

FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



**Department of Energy (DOE)
Grid Deployment Office (GDO)
Office of Clean Energy Demonstrations (OCED)**

BIL – Grid Resilience and Innovation Partnerships (GRIP)

Funding Opportunity Announcement (FOA) Number: DE-FOA-0002740

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Informational Webinar:	11/29/2022 2:00pm ET
Submission Deadline for Concept Papers (Topic Area 1):	12/16/2022 5:00pm ET
Submission Deadline for Concept Papers (Topic Area 2):	12/16/2022 5:00pm ET
Submission Deadline for Concept Papers (Topic Area 3):	01/13/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 1):	04/06/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 2):	03/17/2023 5:00pm ET
Submission Deadline for Full Applications (Topic Area 3):	05/19/2023 5:00pm ET
Expected Date for DOE Selection Notifications (Topic Area 1):	Summer 2023
Expected Date for DOE Selection Notifications (Topic Area 2):	Summer 2023
Expected Date for DOE Selection Notifications (Topic Area 3):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 1):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 2):	Fall 2023
Expected Timeframe for Award Negotiations (Topic Area 3):	Winter 2023

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

Registration Requirements

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

- **SAM** – Applicants must register with SAM at <https://www.sam.gov/> prior to submitting an application in response to this FOA. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Failure to register with SAM will prevent your organization from applying through Grants.gov. The applicant must maintain an active SAM registration with current information at all times during which it has an active Federal award or application under consideration. More information about SAM registration for applicants is found at: https://www.fsd.gov/gsafsd_sp?id=gsafsd_kb_articles&sys_id=650d493e1bab7c105465eaccac4bcbcb .

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

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

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

NOTE: Subawardees/subrecipients at all tiers must also obtain an UEI from the SAM and provide the UEI to the Prime Recipient before the subaward can be issued.

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

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

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

More information about the registration steps for Grants.gov is provided at:

<https://www.grants.gov/web/grants/applicants/registration.html>.

In addition:

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

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

For more detailed instructions about creating a profile on Grants.gov, refer to:

<https://www.grants.gov/web/grants/applicants/registration/authorize-roles.html> .

To track your role request, refer to:

<https://www.grants.gov/web/grants/applicants/registration/track-role-status.html> .

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

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

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

Amendments

Amend. No.	Date	Description of Amendment
000001	11/18/2022	This Amendment is to issue the initial version of the FOA. This version (Amendment 00001) supersedes the previous draft version that was released for public comment (the Draft). The Draft version is now obsolete. Applicants are advised to use Amendment 00001 to prepare the concept paper and full application.
000002	11/29/2022	This Amendment is to revise Section IV.D.xvi to replace the hyperlink to the Community Benefits Plan Scoring Rubric; to remove a reference to program-specific Community Benefits Plan Guidance; and to move the instructions for submitting the Community Benefits Plan to the end of the section. Text that is revised or newly incorporated with this amendment is highlighted in yellow.

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000001	11/18/2022	This Amendment is to issue the initial version of the FOA. This version (Amendment 00001) supersedes the previous draft version that was released for public comment (the Draft). The Draft version is now obsolete. Applicants are advised to use Amendment 00001 to prepare the concept paper and full application.

I. Funding Opportunity Description

A. Background and Context

The Grid Deployment Office (GDO), in conjunction with the Office of Clean Energy Demonstrations (OCED), 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 Act¹ (IIJA), also 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 U.S. competitiveness, driving the creation of good-paying union jobs, tackling the climate crisis, and ensuring stronger access to economic, environmental, and other benefits for disadvantaged communities (DACs). The BIL appropriates more than \$62 billion to the Department of Energy (DOE)² including funding to support investments to build a clean and equitable energy economy that achieves pollution free electricity by 2035 and puts the United States on a path to achieve net-zero emissions economy-wide by no later than 2050³ to benefit all Americans. As new load and generation come online as the market moves in line with these goals, deploying the projects that will support a more resilient and reliable grid will be critical. At present, aging grid infrastructure leaves the grid increasingly vulnerable to attacks.⁴ The increasing frequency of extreme weather events is leading to energy supply disruptions that threaten the economy, put public health and safety at risk, and can devastate affected communities all over the country.

Among other programs DOE has to support the grid, three BIL programs covered by this FOA – each with specific statutory requirements– will invest approximately \$10.5 billion for the five-year period encompassing FY22 through FY26 to deploy technologies to increase grid reliability and resilience. The activities to be funded under this FOA support three BIL sections including 40101(c), 40107 and 40103(b).⁵ Together DOE refers to these programs as the Grid Resilience and Innovation Partnerships (GRIP) program.

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 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>

³ [Executive Order \(EO\) 14008](#), “Tackling the Climate Crisis at Home and Abroad,” January 27, 2021.

⁴ See ICF International, *Electric Grid Security and Resilience: Establishing a Baseline for Adversarial Threats*, at 26 (June 2016)

⁵ 42 USC §18711(c); 42 USC §18712(b); 42 USC §17386

Principles of equity, justice, and advancing accessible good-paying jobs with the free and fair choice to join a union will guide implementation of this program, in alignment with the Administration’s Justice40 Initiative and commitment to American workers. The Department commits to robust engagement and collaboration with States, U.S. Territories, and Indian Tribes, as well as with other interested stakeholders, including industry, unions, and local communities, for successful implementation of the GRIP program.

These BIL sections that make up the GRIP program are:

- Section 40101(c): Grid Resilience Grants
- Section 40107: Smart Grid Grants
- Section 40103(b): Grid Innovation Program

i. Program Purpose

Climate change is increasing the threats to our power system infrastructure. Disruptive weather events are more intense in terms of temperature extremes and precipitation and are becoming broader in scope and affecting larger areas at a time. Other climate impacts like droughts are long-lasting, compounding the potential impact of disruptive events and increasing other threats such as wildfires, floods, and mudslides. Previous methods and approaches to prepare for disruptions are no longer sufficient to meet the increasing threats to the power system due to climate change. Increasing interdependencies between critical infrastructure systems will continue to impact our power system.

With these trends in mind, building a more resilient and reliable grid is critical. Studies indicate a more resilient and reliable grid must inherently have the following characteristics: increased grid reliability and flexibility, the ability to easily interconnect new clean energy to enhance generation mix diversity, and improved system cost-effectiveness.⁶ There is currently insufficient development of projects that will support these characteristics that are critical to reliability and resilience of the grid, particularly in projects that would achieve the following outcomes: 1) increasing transfer capacity between regions, 2) addressing the most consequential system needs and challenges that cause or contribute to the problematic and increasing interconnection queue time for clean energy, and 3) increasing supply of a geographically and technologically diverse sets of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages.⁷ Therefore, DOE is eager to leverage federal dollars under the GRIP program to bring together state, Tribal,

⁶ National Renewable Energy Laboratory (NREL). Interconnections Seam Study. October 2020. <https://www.nrel.gov/analysis/seams.html>

⁷ Lawrence Berkeley National Laboratory (LBL). “Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection.” April 2022. <https://emp.lbl.gov/queues>

community, and industry stakeholders to support these outcomes and others of equal or greater public benefit to build the grid that America needs.

Additionally, as the need for grid investment that can enhance reliability and resilience grows, historical trends show that investments by major U.S. electric utilities—representing about 70% of total U.S. electric load—into the distribution system has been more than double that into the transmission system.^{8,9} DOE is looking to leverage funding to unlock transformative projects that would not be built and deployed without the federal funding under the GRIP program across the transmission system, distribution system, and combination system approaches – including catalyzing and unlocking increased investment into the transmission system to support greater overall grid resilience and reliability at the greatest scale. With the funding provided by the BIL across these three programs there is an opportunity to not only invest in power system infrastructure that addresses critical national, interregional, and regional needs, but also a unique chance to build partnerships between states, local governments, Tribes, and power system operators that align industry objectives with broader regional, interregional, and national goals to enhance reliability, all-hazards resilience, and efficiency of the electric grid. A comprehensive approach that considers all the opportunities available within the BIL can result in more coordinated efforts across relevant stakeholders that can ultimately guide investment strategies for improving resilience beyond what the BIL can support directly.

Concurrently, infrastructure investments in power system resilience offer the opportunity to include a diverse set of populations, including underserved and disadvantaged communities, in the development of resilience strategies that focus on communities, and equitable access to opportunities and the benefits that derive from them. DOE believes there are significant benefits to be realized by coordinating the implementation of the three BIL programs focused on power sector infrastructure, grid reliability and resilience.

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining^{10,11,12} and in alignment with BIL sections 40101(c), 40107, and 40103(b), this FOA and any related activities will seek to encourage meaningful engagement and participation of labor unions and

⁸ Energy Information Administration (EIA). “Utilities continue to increase spending on transmission infrastructure.” February 9, 2018. <https://www.eia.gov/todayinenergy/detail.php?id=34892>

⁹ EIA. “Major utilities continue to increase spending on U.S. electric distribution systems.” July 20, 2018. <https://www.eia.gov/todayinenergy/detail.php?id=36675>

¹⁰ [EO 13985](#), “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government” (Jan. 20, 2021).

¹¹ [EO 14025](#), “Worker Organizing and Empowerment,” April 26, 2021.

¹² [EO 14052](#), “Implementation of the Infrastructure Investment and Jobs Act,” November 18, 2021.

underserved communities and underrepresented groups, including consultation with Tribal Nations^{13,14}. Consistent with Executive Order 14008, this FOA is designed to help meet the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities and drive the creation of accessible good-paying jobs with the free and fair chance for workers to join a union.

ii. Strategic Goals

This FOA seeks applications to address these three goals:

1. Transform community, regional, interregional, and national resilience, including in consideration of future shifts in generation and load
2. Catalyze and leverage private sector and non-federal public capital for impactful technology and infrastructure deployment
3. Advance community benefits

1. Transform community, regional, interregional, and national resilience, including in consideration of future shifts in generation and load

As explained in DOE's Building a Better Grid Initiative Notice of Intent, modernizing, hardening, and expanding the grid will enhance the resilience of our entire electric system, and ensure that electricity is available to customers when it is needed most.¹⁵ Projects funded by the GRIP program should be designed to enable significant national, regional, or community resilience improvements, consistent with grid needs that will manifest as a result of aging grid infrastructure, increasing climate change-related or other hazards to reliability, and the clean energy transition. An important objective of community and regional resilience and transformation is improving the electric grid's ability to avoid, mitigate and recover from major disruptions and plan for future disruptions across all hazards. Grid investments can enhance resilience by, among other things:

- i. increasing regional and interregional electricity transfer capacity,
- ii. addressing the most consequential system needs and challenges that cause or contribute to the problematic and increasing interconnection queue time for clean energy,

¹³ [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.

¹⁴ Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships. January 26, 2021. <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>

¹⁵ Building a Better Grid Initiative To Upgrade and Expand the Nation's Electric Transmission Grid To Support Resilience, Reliability, and Decarbonization. [87 FR 2769](#)

- iii. facilitating clean energy deployment, generation mix diversity, and other system benefits.

A systemic approach can consider all aspects of physical infrastructure and the ability of power system owners and operators to mitigate outages and restore power to communities as well as the ability of communities to work towards recovery. Therefore, alignment with state, regional, and national energy planning is important to understand threats, mitigation approaches, and system needs, and to help with the prioritization of funding. BIL investments can leverage these plans as well as industry and other investments to assist in community transformation. Applications may consider emphasis on a specific threat, such as wildfire or flooding, and how an approach can transform a region or community resulting in a significant resilience and other economic benefits, with an emphasis on equity.

2. Catalyze and leveraging private sector and non-federal public capital for impactful technology and infrastructure deployment

Investments should prioritize driving innovative approaches to achieving grid infrastructure deployment at-scale where significant economic benefits to mitigate threats and impacts of disruptive events to communities can be attained.

DOE is looking for applications that will leverage private sector and non-federal public capital to advance deployment goals. These efforts will be aligned with state, regional, or other planning activities and goals. As state resilience plans continue to be updated annually and evaluate future risks, DOE is interested in how Federal funds will leverage industry investments towards hardening their system and/or advancing innovative solutions to enhance system resilience.

DOE is also interested in leveraging Federal infrastructure funding to maximize grid infrastructure deployment at-scale. Successful projects will demonstrate how federal investments under the GRIP program can lead to additional future investments by industry, communities, venture capital, and other private debt and equity capital. Investments should prioritize grid improvements especially in cases where GRIP investments can overcome institutional barriers, perceived risk, and the like so as to both deliver beneficial grid outcomes and demonstrate an approach suitable for replication.

3. Advance Community Benefits

Increasing grid reliability and resilience provides notable benefits such as reducing outages resulting from extreme events and/or other causes, by

reducing restoration times from such outages, or by reducing risks to health and safety for the affected community.

In keeping with the Administration's goals, and as an agency whose mission includes strengthening our country's energy prosperity, DOE seeks projects that should not only contribute to the country's energy technology and climate goals, but also meet the following four priority goals (1) support meaningful community and labor engagement; (2) invest in the American workforce; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative).

iii. Community Benefits Plan: Job Quality and Equity

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

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

a. Community and Labor Engagement

The project planning should include engagement with an inclusive collection of local labor unions, governments Tribal entities, and other stakeholders -- such as, residents and businesses, entities that carry out workforce development programs, and community-based organizations that support or work with disadvantaged communities. Considering the importance of the four priorities listed above and the financial investment in the projects to be funded under this FOA, stakeholder engagement is a relatively small cost that delivers high value.

Proactive and meaningful engagement with stakeholders ensures stakeholders' perspectives can be incorporated into the project plan, allows for transparency, and helps reduce or eliminate certain risks associated with the project.

b. Quality Jobs

In keeping with the Administration's goals, and to ensure the agency's energy projects contribute to overall economic prosperity, the DOE strongly supports investments that expand accessible good-paying jobs, with assurances that workers will have a free and fair chance to join a union; promote worker power for marginalized workers and in hard-to-organize and changing industries; improve job quality through the adoption of strong labor standards; support responsible employers; and foster safe, healthy, and inclusive workplaces and communities free from harassment and discrimination, and support strategies that develop a skilled and inclusive local workforce to build and maintain the country's energy infrastructure and grow domestic manufacturing.

c. Diversity, Equity, Inclusion, and Accessibility

Advancing equity, civil rights, racial justice, and equal opportunity is a key priority of the Biden Administration. The term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.¹⁶

As part of a whole of government approach to advancing equity, this FOA seeks to encourage the participation of underserved communities¹⁷ and underrepresented groups, ensure equitable access to business opportunities, good-paying jobs, career-track training, and other economic opportunities. Partnerships with community-based organizations, comprehensive support services to reduce barriers to access to opportunities and ensuring business and employment opportunities for members of DACs are key tools. Applicants are

¹⁶ Executive Order 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Jan. 20, 2021).

¹⁷ The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list of in the definition of "equity." E.O. 13985. For purposes of this FOA, communities identified as disadvantaged or underserved communities by their respective States; communities identified on the Index of Deep Disadvantage referenced at <https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/>, and communities that otherwise meet the definition of "underserved communities" stated above.

required to describe how diversity, equity, inclusion, and accessibility objectives will be incorporated in the project.

Further, Applicants are highly encouraged to include individuals from groups historically underrepresented^{18,19} in science, technology, engineering and math (STEM) fields on their project teams.

Minority Serving Institutions²⁰, Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, Tribal Colleges and Universities, or entities located in an underserved community that meet the eligibility requirements (See Section III) are encouraged to apply as the prime applicant or participate on an application as a proposed partner to the prime applicant. The Selection Official may consider the inclusion of these types of entities as part of the selection decision (See Section V.C.i. Program Policy Factors).

d. Justice40 Initiative

In addition to the Federal government's initiative to achieve greater participation from underserved communities and underrepresented groups, this FOA supports DOE's commitment to the Justice40 Initiative.²¹ Benefits include (but are not

¹⁸ According to the National Science Foundation's 2019 report titled, "Women, Minorities and Persons with Disabilities in Science and Engineering", women, persons with disabilities, and underrepresented minority groups—blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives—are vastly underrepresented in the STEM (science, technology, engineering and math) fields that drive the energy sector. That is, their representation in STEM education and STEM employment is smaller than their representation in the U.S. population. <https://nces.nsf.gov/pubs/nsf19304/digest/about-this-report> For example, in the U.S., Hispanics, African Americans and American Indians or Alaska Natives make up 24 percent of the overall workforce, yet only account for 9 percent of the country's science and engineering workforce. DOE seeks to inspire underrepresented Americans to pursue careers in energy and support their advancement into leadership positions. <https://www.energy.gov/articles/introducing-minorities-energy-initiative>

¹⁹ See also. Note that Congress recognized in Section 305 of the American Innovation and Competitiveness Act of 2017, Public Law 114-329:

(1) [I]t is critical to our Nation's economic leadership and global competitiveness that the United States educate, train, and retain more scientists, engineers, and computer scientists; (2) there is currently a disconnect between the availability of and growing demand for STEM-skilled workers; (3) historically, underrepresented populations are the largest untapped STEM talent pools in the United States; and (4) given the shifting demographic landscape, the United States should encourage full participation of individuals from underrepresented populations in STEM fields.

²⁰ Minority Serving Institutions refers to universities and colleges that serve a significant percentage of students from minority groups, including Historically Black Colleges and Universities/Other Minority Institutions as educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's Department of Education U.S. accredited postsecondary minorities' institution list. See <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>.

²¹ The Justice40 initiative, created by E.O. 14008, establishes a goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities. The Justice40 Interim Guidance provides a broad

limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in DACs: (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.

B. Topic Areas

i. Topic Areas

The proposed objectives, eligibility, and the technical approach for each of the three programs within the GRIP program are outlined below. DOE will be requesting and reviewing concept papers as part of the application process. Based on DOE's review of the concept papers, DOE will encourage a subset of applicants to submit Full Applications.

- Topic Area 1: Grid Resilience Grants (BIL section 40101(c))
- Topic Area 2: Smart Grid Grants (BIL section 40107²²)
- Topic Area 3: Grid Innovation Program (BIL section 40103(b))

Topic Area 1: Grid Resilience Grants (40101(c))

Objectives:

This program supports activities that reduce the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfire, and natural disaster. The statutory language requires prioritization of projects that will generate the greatest regional or community benefit (whether rural or urban) in reducing the likelihood and consequences of disruptive events.²³

definition of disadvantaged communities (Page 2): <https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf>. The DOE, Office of Management and Budget, and/or the Federal Council on Environmental Quality (CEQ) may issue additional and subsequent guidance regarding the designation of disadvantaged communities and recognized benefits under the Justice40 Initiative. 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/>

²² Topic Area 2 is authorized under section 1306 of the Energy Independence and Security Act of 2007, which was later amended by section 40107 of the BIL. The authority is codified at 42 USC §17386.

²³ 42 USC §18711(c)(4)

DOE is seeking projects that address comprehensive transformational transmission and distribution technology solutions that will mitigate one or multiple hazards across a region or within a community, including but not limited to wildfires, floods, hurricanes, extreme heat, extreme cold, storms, and any other event that can cause a disruption to the power system.

Consistent with the broader overall objectives of the GRIP programs, projects in this area should demonstrate that they will provide significant economic and justice benefits to communities, can leverage capital investment, and lead to repeatable solutions for other entities.

Technical approaches of interest include (but are not limited to) the following:

Grants under this program are for projects and activities that increase the ability of applicants to reduce the likelihood and consequences of impacts to the electric grid due to extreme weather, wildfire, natural disaster and other disruptive events.

Applicants will demonstrate a transformational, comprehensive approach to mitigating one or more hazards across a region or within a community. Concurrently, DOE encourages applicants to align proposed grid resilience and grid hardening investments with broader State, Tribal, or regional resilience or energy security plans.

DOE is particularly interested in applications for adaptive storage deployment, microgrid deployment, and the undergrounding of existing distribution and transmission lines – in addition to other eligible projects and solutions that provide significant benefit. In the selection process, DOE will prioritize applications that address community transformation or the ability to leverage capital investments.

For Topic Area 1, there are a broad range of activities, technologies, equipment, and hardening measures to reduce the likelihood and consequences of disruptive events that are eligible for funding²⁴, which include:

- (A) weatherization technologies and equipment;
- (B) fire-resistant technologies and fire prevention systems;
- (C) monitoring and control technologies;
- (D) the undergrounding of electrical equipment;
- (E) utility pole management;
- (F) the relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors;

²⁴ See BIL section 40101(e)(1)(A)-(L), as codified at 42 USC 18711(e)(1)(A)-(L).

- (G) vegetation and fuel-load management;
- (H) the use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including—
 - a. microgrids; and
 - b. battery-storage subcomponents;
- (I) adaptive protection technologies;
- (J) advanced modeling technologies;
- (K) hardening of power lines, facilities, substations, of other systems; and
- (L) the replacement of old overhead conductors and underground cables.

The following activities are NOT eligible²⁵ for funding under Topic Area 1: construction of a new— (I) electric generating facility; or (II) large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events; or cybersecurity.

Topic Area 1 Requirements

- **Small utility set-aside.** Thirty percent (30%) of the total funding available for Topic Area 1 will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year.²⁶ Entities applying for this set aside must demonstrate their eligibility by submitting their total retail electricity sales to ultimate customers as reported to the Energy Information Administration (EIA) on Form 861 for the last reporting year.

In addition to submission of the Form 861, applications to Topic Area 1 must include a Project Description and Assurances Document (PDAD) certifying the applicant is a Small Utility (sells no more than 4,000,000 MWh of electricity per year). The PDAD template is provided as Appendix F.

- **Report on Resilience Investments.** An applicant must submit as part of their application, a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events.²⁷ The report must summarize any program and related approved funding that the applicant’s organization has implemented over the past 3 years to reduce the likelihood of events in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster. The report must also summarize current and future efforts planned over at least the next 3 years to reduce the likelihood and consequences of disruptive events.

²⁵ See BIL section 40101(e)(2), as codified at 42 USC 18711(e)(2).

²⁶ 42 USC §18711(c)(5)

²⁷ 42 USC §18711(c)(2)(B)

In addition to submission of the report, applications to Topic Area 1 must include a PDAD that confirms the total amount (USD) of qualifying resilience investments that have been spent for the previous 3 years and the time period utilized for calculation of the reported amount by completing and certifying the PDAD. The PDAD template is provided as Appendix F.

- Funding supplemental to existing efforts. Grants under this program are in general intended to be supplemental to existing hardening efforts of applicants for any given year.²⁸ The applicant should describe in a narrative how the grant funding provided by this program would result in proposed activities that are additional to efforts that would have been undertaken but-for the funding and will generate the greatest community or regional resilience benefit in reducing the likelihood and consequences of disruptive events. This may include the acceleration or expansion of planned activities that would not be accelerated or expanded but-for the funding. The narrative should reference the *Report on Resilience Investments* to demonstrate how the proposed activities would be additional to existing planned investments.
- Biennial Report to Congress. Every two years DOE will submit a report to Congress covering data on the cost of projects, the types of activities funded, and the extent to which the ability of the power grid to withstand disruptive events has increased.²⁹ Awardees will be required to track and report this data to DOE.
- Section 40101(d), ALRD 2736. Per BIL section 40101(e)(2) (C) APPLICATION LIMITATIONS.—*An eligible entity may not submit an application for a grant provided by the Secretary under subsection (c) and a grant provided by a State or Indian Tribe pursuant to subsection (d) during the same application cycle.* If the applicant is a subaward/subcontract recipient for an application submitted under IJA Section 40101(d), ALRD 2736, the applicant must describe the differences between the GRIP FOA 2740 application [40101(c)] and the ALRD 2736 [40101(d)] application in the PDAD. The PDAD template is provided as Appendix F.

Topic Area 1 Teaming Arrangements

Eligible applicants include electric grid operators; electricity generators; electricity storage operators; transmission owners or operators; distribution providers; and fuel suppliers.³⁰ Applicants must certify that the prime applicant

²⁸ 42 USC §18711(c)(1)(A)

²⁹ 42 USC §18711(i)

³⁰ 42 USC §18711(a)(2)

is an eligible entity type as listed above via completion and submission of the PDAD. The PDAD template is provided as Appendix F.

As appropriate, ensuring that the state, Indian Tribe or territory is engaged in the approach is important. The expectation of the Department is that regulatory stakeholders will be engaged in this process to ensure cost recovery of the concepts are achieved.

Topic Area 2: Smart Grid Grants (40107)

Objectives

Topic Area 2 seeks to deploy and catalyze technology solutions that increase the flexibility, efficiency, reliability, and resilience of the electric power system, with particular focus on enhancing the system’s capabilities to meet the following objectives:

- increase the capacity of transmission facilities or the capability of the transmission system to reliably transfer increased amounts of electric energy;
- prevent faults that may lead to wildfires or other system disturbances;
- integrate variable renewable energy resources at the transmission and distribution levels; and,
- facilitate the aggregation and integration (edge-computing) of electric vehicles and other grid-edge devices or electrified loads.

According to a 2018 DOE report, the sum of real-time congestion cost for 2016 among major system operators— specifically, the California Independent System Operator (CAISO), the Electricity Reliability Council of Texas (ERCOT), Independent System Operator New England (ISO-NE), Midcontinent Independent System Operator (MISO), New York Independent System Operator (NYISO), and PJM — was \$4.8 billion.³¹ Another study from DOE found that grid-enhancing technologies (GETs) have significant potential to modernize the grid to increase capacity to reduce clean energy curtailment, unlock additional clean energy generation, and enable more resilient grid operation.³² Complimentary modeling of the impact of deploying three specific types of GETs – Advanced Power Flow Control, Dynamic Line Ratings and Topology Optimization – at a national scale could deliver \$5 billion in yearly energy production cost savings, with upfront investment paid back in just 6 months, and double the amount of renewables that can be integrated into the electricity grid prior to building new large-scale transmission lines. A more granular assessment conducted under the same study looked at the Southwest Power Pool system and found that

³¹ U.S. Department of Energy. "Annual U.S. transmission data review." 2018.

³² [U.S. Department of Energy](#). "Grid-Enhancing Technologies: A Case Study on Ratepayer Impact." February 2022.

deploying the same three types of GETs could enable 2 adjoining states, to integrate 5,200 MW of wind and solar generation currently in interconnection queues by 2025 without any new large-scale transmission buildout, more than double the development possible without the technologies.³³ DOE is interested in applications that deploy GETs to modernize the grid and unlock significant public benefit, and therefore demonstrate the suggested benefit shown by various studies. DOE is also interested in other eligible types of applications that deploy scalable solutions that deliver significant public benefit.

Applicants are encouraged to coordinate with and support broader State, local, Tribal, and regional strategies on resilience, energy security, energy & environmental justice, and decarbonization. In addition, smart grid technologies funded and deployed at-scale under this program should have a pathway to wider market adoption such that the funding significantly encourages and facilitates the development of a smart grid.³⁴ Aggregation of smart grid technologies is encouraged to accelerate deployment.

Technical approaches of interest include (but are not limited to) the following:

A broad set of eligible smart grid investments and capabilities is allowed under statute,³⁵ and any combination of smart grid investments and functions that support the objectives are eligible. DOE will require that projects support data standards (e.g., Green Button Connect³⁶), interoperability, and non-discriminatory data access on a real-time basis.

Priority investments in Topic Area 2 include the following:

- Increasing transmission capacity and operational transfer capacity through grid enhancing technologies such as dynamic line rating, flow control devices, advanced conductors, and network topology optimization, to improve system efficiency and reliability.
- Improving the visibility of the electrical system to grid operators, to help quickly rebalance the electrical system with autonomous controls, through data analytics, software, and sensors.

³³ [The Brattle Group](#). “Unlocking the Queue with Grid-Enhancing Technologies.” February 1, 2021.

³⁴ 42 USC §17386(e)(1)(C)

³⁵ 42 USC §17386(b) and (d)

³⁶ Green Button Connect is the energy industry standard enabling easy access to, and secure sharing of, utility-customer energy-usage data.

- Enhance secure communication and data flow between distribution components, through investments in optical ground wire, dark fiber, operational fiber, and wireless broadband communications networks.
- Aggregation and integration of distributed energy resources and other “grid-edge” devices to provide system benefits, such as renewable energy resources, electric vehicle charging infrastructure, vehicle-to-grid technologies and capabilities, and smart building technologies.
- Enhancing interoperability and data architecture of systems that support two-way flow of both electric power and localized analytics to provide information between electricity system operators and consumers.
- Anticipate and mitigate the impacts of extreme weather or natural disaster on grid resiliency, including investments to increase the ability to redirect or shut of power to minimize blackouts, prevent wildfires, and avoid further damage.

Complete list of qualifying investments under Topic Area 2³⁷ includes:

1. In the case of appliances covered for purposes of establishing energy conservation standards under part B of title III of the Energy Policy and Conservation Act of 1975,³⁸ the documented expenditures incurred by a manufacturer of such appliances associated with purchasing or designing, creating the ability to manufacture, and manufacturing and installing for one calendar year, internal devices that allow the appliance to engage in Smart Grid functions.
2. In the case of specialized electricity-using equipment, including motors and drivers, installed in industrial or commercial applications, the documented expenditures incurred by its owner or its manufacturer of installing devices or modifying that equipment to engage in Smart Grid functions.
3. In the case of transmission and distribution equipment fitted with monitoring and communications devices to enable smart grid functions, the documented expenditures incurred by the electric utility to purchase and install such monitoring and communications devices.
4. In the case of metering devices, sensors, control devices, and other devices integrated with and attached to an electric utility system or retail distributor or marketer of electricity that are capable of engaging in Smart

³⁷ 42 USC §17386(b)

³⁸ 42 USC §6291

Grid functions, the documented expenditures incurred by the electric utility, distributor, or marketer and its customers to purchase and install such devices.

5. In the case of software that enables devices or computers to engage in Smart Grid functions, the documented purchase costs of the software.
6. In the case of entities that operate or coordinate operations of regional electric grids, the documented expenditures for purchasing and installing such equipment that allows Smart Grid functions to operate and be combined or coordinated among multiple electric utilities and between that region and other regions.
7. In the case of persons or entities other than electric utilities owning and operating a distributed electricity generator, the documented expenditures of enabling that generator to be monitored, controlled, or otherwise integrated into grid operations and electricity flows on the grid utilizing Smart Grid functions.
8. In the case of electric or hybrid-electric vehicles, the documented expenses for devices that allow the vehicle to engage in Smart Grid functions (but not the costs of electricity storage for the vehicle).
9. In the case of data analytics that enable software to engage in Smart Grid functions, the documented purchase costs of the data analytics.
10. In the case of buildings, the documented expenses for devices and software, including for installation, that allow buildings to engage in demand flexibility or Smart Grid functions.
11. In the case of utility communications, the documented expenditures incurred by the electric utility to purchase and install operational fiber and wireless broadband communications networks to enable data flow between distribution system components.
12. In the case of advanced transmission technologies such as dynamic line rating, flow control devices, advanced conductors, network topology optimization, or other hardware, software, and associated protocols applied to existing transmission facilities that increase the operational transfer capacity of a transmission network, the documented expenditures to purchase and install those advanced transmission technologies.
13. In the case of extreme weather or natural disasters, the documented expenses for monitoring, control devices and other equipment that enable

the ability to redirect or shut off power to minimize blackouts and avoid further damage.

The following expenditures and investments are not eligible for Smart Grid grant funding under Topic Area 2³⁹:

1. Investments or expenditures for Smart Grid technologies, devices, or equipment that utilize specific tax credits or deductions under the Internal Revenue Code, as amended.
2. Expenditures for electricity generation, transmission, or distribution infrastructure or equipment not directly related to enabling Smart Grid functions.
3. After the final date for State consideration of the Smart Grid Information Standard under section 2621(d)(17) of title 16, an investment that is not in compliance with such standard.
4. After the development and publication by the Institute²² of protocols and model standards for interoperability of smart grid devices and technologies, an investment that fails to incorporate any of such protocols or model standards.
5. Expenditures for physical interconnection of generators or other devices to the grid except those that are directly related to enabling Smart Grid functions.
6. Expenditures for ongoing salaries, benefits, or personnel costs not incurred in the initial installation, training, or startup of smart grid functions.
7. Expenditures for travel, lodging, meals or other personal costs.
8. Ongoing or routine operation, billing, customer relations, security, and maintenance expenditures.

Teaming Arrangements

DOE encourages applicant teams to include a broad set of stakeholders, including but not limited to, electric grid operator or owners, technology vendors, system integrators, subject matter experts, local energy and environmental justice organizations, and community leaders. In addition, State,

³⁹ 42 USC §17386(c)

Tribal, territory, or regulatory stakeholders should be engaged in the approach as appropriate.

Topic Area 3: Grid Innovation Program (40103(b))

DOE is interested in both technical and non-technical approaches that improve grid reliability and resilience on a local, regional, and interregional scale. Innovative approaches can include advanced technologies, innovative partnerships, financial arrangements, deployment of projects identified by innovative planning and cost allocation approaches, and environmental siting and permitting strategies. Applications may address the transmission system, the distribution system, or both, and may include elements such as: distributed generation assets; load point flexibility enhancements; energy storage systems and other flexibility enhancements; technologies to increase the capacity of the transmission and distribution system; grid-edge technologies; sensing, communications, and control technologies and approaches; grid-forming power electronics; integrated system designs; projects with innovative financing and permitting solutions; projects with uncommon or innovative regulatory structures, projects that are a product of innovative planning, modeling, or cost-allocation approaches, and other similar projects.

There is currently insufficient development of projects that are critical to reliability and resilience of the grid, particularly in projects that would achieve the following outcomes for the transmission system: 1) increasing transfer capacity between regions, 2) addressing the most consequential system needs and challenges that cause or contribute to long and increasing interconnection queue time for clean energy, and 3) increasing supply of a geographically and technologically diverse sets of location-constrained energy resources to enhance resource adequacy and reduce correlated generation outages. DOE is particularly interested in applications that demonstrate innovative models, methods, technologies, or other ways to achieve these outcomes that enable grid resilience and reliability. DOE is also interested in all other eligible grid projects that support similar or greater public resilience and reliability benefit.

Applications combining multiple approaches are encouraged, and all applications should demonstrate how the proposed new, innovative approaches interact with each other and any existing infrastructure to increase overall system resiliency. Hardening of assets and infrastructure may be included but must show a clear contribution to overall system resiliency. Project results should enable asset owners and operators to effectively articulate within local, state, and Federal decision-making frameworks the economic, technical, and societal benefits of new innovative approaches that improve system reliability and resilience. Applications that invest in America's workforce; advance energy and environmental justice and support the goals of the Justice40 Initiative; engage in

meaningful community and stakeholder engagement; and advance diversity, equity, inclusion and accessibility are of particular importance in this topic area.

Entities who are eligible to apply to Topic Area 3 include States, local governments, Tribes, and public utility commissions. Applicants must certify that the prime applicant is an eligible entity via completion and submission of the PDAD. The PDAD template is provided as Appendix F.

Objectives

This program seeks to provide financial assistance to eligible entities (States, local governments, Tribes, public utility commissions) to facilitate coordination, and collaboration with electric sector owners and operators to:

- demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability; and
- demonstrate new approaches to enhance regional grid resilience, implemented through States by public and rural electric cooperative entities on a cost-shared basis.³³

DOE is soliciting projects that contribute significantly to one or more of the following primary objectives:

- Ensuring reliable grid operations by reducing the frequency, scale, and/or duration of disruptions, reducing capacity interconnection time, increasing regional and interregional transfer capacity, or reducing costs associated with increased reliability.
- Improving overall grid resilience in terms of avoiding, withstanding, responding to, and recovering from disruptions, including deliberate attacks, accidents, the growing threats of extreme weather events and climate change, and other naturally occurring threats or incidents. Projects may demonstrate:
 - Individual technologies and solutions (or multiple technologies and solutions working as a system) that address resilience in one part of the power system (e.g., transmission system).
 - Technologies and solutions that address resilience across the traditional boundaries in the power system (e.g., between transmission and distribution).
- Enhancing collaboration between and among eligible entities and private and public sector owners and operators on grid resilience, including in alignment with regional resilience strategies and plans. This includes collaboration across state and other territorial boundaries such as grid operators or other balancing authorities, with a particular focus on innovating planning processes, modeling, cost allocation, permitting, reduction of interconnection queue

waiting time, inter-regional projects and other activities aided by collaborative approaches.

- Contributing to the decarbonization of the electricity and broader energy system in a way that supports system resilience, reliability, and affordability by improving access to technologically and geographically diverse energy resources, including distributed energy resources and electrification opportunities.
- Providing enhanced system value, improving current and future system cost-effectiveness, and delivering economic benefits to community members, underrepresented regions, or other stakeholders. Applications should clearly identify their value proposition for each individual stakeholder group.

Project results should enable asset owners and operators to effectively articulate within local, state, regional and federal decision-making frameworks the economic, technical, and societal benefits of deploying new innovative technologies that improve system reliability and resilience.

Technical Approaches of interest include (but are not limited to) the following:

Applications to this topic area may address the transmission system, the distribution system, storage, or a combination.

Applications combining multiple approaches are encouraged, and all applications should demonstrate how proposed innovative approaches interact with each other and any existing infrastructure to increase overall system resilience. Innovative approaches can include advanced technologies; innovative partnerships; new financial arrangements; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices. Hardening of assets and infrastructure may be included but must show a clear contribution to overall system resilience.

DOE has identified the three areas of interest for this program spanning the transmission system, distribution system, and combination system approaches. These are not exhaustive, nor intended to be fully independent. Applications that address more than one area of interest, or that present alternative approaches to accomplish the key objectives outside of the specified areas of interest, are encouraged.

Area of Interest 1: Transmission system applications

The transmission system in operation today is the backbone of the electricity delivery system that connects all grid resources and acts as the path for electricity to flow from generation to demand. Transmission capacity constraints and congestion can prevent delivery of clean, cost-effective electricity to consumers,

harming overall system reliability. Advanced transmission technologies, coupled with advanced computational and advanced dynamic situational awareness, are a suite of tools that can help address transmission challenges, improve the efficiency and effectiveness of electricity delivery, and increase the reliability and resilience of the system. Innovative project approaches, including those leveraging advanced transmission technologies can reduce or remove the existing technical, economic, and/or regulatory barrier(s) necessary to accelerate widescale transmission expansion and renewable energy interconnection. Proposed solutions should demonstrate enhanced transmission system operational flexibility or capacity while enhancing reliability.

Applications in this area could include technologies, solutions, and advanced functionalities such as:

- Investments and strategies that accelerate interconnection of clean energy generation and/or storage;
- Interregional or cross-ISO/RTO projects that address key grid reliability, flexibility, and/or resilience challenges;
- Projects addressing grid access challenges for remote, stranded, or novel low-carbon resources;
- Planning, modeling, cost allocation, or other approaches that enable a transition to innovative financial and/or regulatory constructs that accelerate transmission expansion;
- Underground or underwater HVDC systems in challenging environments;
- Capacity enhancing approaches such as advanced conductors or dynamic line rating systems;
- Congestion management techniques including energy storage and integrated controls;
- Transmission-scale reactive power devices;
- Flexible alternating current transmission system (FACTS) devices;
- Solid state transformers;
- Power flow controllers for AC or High Voltage Direct Current (HVDC) systems.

Area of Interest 2: Distribution system applications

The distribution system serves as a highly interconnected system providing reliable electricity to consumers. The integration of variable distributed energy sources such as wind and solar power, new loads such as electric vehicle charging, and energy storage into these networks is creating new challenges and opportunities for power system control and operation. Solutions should demonstrate improved cost-value characteristics relative to alternative approaches, managing distribution grid integration costs and traditional asset upgrade costs while maintaining or enhancing system reliability and service

provision.

In addition, extreme weather events have led to an increase in the frequency and duration of de-energization events. These occurrences, along with other experienced or potential disruptions of the distribution grid highlight the importance of improved system resilience. Solutions should demonstrate improved system resilience in response to disruptions and/or recovery from these events with an emphasis on community transformation.

Applications in this area could include demonstration of technologies, solutions, and advanced functionalities such as:

- Adaptive microgrid formation, reliable islanded operations, and service provision during grid-tied operations;
- Demonstration of reliable and resilient system operations utilizing high levels of distributed renewable generation and energy storage, or increased levels of non-emitting, non-electric distributed energy resources (e.g., renewable heating or cooling);
- Black-start capable systems and control approaches to minimize negative impacts during power grid disruptions;
- Provision of grid services from distributed, advanced grid-forming inverter-based systems at sufficient scale and system complexity;
- Behind the meter asset operations, aggregation, and coordination to provide demand response and grid services, including building systems, distributed generation, energy storage, electric vehicle fleets and others.

Area of Interest 3: Combination systems applications

While there is a clear differentiation between transmission and distribution systems in the current electrical grid, they both function within the same overall systems. Area of Interest 3 is intended to highlight opportunities to improve joint resilience and functionality across both grid sectors. This could involve using assets in one sector to provide services to the other in a manner that reduces upgrade or expansion requirements, or efforts to improve visibility and communication across sectors to allow for more complete optimization of grid operations.

Applications in this area could include demonstration of technologies, solutions, and advanced functionalities such as:

- Utilization of distribution grid assets to provide backup power and reduce transmission requirements;

- Utilization of distribution grid dispatchable loads, distributed generation, and energy storage to manage transmission congestion and limit required upgrades;
- Optimized integrated management of transmission and distribution systems;
- Monitoring and control technologies, that can provide improved resilience and extend grid visibility & situational awareness across the entire electric delivery system by providing real-time situational awareness across the system.

Requirements

Topic Area 3 will prioritize large scale and complex system projects that demonstrate innovative approaches while offering the greatest public benefit with a clear path to replication, scale, and ability to impact decarbonization objectives; projects that provide equitable access to innovative technologies and business models; and demonstrations that involve multiple communities and diverse asset compositions including electrical, thermal, building and transportation solutions.

Successful applications in this Topic Area 3 will clearly explain:

- The scale of the proposed project and the differentiated value that this scale will bring to the project and the subject area.
- The replicability, extensibility, and scalability of the method, model, financing, planning, regulatory approach, technology, or other solution given the system in which it will be demonstrated.
- Estimated costs and value propositions for the proposed project including contribution to system cost effectiveness, as well as a relative value comparison to alternative approaches.
- How quantitative, measurable metrics relating to the intended improvements in grid outcomes will be utilized to evaluate success.
- The readiness, viability, and expected timing of the deployment strategy, including key milestones relating to critical financial, development, and implementation stages of the project.
- The project management strategy, including use of project funds to secure subrecipient or vendor expertise to support prime recipients on project management, accounting, environmental justice community engagement, federal reporting, and technical oversight.

- Note: this approach has been identified as a potential path forward to address resource limitations at recipient organizations. It is not required that external expertise and groups be included, but use of project funds to support these functions will be allowed in accordance with applicable federal cost principles (Section I.i Allowable Costs)
- How federal funding to address the risks identified in the application will increase the likelihood of securing additional public and/or private investment.
- How the project will invest in America’s workforce, meaningfully engage communities and stakeholders, advance energy and environmental justice, and ensure diversity, equity, inclusion, and accessibility.

Teaming Arrangements

This topic area seeks to support demonstrations at sufficient scale and within a system of sufficient complexity to establish confidence in the value proposition of the proposed approach. Applicants are encouraged to assemble diverse and multi-functional project teams capable of receiving and managing federal and matching funds, executing on technology deployments and upgrades, conducting operational testing and validation, analyzing resultant data and performance, and clearly communicating and disseminating findings to key stakeholders and decision makers. The team must designate one team member to serve as the prime recipient and that team member must qualify as an eligible applicant. See Section III.

In addition, all teams should clearly articulate their ***strategy to enable wide-scale adoption*** of their proposed solutions following a successful demonstration and their ***intended commitment*** to utilize these or resultant solutions within their own systems and jurisdictions. Projects selected under this topic area will attempt to resolve technical and commercial adoption barriers by increasing stakeholder confidence in the performance, cost, and value characteristics of their proposed system. In order to ensure maximum impact following these demonstrations, a clear plan to disseminate findings, replicate successes, incorporate the outcomes of the demonstrations into investment decision-making frameworks, and activate additional public and private capital is crucial. These plans should consider which stakeholders and decision makers must be informed as to the demonstration results, what types and quality of information would lead to concrete investment decisions, and how to integrate with local, Tribal, state, and regional energy strategies and transition plans to amplify overall impact and rate of adoption. Initial strategies should be presented in the

application, but it is expected that these plans will be developed more fully over the course of the project.

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

Project Management Plan: Successful applicants under all topic areas will be required to prepare a Project Management Plan (PMP). The initial PMP is due 30 days after award. The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc. A sample PMP is available at: [BIL-GRIP Application Forms and Templates | netl.doe.gov](https://netl.doe.gov).

ii. **Teaming Partner List**

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

Updates to the Teaming Partner List will be available in the FedConnect (<https://www.fedconnect.net/>) website. The Teaming Partner List will be regularly updated to reflect new teaming partners who provide their organization’s information. Applicants must register with FedConnect to have access to the Teaming Partner List and any updates to it.

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 Topic Area(s) of Interest. Interested parties should complete the Excel file titled DOE-FOA-0002740 Teaming Partner List provided as an attachment to this announcement and email it to GDOFOA@hq.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 technical parameters specified in Sections I.A. and I.B. of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Topic Area 1: Applications that propose the construction of a new—(I) electric generating facility; or (II) large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events; or cybersecurity.
- Topic Area 2: See full list of investments not included in section I.B.

D. Authorizing Statutes

The programmatic authorizing statute is as follows:

- Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL):
 - Section 40101(c) – 42 USC §18711(c);
 - Section 40107 – 42 USC §17386;
 - Section 40103(b) – 42 USC §18712(b).
- Public Law (PL) 95-91, DOE Organization Act;
- PL 109-58, Energy Policy Act 2005;
- PL 110-140 Energy Independence and Security Act of 2007.

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

E. Notice of Bipartisan Infrastructure Law-Specific Requirements

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

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;
- Requiring all of the iron, steel, manufactured goods, and construction materials used in the infrastructure activities of applicable projects are produced in the United States;

- Ensuring laborers and mechanics employed by contractors or subcontractors on BIL-funded projects are paid wages equivalent to prevailing wages on similar projects in the area;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

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

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to make a total of approximately \$3.9 Billion of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 40-100 awards under this FOA. DOE may issue one, multiple, or no awards. Individual award amounts vary by topic area, see details below.

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	Anticipated Period of Performance (months)
1	Grid Resilience Grants (40101(c))	10*	N/A	Either the total of the applicant’s last three years of resilience investments or \$100 million, whichever is lower**	\$918 Million	60 months

2	Smart Grid Grants (40107)	25-40	N/A	\$50 Million	\$1,080 Million	60 months
3	Grid Innovation Program (40103(b))	4-40	N/A	\$250 Million (Increased award size of \$1 Billion per award for interregional transmission projects only)	\$1,820 Million	60-96 months

*Approximately 3 of the anticipated number of awards will be made to small utilities. Thirty percent (30%) of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year.⁴⁰

**DOE may not award a grant to an eligible entity in an amount that is greater than “the total amount that the eligible entity has spent in the previous 3 years on efforts to reduce the likelihood and consequences of disruptive events”.⁴¹ DOE is including an additional discretionary limit of \$100 million in federal funds per award. DOE will interpret “efforts to reduce the likelihood and consequences of disruptive events” as those activities, technologies, equipment, and hardening measures that are eligible for grants under this provision.⁴²

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

ii. Period of Performance

DOE anticipates making awards that will run from 60 months to 90 months in length (see table below), 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.xv.

Topic Area	Period of Performance
1	60 months
2	60 months
3	60 - 96 months

⁴⁰ 42 USC §18711(c)(5)

⁴¹ 42 USC §18711(c)(3)

⁴² 42 USC §18711(e)1

iii. New Applications Only

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

B. DOE Funding Agreements

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

i. Cooperative Agreements (applies to Topic Area 3 ONLY)

DOE anticipates funding projects selected under Topic Area 3 through cooperative agreements. In the event funding is awarded to another federal agency, the funding may be provided directly to the agency through an interagency agreement.

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. Grants (applies to Topic Area 1 and 2 ONLY)

DOE anticipates funding projects selected under Topic Areas 1 and 2 through grants. In the event funding is awarded to another federal agency, the funding may be provided directly to the agency through an interagency agreement.

III. Eligibility Information

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

A. Eligible Applicants

i. Topic Area 1 (Section 40101(c))

The following domestic entities are eligible to apply:

- electric grid operator;

- electricity storage operator;
- electricity generator;
- transmission owner or operator;
- distribution provider; and
- fuel supplier.

ii. Topic Area 2 (Section 40107)

The following domestic entities are eligible to apply:

- Institutions of higher education;
- For-profit entities;
- Non-profit entities; and
- State and local governmental entities, and tribal nations.

iii. Topic Area 3 (40103(b))

The following domestic entities are eligible to apply:

- a State;
- a combination of 2 or more States;
- an Indian Tribe;
- a unit of local government; and
- a public utility commission.

iv. General Requirements for Eligible Applicants For Topic Areas 1, 2, and 3

a. Domestic Entities

Under this FOA, to qualify as a domestic entity, an entity other than a State or Indian Tribe must be organized, chartered or incorporated (or otherwise formed) under the laws of the United States or of a particular state or territory of the United States and have a physical place of business in the United States. Both recipients and subrecipients must be domestic entities absent an approved waiver.

b. 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.

c. National Laboratories/FFRDCs

National Laboratories and Federal Funded Research and Development Centers (FFRDCs) are not eligible to apply for funding as a prime recipient and may not be proposed as a subrecipient on another entity's application. This restriction is applicable to both DOE/NNSA and non-DOE/NNSA National Laboratories and FFRDCs.

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

d. Federal agencies

Federal agencies, instrumentalities, and corporations (other than DOE) are eligible to participate as a subrecipient if the agency, instrumentality, or corporation satisfies the statutory requirements, but are not eligible to apply as a prime recipient; except for the Tennessee Valley Authority (under Topic Area 1), who is eligible to participate as a prime recipient and as a subrecipient.

e. Teaming Arrangements

The project team must designate one team member to serve as the prime recipient and that team member must qualify as an eligible entity. If the project team will operate as an incorporated or unincorporated consortium, DOE may request the applicant to provide additional information, such as any collaboration agreement, that describes management structure and the rights and responsibilities of each consortium member.

f. Additional Restrictions

Entities banned from doing business with the U.S. 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. Nonprofit organizations described in section 501(c)5 of the Internal Revenue Code are eligible to apply for funding.

v. Restricted Eligibility (applies to Topic Area 1 and Topic Area 3 ONLY)

In accordance with 2 CFR 910.126, DOE restricted eligibility for Topic Area 1 and Topic Area 3 to incorporate the eligibility requirements set forth in sections

40101(c) and 40103(b) of the BIL, as codified at 42 USC 18711 and 42 USC 18712(c), respectively.

B. Cost Sharing

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

Topic Area	Topic Area Title	Cost Match/Share Requirement
1	Section 40101(c) – “Grants to Eligible Entities on Preventing Outages and Enhancing the Resilience of the Electric Grid (Grid Resilience Grants)”	An eligible entity that receives a grant under this section shall be required to match 100% of the amount of the grant (at least 50% of the Federal funds only, rather than the Total Project Cost). Exception for small utilities: An eligible entity that sells not more than 4,000,000 megawatt hours of electricity per year shall be required to match 1/3 of the grant.*
2	Section 40107 – “Deployment of Technologies to Enhance Grid Flexibility (Smart Grid Grants)”	The cost share must be at least 50% of the total project costs. The cost share must come from non-federal sources unless otherwise allowed by law.
3	Section 40103 (b) – “Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (Grid Innovation Program)”	Section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16352) shall apply. The cost share must be at least 50% of the total project costs. ^{43,44} The cost share must come from non-federal sources unless otherwise allowed by law.

***Cost matching:** “Cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost.

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

i. Legal Responsibility

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

⁴³ Total project costs is the sum of the government share, , and the recipient share of project costs.

⁴⁴ 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.

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.I.i. of the FOA. In addition, cost share must be verifiable upon submission of the Full Application.

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

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

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

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

- Revenues or royalties from the prospective operation of an activity beyond the project period;

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

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

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

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

iv. Cost Share 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.

v. Cost Share Payment

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

In limited circumstances, and where it is in the government's interest, the DOE Contracting Officer may approve a request by the prime recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. Regardless of the interval requested, the prime recipient must be up-to-date on cost share at each interval. Such requests must be sent to the Contracting Officer during award negotiations and include the following information: (1) a detailed

justification for the request; (2) a proposed schedule of payments, including amounts and dates; (3) a written commitment to meet that schedule; and (4) such evidence as necessary to demonstrate that the prime recipient has complied with its cost share obligations to date. The Contracting Officer must approve all such requests before they go into effect.

C. Compliance Criteria

Concept Papers and Full Applications must meet all compliance criteria listed below or they will be considered noncompliant. DOE will not review or consider noncompliant submissions, including Concept Papers and Full Applications that were: submitted through means other than specifically stated in the FOA; submitted after the applicable deadline; and/or submitted incomplete. DOE will not extend the submission deadline for applicants that fail to submit required information by the applicable deadline due to server/connection congestion.

i. Concept Papers

Concept Papers are deemed compliant if:

- The Concept Paper complies with the content and form requirements in Section IV.C. of the FOA; and
- The applicant successfully emailed all required documents to FOA2740@netl.doe.gov by the deadline stated in this FOA.

ii. Full Applications

Full Applications are deemed compliant if:

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

D. Responsiveness Criteria

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

E. Other Eligibility Requirements (Reserved)

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

An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, scientifically distinct

project and 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 will include 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.**

At each phase, DOE performs an initial eligibility review of the applicant submissions to determine whether they meet the eligibility requirements of Section III of the FOA. DOE will not review or consider submissions that do not meet the eligibility requirements of Section III. All submissions must conform to the following form and content requirements, including maximum page lengths (described below) and must be submitted via Grants.gov at <https://www.grants.gov/>, unless specifically stated otherwise in the FOA. **DOE will not review or consider submissions submitted through means other than specifically stated in the FOA, submissions submitted after the applicable deadline, or incomplete submissions.** DOE will not extend deadlines for applicants who fail to submit required information and documents due to server/connection congestion.

The Concept Paper and Full Application must conform to the following requirements:

- 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; 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.

Applicants are responsible for meeting each submission deadline. **Applicants are strongly encouraged to submit their Concept Papers and Full Applications at least 48 hours in advance of the submission deadline.** Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Concept Paper and Full Application. Once the Concept Paper and Full Application is submitted as specifically stated in the FOA, 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 and Full Application before the applicable deadline.

DOE urges applicants to carefully review their Concept Paper and Full Application to allow sufficient time for the submission of required information and documents. Full Applications that pass the initial eligibility review will undergo comprehensive technical merit review according to the criteria identified in Section V of the FOA.

B. Application Forms

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

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

TechnicalVolume_Part_1

TechnicalVolume_Part_2

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

C. Content and Form of the Concept Paper

Each Concept Paper must be limited to a single Topic Area. Do not consolidate multiple Topic Areas into a single Concept Paper.

The Concept Paper must conform to the following content and form requirements and must not exceed the stated page limits. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages:

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 and/or Technology Description	12 pages maximum	Applicants are required to describe succinctly: <ul style="list-style-type: none"> • How the project addresses the topic area’s eligible uses and technical approaches. • How the project supports State, local, Tribal, community and regional resilience, in reducing the likelihood and consequences of disruptive events, decarbonization, or other energy strategies and plans. • The grid-benefitting outcomes to be delivered by the project. • The impact of the project to reduce innovative technology risk; achieve further deployment at-scale; and lead to additional private sector investments. • The impact that DOE funding would have on the proposed project. • The readiness, viability, and expected timing of the project.
Community Benefits Plan	5 Pages maximum	Applicants are required to describe succinctly the approach to be taken with the Community Benefits Plan, addressing the four core elements: <ul style="list-style-type: none"> • 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 of certain climate and clean energy investments flow to disadvantaged communities.
Addendum A	5 pages maximum	Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including: <ul style="list-style-type: none"> • Whether the Project Manager and Project Team have the skill and expertise needed to successfully execute the project plan;

		<ul style="list-style-type: none"> • Whether the applicant has prior experience that demonstrates an ability to perform tasks of similar risk and complexity; • Whether the applicant has worked together with its teaming partners on prior projects or programs; and • Whether the applicant has adequate access to equipment and facilities necessary to accomplish the effort and/or clearly explain how it intends to obtain access to the necessary equipment and facilities. • Applicants may provide graphs, charts, or other data to supplement their Project and/or Technology Description.
Addendum B Topic Area 1 ONLY, if applicable*	N/A	Applicants who are small utilities applying to Topic Area 1 must submit the EIA Form 861 for the last reporting year showing the total retail electricity sales to ultimate customers to ensure status as a small utility.
*Small utilities ONLY: 30% of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year. ⁴⁵		

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. An applicant who receives a “discouraged” notification may still submit a Full Application. DOE will review all eligible Full Applications. However, by discouraging the submission of a Full Application, DOE intends to convey its lack of programmatic interest in the proposed project in an effort to save the applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

DOE may include general comments provided from reviewers on an applicant’s Concept Paper in the encourage/discourage notification sent via email at the close of that phase.

D. Content and Form of the Full Application

Applicants must submit a Full Application by the specified due date and time to be considered for funding under this FOA. Applicants must complete the following application forms found on the Grants.gov website at <https://www.grants.gov/> in accordance with the instructions.

Applicants should reference the date and time stated on the FOA cover page to plan for the number of days from receipt of the Concept Paper

⁴⁵ 42 USC §18711(c)(5)

Encourage/Discourage notification to preparing and submitting 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.

i. Full Application Content Requirements

Each Full Application must be limited to a single concept or technology. Do not consolidate unrelated concepts and technologies in a single Full Application. Full Applications must conform to the following content and form requirements and must not exceed the stated page limits. **If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.**

Component	File Format	Page Limit	File Name
SF-424	Form	N/A	N/A
Project/Performance Site Location(s)	Form	N/A	N/A
Technical Volume	PDF	25	TechnicalVolume.pdf
Resumes	PDF	2 pages each	Resumes.pdf
Letters of Commitment	PDF	1 page each	LOC.pdf
Community Partnership Documentation	PDF	1 page each	LeadOrganization_Partner.pdf
Statement of Project Objectives	MS Word	5	SOPO.doc or docx
Budget Justification Workbook	MS Excel	N/A	Budget_Justification.xls or xlsx
Summary/Abstract for Public Release	PDF	1	Summary.pdf
Summary Slide	MS PowerPoint	Up to 3	Slide.ppt or pptx
Subrecipient Budget Justification	MS Excel	N/A	Subrecipient_Budget_Justification.xls or xlsx
Environmental Questionnaire	PDF	N/A	Env.pdf
SF-LLL Disclosure of Lobbying Activities	Form	N/A	N/A
Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	N/A	FN_Waiver.pdf
Buy America Requirements for Infrastructure Projects Waiver Requests	PDF	N/A	BAWaiver.pdf
Community Benefits Plan: Job Quality and Equity	PDF	12	CBenefits.pdf
Potentially Duplicative Funding Notice (if applicable)	PDF	N/A	PDFN.pdf

Report on Resilience Investments Topic Area 1 ONLY	PDF	10	ResilienceInvestments.pdf
EIA 861 Topic Area 1 ONLY, if applicable*	PDF	N/A	EIA861.pdf
<u>Locations of Work</u>	MS Excel	N/A	LOW.xls or.xlsx
Project Description and Assurances Document (PDAD)	PDF	N/A	PDAD.pdf
*Small utilities ONLY: 30% of the total funding available will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year. ⁴⁶			

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

ii. SF-424: Application for Federal Assistance

Complete the SF 424 form first to populate data in other forms. Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at

<https://www.energy.gov/management/financial-assistance-forms-and-information-applicants-and-recipients>, under Certifications and Assurances.

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

iii. Project/Performance Site Location(s)

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

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

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

iv. Technical Volume

The Technical Volume must be submitted in PDF format. The Technical Volume must conform to the following content and form requirements, including maximum page lengths. This volume must address the technical review criteria as discussed in Section V of the FOA. Save the Technical Volume in a single PDF file using the following convention for the title “TechnicalVolume.pdf” and click

⁴⁶ 42 USC §18711(c)(5)

on "Add Mandatory Other Attachment" to attach. Note: If a file exceeds 10 MB 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

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

The Technical Volume to the Full Application may not be more than 25 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. The Technical Volume must conform to the following content requirements:

Technical Volume Content Requirements	
SECTION/PAGE LIMIT	DESCRIPTION
Cover Page	The cover page should include the project title, the specific FOA Topic Area being addressed, both the technical and business points of contact, names of all team member organizations, names of the senior/key personnel and their organizations, the project location(s), and any statements regarding confidentiality.
Project Overview (Approximately 10% of the Technical Volume)	<p>The Project Overview should contain the following information:</p> <ul style="list-style-type: none"> • Background: The applicant should discuss the background of their organization, including the history, successes, and current project development status (i.e., the development baseline) relevant to the technical topic being addressed in the Full Application. • Project Goal: The applicant should explicitly identify the targeted improvements to the baseline infrastructure, practices and regulatory framework, and/or technology and the critical success factors in achieving that goal, including the ways in which the proposed project location and related infrastructure, skilled workforce, community benefits, etc. will contribute to the success of the overall project. • DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically

	<p>explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to enable the project to progress, and to achieve its intended objectives.</p> <ul style="list-style-type: none"> • Community Benefits Plan: Job Quality and Equity – The applicant should summarize the overall anticipated benefits that will accrue to the local community and DACs (including, but not limited to, decreased duration, frequency, or impact of power disruption; increased access to clean power; and the support of minority business enterprises). The applicant should summarize a plan to attract, train, and retain a skilled labor force with strong labor standards, ensure workers’ free and fair chance to join a union, and identify potential partners they are working with to support these objectives. • The applicant should articulate a strategy for sharing and maximizing the project’s benefits across disadvantaged communities and include a discussion of how resident and community leadership will be engaged throughout the project’s duration. DOE encourages efforts to reach historically underserved populations, racial minorities, and women. These strategies should create the connectivity and conditions for growth where they may not exist, such as in rural, underserved, and disadvantaged communities. • Identify any potential long-term constraints the project will have on the community’s access to natural resources (e.g., water) and Tribal cultural resources. If applicable, describe a long-term cleanup strategy that ensures communities and neighborhoods remain healthy and safe and not burdened with cleanup costs and waste. • The applicant should outline a climate resilience strategy that accounts for climate impacts and extreme weather patterns such as high winds (tornadoes and hurricanes), heat and freezing temperatures, drought, wildfire, and floods.
<p>Technical Description, Innovation, and Impact (Approximately 30% of the Technical Volume)</p>	<p>The Technical Description should contain the following information:</p> <ul style="list-style-type: none"> • Relevance and Outcomes: The applicant should provide a detailed description of the project, including grid outcomes, the technology used, and other principles and objectives that will be pursued during the project. This section should describe the relevance of the proposed project to the goals and objectives of the FOA, including the potential for the deployment of the project to meet specific desired grid outcomes and other relevant performance targets. The applicant should clearly specify the expected outcomes of the project. • Feasibility: The applicant should demonstrate the technical feasibility of the proposed technology and capability of achieving the anticipated performance targets, including a description of previous work done and prior results. This section should also address the project’s access to necessary infrastructure (e.g. transportation, water, electric transmission), including any use of existing infrastructure, as well as to a skilled workforce.

	<ul style="list-style-type: none"> • Innovation and Impacts: The applicant should describe the current standard practice and/or state-of-the-art technology in the applicable field, the specific innovation (which can include advanced technologies; innovative partnerships; new financial arrangements; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices) of the proposed technology, the advantages of proposed technology over current and emerging technologies, and the overall impact on advancing the state-of-the-art/technical baseline if the project is successful. • The applicant should describe how the project supports State, local, Tribal, regional and national resilience, decarbonization, or other energy goals, strategies and plans. • The applicant should address the potential impact of the project to reduce perceived risk for project deployment; achieve further deployment at-scale to; and lead to additional private sector investments. • <u>Topic Area 1 (Grid Resilience Grants) applications must:</u> <ul style="list-style-type: none"> ○ Address how the proposed project will generate the greatest community, regional, or interregional resilience benefit in reducing the likelihood and consequences of disruptive events. ○ Address how the project (1) comprehensively mitigates one or more hazards faced by community or region; (2) comprehensively mitigates the potential for equipment to cause a wildfire in a community or region; (3) fully addresses the consequences of an outage caused by a natural hazard; or (4) mitigates economic risk as derived from outage duration or outage frequency. ○ Address how the grant funding provided by this program would result in proposed activities that go beyond and are additional to efforts that would have been undertaken but-for the funding and will generate the greatest community or regional resilience benefit in reducing the likelihood and consequences of disruptive events. The narrative should reference the <i>Report on Resilience Investments</i> to demonstrate how the proposed activities would be additional to existing planned investments. • <u>Topic Area 2 (Smart Grid Grants) applications must:</u> <ul style="list-style-type: none"> ○ Describe how the project will have a significant effect in encouraging and facilitating the development of smart grid functions identified as priority focus areas in 1.B.Topic Area 2 ○ Describe how the project would enhance the system flexibility to meet program objectives. • <u>Topic Area 3 (Grid Innovation Program) applications must:</u>
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	<ul style="list-style-type: none"> ○ Describe how the project will address innovative approaches and deployment goals across transmission systems, distribution, or both as identified as priority focus areas in 1.B.Topic Area 3. ○ Describe how federal funding to address the risks identified in the application will increase the likelihood of securing additional public and/or private investment or otherwise enable the project to proceed. ○ Include how the concept will provide economic benefit to communities or regions that mitigate impacts from extreme events and disruptions. ○ Describe how the project has the potential to deliver near-term impact, with appropriate quantitative metrics ○ Describe project’s readiness, viability, and expected timing.
<p>Workplan (Approximately 40% of the Technical Volume)</p>	<p>The Workplan should include a summary of the Project Objectives, Technical Scope, Work Breakdown Structure (WBS), Milestones, Go/No-Go Decision Points, and Project Schedule. A detailed SOPO is separately requested. The Workplan should contain the following information:</p> <ul style="list-style-type: none"> ● Project Objectives: The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes. ● Technical Scope Summary: 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 detailed 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 milestones, will accomplish the final project goal(s), and will produce all deliverables. The Workplan is to be structured with a hierarchy of performance period (approximately annual), task and subtasks, which is typical of a standard WBS for any project. The Workplan shall contain a concise description of the specific activities to be conducted over the life of the project. The description shall be a full explanation and disclosure of the project being proposed (i.e., a statement such as “we will then complete a proprietary process” is unacceptable). It is the applicant’s responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this FOA. The summary provided should be consistent with the SOPO. The SOPO will contain a more detailed description of the WBS and tasks. ● Milestone Summary: The applicant should provide a summary of appropriate milestones throughout the project to demonstrate success. A

	<p>milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be Specific, Measurable, Achievable, Relevant, and Timely, and must demonstrate a technical achievement rather than simply completing a task. Unless otherwise specified in the FOA, the minimum requirement is that each project must have at least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). The applicant should also provide the means by which the milestone will be verified.</p> <ul style="list-style-type: none">• Go/No-Go Decision Points (See Section VI.B.xv 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 Workplan. At a minimum, each project must have at least one project-wide Go/No-Go decision point for each budget period (12 to 18-month period) of the project. The applicant should also provide the specific objective criteria to be used to evaluate the project at the Go/No-Go decision point. The summary provided should be consistent with the SOPO. Go/No-Go decision points are considered “SMART” and can fulfill the requirement for an annual SMART milestone.• End of Project Goal: The applicant should provide a summary of the end of project goal(s). At a minimum, each project must have one SMART end of project goal. The summary provided should be consistent with the SOPO.• Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and Go/No-Go decision points.• Buy America Requirements for Infrastructure Projects: Within the first 2 pages of the Workplan or project description, include a short statement on whether the project will involve the construction, alteration, maintenance and/or repair of public infrastructure in the United States. See Appendix C for applicable definitions and other information regarding Infrastructure Projects and the Buy America Requirement.• Project Management: The applicant should discuss the team’s proposed management plan, including the following:<ul style="list-style-type: none">○ The overall approach to and organization for managing the work○ The roles of each project team member○ Any critical handoffs/interdependencies among project team members○ The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices○ The approach to project risk management, including a plan for securing a qualified workforce and mitigating risks to project
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	<p>performance including but not limited to community or labor disputes.</p> <ul style="list-style-type: none"> ○ A description of how project changes will be handled ○ If applicable, the approach to Quality Assurance/Control ○ How communications will be maintained among project team members
<p>Technical Qualifications and Resources (Approximately 20% of the Technical Volume)</p>	<p>The Technical Qualifications and Resources should contain the following information:</p> <ul style="list-style-type: none"> ● Describe the project team’s unique qualifications and expertise, including those of key subrecipients. ● Describe the project team’s existing equipment and facilities, or equipment or facilities already in place on the proposed project site, that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project. ● This section should also include relevant, previous work efforts, demonstrated innovations, and how these enable the applicant to achieve the project objectives. ● Describe the time commitment of the key team members to support the project. ● Describe the technical services to be provided by DOE/NNSA FFRDCs, if applicable.

v. Resumes

A resume provides information that can be used by reviewers to evaluate the individual’s skills and experience of the key project personnel. Applicants are required to submit two-page resumes for each project manager and key personnel that include 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 "Resumes.pdf" and click on "Add Optional Other Attachment" to attach.

vi. Letters of Commitment

Submit letters of commitment from all subrecipient and third-party cost share providers. If applicable, also include any letters of commitment from suppliers/partners/end users/future customers/labor unions/community-based organizations (one-page maximum per letter). Save the letters of commitment in a single PDF file using the following convention for the title "LOC.pdf" and click on "Add Optional Other Attachment" to attach.

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

vii. 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 "LeadOrganization_Partner.pdf".

viii. Statement of Project Objectives (SOPO)

Applicants are required to complete a SOPO. A SOPO template is available as Appendix D of the FOA. The SOPO, including the Milestone Table, must not exceed 5 pages when printed using standard 8.5 x 11 paper with 1" margins (top, bottom, left, and right) with font not smaller than 12-point (except in figures or tables, which may be 10-point font). Save the SOPO in a single Microsoft Word file using the following convention for the title "SOPO.doc or docx" and click on "Add Optional Other Attachment" to attach.

ix. Budget Justification Workbook

Applicants are required to complete the Budget Justification Workbook. This workbook is included as an attachment to this announcement for use and to describe the level of detail required in the budget justification. Although the data requested is mandatory, the use of the budget justification workbook is not. Prime recipients 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 required annual audits and incurred cost proposals in their proposed budget documents. 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 “Recipient_Budget_Justification.xls or.xlsx” and click on “Add Optional Other Attachment” to attach.

x. Summary/Abstract for Public Release

Applicants are required to submit a one-page summary/abstract of their project. The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project manager, 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), and major participants (for collaborative projects). 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 project 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 convention for the title “Summary.pdf” and click on “Add Optional Other Attachment” to attach.

xi. Summary Slide

Applicants are required to provide up to 3 slides summarizing the proposed project. This slide is used during the evaluation process.

The Summary Slide template requires the following information:

- A technology summary;
- A description of the technology’s impact;
- Proposed project goals;
- Any key graphics (illustrations, charts and/or tables);
- The project’s key idea/takeaway;

- Project title, prime recipient, project manager and key personnel information; and
- Requested DOE funds and proposed applicant cost share.

Save the Summary Slide in a single Microsoft PowerPoint file using the following convention for the title “Slide.ppt or pptx” and click on “Add Optional Other Attachment” to attach.

xii. Subrecipient Budget Justification (if applicable)

Applicants must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than \$250,000 or 25 percent of the total work effort (whichever is less). 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 “Subrecipient_Budget_Justification.xls or.xlsx” and click on “Add Optional Other Attachment” to attach.

xiii. Environmental Questionnaire

The Applicant must submit an environmental questionnaire providing for the work of the entire project. The Applicant is also responsible for submitting a separate environmental questionnaire for each proposed subrecipient performing at a different location. The environmental questionnaire is available at http://www.netl.doe.gov/File%20Library/Business/forms/451_1-1-3.pdf. Save the questionnaire in a single file named "Env.pdf" (or “Env-FILL IN TEAM MEMBER.pdf” if more than questionnaire is submitted) and click on "Add Optional Other Attachment” to attach.

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

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

Prime 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.

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

- An officer or employee of any federal agency;

- A Member of Congress;

xv. Waiver Requests (if applicable)

i. Foreign Entity Participation

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

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

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

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

iii. Waiver of the Buy America Requirement for Infrastructure Projects

As set forth in Section IV.I.vii., federally assisted projects which 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.

The award agreement for funding between DOE and the awardee will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products, subject to a waiver process by DOE assessing the availability and cost (increasing the cost of the overall project by >25%), 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, again subject to a DOE waiver process.

In limited circumstances, DOE may grant a waiver of this requirement. Appendix C to this FOA provides guidance on how “infrastructure work” is

defined, explains the applicable justifications under which a waiver may be granted, and lists the information that must be included in the waiver request.

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

xvi. Community Benefits Plan: Job Quality and Equity (Community Benefits Plan)

When Community Benefits Plan: Job Quality and Equity (Community Benefits Plan or Plan) must set forth the applicant’s framework to ensure that federal investments in the power sector advance the following four priorities: (1) community and labor engagement; (2) investing in the American workforce; (3) advancing diversity, equity, inclusion, and accessibility (DEIA); and (4) the Justice40 Initiative. The below sections set forth the Plan requirements in each of the foregoing areas. 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.

Applicants should complete each portion of the initial Community Benefits Plan to the greatest extent possible. In cases where information is incomplete, applicants should clearly explain the reason for missing information and provide plans to address those gaps during the project. If the applicant has prior or ongoing efforts to advance energy and environmental justice, DEIA, community and labor engagement, or quality jobs, the application should discuss how they are incorporating lessons learned and building on these prior/ongoing efforts. At this stage of the application process, the Community Benefits Plan should indicate the applicant’s intention to engage meaningfully with community and labor stakeholders on these goals, including the potential of entering into a formal Workforce and Community Agreement. DOE expects the information contained in the Community Benefits Plan to deepen and evolve during each phase.

The applicant’s Community Benefits Plan must include at least one SMART (Specific, Measurable, Assignable, Realistic and Time-Related) milestone per budget period supported by metrics to measure the success of the proposed actions. Each of the four sections should also include information about the resources intended to implement the Community Benefits Plan, including staff

time and budget to convene public meetings to engage and negotiate agreements with relevant labor unions, communities, and other stakeholders. The initial Community Benefits Plan should provide the most details regarding actions the applicant would take during the initial stages of project development but should also describe in a higher-level summary what goals, deliverables, outcomes, and implementation strategies the applicant would pursue as the project moves through the development, construction, and operational stages.

The Community Benefits Plan will be evaluated as part of the technical review process. If the project is selected, DOE will incorporate relevant elements of the Community Benefits Plan, including any proposed Workforce and Community Agreement(s), into the award as part of the project requirements. During the life of the DOE award, DOE will evaluate the recipient's progress in formatting and implementing this Plan.

For additional information, see [Community Benefits Plan Frequently Asked Questions \(FAQs\) | Department of Energy](#). In addition, please refer to the program-specific [Community Benefits Plan Scoring Rubric](#), which is available at: [BIL-GRIP Application Forms and Templates | netl.doe.gov](#).

1. Community and Labor Engagement: The Community Benefits Plan must set forth the applicant's prior actions and future plans to engage with labor unions, local governments and Tribal entities, and an inclusive collection of local stakeholders, including community-based organizations that support or work with disadvantaged communities. By facilitating community input and social buy-in and strengthening accountability, such agreements substantially reduce or eliminate certain risks associated with the project. These agreements 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.

If selected for funding, applicants will be expected to execute on any proposed Workforce and Community Agreements that identify how community and labor concerns, vulnerabilities, and benefits will be addressed.

2. Investing in the American Workforce: 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 Community Benefits Plan must provide an approach to the creation and retention of quality jobs.⁴⁷ The Plan is an opportunity for the applicant to detail their approach to investing in the American workforce. Successful applicants will be required to provide more detail and identify SMART milestones to ensure accountability with plan implementation. Letters of support may bolster, but not replace, the descriptions requested below.

Specific components of the plan must include:

- 1) Summarize the applicant’s plan to attract, train, and retain a skilled and well qualified workforce for both (a) construction and (b) ongoing operations/production activities. An available workforce is necessary to ensure project stability, continuity, and success. A collective bargaining agreement, labor-management partnership, or other such agreement would provide evidence of such a plan. Alternatively, applicants may describe:
 - i. Wages, benefits, and other worker supports provided
 - ii. Commitments to support workforce education and training, including which reduces employee turnover costs for employers, increases productivity from a committed and engaged workforce, and promotes a nimble, resilient, and stable workforce for the project.
 - iii. Efforts to engage employees in the design and execution of a workplace safety and health plan to safeguard worker health and well-being.

NOTE: Because Project Labor Agreements (PLAs) have been shown to reduce project costs, avoid work delays, and improve efficiency, they are preferred on construction projects of all sizes and may be required for large construction projects (above \$35M or possibly lower, on a case-by-case basis). Assessment of applicability will be conducted on a case-by-case basis and in consultation with recipients to ensure project feasibility.

⁴⁷ A “quality job” is defined as a job that (1) exceeds the local prevailing wage for an industry in the region, includes basic benefits (e.g., paid leave, health insurance, retirement/savings plan), and/or is unionized, and (2) helps the employee develop the skills and experiences necessary to advance along a career path. See Economic Development Administration, ARPA Good Jobs Challenge NOFO, EDAHDQ-ARPGJ-2021-2006964, at n. 1, available at <https://www.grants.gov/web/grants/viewopportunity.html?oppId=334720>.

2) Please disclose any violations found within the past two years under the National Labor Relations Act, Fair Labor Standards Act, Occupational Safety and Health Act, Service Contract Act, Davis-Bacon Act, or Title VII of the Civil Rights Act and any steps taken to improve your workforce practices following this violation. Describe whether workers can form and join unions of their choosing, exercising collective voice. Employees' ability to organize, bargain collectively, and participate through labor organizations of their choosing in decisions which affect them, helps build meaningful economic power, safeguard the public interest, contribute to the effective conduct of business, and facilitate amicable settlements of disputes between employees and their employers, thus providing assurances of project efficiency, continuity, and multiple public benefits.

3) Describe the job retention and/or transition and other workforce development opportunities associated with the project noting efforts to create or retain jobs.

3. DEIA: The Community Benefits Plan must include a section describing how DEIA objectives will be incorporated into the project. The section should detail how the applicant will partner with underrepresented businesses, training organizations serving workers facing system barriers to access quality jobs, and other project partners to help address DEIA. The plan should include at least one SMART milestone per Budget Period supported by metrics to measure the success of the proposed actions and will be incorporated into the award if selected.

The following is a non-exhaustive list of potential DEIA actions that can serve as examples of ways the proposed project could incorporate DEIA elements. These examples should not be considered either comprehensive or prescriptive. Applicants may include appropriate actions not covered by these examples and should include a comprehensive set of specific DEIA actions anticipated in connection with the project.

- a. Commit to supplier diversity and identify Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses to solicit as vendors and sub-contractors for bids on supplies, services and equipment;
- b. Identify and partner with workforce training organizations serving underrepresented individuals and those facing barriers to quality employment such as those with disabilities, returning citizens, opportunity youth, and veterans;
- c. Offer anti-bias training and education to ensure hiring professionals can recognize unconscious bias and can learn how to reduce discriminatory barriers;

- d. Support for quality apprenticeship-readiness and/or pre-apprenticeship programs in the local community that are integrated with registered apprenticeship, including cyber apprenticeship-readiness programs and cyber-registered apprenticeship programs;
- e. Provide funding for or partner with organization that can provide comprehensive support services such as training stipends, mental health supports, transportation assistance, and access to child care to improve access to career-track training and quality jobs for underrepresented and disadvantaged workers;
- f. Describe Local and/or Economic Hire efforts (e.g., recruitment preferences for economically disadvantaged populations)

4. Justice40 Initiative: Applicants must provide an overview of benefits that can be supported by measurable metrics and describe the benefits to DACs. Such benefits framework shall include appropriate milestones for benefit delivery and will be incorporated into the award.

Specifically, the Justice40 Initiative section must include:

1. Identification of applicable disadvantaged communities to which the anticipated project benefits will flow.
2. Identification of applicable benefits that are quantifiable, measurable, and trackable.
 - a. 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 including reduced outage frequency and/or duration. In addition, applicants, should also discuss how the project will maximize all of the benefits listed herein.
3. A Discussion of Anticipated Negative and Cumulative Environmental Impacts on disadvantaged communities. For example, what are the anticipated environmental impacts associated with the project, and how will the applicant mitigate such impacts? Within the context of cumulative impacts created by the project, applicants should use Environmental Protection

Agency EJSCREEN⁴⁸ tool to quantitatively discuss existing environmental impacts in the project area.

4. 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 Plan, 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?

For projects funded under this FOA, DOE will provide specific reporting guidance for a subset of the eight policy priorities described above; however, recipients must also report how project benefits flow to applicable disadvantaged communities, in furtherance of the advancement of the policy priorities outlined above. For example, a recipient can describe how a project will increase access to clean energy and decrease harmful emissions in disadvantaged communities and provide methods for tracking the progress of these outcomes.

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

xvii. Requirement to Report Potentially Duplicative Funding

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 Potential Duplicative Funding Notice in a single PDF file using the following convention for the title “PDFN.pdf” and click on “Add Optional Other Attachment” to attach.

⁴⁸ Environmental Justice (EJ) Screening and Mapping Tool from the Environmental Protection Agency <https://www.epa.gov/ejscreen>

xviii. Report on Resilience Investments (Topic Area 1 ONLY)

Applicants must submit a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events. The report must summarize any programs and related approved funding that your organization has implemented over the past 3 years to reduce the likelihood of events in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster. The report must also summarize current and future efforts planned over at least the next 3 years to reduce the likelihood and consequences of disruptive events. Save the Report on Resilience Investments in a single PDF file using the following convention for the title “ResilienceInvestments.pdf”.

xix. EIA 861 Report (Topic Area 1, small utilities ONLY)

Applicants who are small utilities applying to Topic Area 1 must submit the EIA Form 861 for the last reporting year showing the total retail electricity sales to ultimate customers to ensure status as a small utility. Save the EIA 861Report in a single PDF file using the following convention for the title “EIA861.pdf”

xx. Project Description and Assurances Document (PDAD)

Applicants for all three topic areas must complete and submit the PDAD. Note that there are requirements specific to Topic Area 1 and Topic Area 3, for which the applicant will respond and certify responses via the PDAD, as described in Section I.B. Applicants shall prepare the PDAD in the format provided in Appendix G of the FOA. The PDAD must be signed by the Authorized Organizational Representative (AOR) on behalf of the organization and be submitted in PDF format. Save the PDAD in a single PDF file using the following convention for the title “PDAD.pdf”.

E. Post Selection Information Requests

If selected for award, DOE reserves the right to request additional or clarifying information regarding the following (non-exhaustive list):

- Personnel proposed to work on the project and collaborating organizations (See Section VI.B.xix. Participants and Collaborating Organizations);
- 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 in accordance with VI.B.xi Intellectual Property Management Plan;
- Indirect cost information;
- Other budget information;

- Commitment Letters from Third Parties Contributing to Cost Share, if applicable;
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to Davis-Bacon Act Requirements;
- Information related to Community Benefits Agreements, as defined above in “Community Benefits Plan: Jobs Quality and Equity,” that applicants may have made with the relevant community;
- Updated Environmental Questionnaire(s).

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

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

G. Submission Dates and Times

All required submissions must be submitted as specifically stated in the announcement no later than 5 p.m. ET on the dates provided on the cover page of this FOA.

H. Intergovernmental Review

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

I. Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles. Pursuant to 2 CFR 910.352, the cost

principles in the Federal Acquisition Regulations (48 CFR Part 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. Costs to support or oppose union organizing, whether directly or as an offset for other funds, are unallowable.

ii. Pre-Award Costs

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

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

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

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

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

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

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

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

1. Requirement

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

2. Failure to Comply

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

3. Waiver

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

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

iv. Construction

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

v. Foreign Travel

Foreign travel costs are not allowable under this FOA.

vi. Equipment and Supplies

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

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

vii. Buy America Requirements for Infrastructure Projects

Awards funded through this FOA that are for, or contain, construction, alteration, maintenance or repair of public infrastructure in the United States, undertaken by applicable recipient types, require that:

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

In general, whether a given project must apply this requirement is 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 (discussed in more detail in Appendix C), based in part on whether the infrastructure in question is publicly owned or serves a public function. For this FOA specifically, all projects subject to this FOA are considered “infrastructure” within the Buy America provision of BIL, based on implementation guidance from Office of Management and Budget (OMB) Memorandum M-22-11 issued on April 18, 2022.

Moreover, based on M-22-11, 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 Cooperative Agreement between DOE and the awardee 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 the applicant's award.

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

viii. Davis-Bacon Act Requirements

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

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

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

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

- (5) maintaining original certified weekly payrolls for 3 years after the completion of the project and must make those payrolls available to the DOE or the Department of Labor upon request, as required by 29 CFR 5.6(a)(2).
- (6) conducting payroll and job-site reviews for construction work, including interviews with employees, with such frequency as may be necessary to assure compliance by its subcontractors and subrecipients and as requested or directed by the DOE.
- (7) cooperating with any authorized representative of the Department of Labor in their inspection of records, interviews with employees, and other actions undertaken as part of a Department of Labor investigation.
- (8) posting in a prominent and accessible place the wage determination(s) and Department of Labor 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; Department of Labor 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>) or its successor system.

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 U.S. Department of Labor (“DOL”) offers free Prevailing Wage Seminars several times a year that meet this requirement, at <https://www.dol.gov/agencies/whd/government-contracts/construction/seminars/events>.

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

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

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 applicants submitted under this FOA. Such risk assessment will consider:

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

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

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

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

Further, as DOE 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;
- Disclosure of any citations related to NLRA, FLSA, OSH, SCA, or DBA, or Title VII;
- Invoices/receipts for all travel, equipment, supplies, contractual, and other costs;
- UCC filing proof for equipment acquired with project funds by for-profit recipients and subrecipients;
- Explanation of cost share for invoicing period;
- Analogous information for some subrecipients; and
- Other items as required by DOE.

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

a. Prohibition

Persons participating in a Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk are prohibited from participating in

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

b. Definitions

- 1. Foreign Government-Sponsored Talent Recruitment Program.** An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at U.S. 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 f federally assisted construction contracts exceeding \$10,000 annually will be subject to the requirements of Executive Order 11246:

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

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

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

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule contractors for compliance evaluations. OFCCP's Technical Assistance Guide⁴⁹ should be consulted to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors and subcontractors must take.

Additionally, for construction projects valued at \$35 million or more and lasting more than one year, the recipients, subrecipients, contractors and subcontractors may be assigned by OFCCP as a mega construction project and may be neutrally selected for a compliance evaluation by OFCCP.⁵⁰

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

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

Applicable to All Topic Areas

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

⁴⁹ 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>

⁵⁰ For more information regarding this program, see <https://www.dol.gov/agencies/ofccp/construction/mega-program>.

This criterion involves consideration of the following factors:

- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA for the specific topic area.
- The proposed work aligns with and supports State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.
- The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that DOE funding and the proposed project would have on the relevant field and application.
- The applicant has proposed strategies to ensure meaningful community and labor engagement; quality jobs and workforce development; EEJ and the Justice40 Initiative; and diversity, inclusion, accessibility—including methods to ensure accountability.
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project.

ii. Full Applications

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

Criterion 1 for Topic Area 1: Impact, Transformation, and Technical Merit (50%):

This criterion involves consideration of the following factors:

- Extent to which the project supports the Topic Area 1 objectives and desired outcomes.
- The magnitude of the community or regional resilience benefit that the project will generate by reducing the likelihood and consequences of disruptive events.
- The extent to which the has application specifically and convincingly demonstrates the applicant’s technical ability to:
 - comprehensively mitigate one or more hazards faced by community or region
 - fully mitigate the potential for equipment to cause a wildfire in a community or region
 - minimize the consequences of an outage caused by a natural hazard
 - minimize economic impact resulting from outage duration or outage frequency.
- Extent to which project supports and works in tandem with State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.

- Extent to which the project aligns with and is additive to the current resilience investments described by the applicant outlined in the Report on Resilience Investments.
- Sufficiency of technical detail to demonstrate that the proposed project is technically feasible and would likely result in the described community or regional resilience benefits.
- The potential impact of the project to lead to catalyze additional private sector investments and/or non-federal public or regulated capital.

Criterion 2 for Topic Area 1: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors:

Project Approach, Workplan, and Statement of Project Objectives (SOPO)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g. technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.
- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be

taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.

- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Criterion 3 for Topic Area 1: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.
- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the individuals on the team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction, who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 1: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country's energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative's goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- 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.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- 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 (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant’s Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- 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.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.
- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

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.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

Criterion 1 Topic Area 2: Impact, Transformation, and Technical Merit (50%):

This criterion involves consideration of the following factors:

- Extent to which the project supports the Topic Area 2 objectives and desired outcomes.
- Extent to which the project deploys technology solutions that address Topic Area 2 priority investments.
- Extent to which the project deploys technology solutions that increase the flexibility, efficiency, reliability and resilience of the electric power system.
- Extent to which the project supports State, local, Tribal, regional resilience, decarbonization, or other energy strategies and plans.

- Extent to which the application provides sufficient technical detail to demonstrate that the proposed project is technically feasible and would likely result in the described smart grid benefits.
- The potential impact of the project to reduce risk for deployment of innovative technologies or solutions and lead to further deployment at-scale.
- The potential impact of the project to catalyze additional private sector investments and/or non-federal public or regulated capital.

Criterion 2 for Topic Area 2: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors:

Project Approach, Workplan, and Statement of Project Objectives (SOPO)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g. technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.
- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be

taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.

- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Criterion 3 for Topic Area 2: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.
- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the key individuals on the team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction, who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 2: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country's energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative's goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant's ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- 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.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.
- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- 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 (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant’s Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- 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.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.
- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

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.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

Criterion 1 for Topic Area 3: Impact and Market Viability (50%)

This criterion involves consideration of the following factors:

- Extent to which the project supports Topic Area 3 objectives and will deliver the desired Topic Area 3 outcomes.
- Extent to which the project demonstrates innovative approaches to support deployment goals across transmission system, distribution system, storage or a combination to achieve Topic Area 3 primary objectives.
- Extent to which the project clearly enhances collaboration between eligible entities and owners/operators to meet Topic Area 3 objectives.

- Extent to which the project offers the greatest public benefit with a clear path to replication, scale and ability to ensure electricity system reliability and/or resilience, provide enhanced system value and economic benefit, and contribute to the decarbonization of the electricity and broader energy systems.
- Extent that the project has the potential to deliver near-term impact.
- Extent to which project supports State, local, Tribal, and regional resilience, decarbonization, or other energy strategies and plans.
- The potential impact of the project to increase adoption of innovative approach(es), for example to lead to more widespread deployment of advanced technologies; innovative partnerships; new financial arrangements; increased non-Federal investment; deployment of projects identified by innovative planning, modeling, or cost allocation approaches; and/or innovative environmental siting, permitting strategies, or community engagement practices.

Criterion 2 for Topic Area 3: Project Plan and Project Financial Feasibility (20%)

This criterion involves consideration of the following factors.

Project Approach, Workplan, and Statement of Project Objectives (SOPO)

- Degree to which the approach and critical path have been clearly described and thoughtfully considered.
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan and SOPO will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key anticipated risks (e.g., technical, financial, market, environmental, regulatory) involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Project Financial Feasibility

- The reasonableness of the budget and spend plan for the proposed project and objectives.

- Soundness of proposed cost share; level of dedication as demonstrated by letter(s) of commitment that clearly identify type and amount of proposed cost share. Proposed cost share meets requirements outlined in the FOA.
- The degree to which the proposed project yields additive benefit(s) from the federal funding to undertake additional efforts that would not be taken but-for the funding or to accelerate or expand planned activities that would not be accelerated or expanded but-for the funding.
- The degree to which the applicant justifies the project's economic viability.
- The degree to which the project provides enhanced system value and/or provides improved current and future system cost-effectiveness and delivers economic benefit.

Project Viability, Readiness, and Timing

- Evidence to support the state of project planning, development, including depth, stage and degree of completeness of engineering design; status of critical agreements and permits; customer expressions of interest; and financial commitments beyond the support sought under this FOA.

Criterion 3 for Topic Area 3: Management Team and Project Partners (10%)

This criterion involves consideration of the following factors:

Project Management

- Clarity and appropriateness of the roles and responsibilities of the project management organization and the project team, including relevant and critical subrecipients and vendors.
- The capability of the Project Manager(s) and the proposed team to manage and address all aspects of the proposed work with a high probability of success.
- The qualifications, relevant expertise, and time commitment of the key individuals on project team.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Project Plan/Workplan.
- The degree to which the applicant has defined and described a project management structure that addresses interfaces with DOE.

Partners

- Degree to which the applicant includes partnerships with critical entities that will help ensure project success, as well as any partnerships with entities (including other states) outside of the applicant's jurisdiction,

who will commit to encourage asset operators (e.g., utilities, merchant developers) to replicate the proposed approaches, technologies or solutions, as applicable.

Criterion 4 for Topic Area 3: Community Benefits Plan (20%)

Every BIL-funded project is expected to contribute to the country’s energy infrastructure modernization goals, energy technology demonstration and deployment goals, and climate goals, and also to (1) support meaningful community and labor engagement; (2) support quality jobs and ensure workforce continuity; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the Justice40 Initiative’s goal that 40% of the overall project benefits flow to disadvantaged communities.

To ensure these goals are met, applications must include a Community Benefits Plan that illustrates how the proposed project plans to incorporate the four goals stated above and are encouraged to submit Community Partnership Documentation from established labor unions, Tribal entities, and community-based organizations that demonstrate the applicant’s ability to achieve the above goals as outlined in the Community Benefits Plan.

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project.
- Extent to which the applicant has a clear and appropriately robust plan to engage—ideally through a clear commitment to negotiate an enforceable Workforce & Community Agreements—with labor unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities and other affected stakeholders.
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities with a plan to publicly share SMART community benefits plan commitments.
- 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.

Quality Jobs

- Quality and manner in which the proposed project will create and/or retain high quality, good-paying jobs with employer-sponsored benefits for all classifications and phases of work.

- Extent to which the project provides employees with the ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them and that contribute to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits.
- 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 (DEIA)

- The quality and manner in which the proposed project incorporates and measures diversity, equity, inclusion and accessibility goals in the project, as reflected in the applicant's Community Benefits Plan.
- Extent to which the project supports the development or demonstration in disadvantaged communities, supports existing minority business enterprises (MBEs) or promotes the creation of MBEs and underrepresented businesses in disadvantaged communities.
- 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.
- Extent of engagement of organizations that represent underserved communities as core element of their mission to include Minority Serving Institutions (MSIs), MBEs, associations, and non-profit organizations.
- Extent to which the project illustrates the ability to meet or exceed the objectives of the Justice40 initiative, including the extent to which the project benefits disadvantaged, underserved communities or partners with Tribal Nations.

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.
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments flow to disadvantaged communities.

B. Standards for Application Evaluation

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

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

C. Other Selection Factors

i. Program Policy Factors

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

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available DOE funding to achieve programmatic objectives;
- The degree to which the proposed project will deliver the greatest benefits for less Federal cost share;
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers;
- For Topic Area 1, the degree to which the applicant supports the availability of information before during and after resilience events through participation in the Outage Data Initiative Nationwide (ODIN),⁵¹ a voluntary program to promote increasing standardization of outage data, accessible and achievable by any size utility;
- The degree to which the proposed project is likely to lead to increased high-quality employment and manufacturing in the United States;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications), including whether the project is in a community facing job loss in the energy transition;
- The degree to which the proposed project incorporates diversity, equity, and inclusion elements, including, but not limited to, applicant or team members from Minority Serving Institutions (e.g. Historically Black Colleges and

⁵¹ More information is available at odin.ornl.gov

Universities (HBCUs)/Other Minority Institutions), Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, Tribal Nations, or members within underserved communities;

- The degree to which the proposed project maximizes benefits to disadvantaged communities;
- The degree to which the proposed project minimizes environmental impacts to disadvantaged communities;
- The degree to which the project's solution or strategy will maximize deployment or replication;
- The degree to which the proposed project leverages existing infrastructure, facilities, and/or workforce skills;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials;
- The degree to which the proposed project, 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 avoids duplication/overlap with other publicly or privately funded work.

D. Evaluation and Selection Process

i. Overview

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

ii. Pre-Selection Interviews

As part of the evaluation and selection process, DOE may invite one or more applicants to participate in Pre-Selection Interviews. Pre-Selection Interviews are distinct from and more formal than pre-selection clarifications (See Section V.D.ii. of the FOA). The invited applicant(s) will meet with DOE representatives to provide clarification on the contents of the Full Applications and to provide DOE an opportunity to ask questions regarding the proposed project. The information provided by applicants to DOE through Pre-Selection Interviews contributes to DOE's selection decisions.

DOE will arrange to meet with the invited applicants in person at DOE's offices or a mutually agreed upon location. DOE may also arrange site visits at certain

applicants' facilities. In the alternative, DOE may invite certain applicants to participate in a one-on-one conference with DOE via webinar, videoconference, or conference call.

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

DOE may obtain additional information through Pre-Selection Interviews that will be used to make a final selection determination. DOE may select applications for funding and make awards without Pre-Selection Interviews. Participation in Pre-Selection Interviews with DOE does not signify that applicants have been selected for award negotiations.

iii. Pre-Selection Clarification

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

iv. Recipient Integrity and Performance Matters

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

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

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

v. Selection

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

E. Anticipated Notice of Selection and Award Negotiation Dates

DOE anticipates notifying applicants selected for negotiation of award and negotiating awards 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. The notification letter will state the basis upon which the Concept Paper or the Full Application is ineligible and not considered for further review.

ii. Concept Paper Notifications

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

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

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

iii. Full Application Notifications

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

iv. Successful Applicants

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

The award negotiation process will take approximately 60 days. Applicants must designate a primary and a backup point-of-contact in Grants.gov with whom DOE will communicate to conduct award negotiations. The applicant must be responsive during award negotiations (i.e., provide requested documentation) and meet the negotiation deadlines. If the applicant fails to do so or if award negotiations are otherwise unsuccessful, DOE will cancel the award negotiations and rescind the Selection. DOE reserves the right to terminate award negotiations at any time for any reason.

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

v. Alternate Selection Determinations

In some instances, an applicant may receive a notification that its application was not selected for award and DOE designated the application to be an

alternate. As an alternate, DOE may consider the Full Application for federal funding in the future. A notification letter stating the Full Application is designated as an alternate does not authorize the applicant to commence performance of the project. DOE may ultimately determine to select or not select the Full Application for award negotiations.

vi. Unsuccessful Applicants

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

B. Administrative and National Policy Requirements

i. Registration Requirements

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

1. System for Award Management

Register with the SAM at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called a Marketing Partner ID Number (MPIN) are important steps in SAM registration. Please update your SAM registration annually.

2. FedConnect

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

3. Grants.gov

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

4. Electronic Authorization of Applications and Award Documents

Submission of an application and supplemental information under this FOA through electronic systems used by the DOE, including Grants.gov and

FedConnect.net, constitutes the authorized representative's approval and electronic signature.

ii. Award Administrative Requirements

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

iii. Foreign National Participation (September 2021)

All applicants selected for an award under this FOA and project participants (including subrecipients and contractors) who anticipate involving foreign nationals in the performance of an award, will be required to provide DOE with specific information about each foreign national to satisfy requirements for foreign national participation. A "foreign national" is defined as any person who is not a United States citizen by birth or naturalization. The volume and type of information collected may depend on various factors associated with the award. DOE concurrence may be required before a foreign national can participate in the performance of any work under an award.

Approval for foreign nationals from countries identified on the U.S. Department of State's list of State Sponsors of Terrorism must be obtained from DOE before they can participate in the performance of any work under an award.

iv. Subaward and Executive Reporting

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

v. National Policy Requirements

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

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

DOE's decision whether and how to distribute federal funds under this FOA is subject to NEPA (42 U.S.C. 4321, *et seq.*). NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For

additional background on NEPA, please see DOE’s NEPA website, at <https://www.energy.gov/nepa>.

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

vii. Flood Resilience

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

viii. Applicant Representations and Certifications

1. Lobbying Restrictions

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

2. Corporate Felony Conviction and Federal Tax Liability Representations

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

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

For purposes of these representations the following definitions apply:

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

3. Nondisclosure and Confidentiality Agreements Representations

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

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

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

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

Executive Orders and statutory provisions are incorporated into this agreement and are controlling.”

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

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 (Applies to Topic Area 3 ONLY)

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) as identified in the Project Management Plan.
4. Reviewing and concurring with ongoing technical performance to ensure that adequate progress has been obtained within the current Budget Period authorized by DOE before work can commence on subsequent Budget Periods.
5. DOE participates in major project decision-making processes.

xi. Intellectual Property Management Plan (IPMP)

As a quarter 1 milestone if selected for award, applicants must submit an executed IPMP between the members of the consortia or team.

The award will set forth the treatment of and obligations related to intellectual property rights between DOE and the individual members. The IPMP should describe how the members will handle intellectual property rights and issues between themselves while ensuring compliance with federal intellectual property laws, regulations, and policies (see Sections VIII.J.-VIII.N. of this FOA for more details on applicable federal intellectual property laws and regulations). Guidance regarding the contents of IPMP is available from DOE upon request.

The following is a non-exhaustive list of examples of items that the IPMP may cover:

- The treatment of confidential information between members (e.g., the use of NDAs);
- The treatment of background intellectual property (e.g., any requirements for identifying it or making it available);
- The treatment of inventions made under the award (e.g., any requirements for disclosing to the other members on an application, filing patent applications, paying for patent prosecution, and cross-licensing or other licensing arrangements between the members);
- The treatment of data produced, including software, under the award (e.g., any publication process or other dissemination strategies, copyrighting strategy or arrangement between members);

- Any technology transfer and commercialization requirements or arrangements between the members;
- The treatment of any intellectual property issues that may arise due to a change in membership of the consortia or team; and
- The handling of disputes related to intellectual property between the members.

xii. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>.

xiii. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist and Instructions, DOE F 4600.2, attached to the award agreement. A sample checklist is available at: [BIL-GRIP Application Forms and Templates | netl.doe.gov](http://netl.doe.gov/BIL-GRIP-Application-Forms-and-Templates).

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, and recycling capacity
- Jobs data including
- Number and types of training jobs provided, wages and benefits paid
- Demographics of workforce including local hires
- Efforts to minimize risks of labor disputes and disruptions
- Contributions to training; certificates and training credentials received by employees; ratio of apprentice-to-journey level workers employed
- Justice and Equity data, including
 - Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses and Veteran Owned Businesses acting as vendors and sub-contractors for bids on supplies, services and equipment.
 - Value, number, and type of partnerships with MSIs
 - Stakeholder engagement events, consent-based siting activities
 - Other relevant indicators from the Community Benefits Plan

- Number and type of energy efficient and clean energy equipment installed
- Funding leveraged, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization
- Biennial Report to Congress - (Applies to Topic Area 1 ONLY), See Section I.B. for more information.

xiv. Go/No-Go Review

Each project selected under this FOA will be subject to a periodic project evaluation referred to as a Go/No-Go Review. A Go/No-Go Review is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, technical success is definitively achieved and potential for success in future phases or periods of performance is evaluated, prior to 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 as compared to the technical milestones, success criteria, and go/no-go decision point as described in the Project Management Plan; (4) recipient’s submittal of required reports; (5) recipient’s compliance with the terms and conditions of the award; (6) the recipient’s submission of a continuation application⁵²; and (7) 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

⁵² 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:

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

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.

xv. Conference Spending

The recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the 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.

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 collaborating organizations within 30 days after the applicant is notified of the selection. 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. Requirement to Report Potentially Duplicative Funding

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. Also See Section IV.D.xvi.

xx. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)⁵³ 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 senior/key personnel⁵⁴ 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 “senior/key personnel” means the Program/Project Manager 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

⁵³ 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](#).

⁵⁴ For purposes of this subsection of the FOA, the term “senior/key personnel” has the same meaning as “Investigator” as defined in the DOE interim COI Policy.

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

xxi. Fraud, Waste and Abuse

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

The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit

<https://www.energy.gov/ig/ig-hotline>.

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

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

xxii. Human Subjects Research

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

Federal regulation and the DOE Order require review by an Institutional Review Board (IRB) of all proposed human subjects research projects. The IRB is an interdisciplinary ethics board responsible for ensuring that the proposed research is sound and justifies the use of human subjects or their data; the potential risks to human subjects have been minimized; participation is voluntary; and clear and accurate information about the study, the benefits and risks of participating, and how individuals’ data/specimens will be protected/used, is provided to potential participants for their use in determining whether or not to participate.

The recipient shall provide the Federal Wide Assurance number identified in item 1) below and the certification identified in item 2) below to DOE prior to initiation of any project that will involve interactions with humans in some way (e.g., through surveys); analysis of their identifiable data (e.g., demographic data and energy use over time); asking individuals to test devices, products, or materials developed through research; and/or testing of commercially available devices in buildings/homes in which humans will be present. Note: This list of examples is illustrative and not all inclusive.

No DOE funded research activity involving human subjects, biospecimens, or identifiable private information shall be conducted without:

- 1) A registration and a Federal Wide Assurance of compliance accepted by the Office of Human Research Protection (OHRP) in the Department of Health and Human Services; and
- 2) Certification that the research has been reviewed and approved by an Institutional Review Board (IRB) provided for in the assurance. IRB review may be accomplished by the awardee’s institutional IRB; by the Central DOE IRB; or if collaborating with one of the DOE national laboratories, by the DOE national laboratory IRB.

The recipient is responsible for ensuring all subrecipients comply and for reporting information on the project annually to the DOE Human Subjects Research Database (HSRD) at <https://science.osti.gov/HumanSubjects/Human-Subjects-Database/home>. Note: If a DOE IRB is used, no end of year reporting will be needed.

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

xxiii. Cybersecurity Plan (Applies to Topic Areas 2 & 3 ONLY)

Be advised that under Section 40126 of the BIL, the Secretary of Energy has determined that this FOA requires an applicant to submit a Cybersecurity Plan to the DOE prior to the issuance of an award.

Each applicant whose Full Application is selected for award negotiations must submit a Cybersecurity Plan during the award negotiations phase. A Cybersecurity Plan explains how basic cybersecurity practices throughout the life of the proposed the project will be maintained. See Appendix E.

xxiv. Domestic Content Commitments

Be advised that the grant agreement or cooperative agreement for funding between DOE and the awardee will require each recipient: (1) to fulfill the commitments made in its application regarding the procurement of U.S.-produced products, subject to a waiver process by DOE 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, again subject to a DOE waiver process.

xxv. Real Property and Equipment

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

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 take disposition action on the real property and equipment or continue to use the real property and equipment after the conclusion of the award period of performance. Recipients may continue to use the real property and equipment so long as the recipient:

- a. continues to use the property for the authorized project purposes;
- b. complies with the applicable reporting requirements and regulatory property standards; and

- c. requests continued use of the property with its final SF-428 Tangible Personal Property Report and/or SF-429 Real Property Status Report submission during award closeout.

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

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

VII. Questions/Agency Contacts

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. 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 and comments concerning this FOA shall be submitted not later than 3 business days prior to the application due date. Please note, feedback on individual concepts will not be provided through Q&A.

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

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov

at 1-800-518-4726 or support@grants.gov. DOE/NNSA cannot answer these questions.

VIII. Other Information

A. FOA Modifications

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

B. Government Right to Reject or Negotiate

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

C. Commitment of Public Funds

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

D. Treatment of Application Information

Applicants should not include business sensitive (e.g., commercial or financial information that is privileged or confidential), trade secrets, proprietary, or otherwise confidential 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.

The cover sheet of the Full Application, and other 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 technical 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.-federal personnel conducting administrative activities must sign an NDA.

F. Notice Regarding Eligible/Ineligible Activities

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

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

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

H. Requirement for Full and Complete Disclosure

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

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

I. Retention of Submissions

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

J. Rights in Technical Data

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

“Limited Rights Data”: The U.S. government will not normally require delivery of confidential or trade secret-type technical data developed solely at private expense prior to issuance of an award, except as necessary to monitor technical

progress and evaluate the potential of proposed technologies to reach specific technical and cost metrics.

Government Rights in Technical Data Produced Under Awards: The U.S. government 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.

For this FOA, selectees and recipients may request an extended period of protection (more than five years and not to exceed thirty years) if reasonably required for commercialization for specific categories of data for all Topic Areas first produced under the resulting awards in accordance with 15 U.S.C. § 3710a(c)(7)(B)(ii) and the Energy Policy Acts of 1992 and 2005. Further direction will be provided during the negotiation process upon request.

K. Copyright

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

L. Export Control

The U.S. government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the U.S. 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 U.S. Export Control laws and regulations relating to any work performed under a resulting award.

The recipient must immediately report to DOE any export control violations related to the project funded under the DOE award, at the recipient or

subrecipient level, and provide the corrective action(s) to prevent future violations.

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

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal funds and recipient cost share) to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) 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 Public Law 115-232, section 889, 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, and 2 CFR 200.471 for additional information.

N. Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. The term “PII” refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name. (See OMB Memorandum M-07-16 dated May 22, 2007, found at: [M-07-16 \(whitehouse.gov\)](https://www.whitehouse.gov/the-press-office/2007/05/22/m-07-16)).

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

O. Annual Independent Audits

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

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

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

P. Informational Webinar

DOE will conduct one informational webinar at the date and time listed in the table on the FOA cover page. To register for the webinar, please copy and paste the following link into your browser:

<https://doe.webex.com/doe/j.php?RGID=r8bd77ad6626ac6324bf10a41ffbd160>

The purpose of this webinar is to give applicants a chance to ask questions about the FOA process generally. 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.

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. The difference between the two terms is the calculation used to determine the non-federal amount. “Cost sharing” for the non-federal share is calculated as a percentage of the Total Project Cost. “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. The following is an example of how to calculate cost sharing amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

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

How Cost Matching Is Calculated

“Cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost. The following are examples of how to calculate cost matching amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost matching requirement:

- Formula D: Federal share (\$) multiplied by non-federal share (%) = Non-federal **match** (\$)
Example: \$1,000,000 multiplied by 20% = \$200,000
- Formula E: Federal Share (\$) plus Non-Federal Match (\$) = Total Project Cost (\$)
Example: \$1,000,000 plus \$200,000 = \$1,200,000
- Formula F: Total Project Cost (\$) minus federal share (\$) = Non-federal **match** (\$)
Example: \$1,200,000 minus \$1,000,000 = \$200,000

- Formula G: Federal share (\$) divided by Total Project Cost (\$) = Calculated Federal Share of Total Project Cost (%)

Example: \$1,000,000 divided by \$1,200,000 = 83.33%

- Formula C: Non-Federal share (\$) divided by Total Project Cost (\$) = Calculated Non-Federal Share of Total Project Cost (%)

Example: \$200,000 divided by \$1,200,000 = 16.67%

The tables below provide additional examples of calculation results for the cost match (Topic Area 1) and cost share (Topic Areas 2 and 3) for the three BIL Topic Areas:

Topic Area 1: Section 40101 (c) Grid Resilience Grants (\$100M Maximum Grant (Federal Share \$)). An eligible entity shall be required to match 100% of the amount of the grant (except for Small Utilities must match 1/3 of the grant).						
Maximum Federal Share (\$)	Entity Type	Non-Federal Minimum Match Required (%)	Calculated Non-Federal Minimum Match (\$) ^D	Total Project Cost (\$) ^E	Calculated Federal Share of Total Project Costs (%) ^G	Calculated Non-Federal Share of Total Project Costs (%) ^C
\$100,000,000	Eligible Entity (except for Small Utilities)	100	\$100,000,000	\$200,000,000	50	50
\$100,000,000	Small Utility	33.33	\$33,330,000	\$133,330,000	75	25

Topic Area 2: Section 40107 Smart Grid Grants (\$50M Maximum Grant (Federal Share \$)). The non-federal cost share must be at least 50% of the Total Project Costs.					
Maximum Federal Share (\$)	Entity Type	Non-Federal Cost Share Minimum % of Total Project Costs (%)	Calculated Non-Federal Minimum Share (\$) ^B	Total Project Cost (\$) ^A	Calculated Non-Federal Minimum Share (%) ^C
\$50,000,000	Eligible Entity	50	\$50,000,000	\$100,000,000	50

Topic Area 3: SECTION 40103 (b) Innovative Grid Resilience Program Example breakdown for \$250M and \$1B maximum Grant (Federal Share \$) The non-federal cost share must be at least 50% of the Total Project Costs.					
Federal Share (\$)	Entity Type	Non-Federal Cost Share Minimum % of Total Project Costs (%)	Calculated Non-Federal Minimum Share (\$) ^B	Total Project Cost (\$) ^A	Calculated Non-Federal Minimum Share (%) ^C
\$250,000,000	Eligible Entity	50	\$250,000,000	\$500,000,000	50
\$1,000,000,000	Eligible Entity	50	\$1,000,000,000	\$2,000,000,000	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. 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: FOREIGN ENTITY PARTICIPATION; AND FOREIGN WORK

Waiver for Foreign Entity Participation

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 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 U.S. industry and U.S. 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 U.S. 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 U.S. and the entity acknowledges and demonstrates that it has the intent and ability to comply with the U.S. Competitiveness Provision; and
- e. The foreign entity will satisfy other conditions that may be deemed necessary by DOE to protect U.S. 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 with the Institute;
- b. Country of incorporation, the extent of the ownership/level control by foreign entities, whether the entity is state owned or controlled, a summary of the ownership breakdown of the foreign entity and the percentage of ownership/control by foreign entities, foreign shareholders, foreign state or foreign individuals;
- c. The rationale for proposing a foreign entity participate (must address criteria above);
- d. A description of the project's anticipated contributions to the U.S. economy;

- How the project will benefit the U.S., including manufacturing, contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
 - How the project will promote domestic American manufacturing of products and/or services;
- e. A description of how the foreign entity's participation is essential to the project;
 - f. A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP; and
 - g. Countries where the work will be performed (Note: if any work is proposed to be conducted outside the U.S., 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, 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.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

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

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

Overall, a waiver request must demonstrate to the satisfaction of DOE that it would further the purposes of this FOA and is otherwise in the economic interests of the United States to perform work outside of the United States. A request for a foreign work waiver must include the following:

- The rationale for performing the work outside the U.S. ("foreign work");
- A description of the work proposed to be performed outside the U.S.;

- An explanation as to how the foreign work is essential to the project;
- A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the US economy;
- The associated benefits to be realized and the contribution to the project from the foreign work;
- How the foreign work will benefit the U.S., including manufacturing, contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
- How the foreign work will promote domestic American manufacturing of products and/or services;
- A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
- The total estimated cost (DOE and recipient cost share) of the proposed foreign work;
- The countries in which the foreign work is proposed to be performed; and
- The name of the entity that would perform the foreign work.

DOE may require additional information before considering the waiver request.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

APPENDIX C – REQUIRED USE OF IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS PRODUCED IN THE UNITED STATES

BUY AMERICA REQUIREMENTS FOR INFRASTRUCTURE PROJECTS

A. Definitions

For purposes of the Buy America requirements, 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 additives⁵⁵—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.

Applicants may also seek a DOE waiver of domestic procurement requirements based on applicable public interest factors, such as relating to minor components, international trade obligations, or other considerations.

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.

In addition to the above, the infrastructure in question must be publicly-owned or must serve a public function; privately owned infrastructure that is solely utilized for private use is not considered “infrastructure” for purposes of Buy America applicability. The Agency, not the applicant, will have the final say as to whether a given project includes infrastructure, as defined herein.

⁵⁵ BIL, § 70917(c)(1).

For this FOA specifically, all projects subject to this FOA are considered “infrastructure” within the Buy America provision of BIL.

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 materials⁵⁶ are manufactured 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 Office of Management and Budget (OMB) Memorandum M-22-11, 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.

⁵⁶ Excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

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. DOE Submission Requirements for Full Application

Within the first two pages of the workplan, applicants must provide a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. The ultimate determination about whether a project includes infrastructure remains with DOE, but the applicant’s statement will assist project planning and integration of domestic preference requirements, which may impact the project’s proposed budget.

D. Waivers

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 is seeking a waiver of the Buy America requirements, it must include a written waiver request with the Full Application. 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 described at <https://www.madeinamerica.gov/financial-assistance/>.

The applicant does not have the right to appeal DOE's decision concerning a waiver request.

APPENDIX D – STATEMENT OF PROJECT OBJECTIVES

Background/Instructions: *Prospective recipients of awards funded from Funding Opportunity Announcement DE-FOA-0002740 (FOA 2740) must prepare/submit a detailed statement of project objectives (SOPO) that addresses how the project objectives will be met. The SOPO must contain a clear, concise description of all activities that will be completed during project performance and follow the structure/format outlined below. Since the SOPO may be released (in whole or in part) to the public by the Department of Energy (DOE) after award, it shall not contain proprietary or confidential business information.*

The SOPO generally consists of less than five (5) pages to describe the proposed work. Prospective recipients of FOA 2740 funding (FOA 2740 Recipient) shall prepare the SOPO according to the format provided in the SOPO template and in accordance with the application content and form requirements identified in Section IV Of the FOA.

This Background/Instructions section as well as italicized text in the SOPO template is intended to be instructional, is provided as guidance, and should be removed by the FOA 2740 recipient when preparing their SOPO. All other text (shown as normal font within the SOPO template) is to be included in the proposed SOPO.

*In writing the Statement of Project Objectives (SOPO), **avoid:** 1) the use of proper nouns to minimize SOPO modifications in the event of changes to the project team, facilities, etc.; 2) figures and equations; 3) references to other documents and publications; and 4) details about past work and discussion of technical background (which should be covered elsewhere in the application narrative).*

[***BEGINNING OF SOPO TEMPLATE*****]**

STATEMENT OF PROJECT OBJECTIVES (SOPO)

Title of Project

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

A. OBJECTIVES

Clearly and concisely describe the objective(s) of the project. If the project includes multiple phases of work, describe the objective(s) for each phase. This section should not exceed one-half page.

B. SCOPE OF WORK

Summarize the planned effort and approach to achieve the proposed overall project objectives. For projects that involve multiple phases of work, specific scope statement(s) should be defined for each phase. This section should not exceed one-half page.

C. TASKS TO BE PERFORMED

Unless otherwise stated, all SOPOs will include tasks for Project Management Plan, National Environmental Policy Act (NEPA) Compliance, and Cybersecurity Plan (CSP) as instructed below. Further, the applicant should include clear and concise descriptions of their planned tasks (and subtasks if needed). Tasks are to be organized in a logical sequence and grouped into corresponding phases, if applicable.

Task 1.0: Project Management and Planning

Subtask 1.1 – Project Management Plan (PMP):

Within 30 days of award, the Recipient shall submit a Project Management Plan (PMP) to the designated Federal Project Officer (FPO). The Recipient shall not proceed beyond Task 1.0 until the PMP has been accepted by the FPO.

The PMP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc.

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

Subtask 1.2: National Environmental Policy Act (NEPA) Compliance

As required, the Recipient shall provide the documentation necessary for NEPA compliance.

Subtask 1.3: Cybersecurity Plan (CSP)*

The CSP shall be revised and resubmitted as often as necessary, during the course of the project, to capture any major/significant changes.

**Applicable to Topic Area 2 [Smart Grid Investments (40107)] and Topic Area 3 (Innovative Grid Resilience Program (40103(b)) only*

Subtask 1.4: Continuation Briefing(s):

The Recipient will brief DOE on roughly an annual basis to explain the plans, progress and results of the technical effort. The briefing shall also describe performance relative to project success criteria, milestones, and the Go/No-Go Decision point that are documented in the Project Management Plan (PMP).

Include additional tasks and subtasks as appropriate using the following format. For projects that involve multiple phases of work, label the start of each phase (such as "Phase 1", etc.), state the title, and provide a brief narrative describing the objective(s) and scope for the phase.

Task 2.0 - (State title of task and provide description)

Subtask 2.1 - (State title of subtask and provide description)

Task 3.0 - (State title of task and provide description)

Subtask 3.1 - (State title of subtask and provide description)

Task 4.0 - (State title of task and provide description)

Subtask 4.1 - (State title of subtask and provide description)

D. DELIVERABLES

The Recipient shall include a list of deliverables that will be submitted during the project.

Subtask 1.1: Project Management Plan

Subtask 1.3 – Cybersecurity Plan (*if applicable)

Subtask 1.4 – Pre-Continuation Briefing Document(s)

List additional deliverables as appropriate including any documents that will be delivered to DOE.

In addition to the deliverables listed above, the Recipient shall submit all periodic, topical, final, and other reports in accordance with the Federal Assistance Reporting Checklist and accompanying instructions.

E. BRIEFINGS/TECHNICAL PRESENTATIONS

The Recipient shall prepare, and present periodic briefings, technical presentations and demonstrations as requested by the Federal Project Officer, which may be held at a DOE or the Recipient's facility, other mutually agreeable location, or via webinar. Such meetings may include all or a combination of the following:

Kickoff Briefing - Not more than 30 days after submission of the Project Management Plan, the Recipient shall prepare and present a project summary briefing as part of a Project Kickoff Meeting.

Pre-Continuation Briefing - Not less than 90 days prior to the planned start of a budget period, the Recipient shall brief the DOE on the results to date, and their plans for the subsequent periods of work. The DOE will consider the information from this briefing, as well as the content of deliverables submitted to date, prior to authorizing continuing the project.

Final Project Briefing - Not less than 30 days prior to the end of the project, the Recipient shall prepare and present a Final Project Briefing on the results and accomplishments of the entire project.

Other Briefings – The Recipient shall prepare and present technical, financial, and/or administrative briefings as requested by the DOE. Additionally, the DOE may require Recipients to make technical presentations at national and/or industry conferences.

[**END OF SOPO TEMPLATE*****]***

APPENDIX E – CYBERSECURITY PLAN

In accordance with BIL Section 40126, DOE requires Topic Area 2 and Topic Area 3 awardees to submit a cybersecurity plan during award negotiations and prior to receiving funding.⁵⁷ These plans are intended to foster a cybersecurity-by-design approach⁵⁸ for BIL efforts. The Department will also use these plans to ensure effective integration and coordination across its research, development, and demonstration programs.

The Department recommends using open guidance and standards such as the National Institute of Standards and Technology's (NIST) Cybersecurity Framework (CSF), the DOE Cybersecurity Capability Maturity Model (C2M2), and the Cybersecurity and Infrastructure Security Agency (CISA) cybersecurity performance goals for critical infrastructure and control systems.⁵⁹ The cybersecurity plan created pursuant to 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, the Cybersecurity Plan should address questions noted in IJIA section 40126 (b) 'Contents of Cybersecurity Plan'.⁶⁰
 - (1) plans to maintain cybersecurity between networks, systems, devices, applications, or components-
 - (A) within the proposed solution of the project; and
 - (B) at the necessary external interfaces at the proposed solution boundaries;

⁵⁷ 42 USC §18725

⁵⁸ Security must be baked into the development process, not bolted on. Security risk evaluation and mitigation measures should be an active component in a project (or product) lifecycle – from early development stages to implementation.

⁵⁹ 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, 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). CISA cybersecurity performance goals for critical infrastructure and control systems directed by the National Security Presidential Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems, found at <https://www.cisa.gov/cpgs>

⁶⁰ 42 USC §18725

- (2) will perform ongoing evaluation of cybersecurity risks to address issues as the issues arise throughout the life of the proposed solution;
 - (3) will report known or suspected network or system compromises of the project to DOE; and
 - (4) will leverage applicable cybersecurity programs of the Department, including cyber vulnerability testing and security engineering evaluations.
- Projects receiving funding under this program must utilize open protocols and standards (including Internet-based protocols and standards) if available and appropriate.⁶¹

⁶¹ 42 USC §17386(e)(1)(B)

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

Project title:

Applicant Name:

Applicant Address:

Names of all team member organizations (if applicable):

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

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

Include any statements regarding confidentiality.

Federal Share:

Cost Share:

Total Estimated Project Cost:

Item 1: Specify (mark with "X") the FOA Topic Area and as applicable the Area of Interest (AOI):

_____ Topic Area 1: **Grid Resilience Grants** (BIL section 40101(c))

_____ Topic Area 2: **Smart Grid Grants** (BIL section 40107)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 1
(Transmission System Applications)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 2
(Distribution System Applications)

_____ Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 3
(Combination System Applications)

TOPIC AREA 1 Specific Items:

Item 2: Specify (mark with "X") the entity type of the applicant organization:

_____ electric grid operator

_____ electricity storage operator

_____ electricity generator

_____ transmission owner or operator

_____ distribution provider

_____ fuel supplier

If further description is needed for the specified entity type, please provide below:

Item 3: Please provide the total amount (USD) of qualifying resilience investments (as outlined in DE-FOA-00002740) that has been spent for the previous 3 years. Please also provide the time period utilized for calculation of this amount.

Total Amount:

Time Period for Resilience Investments:

Note: Topic Area 1 applicants must submit as part of their application, a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events. This report should include efforts over at least the previous 3 years and at least the next 3 years and any broader resilience strategy used by the applicant.

Item 4: Is the eligible entity a Small Utility as defined in DE-FOA-0002740 (sells no more than 4,000,000 MWh of electricity per year)? If NO is selected, skip to Item 7.

_____ Yes

_____ No

Note: If YES, applicant must provide their Form 861 for the last reporting year submitted to the Energy Information Administration (EIA).

Item 5: Per BIL section 40101(e)(2) (C) APPLICATION LIMITATIONS.—An eligible entity may not submit an application for a grant provided by the Secretary under subsection (c) and a grant provided by a State or Indian Tribe pursuant to subsection (d) during the same application cycle.

Therefore, is the eligible entity a Subaward/Subcontract recipient for an application submitted under IIJA Section 40101(d), ALRD 2736? If “YES”, please describe the differences between the GRIP FOA 2740 application [40101(c)] and the ALRD 2736 [40101(d)] applications in the box below:

_____ Yes

_____ No

TOPIC AREA 2 Specific

No items

TOPIC AREA 3 Specific

Item 6: Specify (mark with "X") the entity type of the applicant organization:

_____ a State

_____ a combination of 2 or more States

_____ an Indian Tribe

_____ a unit of local government

_____ a public utility commission

If further description is needed for the specified entity type, please provide below:

Item 7:

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

Authorized Organizational Representative (AOR):

Name:

Address:

Phone:

E-mail:

Item 8: Signature of Authorized Organizational Representative (AOR)

_____ -