i) the amount of cost share proposed in proportion to the Federal award requested; (ii) the proposed cost share and initial capital stack, including the availability, credibility, and risk/terms of non-federal cost share sources; (iii) the plan and schedule to achieve long-term financial viability, beyond federal funding; and (iv) the ability to provide contingency funding to meet unexpected project cost overruns, including the source of such funding (See Appendix G).

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

	It should indicate the terms of such support which could result in termination or reduction of anticipated/actual non-Federal support, and whether any such incentives or assistance are subject to clawback and the circumstances under which a clawback could occur.
Engineering, Procurement, Construction, and Operations (Approximately 15% of the Technical Volume)	Applications should include initial versions of Engineering, Procurement, Construction and Operations (EPC&O) project documents. These documents should be consistent with data, information, and assumptions provided in other sections of the application, including the Project Summary, Business Development, and Technical Data and Analysis sections. The EPC&O project documents should provide detailed technical data and/or information to show how the targeted annual manufacturing / recycling capacity of the proposed project could be met. DOE expects applications will reflect a spectrum of project maturities. At a minimum, the applications should include a comprehensive conceptual design that reflects initial engineering studies such as pre-FEED or FEED (Front End Engineering Design) studies. Engineering information should provide a conceptual description of the type of technology, system integration, and connective infrastructure needed. Key facilities, systems, and technical components should be described in detail. Key technologies should be described, as well as a path to secure any required intellectual property rights if applicable. Projects selected for award negotiation will further develop this set of documents. Engineering designs will evolve and be revised during project negotiations of the project and will be monitored and reviewed as part of Go/No-Go decisions between budget periods.

Risk Analysis and Mitigation (Approximately 10% of the Technical Volume)	DOE expects award recipients to understand and actively manage risks. The applicant should provide a comprehensive Risk Management Plan (RMP) that is accompanied by a corresponding risk register that can be used for ongoing risk management. The RMP should describe commercial, technical, construction, schedule, regulatory, permitting, safety, scale-up, infrastructure, financial, management, organizational, and market-related risks. It should also include consideration of climate impacts and extreme weather patterns (such as tornadoes, hurricanes, heat and freezing temperatures, drought, wildfire, and floods); supply chain risks (including supply chain visibility, single points of failure, timely procurement, and inventory redundancy); and any long-term constraints the project will have on the community's access to natural resources (e.g., water) and Tribal cultural resources, and, if applicable, a long-term cleanup strategy that ensures communities and neighborhoods remain healthy and safe and not burdened with cleanup costs and waste. Each identified risk in the RMP should be clearly described, including its probability of realization, potential impacts, and proposed mitigations. As appropriate, identified risks should be incorporated into other project documentation, such as execution schedules, cost estimate maturity, and contingency. The risk management plan and risk register will be revised and updated as needed throughout the project life cycle. At a minimum, they will be reviewed and assessed for accuracy and adequacy as part of each budget period. Where and when appropriate, quantitative risk analyses may be required and subsequently incorporated into relevant risk management plans and contingency evaluations and will be used to inform negotiations with DOE. See Appendix G for more information about contingency reserve requirements.
Workplan (Approximately 25% of the Technical Volume)	The Workplan should include a summary of the Project Objectives, Technical Scope, Work Breakdown Structure (WBS), Milestones, Earned Value Management Plan, Go/No-Go decision points, and Project Schedule. The Workplan should contain the following information: **Project Objectives:** The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes. **Technical Scope Summary:** The applicant should provide a summary description of the overall work scope and approach to achieve the objective(s). The overall work scope is to be divided by performance periods that are separated by discrete, approximately annual decision points (see below for more information on Go/No-Go decision points). The applicant should describe the specific expected end result of each performance period, including milestones in the Community Benefits Plan.

	WBS and Task Description Summary: The Workplan should describe the work to be accomplished and how the applicant will achieve the project schedule, will accomplish the final project goal(s), and will produce all deliverables. The Workplan is to be structured with a hierarchy of performance period (approximately annual), task and subtasks, which is typical of a standard WBS for any project. The Workplan shall contain a concise description of the specific activities to be conducted over the life of the project (including project construction and operations). The description shall be a full explanation and disclosure of the project being proposed (i.e., a statement such as "we will then complete a proprietary process" is unacceptable). It is the applicant's responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this FOA. If selected for award negotiations, the summary will be incorporated into the Statement of Project Objectives (SOPO), which will contain a more detailed description of the WBS and tasks. **Key Contracts, Permits, and Agreements**: The Workplan should provide a top-level description, schedule, and status, of critical path contracts and agreements relevant to the project, encompassing permits, National Environmental Policy Act (NEPA), design, engineering, technology licensing, financing, construction, startup, commissioning, shakedown, operation, and maintenance. **Go/No-Go Decision Points (See Section VI.B.xii. for more information on the Go/No-Go Review):** Provide a summary of project-wide Go/No-Go decision points at appropriate points in the project schedule. At a minimum, each project must have a project-wide Go/No-Go decision point for each budget period (12 to 18-month period) of the project. The applicant should also provide the specific technical and community benefits plan criteria to be used to evaluate the project at the Go/No-Go decision point. **End of Project Goal:** The applicant should provide a summary of the project's end-of-project goal(s), including, for example: targeted manufacturing / recycling capacity for the proposed project; improvements to the baseline production capacity for SAEP or technical improvements to the SAEP itself; contribution to establishing secure, resilient domestic energy supply chains, such as increasing capacity to meet current or future global demand or onshoring capacity to enhance national security and American economic competitiveness; contribution to economic development and revitalization, and quality job creation with the free and fair chance to join a union, in the relevant geography; and goals set forth in the Community Benefits Plan. **Integrated Project Schedule (IPS):** The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and Go/No-Go decision points. The initial IPS should include

	all major project activities and milestones (consistent with the overall Workplan), including engineering, design, procurement construction, and Community Benefits Plan activities. The applicant should also include the sufficiency of the Earned Value Management Plan to use total project costs and schedule to enable timely and accurate project performance monitoring and prediction as a means to make project adjustments. This IPS will be revised, expanded, and updated in future project activities. By the end of award negotiation, it is expected that the IPS will be execution ready and reflect comprehensive schedule risk and uncertainty analyses. During each budget period, projects will report actual progress against their execution schedule or schedules as part of regular project management reporting requirements.

ii. Environmental Considerations Summary

See Appendix D for information to include in the Environmental Considerations Summary.

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

iii. Resumes

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

1. Contact Information;
2. Education: Include all academic institutions attended, major/area, degree;
3. Training: (e.g.,) certification or credential from a Registered Apprenticeship or Labor Management Partnership;
4. Professional Experience: Beginning with the current position, list professional/academic positions in chronological order with a brief description;
5. List all current academic, professional, or institutional appointments, foreign or domestic, at the applicant institution or elsewhere, whether or not remuneration is received, and, whether full-time, part-time, or voluntary; and

6. There should be no lapses in time over the past ten years or since age 18, which ever time period is shorter.

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

iv. Letters of Commitment

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

Save the Letters of Commitment in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_LOCs".

An Applicant will utilize the details set forth in Section IV.D.ii - Technical Volume: Content Requirements – Business Development & Management Plan – "Offtake Arrangements" to build Offtake Letters of Commitment. Multiple Letters may be submitted. Each letter must not exceed 1 page.

Save each Offtake Agreement or Letter of Commitment in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_OT 1_LOC", "ControlNumber_LeadOrganization_OT 2_LOC", etc.

Note: Per the below Section "xvi. Community Benefits Plan", the Letters of Support are separate from the Letters of Commitment. Letters of Support are endorsements in support of the project. It is desired that Letters of Support are from entities that have a substantive role in the project and are impacted by its outcome. Letters of Support are not included in the 12-page limitation of the required "Community Benefits Plan: Job Quality and Equity".

Letters of support or endorsement for the project from entities that do not have a substantive role in the project are not 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, such as organizations that carry out workforce development programs, labor unions, Tribal organizations, and community-based organizations that work with disadvantaged communities. The partnership documentation could be in the form of a letter on the partner's letterhead outlining the planned partnership signed by an officer of the entity, a Memorandum of Understanding, or other similar agreement. Such letters must state the specific nature of the partnership and must not be general letters of support. If the applicant intends to enter into Workforce and Community Agreements as part of the Community Benefits Plan, please include letters from proposed partners as appropriate. Each letter must not exceed 1 page. In total, the partnership documentation must not exceed 10 pages.

Save the partnership documentation in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_PartnerDoc".

vi. SF-424: Application for Federal Assistance

Applicants can find the 424 application at the following location: (https://www.grants.gov/web/grants/forms/sf-424-individual-family.html).

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".

vii. Budget Justification Workbook

Applicants must complete the Budget Justification Workbook, which is available on OCED Exchange at https://OCED-Exchange.energy.gov/. Applicants must complete each tab of the Budget Justification Workbook for the project as a whole, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with implementing the various 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. 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".

viii. Summary for Public Release

Applicants must submit a one-page summary of their project that is suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the lead project manager/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), major participants (for collaborative projects), and the project's commitments and goals described in the Community Benefits Plan. This document must not include any proprietary or sensitive business information as DOE may make it available to the public after selections are made. The summary must not exceed 1 page when printed using standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right) with font not smaller than 12 point.

Save the Summary for Public Release in a single PDF file using the following naming convention "ControlNumber_LeadOrganization_Summary".

ix. Summary Slides

Applicants must provide four slides summarizing the proposed project. The Summary Slides template must include the following information and may include illustrations, charts, maps, and/or tables:

- SLIDE ONE:
    - Project title;
    - Name of prime recipient;
    - Lead Project Manager, and senior/key personnel information;
    - Proposed project duration (years and months);
    - Requested DOE funds and proposed applicant cost share; and
    - Key project goals or metrics.

- SLIDE TWO:
    - Eligibility information regarding prime recipient, as set forth in Section III.A.i. (gross annual sales, number of employees at existing plant site(s), and annual energy costs);
    - Statement of minority ownership as set forth in Section III.A.iii., if applicable; and
    - Project location, including address and eligible census tract as set forth in Section III.A.i.
- SLIDE THREE:
    - Description of the SAEP to be produced;
    - Targeted annual manufacturing / recycling capacity;
    - Statement of the supply chain supported and the targeted impact in bolstering secure, resilient domestic clean energy supply chains; and
    - Any key innovative aspects of the project.
- SLIDE FOUR:
    - Community Benefits Plan, including an overview of actions in each of the four pillars and including specific information about direct and indirect high quality job creation in disadvantaged communities and for dislocated workers who were previously employed in manufacturing, coal power plants, or coal mining.

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

x. Subrecipient Budget Justification (if applicable)

Applicants must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than $250,000 or 25 percent of the total work effort (whichever is less) which is available on OCED Exchange at https://OCED-Exchange.energy.gov. Note: FFRDCs/NLs are treated as subrecipients and are included in this required submittal if they meet the threshold. The budget justification must include the same justification information described in the "Budget Justification" section above.

Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title "ControlNumber_LeadOrganization_Subrecipient_Budget_Justification."

xi. 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".

xii. 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".

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

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

Waiver for Buy America Requirements for Infrastructure Projects
As set forth in Section IV.J.vii., all of the iron, steel, manufactured products and construction materials used in the infrastructure activities of the project must be produced in the United States. Appendix D lists the necessary information that must be included in a Waiver request.

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

xiv. Data Management Plan

Applicants are required to submit a Data Management Plan as part of their Full Application. The Data Management Plan is a document that outlines the proposed plan for data sharing or preservation. Submission of this plan is required with the full application, and failure to submit the plan may result in rejection of the application without further consideration. Applicants shall prepare the DMP in the format provided in Appendix E of this FOA.

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

xv. Community Benefits Plan: Job Quality and Equity

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

Agreements. Given project complexity and sensitivities, applicants should consider pursuing multiple agreements.

The applicant's Community Benefits Plan must include at least one Specific, Measurable, Achievable, Relevant and Timely (SMART) milestone per budget period in order to measure progress on the proposed actions. The Community Benefits Plan will be evaluated as part of the technical review process. If DOE selects a project, DOE will incorporate the Community Benefits Plan into the award and the recipient must implement its Community Benefits Plan as part of carrying out its project. Public transparency around the plan and SMART commitments is necessary for ensuring accountability. In addition, during the life of the DOE award, DOE will evaluate the recipient's progress, including as part of the Go/No-Go review process.

The Community Benefits Plan must not exceed twelve pages. **Note:** Letters of Support are not inclusive of the 12-page limitation.

It must be submitted in PDF format using the following convention name for the title: "Control Number_LeadOrganization_CBenefits." This Plan must address the technical review criterion titled, "Community Benefits Plan: Job Quality & Equity." See Section V. of the FOA.

For additional information, see Community Benefits Plan Frequently Asked Questions (FAQs) | Department of Energy. In addition, please refer to the Advanced Energy Manufacturing and Recycling Grants Program webpage for any program-specific Community Benefits Plan Guidance.

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

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

Community Agreements could cover that would increase the success of a DOE-funded project.

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

2. Investing in 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 both new and incumbent workers and ensuring jobs are of sufficient quality to attract and retain skilled workers in the industry.

Specific components of the Plan must include:

A) A summary of the applicant's plan to attract, train, and retain a skilled and well-qualified workforce for both construction and ongoing operations/production activities. A collective bargaining agreement, labor-management partnership, or other similar agreement would provide evidence of such a plan. Alternatively, applicants may describe:
   i. wages, benefits, and other worker supports to be provided benchmarking against prevailing wages for construction and local median wages for other occupations;

   ii. commitments to invest in workforce education and training, including measures to reduce attrition, increase productivity from a committed and engaged workforce, and support the development of a resilient, skilled, and stable workforce for the project; and
   iii. efforts to engage employees in the design and execution of workplace safety and health plans.

B) A description of employees' ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them contributes to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple

public benefits. In the description, explain whether workers can form and join unions of their choosing, and how they will have the opportunity to organize with the purposes of exercising collective voice in the workplace.

C) In setting forth the above, specific detail must be included regarding the plan to attract, train, and retain workers from Justice40 communities and dislocated workers previously employed in manufacturing, coal power plants, and coal mines.

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

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

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

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

In addition, pursuant to BIL Section 40209 and as set forth in the Program Priority Factors in Section V.C.i., this Program includes a priority for applicants that qualify as minority-owned firms.

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

Specifically, the Justice40 Initiative section must include:

A) Identification of applicable disadvantaged communities to which the anticipated project benefits will flow.

B) Identification of applicable benefits that are quantifiable, measurable, and trackable, including, at a minimum, a discussion of the relevance of each of the eight DOE Justice40 Initiative benefits outlined below. Benefits include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in disadvantaged communities: (1) a decrease in energy burden; (2) a decrease in environmental exposure and burdens; (3) an increase in access to low-cost capital; (4) an increase in high-quality job creation, the clean energy job pipeline, and job training for individuals; (5) increases in clean energy enterprise creation and contracting (e.g., minority-owned or disadvantaged business enterprises); (6) increases in energy democracy, including community ownership; (7) increased parity in clean energy technology access and adoption; and (8) an increase in energy resilience. In addition, applicants should also discuss how the project will maximize all of the benefits listed in #4.

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 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 Environmental Protection Agency EJSCREEN tool to quantitatively discuss existing environmental impacts in the project area. See EJEJScreen: Environmental Justice Screening and Mapping Tool | US EPA.

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

xvi. Current and Pending Support

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. As part of the application, the principal investigator or lead

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

For every activity, list the following items:

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

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

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

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

> I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete, and accurate. I

understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the project period of performance of the award should circumstances change which impact the responses provided above.

The information may be provided in the format approved by the National Science Foundation (NSF), which 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://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.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. If the NSF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above.

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

Definitions:

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

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

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

Senior/key personnel – an individual who contributes in a substantive, meaningful way to the scientific development or execution of a research, development and demonstration (RD&D) project proposed to be carried out with DOE award.[44]

xvii. Locations of Work

The applicant must complete the supplied template by listing the city, state, and zip code + 4 for each location where project work will be performed by the prime recipient or subrecipient(s).

Save the completed template as a MS Excel file using the following convention for the title "Control Number_LeadOrganization_LOW."

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

xviii. 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.pdf."

xix. Census Tract Evidence of Filing Addendum (if applicable)

Should a potential qualified census tract not be represented in the Mapping Tool, an applicant must provide evidence that demonstrates the closure should be included as an eligible location. An applicant must provide clear and credible data or resources so that the DOE can straightforwardly affirm eligibility.

There is no page restriction. If applicable, save the Census Tract Evidence of Filing in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_ Census Tract.pdf

xx. Required Eligibility Certification Form and Addendum

A prime applicant will be required to submit a "*Required Eligibility Certification Form and Addendum*" which will certify and demonstrate that an applicant is **eligible at the time of Full Application**.

To create a combined *Required Eligibility Certification Form and Addendum* an applicant must:

- Complete the "*Required Eligibility Certification Form and Addendum*" located in Appendix H; and

- Provide documentation that demonstrates a prime applicant meets each eligibility requirement. The prime applicant may choose to utilize the resource titled, "*FOA2907 _ Eligibility Assistance Document*" which can be located at: https://oced-exchange.energy.gov/Default.aspx#FoaIde39932fe-955e-450b-858d-5372701d486e under "Documents" which will assist an applicant in determining practical examples of documentation to support evidence of eligibility.

There is no page restriction. Save the Required Eligibility Certification Form and Addendum in a single PDF file using the following convention for the title "ControlNumber_LeadOrganization_RECert_Addendum.pdf."

E. Content and Form of Replies to Reviewers Comments

DOE will provide applicants with reviewer comments following the evaluation of all eligible Full Applications. Applicants have a brief opportunity to prepare a short Reply to Reviewer Comments (Reply). The Reply must not exceed three (3) pages. If a Reply is more than three (3) pages in length, DOE will review only the first three (3) pages and disregard any additional pages.
Applicants may use the Reply to respond to one or more comments or to supplement their Full Application. The Reply may include text, graphs, charts, or data.

DOE will post the reviewer comments in OCED Exchange. The expected submission deadline is on the cover page of the FOA; however, it is the applicant's responsibility to monitor OCED Exchange in the event that the expected date changes. The deadline will not be extended for applicants who are unable to timely submit their Reply due to failure to check OCED Exchange or relying on the expected date alone. Applicants should anticipate having approximately three (3) business days to submit a Reply.

Applicants are not required to submit a Reply to Reviewer Comments. DOE will review and consider each eligible Full Application, even if no Reply is submitted or if the Reply is found to be ineligible.

F. Post Selection Information Requests

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

- Cybersecurity Plan;
- Environmental / NEPA Questionnaire;
- Potentially, an Intellectual Property Management Plan (if applicable) describing how the project team/consortia members will handle intellectual property rights and issues between themselves while ensuring compliance with federal intellectual property laws, regulations, and policies;
- Statement of Project Objectives;
- Project Management Plan;
- Personnel proposed to work on the project and collaborating organizations (See Section VI.B.xviii. Participants and Collaborating Organizations);
- Current and Pending Support (See Sections IV.D.xvii. and VI.B.xix. Current and Pending Support);
- Indirect cost information;
- Other budget information;
- Information related to Foreign National Participation, Foreign Government-Sponsored Talent Recruitment Programs, Foreign Entity Participation, and Foreign Entities of Concern;
- 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;
- Information related to Section III.A.i.; and
- Information regarding an applicant's business structure

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

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

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

H. Intergovernmental Review

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

I. Submission Dates and Times

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

J. Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles. Pursuant to 2 CFR 910.352, the cost principles in the Federal Acquisition Regulations (48 CFR 31.2) apply to for-profit entities.

The cost principles contained in 2 CFR Part 200, Subpart E apply to all entities other than for-profits.

ii. Pre-Award Costs

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

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

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

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

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

   DOE does not guarantee or assume any obligation to reimburse pre-award costs incurred prior to receiving written authorization from the Contracting Officer. If the applicant elects to undertake activities that DOE determines may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the applicant is doing so at risk of not receiving federal funding for their project and such costs may not be recognized as allowable cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override the requirement to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives. Likewise, if an application is

selected for negotiation of award, and the prime recipient elects to undertake activities that are not authorized for federal funding by the Contracting Officer in advance of DOE completing a NEPA review, the prime recipient is doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

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

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

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

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

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

iv. Construction

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

v. Foreign Travel

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

to be performed by or under a cost-sharing arrangement with a United States flag carrier, if service is available. Foreign travel costs are allowable only with the written prior approval of the Contracting Officer assigned to the award.

vi. Equipment and Supplies

To the greatest extent practicable, all equipment and products purchased with funds made available under this FOA should be American-made. This requirement does not apply to used or leased equipment.

Property disposition will be required at the end of a project if the current fair market value of property, purchased with project (Federal or cost share) funds, exceeds $5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316.

vii. Buy America Requirements for Infrastructure Projects

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

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

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

Please note that, based on implementation guidance from the Office of Management and Budget (OMB) issued on April 18, 2022, the Buy America requirements of the BIL do not apply to DOE projects in which the prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a "non-Federal entity," e.g., a State, local government, Indian tribe, Institution of Higher Education, or nonprofit organization. Subawards should conform to the terms of the prime award from which they flow; in other words, for-profit prime recipients are not required to flow down these Buy America requirements to subrecipients, even if those subrecipients are non-Federal entities as defined above. Conversely, prime recipients which are non-Federal entities must flow the Buy America requirements down to all subrecipients, even if those subrecipients are for-profit entities.

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

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

Applicants are strongly encouraged to consult Appendix C 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.

viii. Davis-Bacon Act Requirements

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

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

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

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

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

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

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

(5) maintaining original certified weekly payrolls for 3 years after the completion of the project and must make those payrolls available to the DOE or the United States Department of Labor ("DOL") upon request, as required by 29 CFR 5.6(a)(2).

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

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

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

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

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

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

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

NOTICE TO APPLICANTS: Build America, Buy America Act, and Davis-Bacon Act requirements will be applicable to the Awards stemming from this FOA. Applicants should take these requirements into consideration when developing applications under this FOA.

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

Further, as DOE invests in critical infrastructure and funds critical and emerging technology areas, DOE also considers possible vectors of undue foreign influence in evaluating risk. If high risks are identified and cannot be sufficiently mitigated, DOE may elect to not fund the applicant.

xi. Invoice Review and Approval

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

- Summary of costs by cost categories;
- Timesheets or personnel hours report;
- Proof of compliance with Davis-Bacon and electronic submittals of certified payroll reports;
- Invoices/receipts for all travel, equipment, supplies, contractual, and other costs;

- UCC filing proof for equipment acquired with project funds by for-profit recipients and subrecipients;
- Explanation of cost share for invoicing period;
- Analogous information for some subrecipients; and
- Other items as required by DOE.

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

a. Prohibition

Persons participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk* are prohibited from participating in projects selected for federal funding under this FOA. Should an award result from this FOA, the recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an individual on the project team is or is believed to be participating in a foreign government talent recruitment program. 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 federally assisted construction contracts exceeding $10,000 annually will be subject to the requirements of Executive Order 11246, as amended, *Equal Employment Opportunity*:

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

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

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

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule compliance evaluations. OFCCP's Technical Assistance Guide[45] should be consulted to gain an understanding of the requirements and possible required actions.

xiv. Foreign Collaboration Considerations

Consideration of new collaborations with foreign organizations and governments. The recipient will be required to provide DOE with advanced written notification of any potential collaboration with foreign organizations or governments in connection with

[45] 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

its DOE-funded award scope. The recipient will then be required to await further guidance from DOE prior to contacting the proposed foreign organization or government regarding the potential collaboration or negotiating the terms of any potential agreement.

Existing collaborations with foreign organizations and governments. The recipient will be required to provide DOE with a written list of all existing foreign collaborations in which has entered in connection with its DOE-funded award scope.

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

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

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

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

This criterion involves consideration of the following factors:

- The applicant clearly describes the SAEP to be produced, the anticipated annual targeted manufacturing / recycling capacity of the proposed project; the relevant market and business plan for the proposed project; the impact the proposed project is anticipated to have in supporting a secure, resilient domestic clean energy supply chains; any innovative aspects of the proposed

project; and any substantial impact the proposed project is anticipated to have in reducing greenhouse gas emissions;

- The applicant clearly describes the geographic region and preliminary site selection for the project, as well as anticipated alignment with economic development planning for that region and the approach to be taken in developing a community benefits plan for the proposed project;
- The applicant clearly describes the approach to be taken with the Community Benefits Plan for the project, addressing the four core elements: (I) community and labor engagement leading to negotiated agreement (ii) investing in job quality and workforce continuity; (iii) advancing diversity, equity, inclusion and accessibility; and (iv) contributing to the Justice40 Initiative goal that 40% of the overall benefits of climate and clean energy investments flow to disadvantaged communities;
- The applicant has identified risks and challenges of the project, as well as strategies for mitigating and managing those risks;
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project; and
- The proposed work, if successfully accomplished, would be commercially viable and clearly meet the objectives as stated in the FOA.

ii. Full Applications

Applications will be evaluated against the technical review criteria shown below.

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

This criterion involves consideration of the following factors:

1. The technical feasibility of the proposed project, including the ability to complete the facility and to deliver market-ready SAEP at the stated annual attributable manufacturing / recycling capacity;
2. The extent to which the project resolves current or projected gaps in secure, resilient domestic clean energy supply chains by (i) increasing domestic availability of the SAEP through recycling; (ii) increasing domestic production capacity of the SAEP; or (iii) onshoring production capacity of the SAEP;
3. The extent to which the project supports the security and resilience of domestic clean energy supply chains by (i) using materials sourced from domestic suppliers, (ii) prioritizing materials sourced using high environmental and social standards, (iii) securing binding offtake agreements and Letters of Commitment with domestic entities, (iv) relying on North American intellectual property, and/or (iv) where contracts with non-domestic entities are required, working with reliable foreign partners to the greatest extent possible and excluding participation of any foreign entities of concern;

4. The technical innovation of the project, including the extent to which the project will, as compared to the current baselines, (i) reduce production cost of the identified SAEP, (ii) reduce recycling cost or increase recycling yield of the identified SAEP, (iii) enhance performance of the SAEP, including by reducing the levelized cost of energy or storage[46] in the clean energy market relevant to the SAEP; and/or (iv) address legacy pollution and result in a net environmental benefit;
5. The extent to which the project has the potential to make a measurable impact in avoiding or reducing air pollutants or anthropogenic emissions of greenhouse gases at an existing facility; and
6. The degree to which the proposed project is likely to lead to increased high-quality jobs for (i) workers from disadvantaged communities and (ii) dislocated workers previously employed in manufacturing, coal power plants, and coal mines.

In assessing each of (1)-(6) above, the following will be considered: (a) the comprehensiveness, specificity, and accuracy of the information and plans provided; (b) the reasonableness of assumptions used in making estimations and projections; and (c) the extent to which the applicant demonstrates an understanding of relevant risks (e.g., technical, siting, market, and/or project management risks) and the quality of the strategies put forward to mitigate and manage those risks.

Criterion 2: Financial and Market Viability (25%)

This criterion involves consideration of the following factors:

1. The degree to which the application justifies the proposed project's economic viability, sustainability, and potential growth beyond DOE funding, including achieving market liftoff and follow-on investments;
2. The extent to which the applicant demonstrates that the SAEP produced will be competitive on a sustainable basis based on a data-based market assessment, including with respect to average selling prices, competition, and forward-looking market trends;
3. The extent to which the proposed project is integrated into long-term, place-based, coordinated, and collaborative regional economic development strategies;
4. The extent to which the proposed project utilizes and leverages available regional resources to meet the FOA objectives;

[46] As defined by the US Energy Information Administration , "levelized cost of electricity (LCOE) and levelized cost of storage (LCOS) represent the average revenue per unit of electricity generated or discharged that would be required to recover the costs of building and operating a generating plant and a battery storage facility, respectively, during an assumed financial life and duty cycle."

5. The reasonableness of the proposed project budget and spend plan for the proposed project and objectives, including the level of contingency proposed to address risk;
6. The ability to leverage state and local incentives and private financing in addition to DOE funding, including the availability, credibility, capability, strength, and risk/terms of non-federal cost share sources to meet ongoing needs; and
7. The extent to which the business plan adequately develops key project agreements such as financing, acquisition strategies, power purchase agreements, offtake (sales) agreements, and other relevant project documents, as well as the extent to which the business plan shows potential to capture growing and enable new and expanding market segments.

In assessing each of (1)-(7) above, the following will be considered: (a) the comprehensiveness, specificity, and accuracy of the information and plans provided; (b) the reasonableness of assumptions used in making estimations and projections; and (c) the extent to which the applicant demonstrates an understanding of relevant risks (e.g., technical, siting, market, and/or project management risks) and the quality of the strategies put forward to mitigate and manage those risks.

Criterion 3: Project Workplan (15%)

This criterion involves consideration of the following factors:

1. The overall reasonableness of the IPS and proposed Workplan to complete all project objectives within the proposed time period while considering the complexity and risks of the proposed project;
2. The adequacy of proposed project management systems including the ability to track scope, cost, and schedule progress and changes;
3. The degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan will succeed in meeting the project goals;
4. The adequacy, reasonableness, and soundness of the project metrics, project schedule, IPS, and Go/No-Go criteria to further funds disbursement, interim milestones, and track process;
5. The strength of deliverables, metrics, and milestones as defined in the application, such that DOE will be able to review key technical, financial, regulatory, permitting, and community benefit milestones at appropriate project Go/No-Go decision points to mitigate project risk and enable the successful design, procurement, construction, and operation of the proposed project;

6. The soundness of a plan to address environmental, siting, and other regulatory requirements for the project in a timely manner, including evaluation of resilience to climate change; and
7. The extent to which the Community Benefits Plan is integrated into the project management schedule and provides mechanisms with measurable actions that enable impacts to project direction in a timely manner.

In assessing each of (1)-(7) above, the following will be considered: (a) the comprehensiveness, specificity, and accuracy of the information and plans provided; (b) the reasonableness of assumptions used in making estimations and projections; and (c) the extent to which the applicant demonstrates an understanding of relevant risks (e.g., technical, siting, market, and/or project management risks) and the quality of the strategies put forward to mitigate and manage those risks.

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

1. The capability of the project team to address all aspects of the proposed work with a high probability of success, including the qualifications, relevant experience and expertise, and time commitment of the individuals on the team;
2. The extent of evidence of the project team's and key personnel experience and success in industry and/or in similar projects;
3. The extent to which the proposed site and facilities are suited for the proposed project;
4. The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan; and
5. The degree to which the application defines a project management structure and plan, including clear and appropriate roles for team members, that gives confidence in a high likelihood of success.

In assessing each of (1)-(5) above, the following will be considered: (a) the comprehensiveness, specificity, and accuracy of the information and plans provided; (b) the reasonableness of assumptions used in making estimations and projections; and (c) the extent to which the applicant demonstrates an understanding of relevant risks (e.g. technical, siting, market, and/or project management risks) and the quality of the strategies put forward to mitigate and manage those risks.

Criterion 5: Community Benefits Plan: Job Quality and Equity (20%)

This criterion involves consideration of the following factors:

Community and Labor Engagement

- The extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project;
- The 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;
- The 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 commitment; and
- The 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.

Job Quality and Workforce Continuity

- The 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, with a particular focus on job training and job creation for workers from Justice40 communities and dislocated workers previously employed in manufacturing, coal power plants, and coal mines;
- The 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
- The extent to which applicant demonstrates that they are a responsible employer, with ready access to a sufficient supply of appropriately skilled labor, and an effective plan to minimize the risk of labor disputes or disruptions.

Diversity, Equity, Inclusion, and Accessibility

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

Justice40 Initiative

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

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

iii. Criteria for Replies to Reviewer Comments

DOE has not established separate criteria to evaluate Replies to Reviewer Comments. Instead, Replies to Reviewer Comments are attached to the original applications and evaluated as an extension of the Full Application.

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA, by the standards set forth in EERE's Notice of Objective Merit Review Procedure (76 Fed. Reg. 17846, March 31, 2011) and the guidance provided in the "DOE Merit Review Guide for Financial Assistance," effective September 2020, which is available at: https://energy.gov/management/downloads/merit-review-guide-financial-assistance-and-unsolicited-proposals-current.

C. Other Selection Factors

i. Program Policy Factors

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

- The extent to which the project advances the objective set forth in Section 40209(c)(2)(B) that, in selecting eligible entities to receive grants under the Program, priority be given to eligible entities that are minority-owned;
- The degree to which the proposed project incorporates applicant or team members from Minority Serving Institutions (e.g., Historically Black Colleges and Universities (HBCUs)/Other Minority Serving Institutions); and partnerships with Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, or Tribal Nations;
- The degree to which the proposed project produces property that is critical to supporting DOE's overall demonstration and deployment goals across clean energy pathways;
- The degree to which the proposed project, or group of projects, represents a desired geographic distribution;
- The degree to which the proposed project is likely to contribute to a long-term, place-based, coordinated, and collaborative regional economic development strategy;
- 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 optimizes the use of DOE funding to address existing gaps or weaknesses in priority supply chains in a timely manner;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available DOE funding to achieve programmatic objectives;
- The degree to which the proposed project contributes towards local, regional, or national greenhouse gas emissions reductions;
- The degree to which the proposed projects will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical or financial uncertainty;

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The level of industry involvement and demonstrated ability to accelerate demonstration and commercialization and overcome key market barriers;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials.

D. Evaluation and Selection Process

i. Overview

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

ii. Pre-Selection 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 Integrity and Performance Matters

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) (see 41 U.S.C. § 2313).

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

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

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

MESC anticipates notifying applicants selected for negotiation of award and negotiating awards by the dates provided on the cover page of this FOA.

VI. Award Administration Information

A. Award Notices

i. Ineligible Submissions

Ineligible Concept Papers and Full Applications will not be further reviewed or considered for award. The Contracting Officer will send a notification letter by email to the technical and administrative points of contact designated by the applicant in OCED 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 OCED Exchange.

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

A notification encouraging the submission of a Full Application does not authorize the applicant to commence performance of the project.

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 OCED Exchange. The notification letter will inform the applicant whether or not its Full Application was selected for award negotiations. Alternatively, DOE may notify one or more applicants that a final selection determination on particular Full Applications will be made at a later date, subject to the availability of funds or other factors.

iv. Successful Applicants

Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an application is selected for award negotiations, it is not a commitment by DOE to issue an award. Applicants do not receive an award until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the prime recipient in FedConnect.

The award negotiation process will take approximately 60 days. Applicants must designate a primary and a backup point-of-contact in OCED 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. Alternate Selection Determinations

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

vi. Unsuccessful Applicants

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

B. Administrative and National Policy Requirements

i. Registration Requirements

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

1. **OCED Exchange**
   Register and create an account on OCED Exchange at https://OCED-Exchange.energy.gov. This account will then allow the user to register for any open OCED FOAs that are currently in OCED Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission. Applicants should also designate backup points of contact so they may be easily contacted if deemed necessary. **This step is required to apply to this FOA.** The OCED Exchange registration does not have a delay; however, **the remaining registration requirements below could take several weeks to process and are necessary for a potential applicant to receive an award under this FOA.**

2. **System for Award Management**
   Register with the SAM at https://www.sam.gov. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called a

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

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

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

5. **Electronic Authorization of Applications and Award Documents**
   Submission of an application and supplemental information under this FOA through electronic systems used by the DOE, including OCED 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.

Approval for foreign nationals from countries identified on the U.S. Department of State's list of State Sponsors of Terrorism, foreign nationals who are citizens of countries of risk (e.g. China, Russia, North Korea, and Iran), and foreign nationals who serve as the Principal Investigator (PI) and potential Co-PI's of an Award, must be

obtained from DOE before they can participate in the performance of any work under an award.

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

iv. Subaward and Executive Reporting

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

v. National Policy Requirements

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

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

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

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

vii. Flood Resilience

Applications should indicate whether the proposed project location(s) is within a floodplain, how the floodplain was defined, and how future flooding will factor into the project's design. The base floodplain long used for planning has been the 100-year

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

viii. Applicant Representations and Certifications

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

2. **Corporate Felony Conviction and Federal Tax Liability Representations**
   In submitting an application in response to this FOA, the applicant represents that:

   a. It is **not** a corporation that has been convicted of a felony criminal violation under any federal law within the preceding 24 months; and

   b. It is **not** a corporation that has any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

   For purposes of these representations the following definitions apply:

   A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of

the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

3. **Nondisclosure and Confidentiality Agreements Representations**
In submitting an application in response to this FOA the applicant represents that:

   a. It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contactors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

   b. It **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:

      (1) *''These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive Order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive Orders and statutory provisions are incorporated into this agreement and are controlling.''*

      (2) The limitation above shall not contravene requirements applicable to Standard Form 312 Classified Information Nondisclosure Agreement (https://fas.org/sgp/othergov/sf312.pdf), Form 4414 Sensitive Compartmented Information Disclosure Agreement (https://fas.org/sgp/othergov/intel/sf4414.pdf), or any other form issued by a federal department or agency governing the nondisclosure of classified information.

      (3) Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States

government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

ix. Statement of Federal Stewardship

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

x. 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. 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.

xii. Reporting

Reporting requirements will be identified on the Federal Assistance Reporting Checklist and attached through an 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
    - Demographics of workforce including local hires
    - Efforts to minimize risks of labor disputes and disruptions
    - Contributions to training such as training hours provided, trainees placed in a new paid position, and trainings partnering with community-based organizations, or labor unions, and information on the types of training provided
- Justice and Equity data, including:
    - Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses and Veteran Owned Businesses acting as vendors and sub-contractors for bids on supplies, services and equipment
    - Value, number, and type of partnerships with MSIs
    - Stakeholder engagement events, including siting specific activities
    - Other relevant indicators from the Community Benefits Plan
- Number and type of energy efficient and clean energy equipment installed
- Non-DOE investment, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization

xiii. Go/No-Go Review

Each project selected under this FOA will be subject to a periodic project evaluation referred to as a Go/No-Go Review. A Go/No-Go Review is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, technical success is definitively achieved and potential for success in

future phases or periods of performance is evaluated, prior to actually beginning the execution of future phases. At the Go/No-Go decision points, DOE will evaluate project performance, project schedule adherence, the extent milestone objectives are met, compliance with reporting requirements, and overall contribution to the program goals and objectives. Federal funding beyond the Go/No-Go decision point (continuation funding) is contingent upon (1) availability of federal funds appropriated by Congress for the purpose of this program; (2) the availability of future-year budget authority; (3) recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 of the award; (4) recipient's submittal of required reports; (5) recipient's compliance with the terms and conditions of the award; (6) DOE's Go/No-Go decision; (7) the recipient's submission of a continuation application[47]; 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.

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.

[47] 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.

xiv. Conference Spending

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

xv. Indemnity

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

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

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 $1,000,000, the recipient or subrecipient must:

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

statements or additional recordings, including appropriate continuation statements, as necessary or as the Contracting Officer may direct.

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

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

xviii. Participants and Collaborating Organizations

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

xix. Current and Pending Support

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

xx. U.S. Manufacturing Commitments

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

https://www.energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards.

Please note that a subject invention is any invention conceived or first actually reduced to practice in performance of work under an award. An invention is any invention or discovery which is or may be patentable. The recipient includes any awardee, recipient, sub-awardee, or 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)[48] is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. The term "Investigator" means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. Recipients must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities. Further, for DOE funded projects, the recipient must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/ unmanageable) in their initial and ongoing FCOI reports.

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

xxii. 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.

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

Additionally, recipients of DOE awards must be cognizant of the requirements of 2 CFR 200.113 Mandatory disclosures, which states:

> The non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in Appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM (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.

xxiii. 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).

xxiv. Real Property and Equipment

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

The recipient's written Request for Continued Use must identify the property and include: a summary of how the property will be used (must align with the authorized

project purposes); a proposed use period, (e.g., perpetuity, until fully depreciated, or a calendar date where the recipient expects to submit disposition instructions); acknowledgement that the recipient shall not sell or encumber the property or permit any encumbrance without prior written DOE approval; current fair market value of the property; and an Estimated Useful Life or depreciation schedule for equipment.

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

xxv. Data Management Plan

During the award negotiations phase, each applicant whose Full Application is selected for award negotiations will be required to finalize the DMP that was submitted as part of the application. A DMP explains how, when appropriate, data generated in the course of the work performed under a MESC award will be shared and preserved in order to validate the results of the proposed work or how the results could be validated if the data is not shared or preserved. The DMP must provide a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publications.

xxvi. Cybersecurity Plan

In accordance with BIL section 40126, applicants selected for award negotiations must submit an acceptable cybersecurity plan to DOE prior to receiving funding.[49] These plans are intended to foster a cybersecurity-by-design approach for BIL efforts. The Department will also use these plans to ensure effective integration and coordination across its research, development, and demonstration programs. A cybersecurity plan is NOT required as part of the application submission for this FOA, but all projects selected under this FOA will be required to submit a cybersecurity plan during the award negotiation phase.

The Department recommends using open guidance and standards such as the National Institute of Standards and Technology's (NIST) Cybersecurity Framework (CSF) and the DOE Cybersecurity Capability Maturity Model (C2M2).[50] The

[49] 42 U.S.C. § 18725

[50] NERC critical infrastructure protection (CIP) standards for entities responsible for the availability and reliability of the bulk electric system. NIST IR 7628: 2 Smart grid cyber security strategy and requirements. NIST SP800-53, Recommended Security Controls for Federal Information Systems and Organizations: Catalog of security controls in 18 categories, along with profiles for low-, moderate-, and high-impact systems. NIST SP800-82, Guide to Industrial Control Systems (ICS) Security. NIST SP800-39, Integrated Enterprise-Wide Risk Management: Organization,

cybersecurity plan created pursuant to BIL section 40126 should document any deviation from open standards, as well as the utilization of proprietary standards where the awardee determines that such deviation is necessary.

- Cybersecurity plans should be commensurate to the threats and vulnerabilities associated with the proposed efforts and demonstrate the cybersecurity maturity of the project.
- Cybersecurity plans may cover a range of topics relevant to the proposed project, e.g., software development lifecycle, third-party risks, and incident reporting.
- At a minimum, cybersecurity plans should address questions noted in BIL section 40126 (b) 'Contents of Cybersecurity Plan'.[51]

A draft version of supplementary guidance on the cybersecurity plan requirement will be available at https://www.energy.gov/ceser/bipartisan-infrastructure-law-implementation.

VII. Questions/Agency Contacts

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted to: mesc_foa2907@netl.doe.gov.

Questions and comments concerning this FOA shall be submitted not later than three (3) business days prior to the application due date. Please note, feedback on individual concepts will not be provided through Q&A.

NOTE: Please be as clear and concise when asking a question about the FOA and be as specific as possible about the topic area to which your question refers. If it is not clear DOE will be required to ask for additional information and clarity on the question to provide an accurate response which will take additional time.

mission, and information system view. AMI System Security Requirements: Security requirements for advanced metering infrastructure. ISO (International Organization for Standardization) 27001, Information Security Management Systems: Guidance on establishing governance and control over security activities (this document must be purchased). IEEE (Institute of Electrical and Electronics Engineers) 1686-2007, Standard for Substation Intelligent Electronic Devices (IEDs) Cyber Security Capabilities (this document must be purchased). DOE Cybersecurity Capability Maturity Model (C2M2).

[51] 42 U.S.C. § 18725

All questions and answers relating to the content of this FOA will be posted in OCED exchange. Specifically, under the FOA Documents, there will be an Excel file labeled "FOA 2907 Q&A" which will contain questions and responses that have been released to date. The Q&A will be updated periodically as DOE receives questions and has provided responses (Financial Opportunities: Funding Opportunity Exchange (energy.gov)). Please note that you must first select this specific FOA Number in order to view the questions and answers specific to this FOA. DOE 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. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. Applicants are encouraged to review previously issued Questions and Answers prior to the submission of questions.

Questions related to the registration process and use of the OCED Exchange website should be submitted to: OCED-ExchangeSupport@hq.doe.gov.

VIII. Other Information

A. FOA Modifications

Amendments to this FOA will be posted on the OCED Exchange website and the Grants.gov system. However, you will only receive an email when an amendment or a FOA is posted on these sites if you register for email notifications for this FOA in Grants.gov. OCED recommends that you register as soon after the release of the FOA as possible to ensure you receive timely notice of any amendments or other FOAs.

B. Government Right to Reject or Negotiate

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

C. Commitment of Public Funds

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

D. Treatment of Application Information

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

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

If an applicant chooses to submit business sensitive, trade secrets, proprietary, or otherwise confidential information, the applicant must provide **two copies** of the submission (e.g., Concept Paper, Full Application). The first copy should be marked, "non-confidential" with the information believed to be confidential deleted. The second copy should be marked "confidential" and must clearly and conspicuously identify the business sensitive, trade secrets, proprietary, or otherwise confidential information and must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose as authorized by law.

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

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

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

make its own determination about the confidential status of the information and treat it according to its determination.

E. Evaluation and Administration by Non-Federal Personnel

In conducting the merit review evaluation, the Go/No-Go Reviews and Peer Reviews, the government may seek the advice of qualified non-federal personnel as reviewers. The government may also use non-federal personnel to conduct routine, nondiscretionary administrative activities, including DOE contractors. The applicant, by submitting its application, consents to the use of non-federal reviewers/administrators. Non-federal reviewers must sign conflict of interest (COI) and non-disclosure acknowledgements (NDA) prior to reviewing an application. Non-federal personnel conducting administrative activities must sign an NDA.

F. Notice Regarding Eligible/Ineligible Activities

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

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

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

H. Requirement for Full and Complete Disclosure

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

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

I. Retention of Submissions

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

J. Title to Subject Inventions

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

- Domestic Small Businesses, Educational Institutions, and Nonprofits: Under the Bayh-Dole Act (35 U.S.C. § 200 et seq.), domestic small businesses, educational institutions, and nonprofits may elect to retain title to their subject inventions;
- All other parties: The Federal Non-Nuclear Energy Act of 1974, 42. U.S.C. § 5908, provides that the government obtains title to new inventions unless a waiver is granted (see below);
- Class Patent Waiver:

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

K. Government Rights in Subject Inventions

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

Government Use License

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

March-In Rights

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

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

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

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

L. Rights in Technical Data

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

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

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

M. Copyright

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

N. Export Control

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

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

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

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

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

P. Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. The term "PII" refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name. (See OMB Memorandum M-07-16 dated May 22, 2007)

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

Q. Annual Independent Audits

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

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

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

R. Informational Webinar

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

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

APPENDIX A – COST SHARE INFORMATION

Cost Sharing or Cost Matching

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

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. FFRDC costs must be included in Total Project Costs. The following is an example of how to calculate cost sharing amounts for a project with $100,000,000 in federal funds with a minimum 50% non-federal cost sharing requirement:

- Formula: Federal share ($) divided by federal share (%) = Total Project Cost
  Example: $100,000,000 divided by 50% = $200,000,000

- Formula: Total Project Cost ($) minus federal share ($) = Non-federal share ($)
  Example: $200,000,000 minus $100,000,000 = $100,000,000

- Formula: Non-federal share ($) divided by Total Project Cost ($) = Non-federal share (%)
  Example: $100,000,000 divided by $200,000,000 = 50%

What Qualifies For Cost Sharing

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

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

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

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

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

General Cost Sharing Rules on a DOE Award

1. Cash Cost Share – encompasses all contributions to the project made by the recipient or subrecipient(s), for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project.

2. In-Kind Cost Share – encompasses all contributions to the project made by the recipient or subrecipient(s) that do not involve a payment or reimbursement and represent donated items or services. In-Kind cost share items include volunteer personnel hours, donated existing equipment, donated existing supplies. The cash value and calculations thereof for all In-Kind cost share items must be justified and explained in the Cost Share section of the project Budget Justification. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out the In-Kind cost share section of the Budget Justification.

3. Funds from other federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC subrecipients. Non-federal sources include any source not originally derived from federal funds. Cost sharing commitment letters from subrecipients must be provided with the original application.

4. Fee or profit, including foregone fee or profit, are not allowable as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

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

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

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

(1) They are verifiable from the recipient's records.

(2) They are not included as contributions for any other federally-assisted project or program.

(3) They are necessary and reasonable for the proper and efficient accomplishment of project or program objectives.

(4) They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:

a. For-profit organizations. Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A–122 is determined in accordance with the for-profit cost principles in 48 CFR Part 31 in the FAR, except that patent prosecution costs are not allowable unless specifically authorized in the award document. (v) Commercial Organizations. FAR Subpart 31.2—Contracts with Commercial Organizations; and

b. Other types of organizations. For all other non-federal entities, allowability of costs is determined in accordance with 2 CFR Part 200 Subpart E.

(5) They are not paid by the federal government under another award unless authorized by federal statute to be used for cost sharing or matching.

(6) They are provided for in the approved budget.

(B) Valuing and documenting contributions

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

a. The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or

b. The current fair market value. If there is sufficient justification, the Contracting Officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The Contracting Officer may accept the use of any reasonable basis for determining the fair market value of the property.

(2) Valuing services of others' employees. If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.

(3) Valuing volunteer services. Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

(4) Valuing property donated by third parties.

a. Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share

must be reasonable and must not exceed the fair market value of the property at the time of the donation.

b. Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the Contracting Officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:

i. The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.

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

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

a. Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.

b. The basis for determining the valuation for personal services and property must be documented.

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

1. Waiver for Foreign Entity Participation

Many of the technology areas DOE funds fall in the category of critical and emerging technologies (CETs). CETs are a subset of advanced technologies that are potentially significant to United States national and economy security.[52] 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
e. The foreign entity will satisfy other conditions that may be deemed necessary by DOE to protect United States government interests.

Content for Waiver Request

A Foreign Entity waiver request must include the following:

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

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

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 C – 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
- Anticipated impact if no waiver is issued

DOE may require additional information before considering the waiver request.

Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver.

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

APPENDIX D – ENVIRONMENTAL CONSIDERATIONS SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

10. **Please describe:**

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

APPENDIX E – DATA MANAGEMENT PLAN

A Data Management Plan ("DMP") explains how data generated in the course of the research or work performed under an assistance award will be shared and preserved or, when justified, explains why data sharing or preservation is not possible or scientifically appropriate.

DMP Requirements

In order for a DMP to be considered acceptable, the DMP must address the following:

At a minimum, the DMP must describe how data sharing and preservation will enable validation of the results from the proposed work, or how results could be validated if data are not shared or preserved.

The DMP must provide a plan for making all research data displayed in publications resulting from the proposed work digitally accessible at the time of publication. This includes data that are displayed in charts, figures, images, etc. In addition, the underlying digital research data used to generate the displayed data should be made as accessible as possible in accordance with the principles stated above. This requirement could be met by including the data as supplementary information to the published article, or through other means. The published article should indicate how these data can be accessed.

The DMP should consult and reference available information about data management resources to be used in the course of the proposed work. In particular, a DMP that explicitly or implicitly commits data management resources at a facility beyond what is conventionally made available to approved users should be accompanied by written approval from that facility. In determining the resources available for data management at DOE User Facilities, researchers should consult the published description of data management resources and practices at that facility and reference it in the DMP. Information about other DOE facilities can be found in the additional guidance from the sponsoring program.

The DMP must protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness; and otherwise be consistent with all laws (i.e., export control laws), and DOE regulations, orders, and policies.

Data Determination for a DMP

The Principal Investigator should determine which data should be the subject of the DMP and, in the DMP, propose which data should be shared and/or preserved in accordance with the DMP Requirements noted above.

For data that will be generated through the course of the proposed work, the Principal Investigator should indicate what types of data should be protected from immediate public disclosure by DOE (referred to as "protected data") and what types of data that DOE should be able to release immediately. Similarly, for data developed outside of the proposed work at private expense that will be used in the course of the proposed work, the Principal Investigator should indicate whether that type of data will be subject to public release or kept confidential (referred to as "limited rights data"). Any use of limited rights data or labeling of data as "protected data" must be consistent with the DMP Requirements noted above.

Suggested Elements for a DMP

The following list of elements for a DMP provides suggestions regarding the data management planning process and the structure of the DMP:

Data Types and Sources: A brief, high-level description of the data to be generated or used through the course of the proposed work and which of these are considered digital research data necessary to validate the research findings or results.

Content and Format: A statement of plans for data and metadata content and format including, where applicable, a description of documentation plans, annotation of relevant software, and the rationale for the selection of appropriate standards. Existing, accepted community standards should be used where possible. Where community standards are missing or inadequate, the DMP could propose alternate strategies for facilitating sharing, and should advise the sponsoring program of any need to develop or generalize standards.

Sharing and Preservation: A description of the plans for data sharing and preservation. This should include, when appropriate: the anticipated means for sharing and the rationale for any restrictions on who may access the data and under what conditions; a timeline for sharing and preservation that addresses both the minimum length of time the data will be available and any anticipated delay to data access after research findings are published; any special requirements for data sharing, for example, proprietary software needed to access or interpret data, applicable policies, provisions, and licenses for re-use and re-distribution, and for the production of derivatives, including guidance for how data and data products should be cited; any resources and capabilities (equipment, connections, systems, software, expertise, etc.) requested in the research proposal that are needed to meet the stated goals for sharing and

preservation (this could reference the relevant section of the associated research proposal and budget request); and whether/where the data will be preserved after direct project funding ends and any plans for the transfer of responsibilities for sharing and preservation. A description of how the recipient intends to make the results of any resulting DOE-funded work available to the public, including the relevant technical community.

Protection: A statement of plans, where appropriate and necessary, to protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; and avoid significant negative impact on innovation, and U.S. competitiveness.

Rationale: A discussion of the rationale or justification for the proposed data management plan including, for example, the potential impact of the data within the immediate field and in other fields, and any broader societal impact.

Additional Guidance

In determining which data should be shared and preserved, researchers must consider the data needed to validate research findings as described in the Requirements and are encouraged to consider the potential benefits of their data to their own fields of research, fields other than their own, and society at large.

DMPs should reflect relevant standards and community best practices and make use of community accepted repositories whenever practicable.

Costs associated with the scope of work and resources articulated in a DMP may be included in the proposed research budget as permitted by the applicable cost principles.

To improve the discoverability of and attribution for datasets created and used in the course of research, DOE encourages the citation of publicly available datasets within the reference section of publications, and the identification of datasets with persistent identifiers such as Digital Object Identifiers (DOIs). In most cases, DOE can provide DOIs free of charge for data resulting from DOE-funded research through its Office of Scientific and Technical Information (OSTI) DataID Service.

Definitions

Data Preservation: Data preservation means providing for the usability of data beyond the lifetime of the research activity that generated them.

Data Sharing: Data sharing means making data available to people other than those who have generated them. Examples of data sharing range from bilateral communications with colleagues, to providing free, unrestricted access to anyone through, for example, a web-based platform.

Digital Research Data: The term digital data encompasses a wide variety of information stored in digital form including: experimental, observational, and simulation data; codes, software and algorithms; text; numeric information; images; video; audio; and associated metadata. It also encompasses information in a variety of different forms including raw, processed, and analyzed data, published and archived data.

Research Data: The recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This 'recorded' material excludes physical objects (e.g., laboratory samples). Research data also do not include:

(A) Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and

(B) Personnel and medical information and similar information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, such as information that could be used to identify a particular person in a research study.

Validate: In the context of DMPs, validate means to support, corroborate, verify, or otherwise determine the legitimacy of the research findings. Validation of research findings could be accomplished by reproducing the original experiment or analyses; comparing and contrasting the results against those of a new experiment or analyses; or by some other means.

APPENDIX F – LIST OF ACRONYMS

BIL	Bipartisan Infrastructure Law
CETs	Critical and Emerging Technologies
CCUS	Carbon Capture Utilization and Storage
CEJST	Climate and Economic Justice Screening Tool
COI	Conflict of Interest
CRADA	Cooperative Research and Development Agreement
D&D	Disposition & Decommissioning
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
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPC&O	Engineering, Procurement, Constructions & Operations
FAPIIS	Federal Awardee Performance and Integrity Information System
FAR	Federal Acquisition Regulation
FCOI	Financial Conflicts of Interest
FEED	Front End Engineering Design
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
IRB	Institutional Review Board
MESC	Manufacturing & Energy Supply Chain
M&O	Management and Operations
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

OCED	Office of Clean Energy Demonstrations
OFCCP	Office of Federal Contractor Compliance Programs
OHRP	Office of Human Research Protection
OIG	Office of Inspector General
OMB	Office of Management and Budget
O&M	Operations & Maintenance
OSS	Open-Source Software
OSTI	Office of Scientific and Technical Information
OTA	Other Transactions Authority
PEM	Polymer Electrolyte Membrane
PII	Personal Identifiable Information
RD&D	Research, Development, and Demonstration
RFI	Request for Information
RFP	Request for Proposal
RMP	Risk Management Plan
SAEP	Specific Advanced Energy Property
SAM	System for Award Management
SciENcv	Science Experts Network Curriculum Vita
SMART	Specific, Measurable, Achievable, Relevant, and Timely
SMM	Small- and Medium-Sized Manufacturing
SOPO	Statement of Project Objectives
SPOC	Single Point of Contact
STEM	Science, Technology, Engineering, and Mathematics
TAA	Technical Assistance Agreement
TIA	Technology Investment Agreement
TPC	Total Project Cost
UCC	Uniform Commercial Code
UEI	Unique Entity Identifier
WBS	Work Breakdown Structure
WP	Work Proposal

APPENDIX G – CONTINGENCY

If recipients must have a contingency reserve, state so within the topic areas and Section VI. "Award Administration Information." If the applicant must provide contingency information in the application, include the application requirements in Section IV. under the Content and Form of the Full Application. Below is sample language that could be tailored:

"In addition to verifying the technical baseline at the beginning of Phase 1 and demonstrating completion of the key outcomes from Phase 1, recipients must demonstrate their financial readiness to proceed into Phase 2. This includes demonstrating the ability to provide all required cost share and contingency reserve (see below) prior to entering into Phase 2 of the project. Recipients are required to secure all cost share and contingency prior to proceeding into Phase 2. Throughout the award life cycle, DOE will review and monitor the financial capability of the Recipient and other key organizations within the project team, such as parent companies or cost share providers. DOE may also conduct pre-award accounting system audits, financial capability reviews, or reviews of financial or compliance audits.

A contingency reserve is required for [ ]. DOE experience and industry best practice show that a minimum of 25% of Total Project Cost (federal share and cost share) is necessary to allow the project to continue when unexpected expenses are encountered. Recipients must demonstrate that they can meet the financial needs of their project when submitting a continuation application. The continuation application (see Section VI.B.xiv.) must include documentation showing that the Recipient has access to this minimum 25% required contingency. Contingency funds must be: (a) liquid, (b) immediately available, and (c) unrestricted funds dedicated exclusively to the project for the purpose of mitigating project performance baseline risk. The contingency reserve is in addition to Total Project Costs and cannot count towards cost share, until expended. If expended, the contingency will not result in reimbursement by DOE above the total federal share approved in the award. DOE discourages Recipients from reducing scope to comply with the contingency reserve requirement."

APPENDIX H – REQUIRED ELIGIBILITY CERTIFICATION FORM AND ADDENDUM

1. ***At the time of Full Application***, I, as the undersigned, am providing evidence we, as the prime recipient, defined herein to include its affiliates (as per 13 CFR § 121.702(c)), meet the required eligibility criteria set forth in Section III.A.i. of the FOA. The eligibility criteria are as follows:

The prime recipient is a small- or medium-sized manufacturing firm as defined by BIL Section 40209 where;

(i) The principal business of the prime recipient falls within the North American Industry Classification System (NAICS) codes 31-33;
(ii) The prime recipient has gross annual sales of less than $100,000,000;
(iii) The prime recipient has annual energy bills that total more than $100,000 but less than $2,500,000;
(iv) The prime recipient has fewer than 500 employees at the plant site of the manufacturing firm, with the number of employees counted using the principles set forth in 13 CFR § 121.106 where:
    a. if the prime recipient has more than one plant site, each plant site has fewer than 500 employees; and
(v) The proposed project must be located in (a) a census tract in which a coal mine closed after December 31, 1999, (b) a census tract in which a coal-fired electricity generating power plant unit closed after December 31, 2009, or (c) a census tract immediately adjacent to (a) or (b).

2. I, the undersigned, certify that all factual representations made by the prime recipient to the U.S. Department of Energy (DOE) to demonstrate the eligibility requirements are true and accurate.

3. I, the undersigned, acknowledge that the information provided herein as an Addendum is supportive evidence that we, as the prime recipient, meet the required eligibility criteria set forth in Section III.A.i. of the FOA.

4. I declare under penalty of perjury that the information and all representations contained herein are true and correct. The documents and information submitted herein, as well as the associated Full Application documents are true, accurate, and complete. I am aware of the significant penalties for submitting false or materially inaccurate information, including the possibility of fine and imprisonment, civil administrative penalties, and/or the denial, revocation, or termination of any award for which the prime recipient may be seeking approval or now hold.

The certifications above shall be signed by the owner or chief executive officer or equivalent, authorized organizational representative (AOR), for the prime recipient.

_____
(Signature)

_____
(Title)

_____
(Name, please print)

_____
(Date)

ADDENDUM

*An Applicant should utilize this section to provide documentation as support of evidence towards eligibility).

**An applicant may utilize the resource titled, "*FOA2907 _ Eligibility Assistance Document*" which can be located at:

https://oced-exchange.energy.gov/Default.aspx#FoaIde39932fe-955e-450b-858d-5372701d486e under "Documents" which will assist an applicant in determining practical examples of documentation to support evidence of eligibility.