

U.S. Department of Energy (DOE) Solar Energy Technologies Office

Bipartisan Infrastructure Law: Advancing Equity through Workforce Partnerships

Funding Opportunity Announcement (FOA) Number: DE-FOA-0002769

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FOA Issue Date:	July 27, 2022
Informational Webinar:	2:00pm ET August 4, 2022
Submission Deadline for Letter of Intent:	5:00pm ET September 13, 2022
Submission Deadline for Concept Papers:	5:00pm ET September 20, 2022
Submission Deadline for Full Applications:	5:00pm ET December 16, 2022
Expected Submission Deadline for Replies to Reviewer Comments:	5:00pm ET February 9, 2023
Expected Date for EERE Selection Notifications:	March 2023
Expected Timeframe for Award Negotiations:	March-April 2023

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

Modifications

All modifications to the FOA are [HIGHLIGHTED] in the body of the FOA.

Mod. No.	Date	Description
000001	November 2, 2022	<p>Extended the Full Application Submission Deadline from 12/6/2022 to 12/16/2022. Updated the FOA timeline on the FOA cover page to accommodate this change.</p> <p>Updated Section IV.E.v – Statement of Project Objectives (SOPO) to show maximum number of pages for SOPO (5 pages).</p>

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I. Funding Opportunity Description

A. Background and Context

The Office of Energy Efficiency and Renewable Energy (EERE) is issuing, on behalf of the Solar Energy Technologies Office (SETO), 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, also more commonly known as the Bipartisan Infrastructure Law (BIL).

The BIL is a once-in-a-generation investment in infrastructure, which will grow a more sustainable, resilient, and equitable economy through enhancing U.S. competitiveness, driving the creation of quality jobs, 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 to invest in American manufacturing and workers; expand access to energy efficiency; deliver reliable, clean and affordable power to more Americans; and deploy the technologies of tomorrow through clean energy demonstrations.

As part of and in addition to upgrading and modernizing infrastructure, DOE's BIL investments will address the climate crisis and support efforts to build a clean and equitable energy economy that achieves zero carbon electricity by 2035, and put the United States on a path to achieve net-zero emissions economy-wide by no later than 2050³ to benefit all Americans.

Under Section 41007(c)(1), the BIL provides funding to carry out research, development, demonstration, and commercialization activities relating to solar energy technologies, which includes conducting workforce development activities.

The activities to be funded under this FOA support the broader government-wide approach to addressing the climate crisis and maximizing the benefits of the clean energy transition as the nation works to curb the climate crisis, empower workers, and advance environmental justice.

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.

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i. Program Purpose

This FOA supports the administration goals laid out above by supporting the development of workforce programs and partnerships that will facilitate the continued deployment of solar energy technologies, while supporting an inclusive workforce with opportunities for career advancement, including through union membership.

As part of the whole-of-government approach to advance equity and encourage worker organizing and collective bargaining^{4, 5, 6} this FOA and any related activities will seek to encourage meaningful engagement and participation of labor unions and underserved communities and underrepresented groups, including consultation with Tribal Nations⁷. Consistent with Executive Order 14025, this FOA is designed to encourage worker organizing and collective bargaining.⁸ Unions are encouraged to apply to this FOA, either as lead organizations or as members of project teams. Consistent with Executive Order 14008, this FOA is designed to support the goal that 40% of the overall benefits of certain investments flow to DACs in accordance with the Justice40 Initiative. Consistent with Executive Order 14052, this FOA is designed to improve job opportunities for Americans by focusing on high labor standards, including prevailing wages and the free and fair chance to join a union⁹.

ii. Technology Space and Strategic Goals

Solar energy technologies are essential to achieving a 100% clean electricity system by 2035 and a net-zero energy system by 2050. In September 2021, DOE released the Solar Futures Study,¹⁰ which examined solar power's role in achieving the decarbonization of the grid by 2035 and 2050. According to the study, solar power will need to grow from 3% of the U.S. electricity supply today to 40% by 2035 and 45% by 2050. This will require the U.S. to install 30 gigawatts alternating current¹¹ (GW) of solar capacity each year between now and 2025

⁴ EO 13985, "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" (Jan. 20, 2021).

⁵ EO 14025, "Worker Organizing and Empowerment," April 26, 2021.

⁶ EO 14052, "Implementation of the Infrastructure Investment and Jobs Act," November 18, 2021.

⁷ 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.

⁸ EO 14025, "Worker Organizing and Empowerment," April 26, 2021.

⁹ EO 14052, "Implementation of the Infrastructure Investment and Jobs Act," November 18, 2021.

¹⁰ SETO. Solar Futures Study. <https://www.energy.gov/eere/solar/solar-futures-study>

¹¹ All capacity numbers are described in alternating current (AC) rather than direct current (DC).

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and ramp up to 60 GW per year from 2025-2030. With supportive policies, electrification, and aggressive cost reductions, solar could provide 1 terawatt (TW) of solar capacity to the grid by 2035 and 1.6 TW of capacity by 2050. Preliminary modeling shows that decarbonizing the entire energy system could result in the need for as much as 3 TW of solar capacity due to increased electrification across the energy system.

To achieve these decarbonization goals, the study suggests that the solar industry will need to grow from employing approximately 230,000 individuals today to between 500,000 and 1,500,000 workers by 2035. The transition to this clean energy future must be equitable and inclusive and must benefit all Americans, particularly DACs.

iii. Job Quality and Equity

Community and Labor Engagement

The project planning should include sector-based engagement with an inclusive collection of local stakeholders -- including employers, labor unions and joint labor-management training programs community-based organizations that work with disadvantaged communities or populations, employers, and local government or agencies. Proactive and meaningful engagement should be evidenced by Letters of Commitment specifying the intention to enter into formal partnership should the project be awarded funding.

Quality Jobs

In keeping with the administration's goals¹², and to ensure the agency's energy projects contribute to overall economic prosperity, the DOE seeks to expand access to and grow quality jobs, where workers have a free and fair chance to join or form a union; support responsible employers that foster safe, healthy, and inclusive workplaces free from harassment and discrimination; and support strategies that develop a skilled and inclusive workforce to build and maintain the country's energy infrastructure.

¹² Strengthening prosperity by expanding good-paying, secure, and safe union jobs accessible to all workers is a key goal set by President Biden, discussed in depth in his Executive Orders on Ensuring the Future Is Made in All of America by All of America's Workers (EO 14005), Tackling the Climate Crisis at Home and Abroad (EO 14008), Worker Organizing and Empowerment (EO 14025), Boosting Quality of Federal Construction Contracts (EO 14063), Promoting Competition in the American Economy (EO 14036), and Implementing the Infrastructure Investment and Jobs Act (EO 14052).

Diversity, Equity, Inclusion, and Accessibility

Advancing equity, civil rights, racial justice, and equal opportunity is a key priority of DOE. 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.¹³

As part of a whole of government approach to advancing equity, this FOA seeks to encourage the participation of underserved communities¹⁴ and underrepresented groups in career-track training, employment, and other economic opportunities.

Justice40 Initiative

In addition to the Federal government’s initiative to achieve greater participation from underserved communities and underrepresented groups, benefits under this FOA should flow to DACs to support DOE’s commitment to the Justice40 Initiative. Benefits should include (but are not limited to) measurable direct or indirect investments or positive project outcomes that achieve or contribute to an increase in job creation, the clean energy job pipeline, job training for individuals, and clean energy enterprise creation or expansion (e.g. opportunities for minority-owned or disadvantaged businesses).

iv. 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

¹³ Executive Order 13985, “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government” (Jan. 20, 2021).

¹⁴ 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.

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applicants and to explore potential partnerships. Participation by employers, including minority and women-owned firms, labor unions, and community-based organizations serving DACs or other high-risk, under-represented, or under-served populations is highly encouraged.

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

SUBMISSION INSTRUCTIONS: Any organization that would like to be included on this list should submit the following information: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, Brief Description of Capabilities, and Area of Interest.

Interested parties should email the information to Seto.workforceFOA22@ee.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.

B. Topic Area Description

This FOA will support multi-stakeholder high-road workforce development partnerships that help accelerate the deployment of solar energy while advancing the Administration's priorities around worker empowerment, quality jobs with a free and fair choice for workers to join a union, and Energy and Environmental Justice (EJ) and Diversity, Equity, Inclusion, and Accessibility (DEIA) in the clean energy workforce.

High-road workforce partnerships bring together employers, training providers, and community-based organizations to improve both job quality and job access and create other community benefits. Successful workforce development activities should be demand-driven and worker-centric. They must be designed to recruit, train, and retain a diverse and local workforce to address pressing

industry needs around the comprehensive skills and competencies most in demand to enable robust industry growth. At the same time, they must provide employees with the support and services needed to obtain broad occupational training leading to family-sustaining careers and opportunities for union membership.

Successful applicants will foster new multi-stakeholder high-road workforce partnerships. These partnerships should aim to establish sector-based training models and career pathways by bringing together key stakeholders in an organized and formalized partnership. Stakeholders may include employers, training providers, labor unions, non-profit community-based organizations (CBOs), local governments, Tribal entities, regional workforce development boards, or other relevant entities. By identifying common challenges and opportunities, effective workforce partnerships can better align programs, provide supportive services/wrap-around supports, education and training curriculum, and other resources that serve both employers and employees.

Proposed programs should assess and utilize existing quality training infrastructure wherever possible, and leverage existing local, state, and federal training resources. These programs could include pre-apprenticeships tied to Registered Apprenticeships, labor-management partnerships, Registered Apprenticeships, and other quality efforts. Programs might also leverage private funding sources or new financing models. Programs should be designed to be scalable, replicable, and sustainable in order to have a lasting and meaningful impact on the solar industry and the clean energy workforce. Successful applicants should demonstrate a clear plan for program sustainability beyond the award's period of performance.

Workforce development programs and partnerships that support employment pathways for members of underserved or disadvantaged communities are the primary focus of this funding program. In addition, the Biden Administration and DOE recognize the need to support communities that have significant economic dependence on fossil fuel industries and have been or are expected to be impacted by the transition away from these industries, including coal mining and coal and natural gas power generation. Workers in these industries possess many of the transferable skills needed to contribute to the growing clean energy sector. Women are also a target population for workforce development initiatives under this FOA, as women are significantly underrepresented in technical roles in clean energy, as well as in the broader construction trades.

Specifically, this FOA is intended to support sustainable, employer-driven, employee-centric high-road workforce development partnerships that benefit the following individuals and communities:

- Disadvantaged or LMI communities
- Communities of Color
- Tribal communities
- Young people with disadvantaged backgrounds
- Previously Incarcerated Individuals (PII) or Returning Citizens
- Transitioning fossil fuel communities
- Rural communities
- People with Disabilities
- Women

Background

SETO has undertaken a variety of activities to gather feedback about the most pressing industry needs related to solar workforce development and the role of workforce development programs in creating more opportunities for members of disadvantaged communities to pursue careers in this sector.

On May 4, 2021, SETO published a Request for Information (RFI) to solicit feedback from industry, academia, government agencies, worker organizations (including unions), and other stakeholders on issues related to the employment needs of the solar industry, and the perceived value of different workforce development programs, training strategies, and tools. To supplement the RFI, SETO hosted four virtual convenings that brought together stakeholders from utility-scale and distributed generation (DG) solar development, labor organizations, and training providers to hear direct feedback on the questions in the RFI. In addition, SETO held listening sessions with roughly a dozen other organizations and staff who could not participate in the virtual convenings. Altogether, SETO received 45 responses to the RFI and heard directly from 80-100 other stakeholders via the convenings and listening sessions. The scope of efforts was limited to workforce needs related to deployment of Photovoltaic (PV) systems at residential, commercial, and utility scale; workforce needs for Concentrating Solar Power (CSP) systems or other thermal solar heating systems were not included in the RFI and are outside the scope of this funding opportunity.

Several key issues emerged as recurring themes throughout this process. First, many companies relayed that almost every job category was in high demand,

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and that they were making plans for additional hires in general construction, skilled electrical trades, and a wide variety of other positions. For both utility-scale and DG projects, companies described an enormous demand for on-site workers. PV installer positions were identified as one of the most in-demand labor categories. Electricians, especially those with solar experience and any required state license or certification, were also identified as one of the most in-demand and difficult-to-fill positions. These findings also align with data published in the Solar Futures Study, which found that approximately 65% of jobs in the solar industry could be characterized as solar installation and project development¹⁵ and the 2022 U.S. Energy and Employment Report, which found that over 93% of employers within solar electric power generation reported some difficulty finding qualified construction workers, with 40% claiming it is “very difficult”.¹⁶

In addition, employers identified sales and marketing roles, and solar business professionals, as important opportunities that can lead to longer-term career growth. In addition to current demand, employers anticipated strong labor market growth and the continued need for new hires. Both employers and labor organizations emphasized the Federal government’s role in broadening the funnel for individuals interested in pursuing a career in this sector.

There was broad recognition that both solar and the broader construction industry need to do more to improve racial and gender diversity within its workforce. Many companies described impressive efforts to improve diversity and create a more inclusive workplace, but there was also wide recognition of the need to expand these efforts and of a potential role for the Federal government in supporting new programs or initiatives in this area. Many saw a critical role for employers and labor organizations to work with local communities and hire from within those communities as they worked to deploy solar on multi-family and affordable housing in low- to moderate-income (LMI) communities, on Tribal lands, and in rural areas of the country. Many stakeholders also affirmed the importance of further supporting and partnering with CBOs, local training providers, and community colleges, who were already working with, and had the trust of, these communities.

Currently, there are a variety of workforce development programs that prepare workers for careers in clean energy, including apprenticeship readiness (pre-apprenticeship), Registered Apprenticeship, job-readiness programs, certification

¹⁵ Solar Futures Study, U.S. Department of Energy, October 2021.

<https://www.energy.gov/sites/default/files/2021-09/Solar%20Futures%20Study.pdf>

¹⁶ U.S. Energy and Employment Report, U.S. Department of Energy, June 2022.

https://www.energy.gov/sites/default/files/2022-06/USEER%202022%20National%20Report_1.pdf

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programs, community and technical college programs, and 4-year college degree tracks. Program durations can range from a few days to several years. Some stakeholders felt there was a role for SETO to help standardize and improve solar-related curriculum and certification programs, or support development of new apprenticeship readiness and/or Registered Apprenticeship programs, while others emphasized that many programs already exist, and it was more important for SETO to provide support for outreach and recruitment, on-the-job training, and partnership-building that would help more people pursue careers in solar and related clean energy technologies.

Key Elements of a Successful Application

In order to be considered under this FOA, applicants must propose solar-centered workforce development programs oriented around advancing worker empowerment, DEIA, and EJ goals, improving career opportunities, and other related priorities. In addition, key elements of successful applications will include many, if not all, of the following characteristics:

- **Multi-Stakeholder Teams:** Applicants should bring together multi-stakeholder teams that include employers, training providers, labor unions, local government partners, and CBOs working or serving DACs or other high-risk, under-represented, or under-served populations. Through these partnerships, project teams will be positioned to better understand the workforce needs of the regional labor market and create programs that support local skills training, job placement, and other support services, and offer effective career development pathways for the local community. Ideally, applications will include multiple employer partners and labor organizations who co-invest in proposed programs and commit to hiring trained individuals or placing them into apprenticeship or mentorship programs, or other career development pathways. Employer partners should also commit to actively engage in the development and implementation of training programs and processes, by participating on Advisory Committees, and ensuring programs align with their needs. The prime applicant should serve as a respected “convener” to act as the voice of the partnership, navigate conflicts, align interests, and execute partner subcontracts across the multi-stakeholder team.
- **Demand-Driven:** Applicants should demonstrate knowledge and awareness of industry needs and skills requirements both at the national level and in their proposed region of focus. Applicants should provide a clear overview of recent trends in local solar market development, areas

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of expected acute demand, impacts of recent state or local policies, and any local licensing requirements. They should demonstrate that participation in their proposed training program will fill necessary gaps and readily contribute to meeting local solar market demand growth. By assessing the regional labor market and the current and future needs of employers, multi-stakeholder project teams can help ensure optimal alignment between different training programs and the actual needs of industry. Applicants might also include plans to develop an employer needs assessment or gap analysis around the relevance and value of any existing programs, and recommend any changes needed to program content and approach (hands-on, online, or hybrid, etc.). Applicants are strongly encouraged to incorporate increased on-the-job earn-as-you-learn opportunities. If compensation is intended to be provided through award funds, applicants should provide a strong justification as to why this is necessary. Applicants should include a minimum of three letters of support from local employers affirming their interest in the training program and making commitments to hire program graduates, detailing the minimum number and types of openings; the minimum wages, benefits, and conditions of work; and minimum contributions for worker training. Applicants with employer partners willing to provide cost-share, through financial contributions to the training and through employment of program participants, are preferred.

- **Worker-Centric:** Applicants should demonstrate ways that they would balance employer needs with a worker-centric training program that empowers workers, meets individuals where they are with comprehensive support services to overcome their specific barriers to employment, and provides placement services. They should describe the provision of any wrap-around services (e.g., childcare, transportation costs), career mapping, mentoring, and coaching, and the type of skills development needed for individuals to build successful careers through a variety of career pathways. While solar should be the primary focus of the proposed program, SETO recognizes an imperative to de-silo the solar industry within the broader construction and energy industries, and will consider applicants that propose broadly designed programs that encompass skills training for related technologies, including energy storage, electric vehicle charging, building energy efficiency, and other energy technologies. Programs are encouraged to create pathways to the electrical trades and other building trades and their registered apprenticeship programs, or may support the development of cross-over skills training that will enable individuals to be successful across many career types. Programs should also propose ways to support upward

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mobility in the labor market through stackable credentials, targeted upskilling, or more specialized training programs, based on industry needs. SETO regards this focus on worker empowerment and long-term career development as a vital component of program success, and as such, applicants should include information on how worker voice will be elevated in project design, demonstrated by letters of support from registered apprenticeship programs, labor unions, and/or other organizations representing workers.

- **Leveraging Existing Infrastructure and Resources:** Applicants should describe how they will leverage existing training infrastructure and resources developed by other local, state, and federal programs, or leverage public or private funding sources or financing models. Many related apprenticeship programs, solar credentials, curriculum, and training resources already exist, and applicants should demonstrate knowledge and awareness of these programs, and describe how they will leverage this existing infrastructure to create broader, more equitable, and more numerous pathways to careers in this sector. Where new curriculum or curriculum modules, certifications, or other programs are needed, applicants should clearly describe what is needed and how existing offerings are falling short. Applicants should also describe how their efforts will complement existing local, state, or federal programs. This is particularly important for programs supported or certified by the U.S. Department of Labor, including engagement with regional workforce boards, American Jobs Centers, and other programs. Given the Biden Administration’s commitment to a “whole-of-government” approach to addressing the climate crisis, it is imperative that DOE programs are aligned with resources already committed by other Federal agencies and existing public-private partnerships.
- **Sustainability and Replicability:** Applicants must demonstrate how their proposed project would produce a meaningful and long-term impact on the solar industry beyond each award’s period of performance. Applicants should present strategies for ensuring that project activities are sustainable beyond the award’s period of performance without requiring additional funding from SETO. Projects may be sustained by monetizing certain activities, securing funding through alternate mechanisms, or describing other ways that project infrastructure would remain in place and continue to produce desired results. Preference will be given to programs that will be financially sustained by training contributions from multiple participating employers and labor unions. Projects should also describe how successful activities could serve as a

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pilot for future programs or be replicated in other communities. All applicants must affirm their interest in working with SETO, with other DOE workforce awardees and programs, and other relevant stakeholders in order to share program results, disseminate resources, and promote best practices in a way that will support the overall success of SETO's workforce development strategy.

- **Prioritization of Energy Justice:** As discussed above, the goal of this FOA is to help support an equitable transition to a clean energy economy and ensure that all Americans benefit, particularly those individuals and communities that have been negatively impacted by previous energy and environmental programs and policies. All applicants should orient their projects around increasing Diversity, Equity, Inclusion, and Accessibility (DEIA) within the solar workforce and supporting the Administration's Justice40 priorities. Projects that are led by, or have as part of their project team, Minority-led or Woman-led entities are encouraged to apply. Other entities are welcome to apply and describe how their project would be oriented around supporting individuals from disadvantaged communities to pursue careers in the solar and related construction and clean energy industries by supporting career ladders, apprenticeship readiness programs that lead to placement in jobs including registered apprenticeship programs (which are earn-as-you-learn on-the-job training opportunities), and wrap-around supportive services to reduce systemic barriers to career-track training and employment.

Similar to other projects funded by SETO, applicants to this FOA should propose a clear work plan and effectively articulate project objectives, expected outcomes and impacts, and anticipated partner roles and responsibilities. On the front-end of the project, applicants typically establish a Technical Advisory Council (TAC) comprising a cross-section of diverse stakeholder perspectives, and use the TAC throughout the project to inform project planning and ensure that project outcomes align with stakeholder needs. Applicants must also set clear quarterly milestones and Go/No-Go Decision Points for their project that are Specific, Measurable, Attainable, Relevant and Time-bound (SMART). In most cases, for this award, successful milestones should generally be centered around key metrics, such as the number of individuals from EJ and underserved communities participating in training programs and obtaining meaningful employment in relevant sectors of the industry. Other types of expected key outcomes and metrics are described along with the areas of interest described below.

Areas of Interest

SETO will consider and evaluate a variety of multi-stakeholder high-road training partnership proposals under this FOA. Projects should primarily relate to PV solar deployment and associated careers including in installation, system design, operations and maintenance (O&M), electrical work, project management, sales, and business operations. Proposals focused on manufacturing for solar PV modules and other equipment will be considered, but is not expected to be the primary area of focus for the funding program. Proposals related to CSP or other solar-thermal heating systems will not be considered.

The following list describes the types of applications SETO expects to receive and may potentially fund as a result of the funding opportunity.

- **Apprenticeship Readiness (Pre-Apprenticeship) or Apprenticeship Partnership:** A labor union or non-profit organization could propose to launch or expand a training program that effectively integrates solar curriculum and on-the-job training into an apprenticeship readiness (aka pre-apprenticeship) or apprenticeship program, and include a DEIA-focused recruitment initiative. Such a program would focus on building new pathways for disadvantaged or underrepresented groups to build careers in the solar industry, or related electrical or building trades. Programs should have a solar orientation, but can be broader to encompass solar within the building, construction, electrical, or other trades. The program should partner with local employers to assess skills and hiring needs, leverage existing training infrastructure or apprenticeship programs, and build new partnerships with underserved K-12 vocational schools, local community colleges, Minority Serving Institutions (MSIs), Historically Black Colleges and Universities (HBCUs), trade schools, or CBOs active in their communities.

According to the Department of Labor Apprenticeship Office, the successful elements of a quality Apprenticeship Readiness Program are as follows: an approved curriculum; a simulated, hands-on training experience; facilitating participant entry through sponsors and placement services; increasing diversity of the applicants; providing supportive, wrap-around services; and building sustainable partnerships.¹⁷ Applicants should work to include these elements and other DOL Best Practices in their proposed programs.

¹⁷ “What is a Pre-Apprenticeship Program?,” U.S. Department of Labor,
<https://apprenticeship.gov/employers/explore-pre-apprenticeship>

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- *Key outcomes* from these projects could include union or non-union adoption of new programs or policies; new DEIA-focused outreach or recruitment efforts; and lasting partnerships between employers, CBOs, MSI/HBCUs, or underserved K-12 schools. Metrics could focus on the number of participating employers, the number of students participating in these programs, graduating from them, or being placed in relevant careers with family-supporting wages and good benefits.
- **Community-Led Training Partnership:** CBOs, non-profits, Tribal entities, or local governments and governmental entities could propose to build new solar-focused career development programs or could propose to expand or replicate new programs to new communities or regions of the country. Incumbent awardees that have implemented effective DOE workforce or EJ-focused projects are eligible to apply for additional funding to expand or replicate their program in new regions or areas of focus. All applicants should describe key elements of successful programs and how they would propose to improve or expand upon their existing infrastructure. As indicated above, all applicants should propose partnerships with multi-stakeholder teams that will bridge the gap between worker recruitment and training, and job placement and career development.
 - *Key outcomes* from these projects could include new or expanded training programs; new lasting partnerships with employers and unions; and programs with a high potential for replication and sustainability. Metrics could focus on the number of individuals participating in these programs and successfully obtaining careers in relevant sectors.
- **Clean Energy Sector Partnerships:** A regional or national non-profit organization, local governmental entity, or other organization could propose to serve as a regional or national workforce intermediary and convener to bring together relevant stakeholders including solar employers, solar workers, labor unions, community colleges, training providers, CBOs, and governmental entities to identify workforce needs and coordinate effective workforce development strategies, particularly those oriented around supporting EJ communities and leading to industry utilization of standardized credentials. Such an effort would focus on collaboration between multiple employers, connecting training programs, and building consensus among various stakeholder groups on the most

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effective ways to recruit, support, and connect job seekers with workforce development pathways and employer and/or union programs. These programs would facilitate collaboration across employers and other industry stakeholders in order to share resources and upskill workers across the industry. Where necessary, such a program could also support activities designed to launch a new multiple employer-sponsored apprenticeship readiness or apprenticeship program.

- *Key outcomes* from these projects could include durable multi-stakeholder partnerships; new certification, apprenticeship readiness, or apprenticeship programs; new web resources or career navigation platforms that amplify career opportunities in the sector and help job seekers navigate career pathways, locate training resources and continuing education services, and access career mentors and other wrap-around services. Metrics could focus on communications deliverables, training programs, resource downloads, or individuals leveraging this ecosystem of partners and resources to build careers in solar and related fields.

SETO will also consider and evaluate other new or innovative types of programs which advance the Office's goals around solar workforce development and equitable access. Other types of proposed programs should include a clear justification for, and documentation of, industry-need, expected benefits for EJ and underserved communities, and alignment with the other elements of a successful program as described in the previous section.

All work under EERE funding agreements must be performed in the United States. See Section IV.K.iii..

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 Section I.A. and I.B. of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Applications that focus on training programs for Concentrating Solar Power or other solar-thermal technologies.
- Single employer programs or programs without formal partnerships

D. Authorizing Statutes

The programmatic authorizing statutes are:

Public Law 116–260, Division Z, Sec.3004, Energy Act of 2020 (codified at 42 U.S.C. 16238)

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.

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to make a total of approximately \$10,000,000 of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 8-16 awards under this FOA. DOE may issue one, multiple, or no awards. Individual awards may vary between \$250,000 and \$1,500,000.

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

Topic Area Number	Topic Area Title	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual Award (Fed Share)	Anticipated Maximum Award Size for Any One Individual Award (Fed Share)	Approximate Total Federal Funding Available for All Awards	Anticipated Period of Performance (months)
1	Advancing Equity Through Workforce Partnerships	8-16	\$250,000	\$1,500,000	\$10,000,000	24-36 months

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

ii. Period of Performance

DOE anticipates making awards that will run from 24 up to 36 months in length, comprised of one or more budget periods. Project continuation will be

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contingent upon several elements, including satisfactory performance and DOE's Go/No-Go decision. For a complete list and more information on the Go/No-Go review, see Section VI.B.xiii.

iii. New Applications Only

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

Organizations that have current awards with EERE are eligible to apply for this funding program, but they must submit a new application for funding.

B. DOE Funding Agreements

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

i. Cooperative Agreements

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

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.ix of the FOA for more information on what substantial involvement may involve.

ii. Funding Agreements with Federally Funded Research and Development Center (FFRDCs)¹⁸

In most cases, FFRDCs are funded independently of the remainder of the project team. The FFRDC then executes an agreement with any non-FFRDC project team members to arrange work structure, project execution, and any other matters.

¹⁸ Federally Funded Research and Development Centers (FFRDC) - FFRDCs are public-private partnerships which conduct research for the United States government. A listing of FFRDCs can be found at <http://www.nsf.gov/statistics/ffrdclist/>.

Regardless of these arrangements, the entity that applied as the prime recipient for the project will remain the prime recipient for the project.

III. Eligibility Information

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

A. Eligible Applicants

i. Domestic Entities

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

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

To qualify as a domestic entity, the entity must be organized, chartered or incorporated (or otherwise formed) under the laws of a particular state or territory of the United States; have majority domestic ownership and control; and have a physical place of business in the United States.

DOE/NNSA FFRDCs are eligible to apply for funding as a prime recipient or subrecipient.

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

Federal agencies and instrumentalities (other than DOE) are eligible to participate as a subrecipient, but are not eligible to apply as a prime recipient. Entities banned from doing business with the U.S. government such as entities debarred, suspended, or otherwise excluded from or ineligible for participating in Federal programs are not eligible.

Entities identified on a Department of Homeland Security, Binding Operational Directives as an entity publicly banned from doing business with the United States government are not eligible. See <https://cyber.dhs.gov/directives/>.

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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.

ii. Foreign Entities

In limited circumstances, EERE 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. The applicant does not have the right to appeal EERE's decision concerning a waiver request.

iii. Incorporated Consortia

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

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

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

iv. Unincorporated Consortia

Unincorporated Consortia must designate one member of the consortium to serve as the prime recipient/consortium representative. The prime recipient/consortium representative must be incorporated (or otherwise formed) under the laws of a state or territory of the United States. The eligibility of the consortium will be determined by the eligibility of the prime recipient/consortium representative under Section III.A. of the FOA.

Upon request, unincorporated consortia must provide the DOE Contracting Officer with a collaboration agreement, commonly referred to as the articles of collaboration, which sets out the rights and responsibilities of each consortium

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member. This agreement binds the individual consortium members together and should include the consortium's:

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

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

B. Cost Sharing

Cost sharing is not required under this FOA. However, cost share is encouraged in order to extend the impact of projects.

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

C. Compliance Criteria

Letters of Intent, Concept Papers, Full Applications, and Replies to Reviewer Comments must meet all compliance criteria listed below or they will be considered noncompliant. DOE will not review or consider noncompliant submissions

, including Letters of Intent, Concept Papers, Full Applications, and Replies to Reviewer Comments that were: submitted through means other than EERE Exchange; 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. Compliance Criteria

i. *Letters of Intent*

Letters of Intent are deemed compliant if:

- The applicant entered all required information and clicked the "Submit" button in EERE Exchange by the deadline stated in the FOA.

ii. *Concept Papers*

Concept Papers are deemed compliant if:

- The applicant submitted a compliant Letter of Intent;
- The Concept Paper complies with the content and form requirements in Section IV.D. of the FOA; and

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- The applicant successfully uploaded all required documents and clicked the “Submit” button in EERE Exchange by the deadline stated in this FOA.

iii. *Full Applications*

Full Applications are deemed compliant if:

- The applicant submitted a compliant Letter of Intent and Concept Paper;
- The Full Application complies with the content and form requirements in Section IV.E. of the FOA; and
- The applicant successfully uploaded all required documents and clicked the “Submit” button in EERE Exchange by the deadline stated in the FOA.

iv. *Replies to Reviewer Comments*

Replies to Reviewer Comments are deemed compliant if:

- The Reply to Reviewer Comments complies with the content and form requirements in Section IV.F. of the FOA; and
- The applicant successfully uploaded all required documents to EERE Exchange 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

i. Requirements for DOE/NSA FFRDCs Listed as the Applicant

A DOE/NSA FFRDC is eligible to apply for funding under this FOA if its cognizant Contracting Officer provides written authorization and this authorization is submitted with the application.

The following wording is acceptable for the authorization:

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

If a DOE/NNSA FFRDC is selected for award negotiation, the proposed work will be authorized under the DOE work authorization process and performed under the laboratory's Management and Operating (M&O) contract.

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

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

i. Authorization for non-DOE/NNSA FFRDCs

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

ii. Authorization for DOE/NNSA FFRDCs

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

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

iii. Value/Funding

The value of and funding for the FFRDC portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE/NNSA FFRDC through the DOE field work proposal (WP) system and non-DOE/NNSA FFRDC through an interagency agreement with the sponsoring agency.

iv. Cost Share

Although the FFRDC portion of the work is usually excluded from the award to a successful applicant, the applicant's cost share requirement will be based on the total cost of the project, including the applicant's, the subrecipient's, and the FFRDC's portions of the project.

v. Responsibility

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

iii. Agreement Requirements for DOE/NNSA FFRDC Participating as a Subrecipient

DOE/NNSA FFRDCs participating as a subrecipient on a project and funded directly through the DOE WP System must establish a Cooperative Research and Development Agreement¹⁹ (CRADA) or, if the role of the DOE/NNSA FFRDC is limited to technical assistance and intellectual property is not anticipated to be generated from the DOE/NNSA FFRDC's work, a Technical Assistance Agreement (TAA), with at least the prime recipient before any project work begins.

The CRADA or TAA is used to ensure accountability for project work and provide the appropriate management of intellectual property (IP), e.g., data protection and background IP. The DOE/NNSA FFRDC (or lead DOE/NNSA FFRDC, if more than one FFRDC is involved) must provide a Joint Work Statement to the DOE COs with cognizance over the DOE funding program and DOE/NNSA FFRDC during the award negotiation process. The CRADA or TAA must be executed by all parties using the CRADA or TAA template provided, as needed, during the award negotiation process.

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.

¹⁹ A cooperative research and development agreement is a contractual agreement between a national laboratory contractor and a private company or university to work together on research and development. For more information, see <https://www.energy.gov/gc/downloads/doe-cooperative-research-and-development-agreements>

IV. Application and Submission Information

A. Application Process

The application process will include three phases: a Letter of Intent phase, 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 EERE Exchange at <https://eere-Exchange.energy.gov>, unless specifically stated otherwise. **DOE will not review or consider submissions submitted through means other than EERE Exchange, 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.

A **Control Number** will be issued when an applicant begins the EERE Exchange application process. This control number must be included with all application documents, as described below.

The Concept Paper, Full Application, and Reply to Reviewer Comments 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;
- The Control Number must be prominently displayed on the upper right corner of the header of every page. Page numbers must be included in the footer of every page; and

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- 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 Letters of Intent, Concept Papers, Full Applications, and Replies to Reviewer Comments at least 48 hours in advance of the submission deadline.** Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Letter of Intent, Concept Paper, Full Application, or Reply to Reviewer Comments. Once the Letter of Intent, Concept Paper, Full Application, or Reply to Reviewer Comments is submitted in EERE Exchange, applicants may revise or update that submission until the expiration of the applicable deadline. If changes are made to any of these documents, the applicant must resubmit the Letter of Intent, Concept Paper, Full Application, or Reply to Reviewer Comments before the applicable deadline.

DOE urges applicants to carefully review their Letters of Intent, Concept Papers, Full Applications, and Replies to Reviewer Comments 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.

i. Additional Information on EERE Exchange

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

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

B. Application Forms

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

Note: The maximum file size that can be uploaded to the EERE Exchange website is 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

C. Content and Form of the Letter of Intent

Applicants must submit a Letter of Intent by the specified due date and time to be eligible to submit a Concept Paper and Full Application. Letters of Intent will be used by DOE to plan for the merit review process. The letters should not contain any proprietary or sensitive business information. The letters will not be used for down-selection purposes, and do not commit an applicant to submit an application.

Each applicant must provide the following information as part of the Letter of Intent:

- Project Title;
- Lead Organization;
- Organization Type (Business < 500 Employees; Business > 1000 Employees; Business 500-1000 Employees; FFRDC; Government-Owned, Government Operated; Non-Profit; University);
- Whether the application has been previously submitted to DOE;
- % of effort contributed by the Lead Organization;
- The Project Team, including:
 - The Principal Investigator (PI) for the prime recipient;
 - Team Members (i.e., subrecipients); and
 - Senior/Key Personnel (i.e., individuals who contribute in a substantive, measurable way to the execution of the proposed project);
- Technical Topic or Area; and
- Abstract – The abstract provided should be not more than 200 words in length, and should provide a truncated explanation of the proposed project.

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D. Content and Form of the Concept Paper

To be eligible to submit a Full Application, applicants must submit a Concept Paper by the specified due date and time.

i. Concept Paper Content Requirements

Each Concept Paper must be limited to a single concept or project. Do not consolidate unrelated concepts and technologies 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 (if applicable), both the technical and business points of contact, names of all team member organizations, the project location(s), and any statements regarding confidentiality.
Project Description	3 pages maximum	Applicants are required to describe succinctly: <ul style="list-style-type: none"> • The proposed program, including its basic operating principles and how it is unique and innovative; • The proposed program's target level of performance (applicants should provide data or other support to show how the proposed target could be met); • Information on currently existing programs, including key shortcomings, limitations, and challenges; • How the proposed program will overcome the shortcomings, limitations, and challenges in currently existing programs; • The potential impact that the proposed project would have on the relevant field and application; • How the proposed location of the proposed project will support long-term success; • The key risks/issues associated with the proposed project development plan; and • The impact that DOE funding would have on the proposed project.
Addendum	2 pages maximum	Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including:

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		<ul style="list-style-type: none">• Whether the Lead and Project Team have the skill and expertise needed to successfully execute the project plan;• Whether the applicant has prior experience which 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 Description.
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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 posted on EERE Exchange at the close of that phase.

E. 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 EERE Exchange website at <https://eere-Exchange.energy.gov/>, in accordance with the instructions.

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

All Full Application documents must be marked with the Control Number issued to the applicant. Applicants will receive a control number upon clicking the

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“Create Concept Paper” button in EERE Exchange, and should include that control number in the file name of their Full Application submission (i.e., *Control number_Applicant Name_Full Application*).

i. Full Application Content Requirements

Each Full Application must be limited to a single concept or project. 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
Technical Volume	PDF	15	ControlNumber_LeadOrganization_TechnicalVolume
Resumes	PDF	2 pages each	ControlNumber_LeadOrganization_Resumes
Letters of Commitment	PDF	1 page each	ControlNumber_LeadOrganization_LOCs
Statement of Project Objectives	MS Word	5	ControlNumber_LeadOrganization_SOPO
SF-424	PDF	n/a	ControlNumber_LeadOrganization_App424
Budget Justification Workbook	MS Excel	n/a	ControlNumber_LeadOrganization_Budget_Justification
Summary/Abstract for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary
Summary Slide	MS Powerpoint	1	ControlNumber_LeadOrganization_Slide
Subrecipient Budget Justification	MS Excel	n/a	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification
DOE Work Proposal for FFRDC, if applicable (see DOE O 412.1A, Attachment 3)	PDF	n/a	ControlNumber_LeadOrganization_WP
Authorization from cognizant Contracting Officer for FFRDC	PDF	n/a	ControlNumber_LeadOrganization_FFRDCAuth
SF-LLL Disclosure of Lobbying Activities (Prime Applicant and Subrecipients)	PDF	n/a	ControlNumber_LeadOrganization_SF-LLL
Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	n/a	ControlNumber_LeadOrganization_Waiver
Current and Pending Support	PDF	n/a	ControlNumber_LeadOrganization_CPS

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

TechnicalVolume_Part_1
TechnicalVolume_Part_2

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

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

ii. **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 “ControlNumber_LeadOrganization_TechnicalVolume”.

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

The Technical Volume to the Full Application may not be more than 15 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

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Cover Page	<p>The cover page should include the project title, the specific FOA Topic Area being addressed (if applicable), both the technical and business points of contact, names of all team member organizations, names of the senior/key personnel and their organizations, the project location(s), and any statements regarding confidentiality.</p>
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 focus of the organization relevant to the topic being addressed in the Full Application. • Project Goal: The applicant should explicitly identify the objectives of the program and the critical success factors in achieving that goal, including the ways in which the proposed project location and partners will contribute to the success of the overall project. • DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to achieve the project objectives.
Technical Description, Innovation, and Impact (Approximately 30% of the Technical Volume)	<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 program, including the key 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 to meet specific DOE targets or other relevant performance targets. The applicant should clearly specify the expected outcomes of the project. • Job Quality and Equity: the applicant should summarize a plan to improve job quality and job access through high-road workforce partnerships that include both employers, union partners, community-based organizations serving DACs or other high-risk, under-represented, or under-served populations, training providers. Projects identify partners they are working with to support trainees and workers' opportunities to join a union. The applicant should articulate a strategy for sharing and maximizing the project's benefits for DACs. Letters of commitment to enter into formal partnerships with detailed roles and responsibilities should be provided as evidence of robust labor and community engagement. Feasibility: The applicant should demonstrate the feasibility of the proposed program and capability of achieving the anticipated performance targets, including a description of previous work done and prior results. • Innovation and Impacts: The applicant should describe currently existing programs, the specific innovation of the proposed program, the

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	<p>advantages of proposed program over current and emerging programs, and the overall impact on advancing the needs of the solar industry and its workers, if the project is successful.</p>
<p>Workplan and Market Transformation Plan (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 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

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	<p>provide the means by which the milestone will be verified. The summary provided should be consistent with the Milestone Summary Table in the SOPO.</p> <ul style="list-style-type: none"> • Go/No-Go Decision Points (See Section VI.B.xiii 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 technical 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. • 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 ○ 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 • Sustainability Plan: The applicant should provide a description of how the program would be sustainable beyond the award’s period of performance and/or replicated in other ways during the award period. • Dissemination Strategy: The applicant should provide a description of the intended plan to disseminate project outputs and deliverables for the project, as well as lessons learned and best practices, and to ensure
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	the project has broad stakeholder impacts.
Technical Qualifications and Resources (Approximately 20% of the Technical Volume)	<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. • 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. • For multi-organizational projects, describe succinctly: <ul style="list-style-type: none"> ○ The roles and the work to be performed by each organization and senior/key personnel; ○ Business agreements between the applicant and each organization and senior/key personnel; ○ How the various efforts will be integrated and managed; ○ Process for making decisions on strategic direction; and ○ Communication plans

iii. Resumes

A resume provides information that can be used by reviewers to evaluate the individual’s skills, experience, and potential for leadership. Applicants are required to submit two-page resumes for the Project Lead and all Senior/Key Personnel that include the following:

1. Contact Information;
2. Education and training: Provide institution, major/area, degree, and year for undergraduate, graduate, and postdoctoral training; including a certification or graduate credential for a Registered Apprenticeship or Labor Management Partnership;
3. Professional Experience: Beginning with the current position, list professional positions in chronological order with a brief description.
4. Awards and honors;
5. Synergistic Activities: List up to five professional activities related to the proposed effort.

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

iv. Letters of Commitment

Submit letters of commitment from all subrecipient and third-party cost share providers. If applicable, also include any letters of commitment from employers, labor unions or joint labor-management training organizations/community-based organizations serving DACs or other high-risk, under-represented, or under-served populations, and local government or local agencies (one-page maximum per letter). Save the letters of commitment in a single PDF file using the following convention for the title “ControlNumber_LeadOrganization_LOCs”.

v. Statement of Project Objectives (SOPO)

Applicants are required to complete a SOPO. A SOPO template is available on EERE Exchange at <https://eere-Exchange.energy.gov/>. The SOPO, including the Milestone Table, must not exceed 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 “ControlNumber_LeadOrganization_SOPO”.

vi. SF-424: Application for Federal Assistance

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

vii. Budget Justification Workbook

Applicants are required to complete the Budget Justification Workbook. This form is available on EERE Exchange at <https://eere-Exchange.energy.gov/>. 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

“ControlNumber_LeadOrganization_Budget_Justification”.

viii. 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 director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), 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 “ControlNumber_LeadOrganization_Summary”.

ix. Summary Slide

Applicants are required to provide a single slide summarizing the proposed project. This slide is used during the evaluation process.

The Summary Slide template requires the following information:

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

Save the Summary Slide in a single Microsoft Powerpoint file using the following convention for the title “ControlNumber_LeadOrganization_Slide”.

x. Subrecipient Budget Justification (if applicable)

Applicants must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than \$250,000 or 25

percent of the total work effort (whichever is less). The budget justification must include the same justification information described in the “Budget Justification” section above. Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title “ControlNumber_LeadOrganization_Subrecipient_Budget_Justification”.

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

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

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

The federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with the contractor’s authority under its award. Save the Authorization in a single PDF file using the following convention for the title “ControlNumber_LeadOrganization_FFRDCAuth”.

xiii. 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” (<https://www.grants.gov/web/grants/forms/sf-424-individual-family.html>) to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

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

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

xiv. Waiver Requests (if applicable)

i. Foreign Entity Participation

For projects selected under this FOA, as set forth in Section III.A.iii., all prime recipients and subrecipients must be organized, chartered or incorporated (or otherwise formed) under the laws of a particular state or territory of the United States; have majority domestic ownership and control; and have a physical place of business in the United States. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application.

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

As set forth in Section IV.K.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.

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

iii. Waiver of the Buy America Requirement for Infrastructure Projects

As set forth in Section IV.K.vii., federally assisted projects which involve infrastructure work and are 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.

In limited circumstances, DOE may grant a waiver of this requirement.

Save the Waivers in a single PDF file using the following convention for the title “ControlNumber_LeadOrganization_BAWaiver”.

xv. Current and Pending Support

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. As part of the application, the principal investigator and all senior/key personnel at the applicant and subrecipient level must provide

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

For every activity, list the following items:

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

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

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

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

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or

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

The information may be provided in the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENCv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>, and is also available at <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>. The use of a format required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats. If the NSF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above.

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

Definitions:

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

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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.

Senior/key personnel – an individual who contributes in a substantive, meaningful way to the development or execution of project proposed to be carried out with DOE award.²⁰

F. Content and Form of Replies to Reviewer Comments (Optional Submission)

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

²⁰ Typically, these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level may be considered senior/key personnel if their involvement meets this definition. Consultants, graduate students, and those with a postdoctoral role also may be considered senior/key personnel if they meet this definition.

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

EERE will not review or consider ineligible Replies to Reviewer Comments (see Section III of the FOA). Applicants are not required to submit a Reply to Reviewer Comments. EERE will review and consider each eligible Full Application, even if no Reply is submitted or if the Reply is found to be ineligible.

G. Post Selection Information Requests

If selected for award, EERE 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.xviii. Participants and Collaborating Organizations);
- Current and Pending Support (See Sections IV.E.xvii and VI.B.xix. Current and Pending Support);
- 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 Workforce and Community Agreements, including Community Benefits Agreements, Community Workforce Agreements, Good Neighbor Agreements, or other agreements applicants may have made with the relevant community; and
- Environmental Questionnaire.

H. 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

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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.

I. Submission Dates and Times

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

J. Intergovernmental Review

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

K. 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. EERE 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

EERE'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 EERE completing the NEPA review process.

EERE 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 EERE 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

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All work performed under EERE awards 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, EERE 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

There may be limited circumstances where it is in the interest of the project to perform a portion of the work outside the United States. To seek a foreign work waiver, the applicant must submit a written waiver request to EERE.

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

vii. 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.

viii. Risk Assessment

Prior to making a federal award, the DOE is required by 31 U.S.C. 3321 and 41 U.S.C. 2313 to review information available through any Office of Management and Budget (OMB)-designated repositories of government-wide eligibility qualification or financial integrity information, such as SAM Exclusions and “Do Not Pay.”

In addition, DOE evaluates the risk(s) posed by applicants before they receive federal awards. This evaluation may consider: results of the evaluation of the applicant's eligibility; the quality of the application; mitigation of labor and community disputes; financial stability; quality of management systems and ability to meet the management standards prescribed in this part; history of performance; reports and findings from audits; and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-federal entities.

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.

ix. 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;

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- 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.

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

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 continuing 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.

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

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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.

xi. Affirmative Action and Pay Transparency Requirements

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

- (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 Guide²¹ should be consulted to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors and subcontractors must take.

²¹ See OFCCP's Technical Assistance Guide at:

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

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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.²²

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

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

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

This criterion involves consideration of the following factors:

- The applicant clearly describes the proposed program, describes how the program is unique and innovative, and how the program will advance the current state-of-the-art;
- The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that EERE funding and the proposed project would have on the relevant field and application;
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project; and
- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

ii. Full Applications

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

²² For more information regarding this program, see <https://www.dol.gov/agencies/ofccp/construction/mega-program>.

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Criterion 1: Technical Merit, Innovation, and Impact (50%)

This criterion involves consideration of the following factors:

Technical Merit and Innovation

- Extent to which the proposed program or process is innovative;
- Extent to which the proposed program engages priority partners (i.e., employers, labor unions, training organizations, and CBOs serving DACs or other high-risk, under-represented, or under-served populations)
- Degree to which currently existing programs and the proposed advancement are clearly described;
- Extent to which the application specifically and convincingly demonstrates how the applicant will be an improvement over existing programs; and
- Sufficiency of detail in the application to assess whether the proposed work is meritorious, including relevant data, calculations and discussion of prior work with analyses that support the viability of the proposed work.

Impact of Technology Advancement

- The extent the project supports the topic area objectives and target specifications and metrics;
- The potential impact of the project on existing programs or processes; and

Project Management

- Adequacy, reasonableness, and soundness of the project schedule, as well as annual Go/No-Go decisions prior to a budget period continuation application, interim milestones, and metrics to track process.
- Adequacy of the identification of risks, including labor and community opposition or disputes, and “timely” and appropriate strategies for mitigation and resolution.
- Soundness of a plan to expeditiously address environmental, siting, and other regulatory requirements for the project, including evaluation of resilience to climate change.

Job Quality

- Extent to which program supports Quality Jobs, including—
 - Commitments to career-track training pathways, fair wages, benefits, opportunities for union membership, or other worker support, including wrap-around and supportive services to reduce systemic barriers to employment;

Diversity, Equity, Inclusion, and Accessibility

- Extent to which program includes specific and high-quality actions to meet DEIA goals, including partnerships with minority-, women-, or veteran-owned businesses or other commitments to supplier diversity; DEIA recruitment procedures; partnerships with workforce training or support organizations serving workers facing systemic barriers to employment; and other DEIA commitments

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Justice40 Initiative

- 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 or underserved communities and/or partners with Tribal Nations and commitment to accountability

Criterion 2: Project Research and Market Transformation Plan (20%)

This criterion involves consideration of the following factors:

Research Approach, Workplan and SOPO

- Degree to which the approach and critical path have been clearly described and thoughtfully considered; and
- 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 Technical Risks

- Discussion and demonstrated understanding of the key technical risk areas 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; and
- Relative to a clearly defined experimental baseline, the strength of the quantifiable metrics, milestones, and a mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Sustainability and Dissemination Plan

- Degree to which the application provides a description of how the program would be sustainable beyond the awards period of performance and/or replicated in other ways during the award period. Degree to which the application provides a description of the intended plan to disseminate project outputs and deliverables for the project, as well as lessons learned and best practices, and ensure the project has broad stakeholder impacts.

Criterion 3: Team and Resources (30%)

This criterion involves consideration of the following factors:

- The capability of the lead applicant and the proposed team to address all aspects of the proposed work with a high probability of success. The quality of the project team, including participation of labor unions. The qualifications, relevant expertise, and time commitment of the individuals on the team;
- The sufficiency of the facilities to support the work;
- The degree to which the proposed consortia/team demonstrates the ability to meet the objectives of the FOA;
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan, Workplan; and
- The reasonableness of the budget and spend plan for the proposed project and objectives.

iii. Criteria for Replies to Reviewer Comments

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

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA, by the standards set forth in EERE's Notice of Objective Merit Review Procedure (76 Fed. Reg. 17846, March 31, 2011) and the guidance provided in the "DOE Merit Review Guide for Financial Assistance," effective September 2020, which is available at:

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

C. Other Selection Factors**i. Program Policy Factors**

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

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

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- The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives;
- The degree to which the project advances job quality, broad occupational training, and upward mobility for workers in the clean energy industry
- The level of industry involvement and demonstrated ability to overcome key barriers;
- The degree to which the proposed project is likely to lead to increased high-quality employment in the United States;
- The degree to which the proposed project will accelerate transformational advances in areas that industry by itself is not likely to undertake
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications);
- The degree to which the proposed project incorporates diversity, equity, and inclusion elements, including, but not limited to, applicant or team members from Minority Serving Institutions (e.g. Historically Black Colleges and 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 DACs.
- The degree to which the proposed project preferences union participation.

D. Evaluation and Selection Process

i. Overview

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

ii. Pre-Selection Interviews

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

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information provided by applicants to EERE through Pre-Selection Interviews contributes to EERE's selection decisions.

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

EERE 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.

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

iii. Pre-Selection Clarification

EERE 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 EERE's written clarification questions or video or conference calls with EERE representatives.

The information provided by applicants to EERE through pre-selection clarifications is incorporated in their applications and contributes to the merit review evaluation and EERE's selection decisions. If EERE 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.

EERE 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

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

VI. Award Administration Information

A. Award Notices

i. Ineligible Submissions

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

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ii. Concept Paper Notifications

EERE will notify applicants of its determination to encourage or discourage the submission of a Full Application. EERE will post these notifications to EERE Exchange.

Applicants may submit a Full Application even if they receive a notification discouraging them from doing so. By discouraging the submission of a Full Application, EERE 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.K.ii. of the FOA for guidance on pre-award costs.

iii. Full Application Notifications

EERE will notify applicants of its determination via a notification letter by email to the technical and administrative points of contact designated by the applicant in EERE Exchange. The notification letter will inform the applicant whether or not its Full Application was selected for award negotiations. Alternatively, EERE 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 EERE 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 EERE Exchange with whom EERE 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, EERE will cancel the award negotiations.

and rescind the Selection. EERE reserves the right to terminate award negotiations at any time for any reason.

Please refer to Section IV.K.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 EERE designated the application to be an alternate. As an alternate, EERE 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. EERE may ultimately determine to select or not select the Full Application for award negotiations.

vi. Unsuccessful Applicants

EERE 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. EERE Exchange

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

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2. System for Award Management

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

3. FedConnect

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

4. Grants.gov

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

5. Electronic Authorization of Applications and Award Documents

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

ii. Award Administrative Requirements

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

iii. Foreign National Access

All applicants selected for an award under this FOA may be required to provide information to DOE in order to satisfy requirements for foreign nationals' access to DOE sites, information, technologies, equipment, programs or personnel. A foreign national is defined as any person who is not a U.S. citizen by birth or naturalization. If a selected applicant (including any of its subrecipients, contractors or vendors) anticipates involving foreign nationals in the performance of its award, the selected applicant may be required to provide DOE with specific information about each foreign national to ensure compliance with the requirements for access approval. National laboratory personnel already cleared for site access may be excluded.

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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)

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

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

vii. Applicant Representations and Certifications

1. Lobbying Restrictions

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

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov Include FOA name and number in subject line.

2. Corporate Felony Conviction and Federal Tax Liability Representations

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

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

For purposes of these representations the following definitions apply:

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

3. Nondisclosure and Confidentiality Agreements Representations

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

- a. It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- b. It **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - (1) *“These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive Order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a*

substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive Orders and statutory provisions are incorporated into this agreement and are controlling.”

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

viii. Statement of Federal Stewardship

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

ix. Statement of Substantial Involvement

EERE has substantial involvement in work performed under awards made as a result of this FOA. EERE does not limit its involvement to the administrative requirements of the award. Instead, EERE 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. EERE shares responsibility with the recipient for the management, control, direction, and performance of the project.
2. EERE 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. EERE may redirect or discontinue funding the project based on the outcome of EERE's evaluation of the project at the Go/No-Go decision point(s).
4. EERE participates in major project decision-making processes.

x. Subject Invention Utilization Reporting

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

xi. Intellectual Property Provisions

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

xii. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, attached to the award agreement. This helpful EERE checklist can be accessed at <https://www.energy.gov/eere/funding/eere-funding-application-and-management-forms>. See Attachment 2 Federal Assistance Reporting Checklist, after clicking on "Model Cooperative Agreement" under the Award Package section.

Additional reporting requirements apply to projects funded by BIL. As part of tracking progress toward key departmental goals – ensuring justice and equity, creating jobs, boosting domestic manufacturing, reducing greenhouse gas emissions, and advancing a pathway to private sector – DOE may require specific data collection. Examples of data that may be collected include:

- New manufacturing production, or recycling capacity
- Number of workforce partnerships, and number and percent of trained workers placed in full-time jobs
- Community Benefits 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
 - Level and type of stakeholder engagement, including Community Benefits Agreements negotiated
- Funding leveraged, follow-on-funding, Intellectual Property (IP) Generation and IP Utilization

xiii. Go/No-Go Review

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

continuation application²³; and (8) written approval of the continuation application by the Contracting Officer.

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

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

xiv. Conference Spending

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

²³ A continuation application is a non-competitive application for an additional budget period within a previously approved project period. At least ninety (90) days before the end of each budget period, the recipient must submit its continuation application, which includes the following information:

- i. A progress report on the project objectives, including significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.
- ii. A detailed budget and supporting justification if there are changes to the negotiated budget, or a budget for the upcoming budget period was not approved at the time of award.
- iii. A description of any planned changes from the SOPO and/or Milestone Summary Table.

xv. Uniform Commercial Code (UCC) Financing Statements

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

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

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

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

xvii. Participants and Collaborating Organizations

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

xviii. Current and Pending Support

If selected for award negotiations, within 30 days of the selection notice, the selectee must submit 1) current and pending support disclosures and resumes for any new PIs or senior/key personnel, and 2) updated disclosures if there have been any changes to the current and pending support submitted with the application. Throughout the life of the award, the recipient has an ongoing

responsibility to submit 1) current and pending support disclosure statements and resumes for any new PI and senior/key personnel, and 2) updated disclosures if there are changes to the current and pending support previously submitted to DOE. Also See Section IV.E.xvii.

xix. Interim Conflict of Interest Policy for Financial Assistance Policy

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)²⁴ is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. The term “Investigator” means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. Recipients must flow down the requirements of the interim COI Policy to any subrecipient non-Federal entities. Further, for EERE funded projects, the recipient must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/ unmanageable) in their initial and ongoing FCOI reports.

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

xx. 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

²⁴ 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](#).

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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]

xxi. 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 \(SC\) \(osti.gov\)](#).

VII. Questions/Agency Contacts

Upon the issuance of a FOA, EERE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding this FOA must be submitted to: [set up a FOA email address and enter specific FOA email address here]. Questions must be submitted not later than 3 business days prior to the application due date and time. Please note, feedback on individual concepts will not be provided through Q&A.

All questions and answers related to this FOA will be posted on EERE Exchange at: <https://eere-exchange.energy.gov>. **You must first select this specific FOA Number to view the questions and answers specific to this FOA.** EERE will attempt to respond to a question within 3 business days, unless a similar question and answer has already been posted on the website.

Questions about this FOA? Seto.workforceFOA22@ee.doe.gov
Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov Include FOA name and number in subject line.

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

VIII. Other Information

A. FOA Modifications

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

B. Government Right to Reject or Negotiate

EERE 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 trade secrets or commercial or financial information that is privileged or 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 trade secrets or information that is commercial or financial, or information that is confidential or privileged, it is furnished to the 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, EERE 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.

Full Applications, and other submissions containing confidential, proprietary, or privileged information 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 U.S. 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 containing trade secrets, confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this document may contain trade secrets, confidential, proprietary, or privileged 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 or loan 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]

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: "Contains Trade Secrets, Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure." In addition, each line or paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

E. Evaluation and Administration by Non-Federal Personnel

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

F. Notice Regarding Eligible/Ineligible Activities

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

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

EERE 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

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

J. Title to Subject Inventions

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

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

- All other parties: The federal Non-Nuclear Energy Act of 1974, 42. U.S.C. 5908, provides that the government obtains title to new inventions unless a patent waiver is granted.

K. Government Rights in Subject Inventions

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

i. Government Use License

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

ii. March-In Rights

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

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

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

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

L. Rights in Technical Data

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

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

Government Rights in Technical Data Produced Under Awards: The U.S. government retains unlimited rights in technical data produced under government financial assistance awards, including the right to distribute to the public. One exception to the foregoing is that invention disclosures may be protected from public disclosure for a reasonable time in order to allow for filing a patent application.

M. Copyright

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

N. Export Control

The 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”. To ensure compliance with Export Controls, it is the prime recipient’s responsibility to determine when its project activities trigger Export Controls and to ensure compliance.

Certain information, technology or material under an award may be considered export-controlled items that cannot be released to any foreign entity (organization, company, or person) without a license. All recipients and subrecipients must take the appropriate steps to obtain any required licenses, monitor and control access to restricted information and material, and safeguard

all controlled items to ensure compliance with Export Controls. Under no circumstances may any foreign entity (organizations, companies or persons) receive access to an export controlled item unless proper export procedures have been satisfied and such access is authorized pursuant to law or regulation.

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

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

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

- (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).
 - (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 - (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
 - (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

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

P. Personally Identifiable Information (PII)

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

<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2007/m07-16.pdf>

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

Q. Annual Independent Audits

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

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

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

R. Informational Webinar

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

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov Include FOA name and number in subject line.

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

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

1. 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; have majority domestic ownership and control; and have a physical location for business operations in the United States. To request a waiver of this requirement, an applicant must submit an explicit waiver request in the Full Application.

Waiver Criteria

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

- a. Its participation is in the best interest of the 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. Manufacturing Plan; 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;

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- How the project will benefit U.S. research, development and manufacturing, including 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 for 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.

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

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

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

1. The rationale for performing the work outside the U.S. (“foreign work”);
2. A description of the work proposed to be performed outside the U.S.;
3. An explanation as to how the foreign work is essential to the project;
4. A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the US economy;
5. The associated benefits to be realized and the contribution to the project from the foreign work;
6. How the foreign work will benefit U.S. research, development and manufacturing, including contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
7. How the foreign work will promote domestic American manufacturing of products and/or services;
8. A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
9. The total estimated cost (DOE and recipient cost share) of the proposed foreign work;
10. The countries in which the foreign work is proposed to be performed; and
11. 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 B – LIST OF ACRONYMS

COI	Conflict of Interest
DEC	Determination of Exceptional Circumstances
DEI	Diversity, Equity, and Inclusion
DMP	Data Management Plan
DOE	Department of Energy
DOI	Digital Object Identifier
EERE	Energy Efficiency and Renewable Energy
FAR	Federal Acquisition Regulation
FFATA	Federal Funding and Transparency Act of 2006
FOA	Funding Opportunity Announcement
FOIA	Freedom of Information Act
FFRDC	Federally Funded Research and Development Center
GAAP	Generally Accepted Accounting Principles
IPMP	Intellectual Property Management Plan
M&O	Management and Operating
MPIN	Marketing Partner ID Number
MSI	Minority-Serving institution
MYPP	Multi-Year Program Plan
NDA	Non-Disclosure Acknowledgement
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Agency
OMB	Office of Management and Budget
OSTI	Office of Scientific and Technical Information
PII	Personal Identifiable Information
R&D	Research and Development
RFI	Request for Information
RFP	Request for Proposal
SAM	System for Award Management
SOPO	Statement of Project Objectives
SPOC	Single Point of Contact
STEM	Science, Technology, Engineering, and Mathematics
TIA	Technology Investment Agreement
TRL	Technology Readiness Level
UCC	Uniform Commercial Code
UEI	Unique Entity Identifier
WBS	Work Breakdown Structure
WP	Work Proposal

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