U.S. Department of Energy (DOE)
Office of State and Community Energy Programs (SCEP)

Inflation Reduction Act of 2022 (IRA)
Assistance for the Adoption of the Latest and Zero Building Energy Codes

Funding Opportunity Announcement (FOA) Number: DE-FOA-0003056

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FOA Issue Date:	**December 18, 2023**
First Round Informational Webinar:	January 17, 2024
Submission Deadline for First Round of Concept Papers:	February 9, 2024 5:00 p.m. ET
Submission Deadline for First Round of Full Applications:	April 30, 2024 5:00 p.m. ET
Expected Submission Deadline for Replies to Reviewer Comments:	July 2024
Expected Date for First Round of DOE Selection Notifications:	August 2024
Submission Deadline for Second Round of Concept Papers:	June 28, 2024 5:00 p.m. ET
Submission Deadline for Second Round of Full Applications:	September 13, 2024 5:00 p.m. ET
Expected Timeframe for Third Round of Concept Papers and Applications (pending funding availability):	Fall/Winter 2024

- Applicants must submit a Concept Paper by 5 p.m. ET on the due dates listed above to be eligible to submit a Full Application in the first and second funding rounds. DOE will put out a more concrete schedule for additional rounds of funding as the timing gets closer.

- To apply to this FOA, applicants must register with and submit application materials through Infrastructure eXCHANGE at Infrastructure eXCHANGE: Registration (energy.gov), SCEP's online application portal.

- Applicants must designate primary and backup points-of-contact in Infrastructure eXCHANGE with whom SCEP 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.

- **Unique Entity Identifier (UEI) and System for Award Management (SAM)** - Each applicant (unless the applicant is excepted from those requirements under 2 CFR 25.110) is required to: (1) register in the SAM at https://www.sam.gov before submitting an application; (2) provide a valid UEI number in the application; and (3) maintain an active SAM registration with current information when the applicant has an active federal award or an application or plan under consideration by a federal awarding agency. DOE may not make a federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements and, if an applicant has not fully complied with the requirements by the time DOE is ready to make a federal award, DOE will determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant.

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

Modifications

All modifications to the FOA are highlighted in the body of the FOA. Revisions from Mod 0001 are highlighted in [YELLOW], revisions from Mod 0002 are highlighted in [GREEN],

Mod. No.	Date	Description of Modification
0001	3/4/2024	Providing deadlines for the second round of Concept Papers and Full Applications. Clarifying text. (FOA Cover Page, p. 7)
0002	5/31/2024	Extending Submission Deadline for Second Round of Concept Papers (FOA Cover Page, p. 7)
0002	5/31/2024	Updating list of qualifying building energy codes for Topic Area 1 (Appendix C, pp. 81-84)
0002	5/31/2024	Updating list of qualifying code amendments for Topic Area 1 (Appendix C, pp. 81-84)

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Overview of Key Information

The Inflation Reduction Act (IRA) provides up to $1 billion for States and local governments to take innovative approaches to improve the efficiency of and reduce emissions from both new and existing buildings. Under Section 50131 of the IRA, up to $330 million is provided for adopting and implementing: (A) a building energy code (or codes) for residential buildings that meets or exceeds the 2021 International Energy Conservation Code (IECC), or achieves equivalent or greater energy savings; (B) a building energy code (or codes) for commercial buildings that meets or exceeds the ANSI/ASHRAE/IES Standard 90.1–2019, or achieves equivalent or greater energy savings; or (C) any combination of building energy codes described in subparagraph (A) or (B). Up to $670 million is provided for adopting and implementing building energy codes that meet or exceed the zero energy provisions in the 2021 IECC or an equivalent stretch code.

This funding will support States and units of local government that have authority to adopt building codes in adopting, implementing, enforcing, and measuring compliance rates of certain building energy codes that meet or exceed the minimum energy savings specified in the IRA, while training and educating their workforce and building localized capacity. Recipients must develop an implementation plan that provides approaches to achieve full compliance with the adopted code, plans for capacity building to support ongoing implementation, and active workforce training and enforcement programs.

This Funding Opportunity Announcement (FOA) is being issued by the U.S. Department of Energy (DOE)'s State and Community Energy Program (SCEP) under IRA Section 50131, Technical Assistance for the Adoption of Building Energy Codes. The goal of this FOA is to improve new construction and major renovations; increase building code effectiveness; provide implementation support for adopting updated building energy codes, zero energy codes, and stretch codes; educate stakeholders; improve the resilience of buildings; and provide meaningful benefits to communities nationwide.

This competitive FOA provides funding to States[1] and units of local government that have the authority to adopt building codes to assist with the adoption and implementation of the latest model building energy codes, zero energy codes, and certain innovative code equivalents, which may include certain building performance standards. This FOA complements, but does not duplicate, the previously-released Administrative and Legal Requirements Document (ALRD) Formula Funding opportunity released under IRA Section 50131. This FOA is designed to fund additional qualifying jurisdictions and to fund distinctly different and unique activities.

[1] *State* is defined for the purpose of this FOA as a State, the District of Columbia, Puerto Rico, or any territory or possession of the United States.

I. Funding Opportunity Description

A. Background and Context

The Office of State and Community Energy Programs (SCEP) is issuing this Funding Opportunity Announcement (FOA). Awards made under this FOA will be funded, in whole or in part, with funds appropriated by Section 50131 of the Inflation Reduction Act (IRA) of 2022, Assistance for Latest and Zero Building Energy Code Adoption.

The Inflation Reduction Act of 2022 (IRA) provides up to $1 billion for States and units of local government with the authority to adopt building energy codes to adopt and implement the latest building energy codes, zero energy building codes, or equivalent codes or standards. An energy code is one of several types of building codes that help contribute to the overall health, safety, efficiency, and long-term resilience of buildings. Energy codes can be adopted directly as a standalone code, such as the International Energy Conservation Code (IECC), which is commonly adopted by States and local governments. Moreover, energy codes are also fundamental components of certain more broadly adopted building codes, including the International Building Code (IBC) and International Residential Code (IRC), which are referenced in the United States as "parental" codes. Energy codes are often described as a subset of these broader building codes, representing distinct chapters of the IBC and IRC alongside other commonly recognized provisions, such as those pertaining to structural, plumbing, or electrical requirements, and other basic aspects of building design and construction. Adoption and implementation of such codes supports the decarbonization of new and existing residential and commercial buildings. In addition, updates to refrigerant approvals at the State and local level that allow for the installation of equipment that utilize refrigerants with lower global warming potential in accordance with the Environmental Protection Agency's Significant New Alternatives Policy Program along with energy code updates helps to support the transition to a clean energy economy.

This opportunity assists eligible entities in further decarbonizing their buildings through the adoption of the latest national model building energy codes, zero energy codes, other codes that deliver equivalent or greater energy savings, including innovative approaches to decarbonize existing buildings through certain measurable and enforceable requirements. The IRA is unprecedented in its opportunity to support sustainable change at the State and local level with respect to advancing the energy efficiency of new, renovated, and existing buildings. DOE is particularly interested in supporting States and local governments in implementing local capacity building, multi-year investments in workforce and education, and long-term improvements in building energy codes through multi-cycle adoption and building performance standards (BPS).

Building energy codes establish minimum levels of energy efficiency for new and existing residential and commercial buildings. Model energy codes, such as the 2021 IECC and ASHRAE Standard 90.1-2019, are developed and updated through national consensus

processes. States and local governments ultimately implement building energy codes, which are handled through various adoption, compliance, and enforcement processes and can vary widely across the United States. Many States have consistently received funding through their State Energy Plan to support the adoption of traditional building energy codes. In addition to this competitive funding opportunity announcement, a formal funding announcement was published on September 19, 2023 for States pursuing pre-approved code packages.

DOE understands that implementation of building energy codes also depends on a significant number of stakeholders, including State and local government jurisdictions, building and safety departments, builders, contractors, and design professionals, owners, occupants, as well as a variety of critical community interests. Successful implementation of the latest model energy codes, zero energy codes and other innovative approaches to increasing building energy efficiency relies upon the formation of partnerships amongst many of these groups and is critical to ensuring their benefits are realized in American homes and businesses.

i. Program Purpose

On August 16, 2022, President Joseph R. Biden signed the Inflation Reduction Act (IRA) into law, making the single largest investment in addressing climate change through clean energy technologies. Recognizing all facets of our economy contribute to the climate crisis, investments needed for a clean energy future must be broad and deeply impactful. Through *Section 50131* of the IRA, *Assistance for Latest and Zero Building Energy Code Adoption*, the 117th U.S. Congress appropriated $1 billion to facilitate the adoption and implementation of the latest model energy codes (i.e., 2021 IECC and ANSI/ASHRAE/IES Standard 90.1-2019), zero energy building codes, or equivalent codes or standards throughout the country. This IRA funding will support States and local governments in this effort with funding available through September 30, 2029. Specifically, this provision makes the following investments to assist States and units of local government with authority to adopt building codes:

- **$330 million** to adopt and implement the latest building energy code that meets or exceeds the energy savings in the 2021 IECC) for residential buildings and the ANSI/ASHRAE/IES Standard 90.1–2019 for commercial buildings; and
- **$670 million** to adopt and implement a building energy code that meets or exceeds the zero energy provisions in the 2021 IECC code or an equivalent stretch code.

This funding opportunity is in support of IRA Section 50131, *Assistance for Latest and Zero Building Energy Code Adoption*. The Topic Areas are designed to complement, but not duplicate, the previously-released Administrative and Legal Requirements Document (ALRD) Formula Funding opportunity released under IRA Section 50131 to provide formula funding to eligible States. This competitive FOA provides funding to States and units of local government with the authority to adopt building codes for activities aligned with IRA Section 50131 including the adoption and implementation of the latest model building energy codes, zero energy codes, and innovative code equivalents such as building performance standards.

ii. Program Overview and Strategic Goals

Section 50131 of the IRA provides funding for certain activities in support of specified building energy codes (i.e., qualifying building energy codes). In alignment with Section 50131, this FOA seeks to support the adoption and implementation of eligible codes by States, Territories, and units of local government that have the authority to adopt building codes. Detailed technical descriptions of the specific Topic Areas are provided in the sections that follow.

B. Topic Areas

Detailed Topic Area descriptions are provided below. Note that awards may not be made in all areas and the distribution will depend on the number, quality, and potential impact of the proposals received. Detailed evaluation criteria for each Topic Area can be found in Section V (A)–(C). In all cases, the proposed project structure should include a clear validation and demonstration of adoption and implementation of eligible codes in alignment with Section 50131 of the IRA.

Topic Area 1: Adoption and Implementation of Qualifying Building Energy Codes by Certain Units of Local Government

This Topic Area is to provide funding to units of local government that have authority to adopt building codes for the adoption and implementation of a building energy code presented in Appendix C of this FOA, i.e., a qualifying building energy code.

Topic Area 2: Adoption and Implementation of the Latest Model Energy Codes or Zero Energy Codes with Combinations of Strengthening and Weakening Amendments by States and Certain Units of Local Governments

This Topic Area is to provide funding to States and units of local government that have authority to adopt building codes for the adoption and implementation of a building energy code with combinations of strengthening and weakening amendments that achieves equivalent or greater energy savings as compared to the applicable latest model energy code or zero energy code that is a qualifying building energy code.

Topic Area 3: Adoption and Implementation of Innovative Building Energy Code Approaches by States and Certain Units of Local Government

This Topic Area is to provide funding to States and units of local government that have authority to adopt building codes for the adoption and implementation of certain innovative building codes, including certain building performance standards (BPS) for existing buildings or stretch codes for new and renovated buildings. Codes eligible under this Topic Area must be measurable, verifiable, and enforceable. The subject codes under this Topic Area must achieve equal or greater energy savings as compared to a latest model code that is a qualifying building energy code, or the zero energy code appendices in the 2021 IECC, as applicable.

Table 1 below includes descriptions of each Topic and Subtopic Area.

Table 1: Descriptions of Topic and Subtopic Areas

	Topic Area Name	Subtopic	Brief Description
1	Adoption and Implementation of Qualifying Building Energy Codes by Certain Units of Local Government	Subtopic A: Units of Local Government – Latest Model Energy Codes Identified as Qualifying Building Energy Codes	Topic Area for units of local government that have authority to adopt building codes to adopt and implement the latest model energy code(s) that have been identified as qualifying building energy codes in the ALRD and are included in Appendix C of this document.
		Subtopic B: Units of Local Government - Zero Energy Codes Identified as Qualifying Building Energy Codes	Topic Area for units of local government that have authority to adopt building codes to adopt and implement zero energy code(s) that have been identified as qualifying energy codes in the ALRD and are included in Appendix C of this document.
2	Adoption and Implementation of the Latest Model Energy Codes or Zero Energy Codes with Combinations of Strengthening and Weakening Amendments by States and Certain Units of Local Government	Subtopic A: Units of Local Government Latest Model Code Equivalent with Combinations of Strengthening and Weakening Amendments	Topic Area for units of local government that have the authority to adopt building codes to adopt and implement customized versions of the latest model energy codes, including adoption and implementation of the latest model energy codes that will be amended with combinations of strengthening and weaking amendments. All energy codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant latest model code that is a qualifying building energy code.
		Subtopic B: State Latest Model Code Equivalent with Combinations of Strengthening and Weakening Amendments	Topic Area for States to adopt and implement customized versions of the latest model energy codes, including adoption and implementation of the latest model energy codes with combinations of strengthening and weakening amendments. All energy codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant latest model code that is a qualifying building energy code.

	Topic Area Name	Subtopic	Brief Description
		Subtopic C: Units of Local Government Zero Energy Codes with Combinations of Strengthening and Weakening Amendments, Custom Zero Energy Codes, and Stretch Codes	Topic Area for units of local government that have the authority to adopt building codes to adopt and implement zero energy codes with combinations of strengthening and weakening amendments, custom zero codes, or stretch codes. All codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant qualifying zero energy code.
		Subtopic D: State Zero Energy Codes with Combinations of Strengthening and Weakening Amendments, Custom Zero Energy Codes, and Stretch Codes	Topic Area for States to adopt and implement zero energy codes with combinations of strengthening and weakening amendments, custom zero codes, or stretch codes. All codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant qualifying zero energy code.
3	Adoption and Implementation of Innovative Building Energy Codes by States and Certain Units of Local Government	Subtopic A: Innovative Building Energy Codes with Energy Savings Equivalent to Latest Model Energy Codes	Topic Area for States and units of local government that have the authority to adopt and implement innovative building codes. All innovative building energy codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant latest model building energy code.
		Subtopic B: Innovative Building Energy Codes with Energy Savings Equivalent to Zero Energy Codes	Topic Area for States and units of local government that have the authority to adopt and implement innovative energy codes. All innovative building energy codes pursued through this Topic Area must meet the equivalent energy savings requirement when compared to the relevant qualifying zero building energy code.

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

This Funding Opportunity Announcement may remain open for up to 18 months, with review cycles occurring approximately every 6 months, while funding lasts. The "rolling" nature of this announcement is meant to allow time for effective teams to be developed and strategies identified to successfully meet the goals outlined in the FOA.

In addition, it is a well-known challenge for smaller jurisdictions to find the bandwidth to develop an application for and subsequently administer a federal grant, so there are also simplified pathways provided for local governments to ease the burden of accessing these funds. In response to this challenge, Topic Area 1 provides a simplified pathway for local governments based on specified building energy codes.

It is possible that all funding for Topic Areas 1, 2 or 3 may be expended after the first application/review cycle, in which case all subsequent cycles for the fulfilled Topic Area(s) will not occur and only applications for the remaining Topic Area(s) would be accepted in the subsequent cycle. The planned review periods are outlined in Table 2, below.

Please note that appropriated funding may be expended after the first or second Cohort selections are made. If this is the case, DOE will notify the community via Infrastructure eXCHANGE that subsequent submission periods will be withdrawn.

Table 2: Planned Review Periods for FOA Review Cycles

Cohort	Applicant Dates	Date	Notes
	FOA Release	December 18, 2023	
1	1st Round Concept Papers	February 9, 2024	
	1st Round Full Applications Due	April 30, 2024	
2	2nd Round Concept Papers	June 28, 2024 5:00 p.m. ET	
	2nd Round Full Applications Due	September 13, 2024 5:00 p.m. ET	
3	3rd Round of Concept Papers	Fall 2024	Pending availability of funding
	3rd Round of Full Applications Due	Winter 2024	Pending availability of funding

Understanding "equivalent or greater energy savings" is critical in determining the appropriate Topic and Subtopic Area for an application. IRA Section 50131 states that certain adopted codes must demonstrate "equivalent or greater energy savings" compared to the specified code. IRA Section 50131 specifies four codes:

- **Latest Model Code, Residential:** a building energy code (or codes) for residential buildings that meets or exceeds the 2021 IECC, or achieves equivalent or greater energy savings.
- **Latest Model Code, Commercial:** a building energy code (or codes) for commercial buildings that meets or exceeds the ASHRAE Standard 90.1–2019, or achieves equivalent or greater energy savings.
- **Zero Energy Code, Residential:** a building energy code (or codes) for residential buildings that meets or exceeds the zero energy provisions in the 2021 IECC (Appendix RC) or an equivalent stretch code.
- **Zero Energy Code, Commercial:** a building energy code (or codes) for commercial buildings that meets or exceeds the zero energy provisions in the 2021 IECC (Appendix CC) or an equivalent stretch code.

Applications for building energy codes other than those specified in Appendix C of this FOA must demonstrate equivalent or greater energy savings relative to the code specified in the Topic and Subtopic Area where it is being submitted. Topic and Subtopic Areas are designed to bundle applications with similar comparisons of "equivalence" to ensure similar standing for all applications throughout the merit review process. For example, a local jurisdiction considering a modified residential code that is more customized than the latest model code amended with provisions specified in Appendix C, but not a zero code, will need to perform the equivalence calculation in Section 4 of the equivalency methodology[2] relative to the 2021 IECC Residential code as the IRA-specified code. In this case, the applicant should submit their proposal under Topic Area 2, Subtopic Area A for consideration. For the purposes of this FOA, energy savings equivalence is established in the aggregate, calculating the overall energy savings from the impacted building stock under the proposed building energy code, not at the individual building level.

The equivalence calculator and the equivalence methodology provided in Section IV (D)(vi) are designed to demonstrate the energy savings of the proposed building energy code and to allow for a comparison to the energy savings of the relevant IRA-specified code. The methodology specifies pathways for new construction codes and innovative approaches such as building performance standards and zero energy codes. Applicants should give special consideration to the potential impact that combinations of strengthening and weakening amendments, or pursuit of outcome-based targets will have on the calculation of energy savings. Applicants should align the expected savings with the appropriate Topic and Subtopic Area for submissions under this opportunity.

[2] https://infrastructure-exchange.energy.gov/Default.aspx

Applications must propose building energy codes or innovative approaches to building energy codes that are measurable, verifiable, and enforceable. While attributes may vary across applications, the proposed building energy code, including a proposed building performance standard, or other code must be measurable in terms of energy savings. Further, the proposal should result in a code that is verifiable through surveys or field studies and enforceable through administrative procedures vested with the authority of the agency having jurisdiction. Examples of enforcement mechanisms may include permitting, certificates of occupancy, financial penalties, and/or civil suits.

i. Guidance for Topic Selection

Jurisdictions may submit multiple applications under this FOA, but only a single application for each Subtopic Area. Accordingly, applicants should consider the coordination of activities that qualify for similar categories of funds, activities that are complementary or additive to each other, or activities that are not sufficiently distinct to warrant separate projects.

The Topic Areas and corresponding Subtopic Areas in this funding opportunity reflect the desired end-state of the applicant's code adoption and implementation activities. For example, a jurisdiction seeking to adopt the latest model code or equivalent, but not pursue anything further, should consider Subtopic Areas that reflect equivalence and qualified codes relative to the latest model code. A jurisdiction seeking to adopt a zero energy code, even over multiple code adoption cycles, should consider Subtopic Areas that reflect equivalence and qualified codes relative to the zero energy code.

Using Topic Area 1 as an example: an eligible unit of local government may want to update their residential code to a qualified building energy code that is a net zero code, and also update their commercial code to a latest model code that is a qualified building energy code. This eligible unit of local government should consider submitting two applications: one to Subtopic B for the residential zero code update (which may take place over multiple code adoption cycles), and a second application to Subtopic A for a single cycle adoption of the commercial latest model code.

Another example considering Topic Areas 2 and 3: an eligible State may plan to adopt a zero energy code for commercial buildings over multiple code adoption cycles and a building performance standard designed to be equivalent to the latest model code using the provided methodology. The State would need to submit two applications:

- The first to Topic Area 2 Subtopic D for a commercial code adoption effort resulting in a zero energy code equivalent adoption and implementation at the conclusion of the award.
- The second to Topic Area 3 Subtopic A for the application proposing the adoption and implementation of a building performance standard equivalent to the commercial latest model code.

Consider an additional example: a Territory is planning to adopt the latest model code for both commercial and residential buildings. First, the Territory, being an eligible entity for

formula funding under the ALRD,[3] should consider whether their proposal would put forward a qualifying building energy code under the terms outlined in the ALRD. If so, the Territory should review the ALRD to determine the process for submitting an application under that opportunity (e.g., submitting a letter of intent (LOI)). Otherwise, if the Territory is considering a combination of strengthening and weakening amendments for either or both of their commercial or residential building energy codes, or an entirely custom code, for their proposed project, then the Territory should submit an application containing both the residential and commercial code proposals. Their proposal should include the proposed combinations of strengthening and weakening amendments and the corresponding equivalence evaluation using the provided methodology, and should be submitted to Topic Area 2 Subtopic B.

It may be that a single jurisdiction has multiple applications selected for awards after evaluation through the merit review process. Opportunities for streamlining such selections may be considered in the negotiations with the Selectee.

C. Applications Specifically Not of Interest

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

- Applications that fall outside the technical parameters specified in Sections I (A) and I (B) of the FOA
- Applications from entities that do not have code adoption authority (except as provided in Section III (A)(i))
- Applications that propose activities that fail to meet the statutory requirements of Section 50131 of the Inflation Reduction Act
- Applications that do not meet the "equivalent or greater energy savings" requirement for custom or amended codes or other innovative approaches such as building performance standards
- Applications that propose building energy provisions that are not measurable, verifiable, or enforceable

D. Community Benefits Plan: Job Quality and Equity

To support the goal of building a clean and equitable energy economy, the IRA funded projects are expected to:

(1) support meaningful community and labor engagement;

(2) invest in America's workforce;

(3) advance diversity, equity, inclusion, and accessibility (DEIA); and

[3] https://www.energy.gov/scep/articles/alrd-assistance-latest-and-zero-building-energy-code-adoption-sec-50131-states-and

(4) contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative).[4,5]

To ensure these goals are met, applications must include a Community Benefits Plan that describes how the proposed project would incorporate the four objectives stated above.

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

E. Authorizing Statutes

The programmatic authorizing statute is Section 50131 of the Inflation Reduction Act (IRA), as codified at 42 U.S.C. 6321 through 6326. Awards made under this announcement will fall under the purview of 2 CFR Part 200 as supplemented by 2 CFR Part 910.

II. Award Information

A. Award Overview

i. Estimated Funding

DOE expects to make a total of approximately $530,000,000 of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. DOE anticipates making approximately 40 - 200 awards under this FOA. DOE may issue one, multiple, or no awards. Individual awards may vary between $1,000,000 and $20,000,000.

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[4] The Justice40 initiative, established by E.O. 14008, sets a goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities. Reference Memorandum M-23-09 regarding the use of the Climate and Economic Justice Screening Tool (CEJST) for geographic definition of disadvantaged communities: https://www.whitehouse.gov/wp-content/uploads/2023/01/M-23-09_Signed_CEQ_CPO.pdf. See https://screeningtool.geoplatform.gov/.

[5] DOE's General Guidance for Justice40 Implementation is available here: https://www.energy.gov/sites/default/files/2023-07/DOE%20Justice40%20General%20Guidance%2072523.pdf

DOE may issue awards in one, multiple, or none of the Topic Areas summarized in Table 3, below.

Table 3: Topic and Subtopic Areas and Anticipated Award Information

Topic Area #	Topic Area Title	Subtopic	Anticipated Number of Awards	Estimated Federal Funding per Award	Approximate Total Federal Funding Available for all Awards	Anticipated Period of Performance
1	Adoption and Implementation of Qualifying Building Energy Codes by Certain Units of Local Government	Subtopic A: Units of Local Government – Latest Model Energy Codes Identified as Qualifying Building Energy Codes	Up to 20	Up to $5M	Up to $45M	Up to 3 years
		Subtopic B: Units of Local Government - Zero Energy Codes Identified as Qualifying Building Energy Codes	Up to 20	Up to $5M	Up to $45M	Up to 9 years
2	Adoption and Implementation of the Latest Model Energy Codes or Zero Energy Codes with Combinations of Strengthening and Weakening Amendments by States and Certain Units of Local Government	Subtopic A: Units of Local Government Latest Model Code Equivalent with Combinations of Strengthening and Weakening Amendments	Up to 10	Up to $10M	Up to $20M	Up to 3 years
		Subtopic B: State Latest Model Code Equivalent with Combinations of Strengthening and Weakening Amendments	Up to 10	Up to $10M	Up to $20M	Up to 3 years

Topic Area #	Topic Area Title	Subtopic	Anticipated Number of Awards	Estimated Federal Funding per Award	Approximate Total Federal Funding Available for all Awards	Anticipated Period of Performance
		Subtopic C: Units of Local Government Zero Energy Codes with Combinations of Strengthening and Weakening Amendments, Custom Zero Energy Codes, and Stretch Codes	Up to 20	Up to $10M	Up to $100M	Up to 9 years
		Subtopic D: State Zero Energy Codes with Combinations of Strengthening and Weakening Amendments, Custom Zero Energy Codes, and Stretch Codes	Up to 20	Up to $10M	Up to $100M	Up to 9 years
3	Adoption and Implementation of Innovative Building Energy Codes by States and Certain Units of Local Government	Subtopic A: Innovative Building Energy Code Approaches with Energy Savings Equivalent to Latest Model Energy Codes	Up to 10	Up to $10M	Up to $45M	Up to 3 years

Topic Area #	Topic Area Title	Subtopic	Anticipated Number of Awards	Estimated Federal Funding per Award	Approximate Total Federal Funding Available for all Awards	Anticipated Period of Performance
		Subtopic B: Innovative Building Energy Code Approaches with Energy Savings Equivalent to Zero Energy Codes	Up to 100	Up to $20M	Up to $420M	Up to 9 years
Total					**$530M**	

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

Awards will run a maximum of nine (9) years in length and will consist of one or more budget periods ending no later than September 30, 2034. DOE will evaluate project performance and project schedule adherence, and project continuation will be contingent upon several elements, including satisfactory performance and DOE's Go/No-Go decisions. For a complete list and more information on the Go/No-Go review, see Section VI (B)(xii).

iii. New Applications Only

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

B. DOE Funding Agreements

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

i. Funding Agreements with Federally Funded Research and Development Center (FFRDCs)[6]

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

ii. Grants

DOE will be utilizing grants to provide financial support to prime recipients for this FOA.

III. Eligibility Information

To be considered for 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

In accordance with the Section 50131 of the IRA eligible Grantees are defined as States and units of local government that have the authority to adopt building codes. As previously noted, for the purpose of this FOA, DOE is defining *State* as a State, the District of Columbia, Puerto Rico, or any territory or possession of the United States.

i. Delegation of Authority

In some cases, it is understood that the agency with the authority to adopt building codes may not be the same entity with the capacity or ability to implement or enforce those codes, or otherwise enter into a grant agreement with DOE. In these scenarios, the agency with the authority to adopt building codes may provide formal documentation of delegation of authority to another agency to proceed as the prime applicant on the jurisdiction's submission. It will be incumbent on the eligible entity and designated applicant to ensure the validity of the delegation under the relevant State and/or local authorities, and to specify which specific project activities will be delegated. Entities that are not agencies within the applicant jurisdiction (e.g.: non-governmental organizations (NGOs), industry associations, etc.) are not eligible to be delegated as the prime applicant.

[6] FFRDCs are public-private partnerships that conduct research for the U.S. government. A listing of FFRDCs can be found at http://www.nsf.gov/statistics/ffrdclist/.

ii. Domestic Entities

The proposed prime recipient and subrecipient(s) must be domestic entities. The prime recipient must be a State, or unit of local government that has the authority to adopt building codes, unless delegated as outlined in Section III (A)(i), above. The following types of domestic entities are eligible to participate as a subrecipient of this FOA:

1) Institutions of higher education
2) For-profit entities
3) Nonprofit entities
4) State and local governmental entities and Indian Tribes
5) Code and standards developers
6) Associations of builders and design and construction professionals
7) Local and utility energy efficiency program implementers

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 not eligible to apply for funding under this announcement 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.

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 to apply for funding.

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

iii. Foreign Entities

In limited circumstances, DOE may approve a waiver to allow a foreign entity to participate as a subrecipient. If the applicant seeks to include a foreign entity as a subrecipient, the applicant must submit a separate explicit written waiver request in the Full Application for each proposed foreign subrecipient.

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

B. Cost Sharing

Cost sharing is not required under this FOA.

C. Compliance Criteria

All applicant submissions must:

- Comply with the applicable content and form requirements listed in Section IV. of the FOA;
- Include all required documents;
- Be uploaded and submitted in Infrastructure eXCHANGE https://infrastructure-eXCHANGE.energy.gov; including clicking the "Submit" button and
- Be submitted by the deadline stated in the FOA.

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

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

D. Responsiveness Criteria

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

E. Other Eligibility Requirements

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

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

a. **Authorization for non-DOE/NNSA FFRDCs**

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

b. **Funding and Subaward with FFRDCs**

The value of and funding for the FFRDC portion of the work will not normally be included in the award. Non-DOE/NNSA FFRDCs participating as a subrecipient will be funded through an interagency agreement with the sponsoring agency. Unless instructed otherwise by the DOE Contracting Officer for the DOE award, all FFRDCs are required to enter into a Cooperative Research and Development Agreement[7] (CRADA), with at least the prime recipient before any project work begins. Any questions regarding the use of a CRADA should be directed to the cognizant DOE field intellectual property (IP) counsel.

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

c. **Responsibility**

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

d. **Limit on FFRDC Effort**

The FFRDC effort, in aggregate, shall not exceed 20 percent of the total estimated cost of the project, including the applicant's and the FFRDC's portions of the effort.

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

An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, distinct project, proposing the adoption of and implementation and compliance with, or implementation and compliance with, a distinct qualifying building energy code or innovative approach to building energy codes for a discrete segment of the building stock, and an eligible Concept Paper was submitted for each Full Application. Entities may submit a maximum of one Concept Paper and Full Application per Subtopic Area.

[7] 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.

G. Questions Regarding Eligibility

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

IV. Application and Submission Information

A. Application Process

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

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

- Each must be submitted in Adobe PDF format unless stated otherwise;
- Each must be written in English;
- All pages must be formatted to fit on 8.5" x 11" paper with margins not less than one inch on every side. Use Calibri typeface, a black font color, and a font size of 12-point or larger (except in figures or tables, which may be 10-point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement;
- A **control number** will be issued when an applicant begins the Infrastructure eXCHANGE application process. The control number must be included with all application documents. Specifically, the control number must be prominently displayed on the upper right corner of the header of every page and included in the file name (i.e., *Control Number_Applicant Name_Full Application*);
- Page numbers must be included in the footer of every page; and
- Each submission must not exceed the specified maximum page limit, including cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced. If applicants exceed the maximum page lengths indicated below, DOE will review only the authorized number of pages and disregard any additional pages.

i. Additional Information on Infrastructure eXCHANGE

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

Applicants who experience technical difficulties with submission PRIOR to the FOA deadline should contact the Infrastructure eXCHANGE helpdesk for assistance (InfrastructureExchangeSupport@hq.doe.gov).

B. Application Forms

To access application forms and instructions available on Infrastructure eXCHANGE, go to InfrastructureExchangeSupport@hq.doe.gov and select the appropriate funding opportunity number.

Note: The maximum file size that can be uploaded to the Infrastructure eXCHANGE website is 50MB. Files larger than 50MB cannot be uploaded and hence cannot be submitted for review. If a file is larger than 50MB but is still within the maximum page limit specified in the FOA, it must be broken into parts and denoted to that effect. For example:

TechnicalVolume_Part_1

TechnicalVolume_Part_2

DOE will not accept late submissions that resulted from technical difficulties due to uploading files that exceed 50MB.

C. Content and Form of the Concept Paper

Each Concept Paper must be limited to a single project and should not exceed two pages in length. The Concept Paper must include:

a) A statement about the applicant and an attestation of the entity's authority to adopt building codes.
b) A description of the applicant's high-level plan to adopt, implement, and enforce the eligible code or codes (i), or implement and enforce an already adopted eligible code or codes, (ii), below:
    i) If the applicant *intends to adopt* a code or codes that meet or exceed the requirements of Section 50131 of the IRA:
        1) The code or codes (including the applicable edition if relevant) intended for adoption)
        2) A brief description of the applicant's plan to use funds for adoption, implementation, compliance and enforcement of one or more eligible codes
        3) The expected timeline for adopting the specified code or codes in the jurisdiction
    ii) If the applicant *has adopted* a code that meets or exceeds the requirements of Section 50131 of the IRA, brief description of the applicant's plan to use funds for implementation, compliance and enforcement activities for the applicable code (or codes) (include all codes that apply)
        1) Provide documentation of adoption, including cite to the relevant authority, and if available a link to the current version of the adopted code on a publicly available website.

DOE makes an independent assessment of each Concept Paper based on the criteria in Section IV (C) of the FOA. DOE will encourage a subset of applicants to submit Full

Applications. Other applicants will be discouraged from submitting a Full Application. See Section VI (A) for additional information about award notices.

D. Content and Form of the Full Application

Applicants must complete the following application forms found on the Infrastructure eXCHANGE website at: https://infrastructure-exchange.energy.gov and select the appropriate funding opportunity number.

Applicants will have approximately 90 days from receipt of the Concept Paper Encourage/Discourage notification on Infrastructure eXCHANGE to prepare and submit a Full Application. Regardless of the date the applicant receives the Encourage/Discourage notification, the submission deadline for the Full Application remains the date and time stated on the FOA cover page.

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

i. Full Application Content Requirements

Each Full Application must be limited to a single project, falling within one Subtopic Area. This may include more than one eligible code (for example, a locality proposing to adopt both the commercial and residential latest model codes under Topic Area 1). Full Applications must conform to the following requirements and must not exceed the stated page limits. Applications must submit all relevant materials as required by Table 4, below.

Table 4: Application Requirements

Component	File Format	Page Limit	File Name
Technical Volume/Project Narrative	PDF	20	ControlNumber_LeadOrganization_TechnicalVolume
Resumes	PDF	1 page each	ControlNumber_LeadOrganization_Resumes
Letters of Commitment	PDF	1 page each	ControlNumber_LeadOrganization_LOCs
Community Partnership Documentation	PDF	5	ControlNumber_LeadOrganization_PartnerDocs
Equivalence Calculator†	XLS	n/a	ControlNumber_LeadOrganization_EquivalenceCalculator
Equivalence Analysis†	PDF	10	ControlNumber_LeadOrganization_EquivalenceAnalysis
SF-424: Application for Federal Assistance	PDF	n/a	ControlNumber_LeadOrganization_App424

Component	File Format	Page Limit	File Name
Summary/Abstract for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary
Budget Justification Workbook	MS Excel	n/a	ControlNumber_LeadOrganization_Budget_Justification
Summary Slide	MS PowerPoint	1	ControlNumber_LeadOrganization_Slide
SF-LLL Disclosure of Lobbying Activities	PDF	n/a	ControlNumber_LeadOrganization_SF-LLL
Current and Pending Support	PDF	n/a	ControlNumber_LeadOrganization_CPS
Community Benefits Plan: Job Quality and Equity	PDF	5	ControlNumber_LeadOrganization_CBP
†For Topic Area 1, applicants must submit the Topic Area 1 Qualifying Code Amendments checklist or a narrative description of the qualifying code and amendments proposed per Appendix C. For Topic Areas 2 and 3, the applicant must submit according to the applicable direction in Section IV(D)(vi), the completed Equivalence Calculator, the completed evaluation pursuant to the Equivalence Methodology, or the requisite inputs for analysis.			
The Following items are required, if applicable.			
Delegation of Authority	PDF	1	ControlNumber_LeadOrganization_DelegationOfAuth
Proposed Building Energy Code Language	PDF	n/a	ControlNumber_LeadOrganization_ProposedCode
Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	n/a	ControlNumber_LeadOrganization_Waiver
Potentially Duplicative Funding Notice	PDF	n/a	ControlNumber_LeadOrganization_PDFN
Authorization from cognizant Contracting Officer for FFRDC	PDF	n/a	ControlNumber_LeadOrganization_FFRDCAuth
DOE Work Proposal for FFRDC, if applicable (see DOE O 412.1A, Attachment 2)	PDF	n/a	ControlNumber_LeadOrganization_WP

Component	File Format	Page Limit	File Name
Open-source Software Distribution Plan	PDF	n/a	ControlNumber_LeadOrganization_OSSDP
Additional items to be required if applicant is selected for negotiation			
Statement of Project Objectives	MS Word	10	ControlNumber_LeadOrganization_SOPO
Subrecipient Budget Justification	MS Excel	n/a	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification
Community Benefits Plan Budget Justification	MS Excel	n/a	ControlNumber_CBP_Budget_Justification

Note: The maximum file size that can be uploaded to the Infrastructure eXCHANGE website is 50MB. See Section IV (B).

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

ii. Technical Volume

The Technical Volume must conform to the following content and form requirements. This volume must address the technical review criteria as discussed in Section V of the FOA. Save the Technical Volume in a single PDF file using the following convention for the title: "ControlNumber_LeadOrganization_TechnicalVolume".

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

The Technical Volume to the Full Application may not be more than 20 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all information in the table below. The applicant should consider the weighting of each of the technical review criteria (see Section V of the FOA) when preparing the Technical Volume.

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

Technical Volume Content Requirements

SECTION/PAGE LIMIT	DESCRIPTION
Cover Page	The cover page should include the project title, the specific FOA Topic Area and Subtopic Area, both the technical and business points of contact, names of all team member organizations, names of project managers, Senior/Key Personnel and their organizations, the project location(s), and any statements regarding confidentiality.
Project Overview (Approximately 10% of the Technical Volume)	The Project Overview should contain the following information: • Attestation of Code-making Authority: The applicant should discuss the role of the organization and provide documentation of its authority to adopt building codes. • Background: The applicant should discuss the history of building codes in its jurisdiction and any relevant partner jurisdictions. This should include a clear articulation of the building energy code or equivalent currently in place, specifying the adoption and effective dates as well as current compliance rates. This information will be used to set a baseline for the proposal in the rest of the Full Application. • Project Goal: The applicant should explicitly identify the proposed code(s) or equivalent to be adopted as part of the project, including a summary of relevant amendments, long term targets, and key implementation and compliance activities. Critical success factors for the project should be discussed including the ways in which the proposed project location and related infrastructure, skilled workforce, community benefits, etc. will contribute to the success of the overall project. • DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to achieve the project objectives. See, Potentially Duplicative Funding Notice in Section IV (D)(xvii). • Additional benefits: The applicant should outline additional benefits of the proposed project, including affordability, workforce development, public health, climate resilience, and climate impacts (such as extreme weather patterns, high winds, heat and freezing temperatures, drought, wildfire, and floods).
Technical Description, Innovation, and	The Technical Description should contain the following information: • Relevance and Outcomes: The applicant should provide a detailed description of the project or focus area, including the

Impact (Approximately 30% of the Technical Volume)	current code(s) adopted in the applicant jurisdiction and any relevant partner jurisdictions and the specific code(s) with any amendments and alterations that will be pursued for adoption and the subsequent activities to support implementation and compliance. This section should describe the relevance of the proposed project to the goals and objectives of the FOA and clearly specify the expected outcomes of the project. • Feasibility: The applicant should demonstrate the feasibility of the proposed project and capability of achieving the anticipated outcomes, including a description of previous work done and prior results on relevant code adoption efforts in the jurisdiction. This section should also address the project's access to necessary stakeholders and ability to influence energy code adoption and implementation in the applicant's jurisdiction(s). • Impacts: The applicant should describe the current code, the qualifying code intended for adoption (or that was recently adopted), and the results of the equivalence calculation conducted through the provided calculator or by following the provided methodology.[8,9] Impacts should also include potential energy and emissions savings, workforce impacts, capacity building, economic impacts, and impacts to disadvantaged communities.
Workplan (Approximately 40% of the Technical Volume)	The Workplan should include a summary of the Project Objectives, Technical Scope, Work Breakdown Structure (WBS), Milestones, Go/No-Go decision points, and Project Schedule. If selected, a detailed SOPO will be requested. The Workplan should contain the following information: • Project Goals and 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,

[8] https://infrastructure-exchange.energy.gov/Default.aspx

[9] Applicants submitting proposals to Topic Area 2 and Topic Area 3 (excluding innovative building energy codes for existing commercial and multifamily buildings) may submit the specified input requirements outlined in Section IV(D)(vi) along with the full application. DOE will conduct the analysis in line with the equivalence methodology to determine application eligibility following submission. Topic Area 3 proposals for which DOE provided a calculator (e.g., a commercial/multifamily BPS) commercial/multifamily BPS) must use the calculator provided and include it with the application at the time of submission.

	approximately annual decision points (see below for more information on Go/No-Go decision points). The applicant should describe the specific expected end result of each performance period, including milestones in the Community Benefits Plan, Adoption Plan and the Implementation and Compliance 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 Specific, Measurable, Achievable, Relevant, and Timely (SMART) technical milestone. technical milestone. SMART milestones must demonstrate an achievement rather than simply completing a task. Unless otherwise specified in the FOA, the minimum requirement is that each project must have at least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). The applicant should also provide the means by which the milestone will be verified. The summary provided should be consistent with the Milestone Summary Table in the SOPO (required at the time of negotiations). • Go/No-Go Decision Points (See Section VI (B)(xii) for more information on the Go/No-Go Review): The applicant should provide a summary of project-wide Go/No-Go decision points at appropriate points in the Workplan. At a minimum, each project must have at least one project-wide Go/No-Go decision point for each budget period of the project. The applicant should also provide the specific technical and Community Benefits Plan

	criteria to be used to evaluate the project at the Go/No-Go decision point. The summary provided should be consistent with the SOPO. Go/No-Go decision points are considered "SMART" and can fulfill the requirement for an annual SMART milestone. • End of Project Goal: The applicant should provide a summary of the end of project goal(s). At a minimum, each project must have one SMART end of project goal. The summary provided should be consistent with the SOPO. • Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and Go/No-Go decision points. • Buy America Requirements for Infrastructure Projects: Within the first two pages of the Workplan, include a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. See Appendix D for applicable definitions and other information to inform this statement. • Project Management: The applicant should discuss the team's proposed management plan, including the following: o The overall approach to and organization for managing the work; o The roles of each project team member; o Any critical handoffs/interdependencies among project team members; o The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices; o The approach to project risk management, including a plan for securing a qualified workforce and mitigating risks to project performance including but not limited to community or labor disputes; o A description of how project changes will be handled; o If applicable, the approach to Quality Assurance/Control; and o How communications will be maintained among project team members.
Technical Qualifications and Resources	The Technical Qualifications and Resources should contain the following information:

(Approximately 20% of the Technical Volume)	• A description of the project team's unique qualifications and expertise, including those of key subrecipients;
	• A description of the project team's existing equipment and facilities, or equipment or facilities already in place on the proposed project site, that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project;
	• Relevant, previous work efforts, demonstrated innovations, and how these enable the applicant to achieve the project objectives;
	• The time commitment of the key team members to support the project;
	• The skills, certifications, or other credentials of the construction and ongoing operations workforce;
	• For multi-organizational projects, describe succinctly:
	  ○ The roles and the work to be performed by the project manager and Senior/Key Personnel at the prime and sub levels;
	  ○ Business agreements between the applicant and sub;
	  ○ How the various efforts will be integrated and managed;
	  ○ Process for making decisions on technical direction;
	  ○ Publication arrangements;
	  ○ Intellectual property issues; and
	  ○ Communication plans.

iii. Resumes

A resume provides information reviewers can use to evaluate an individual's relevant skills and the experience of the key project personnel. Applicants must submit a 1-page resume for each project manager and Senior/Key Personnel that includes the following:

1. Contact information;
2. Education: All academic institutions attended, major/area, degree;
3. Training: (e.g.,) certification or credential from a Registered Apprenticeship or Labor Management Partnership
4. Professional experience: Beginning with the current position, list professional/academic positions in chronological order with a brief description;
5. List all current academic, professional, or institutional appointments, foreign or domestic, at the applicant institution or elsewhere, whether or

not remuneration is received, and whether full-time, part-time, or voluntary; and

6. There should be no lapses in time over the past 10 years or since age 18, whichever period is shorter.

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

iv. Letters of Commitment

Section 50131 of the IRA establishes specific requirements for eligible entities under this FOA. The prime recipient must be a State or unit of local government that has the authority to adopt building codes. All project partners must submit a Letter of Commitment. Each partner's Letter of Commitment shall demonstrate their support for the overall project and specific role within the project team. Letters of Commitment should highlight specific roles, skillsets, or expertise that can address critical barriers and challenges addressed by the project work plan, or aid in providing access to, or participation of, critical stakeholders.

Submit letters of commitment from all subrecipient(s). Each letter must not exceed one page. Save the letters of commitment in a single PDF file using the following convention for the title: "ControlNumber_LeadOrganization_LOCs". Letters of support or endorsement for the project from entities that do not have a substantive role in the project will not be accepted.

v. Community Partnership Documentation

In support of the Community Benefits Plan, applicants may submit documentation to demonstrate existing or planned partnerships with community entities, such as organizations that work with local stakeholders most vulnerable to or affected by the project. Examples of such entities include organizations that carry out workforce development programs, labor unions, Tribal organizations, and community-based organizations that work with disadvantaged communities. The partnership documentation can be a letter on a partner's letterhead outlining the planned partnership and signed by an officer of the entity, a Memorandum of Understanding, or another similar agreement. Such letters must state the specific nature of the partnership and must not be general letters of support. If the applicant intends to enter into Workforce and Community Agreements as part of the Community Benefits Plan, they should include letters from proposed partners. Each letter must not exceed one page. Save the partnership documentation in a single PDF file using the following convention for the title: "ControlNumber_LeadOrganization_PartnerDoc".

vi. Equivalency Calculator and Equivalency Analysis

Applicants must demonstrate equivalent or greater energy savings for the specified code using either the equivalence calculator provided or by following the specified methodology,[10] or, as specified below for certain building energy codes, provide DOE the information necessary to conduct the equivalency calculation during application eligibility

[10] https://infrastructure-exchange.energy.gov/Default.aspx

review following submission. Topic Area 1 applicants must submit the provided Topic Area 1: Qualified Building Energy Codes and Amendments Checklist to indicate which preapproved packages are included in the proposed code for adoption (this will be submitted as the "Equivalence Analysis" requirement in Table 4). Topic Area 2 and 3 applicants may use the provided calculator for proposals targeting existing buildings but will need to demonstrate equivalency using the provided methodology for proposals focused on custom codes or trade-offs in new construction codes. The applicant has two options for demonstrating equivalency under Topic Areas 2 and 3:

Option 1: The applicant runs the equivalence methodology or calculator and submits the results and documentation as part of the application submission. If the applicant does not use the provided calculator, the submission must demonstrate compliance with the provided equivalence methodology. A calculator or analysis must be provided for each code proposed for adoption, for example: a proposal putting forward a custom commercial code and a custom residential code must provide an analysis for the commercial code and a separate additional analysis or completed calculator for the residential code.

Option 2: Applicants submitting proposals to Topic Area 2 and to Topic Area 3 other than proposals for innovative building energy codes for existing commercial and multifamily buildings may submit the input requirements and DOE will conduct the analysis as part of its application review. Applicants choosing this option must submit the input requirements specified below along with the full application. DOE will conduct the analysis according to the provided methodology, the results of which will be used to determine application eligibility following submission.

Topic Area 3 proposals for innovative building energy codes for existing commercial and multifamily buildings must use the calculator provided and include the completed calculator with the application at the time of submission. Other Topic Area 2 and 3 applications, if choosing the option to have DOE conduct the analysis, must provide the following data inputs as part of their application submission for this calculation:

- Option 2 Inputs for Topic Area 2 and Topic Area 3 (if applicable)
  - Name, State, and locality (if applicable)
  - Proposed code adoption year for residential and/or commercial buildings, as applicable
  - The text of the proposed code, including as applicable a corresponding list of amendments, alterations, and other relevant changes
  - *ZEC Only*: Details of renewable energy generation requirements and procurement

Building energy codes establish requirements that provide measurable energy savings and that are verifiable and enforceable. Applications for buildings codes proposed as equivalent to a qualifying building energy code, regardless of the option used to demonstrate equivalency, must describe how the proposed code would establish measurable, verifiable, and enforceable requirements.

vii. SF-424: Application for Federal Assistance

Applicants must complete the SF-424: Application for Federal Assistance, which is available on Infrastructure eXCHANGE at http://infrastructure-exchange.energy.gov under the appropriate funding opportunity number. The list of certifications and assurances in Field 21 can be found at http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms, under Certifications and Assurances. Note: The dates and dollar amounts on the SF-424 are for the complete project period and not just the first project year, first phase, or other subset of the project period. Save the SF-424 in a single PDF file using the following convention for the title: "ControlNumber_LeadOrganization_424".

viii. Summary/Abstract for Public Release

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

ix. Budget Justification Workbook

Applicants selected for negotiation must complete the Budget Justification Workbook, available on Infrastructure eXCHANGE at https://infrastructure-exchange.energy.gov under the appropriate funding opportunity number. Applicants must complete each tab of the Budget Justification Workbook for the project, including all work to be performed by the prime recipient and its subrecipients and contractors. Applicants should include costs associated with 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.

x. Summary Slide

Applicants must provide a single slide summarizing the proposed project. The Summary Slide template is available on Infrastructure eXCHANGE at https://infrastructure-exchange.energy.gov under the appropriate funding opportunity number and must include the following information:

- An overall project summary;

- Proposed code(s) to be adopted;
- A description of the project's impact and energy savings;
- Proposed project goals;
- Any key graphics (illustrations, charts and/or tables);
- The project's key idea and takeaways;
- Topline community benefits;
- Project title, prime recipient, Senior/Key Personnel information; and
- Requested DOE funds.

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

xi. SF-LLL: Disclosure of Lobbying Activities

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

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

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

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

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

For every activity, list the following items:

- The sponsor of the activity or the source of funding;
- The award or other identifying number;

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

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

> I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil, or administrative penalties for fraud, false statements, false claims, or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

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

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

Definitions:

Current and pending support – (a) All resources made available, or expected to be made available, to an individual in support of the individual's RD&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for an award or directly to the individual; or (iii) whether the resource has monetary value; and (b) includes in-kind contributions requiring a commitment of time and directly supporting the individual's RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning as the

term Other Support as applied to researchers in NSPM-33: For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resource and/or financial support from all foreign and domestic entities, including but not limited to gifts provided with terms or conditions, financial support for laboratory personnel, and participation of student and visiting researchers supported by other sources of funding.

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

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

xiii. Community Benefits Plan

To support the goal of building a clean and equitable energy economy, Grantees are expected to:

1) support meaningful community, Tribal, and labor engagement;
2) engage and support a skilled and qualified workforce;
3) advance diversity, equity, inclusion, and accessibility (DEIA); and
4) contribute to the Justice40 Initiative with the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (as defined in footnote 4 above).

To ensure these goals are met, as part of their application for funding, applicants must create a Community Benefits Plan that describes how their codes program will incorporate the four objectives stated above.

The applicant's Community Benefits Plan must include at least one Specific, Measurable, Achievable, Relevant, and Timely (SMART) milestone per program year to measure progress on each of the proposed actions. The applicant must make the Community Benefits Plan, the milestones, and progress toward them accessible on a public website. DOE will incorporate the Community Benefits Plan into the award and the recipient must implement its Community Benefits Plan when carrying out its project.

The Community Benefits Plan must address the following:

1. **Community and Labor Engagement:** The Community Benefits Plan must identify and describe the applicant's actions to date and its plans to engage with historically underrepresented parties, including but not limited to Tribal governments, labor unions, and community-based organizations that support or work with underserved and rural communities, including disadvantaged communities as geographically defined for purposes of the Justice40 Initiative using the Climate and Economic Justice Screening Tool, or as defined as a geographically dispersed community that is consistent with the most recent DOE Justice40 General Guidance.[11] By facilitating community input, social buy-in, and accountability, such engagement can improve and accelerate code updates, content and creation and implementation.

   Applicants must describe what important stakeholder or community engagement and outreach strategies they will utilize to reach contractor and workforce organizations, disadvantaged communities, low-income households, and communities with environmental justice concerns. Applicants are strongly encouraged to establish partnerships with and provide funding to community-based organizations, labor unions, contractor organization, utilities, existing program implementers, community colleges and trade schools, and other organizations that represent or work with underserved households to reach and engage with these communities effectively over the life of the code development, creation, design and implementation.

2. **Engage and Support a Skilled and Qualified Workforce:** A well-qualified, skilled, trained, and stable workforce is necessary to ensure that the adopted codes are fully and successfully implemented. High-quality jobs are critical to attracting and retaining the qualified workforce required to ensure successful and durable energy savings from a newly adopted code.

   The Community Benefits Plan must describe the applicant's approach providing ongoing workforce education and training and ensuring jobs are of sufficient quality to attract and retain skilled workers. Applicants must describe how they are supporting education and training of both new and incumbent workers.

[11] DOE's General Guidance for Justice40 Implementation is available here: https://www.energy.gov/sites/default/files/2023-07/DOE%20Justice40%20General%20Guidance%2072523.pdf

As the 1935 National Labor Relations Act states, employees' ability to organize, bargain collectively, and participate, through labor organizations of their choosing, in decisions that affect them contributes to the effective conduct of business and facilitates amicable settlements of any potential disputes between employees and employers, providing assurances of project efficiency, continuity, and multiple public benefits. Applicants should provide a description of how they plan to affirmatively support worker organizing and collective bargaining. This might include investing in workforce and education through joint labor-management training programs, supports for the development of a resilient, skilled, and stable workforce including by utilizing registered apprentices on projects and paying at or above the local prevailing wages, establishing or encouraging use of project labor or community workforce agreements, and other commitments or pledges.

3. **Diversity, Equity, Inclusion, and Accessibility (DEIA):** The Community Benefits Plan must include a section describing how DEIA objectives will be incorporated into the overall program. The section should detail how the applicant will support underrepresented businesses and training organizations that serve workers who face barriers to accessing quality jobs, and/or other project partners to help address DEIA.

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

   - Commit to partnering with Minority Business Enterprises, minority-owned businesses, women-owned businesses, and veteran-owned businesses;
   - To fill open positions for code officials or other energy efficiency jobs, partner with workforce training organizations serving underrepresented communities and those facing systemic barriers to quality employment, such as those with disabilities, women, returning citizens, opportunity youth, and veterans;
   - Partner with organizations who can provide workers with comprehensive support services, such as childcare, mentoring, and transportation, to increase representation and access in energy codes, energy efficiency, and construction jobs.

4. **Justice40 Initiative:** Applicant must provide an overview of benefits to disadvantaged communities that codes can deliver, supported by measurable milestones. The Justice40 Initiative section of the Community Benefits Plan must include:

   A) Tracking Benefits to disadvantaged communities

   Under this funding opportunity, code changes and updates or other positive outcomes (see below for examples) that may impact residential and commercial buildings in communities identified by the Climate and Environmental Justice Screening Tool (CEJST) may qualify as benefits that flow to disadvantaged

communities.[12] Disadvantaged communities are not limited to specific geographies, but also include underrepresented stakeholder groups such as minority businesses, migrant workers, and others.

B) A description of how the applicant will assure that applicable benefits flow to disadvantaged communities

Applicants should specifically identify how their programs will deliver benefits in CEJST-identified areas (or their DOE-approved alternative definition of a disadvantaged community), such as how a modernized code will reduce energy bills and improve indoor air quality.[13] Where applicable, applicants should outline how applicant-Tribal partnerships will ensure building code adoption, implementation and compliance within Tribal jurisdictions. DOE encourages the applicants to consider how funding resources will be equitably shared with Tribes. Applicants should also discuss how their programs will create high-quality jobs for members of disadvantaged communities and increase workforce training opportunities for underrepresented populations and businesses. Benefits might also include opportunities that increase participation within code development and adoption processes of stakeholder groups identified in the earlier sections of the Community Benefits Plan described above. Specific examples of energy code-related activities in support of the Justice40 Initiative can be in the following resource: Opportunities for

[12] https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

[13] DOE's General Guidance for Justice40 Implementation is available here: https://www.energy.gov/sites/default/files/2023-07/DOE%20Justice40%20General%20Guidance%2072523.pdf

Equity-Focused Building Energy Code Activities. Any proposed benefits should conform to DOE's Justice40 policy priorities identified below.

Benefits are measurable direct or indirect investments or positive project outcomes that achieve or contribute to the following in disadvantaged communities:[14]

(1) a decrease in energy burden;

(2) an increase in housing quality and durability;

(3) an increase in energy resilience;

(4) a decrease in environmental exposure and burdens;

(5) an increase in access to low-cost capital;

(6) an increase in job creation, the clean energy job pipeline, and job training for individuals;

(7) increases in clean energy enterprise creation and contracting (e.g., minority-owned or disadvantaged business enterprises);

(8) increases in energy democracy; and

(9) increased parity in clean energy technology access and adoption.

xiv. Delegation of Authority (if applicable)

The applicant must submit a completed delegation of authority documentation, if necessary, to designate another agency within the jurisdiction as the prime applicant, separate from the agency with the authority to adopt building codes.

xv. Proposed Building Energy Code (if applicable)

The applicant must submit draft language, if applicable, detailing the proposed building energy code, innovative approach to building energy codes, or equivalent, for evaluation.

xvi. Waiver Requests (if applicable)

Foreign Entity Participation

For projects selected under this FOA, all recipients and subrecipients must qualify as domestic entities. See Section III for more information on eligibility criteria. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix A lists the information that must be included in a waiver request.

Foreign Work Waiver Request

As set forth in Section IV (J)(iii), all work for projects selected under this FOA must be performed in the United States. To request a waiver of this requirement, the applicant must

[14] These policy priorities were adapted from DOE's standard Justice40 Policy Priorities to reflect the unique opportunities of this FOA.

submit an explicit waiver request in the Full Application. Appendix A lists the information that must be included in a foreign work waiver request.

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

xvii. Potentially Duplicative Funding Notice (if applicable)

If the applicant or project team member has other active awards of federal funds, the applicant must determine whether the activities of those awards potentially overlap with the activities set forth in its application to this FOA. If there is a potential overlap, the applicant must notify DOE in writing of the potential overlap and state how it will ensure any project funds will not be used for identical cost items under multiple awards. Likewise, for projects that receive funding under this FOA, if a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded under the DOE award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award. If there are identical cost items, the recipient must promptly notify the DOE Contracting Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Save the Potentially Duplicative Funding Notice in a single PDF file using the following convention for the title: "ControlNumber_LeadOrganization_PDFN."

xviii. 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".

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

If a DOE/NNSA FFRDC is to perform a portion of the work, the applicant must provide a DOE work proposal (WP) in accordance with the requirements in DOE Order 412.1A, Work Authorization System, Attachment 2, 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".

xx. Statement of Project Objectives (SOPO) (if applicant is selected for negotiation)

Applicants selected for negotiations are required to complete a SOPO. A SOPO template is available on Clean Energy Infrastructure eXCHANGE at https://infrastructure-exchange.energy.gov under the appropriate funding opportunity number. 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).

xxi. Subrecipient Budget Justification (if applicable, if applicant is selected for negotiation)

Applicants selected for negotiation must provide a separate budget justification for each subrecipient that is expected to perform work estimated to be more than $250,000 or 25% of the total work effort, whichever is less. The budget justification must include the same justification information described in the "Budget Justification" section above.

xxii. Community Benefits Plan Budget Justification (if applicant is selected for negotiation)

Applicants must provide a separate budget justification identifying the Community Benefit Plan costs included in the "Budget Justification Workbook." This Community Benefits Plan Budget Justification must include the same justification information described in the "Budget Justification Workbook" section above but should only include Community Benefits Plan costs. Save the Community Benefits Plan Budget Justification in a Microsoft Excel file using the following convention for the title: "ControlNumber_CBP_Budget_Justification".

E. Content and Form of Replies to Reviewer Comments

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

DOE will post the reviewer comments in eXCHANGE. The expected submission deadline is on the cover page of the FOA; however, it is the applicant's responsibility to monitor eXCHANGE if 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 eXCHANGE or relying on the expected date alone. Applicants should anticipate having approximately three (3) business days to submit a Reply.

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

F. Post Selection Information Requests

If selected for award negotiations, DOE reserves the right to require that selected applicants provide additional or clarifying information regarding the application submissions, the

project, the project team, the award requirements, and any other matters related to anticipated award. The following is a list of examples of information that may be required:

- Personnel proposed to work on the project and collaborating organizations (See Section VI (B)(xix) Participants and Collaborating Organizations);
- Current and Pending Support (See Sections IV (D)(xvii) Potentially Duplicative Funding Notice and Section VI (B)(xviii) Current and Pending Support);
- SOPO as defined above in Section IV (D)(xx);
- Indirect cost information;
- Other budget information;
- Letters of Commitment from third parties, if applicable;
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
- Information for the DOE Office of Civil Rights to process assurance reviews under 10 CFR 1040;
- Representation of Limited Rights Data and Restricted Software, if applicable;
- Information related to any proposed Workforce and Community Agreement, as defined above in "Community Benefits Plan: Job Quality and Equity," that applicants may have made with the relevant community;
- Any proposed or required Project Labor Agreements; and
- Environmental Questionnaire.

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

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

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

H. Submission Dates and Times

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

I. Intergovernmental Review

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

J. Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles. Pursuant to 2 CFR 910.352, the cost principles in the Federal Acquisition Regulations (48 CFR 31.2) apply to for-profit entities. The cost principles contained in 2 CFR Part 200, Subpart E apply to all entities other than for-profits.

ii. Pre-Award Costs

Applicants selected for award negotiations (selectee) must request prior written approval to charge pre-award costs. Pre-award costs are those incurred prior to the effective date of the federal award directly pursuant to the negotiation and in anticipation of the federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the federal award and **only** with the written approval of the federal awarding agency, through the DOE Contracting Officer. Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis. Pre-award expenditures are made at the selectee's risk. DOE is not obligated to reimburse costs: (1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the selectee anticipated.

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

DOE's decision whether and how to distribute federal funds under this FOA is subject to NEPA. Applicants should carefully consider and should seek legal counsel or other expert advice before taking any action related to the proposed project that would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE completing the NEPA review process.[15]

DOE does not guarantee or assume any obligation to reimburse pre-award costs incurred prior to receiving written authorization from the Contracting Officer. If the applicant elects to

[15] Further guidance can be found here: https://www.energy.gov/nepa/guidance-and-requirements-table

undertake activities that DOE determines may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the applicant is doing so at risk of not receiving federal funding for its project. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer overrides the requirement to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives. Likewise, if an application is selected for negotiation of award, and the prime recipient elects to undertake activities that are not authorized for federal funding by the Contracting Officer in advance of DOE completing a NEPA review, the prime recipient is doing so at risk of not receiving federal funding.

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

1. Requirement

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

2. Failure to Comply

If the prime recipient fails to comply with the Performance of Work in the United States requirement, DOE may deny reimbursement for the work conducted outside the United States. The prime recipient is responsible should any work under this award be performed outside the United States, absent a waiver, regardless of whether the work is performed by the prime recipient, subrecipients, contractors or other project partners.

3. Waiver

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

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

iv. Construction

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

v. Foreign Travel

Foreign travel costs are not allowable under this FOA.

vi. Equipment and Supplies

Property disposition may be required at the end of a project if the current fair market value of property exceeds $5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316. However, pursuant to the FY23 Consolidated Appropriations Act

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

vii. Build America Buy America Requirements for Infrastructure Projects

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

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

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

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

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

The DOE financial assistance agreement will require each recipient to: (1) fulfill the commitments made in its application regarding the procurement of U.S.-produced products and (2) fulfill the commitments made in its application regarding the procurement of other key component metals and domestically manufactured products that are deemed available in

sufficient and reasonably available quantities or of a satisfactory quality at the time of award negotiation. Applicants may seek waivers of these requirements in very limited circumstances and for good cause shown. Further details on requesting a waiver can be found in Appendix B and the terms and conditions of an award.

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

viii. Lobbying

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

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

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

ix. Risk Assessment

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

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

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

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

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

Further, as DOE invests in critical infrastructure and funds critical and emerging technology areas, DOE also considers possible threats to United States research, technology, and

economic security from undue foreign government influence when evaluating risk. If high risks are identified and cannot be sufficiently mitigated, DOE may elect to not fund the applicant.

x. Invoice Review and Approval

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

- Summary of costs by cost categories;
- Timesheets or personnel hours report;
- 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;
- Analogous information for some subrecipients; and
- Other items as required by DOE.

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

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

b. Definitions

1. Foreign Government-Sponsored Talent Recruitment Program. An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to

the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

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

xii. Affirmative Action and Pay Transparency Requirements

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

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

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

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

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

DOL's Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule compliance evaluations. Consult OFCCP's Technical Assistance Guide[16] to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors, and subcontractors must take. Additional guidance may also be found in the National Policy Assurances, produced by DOE.

[16] 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

xiii. Foreign Collaboration Considerations

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

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

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

V. Application Review Information

A. Technical Review Criteria

i. Concept Papers

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

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

This criterion involves consideration of the following factors:

- The applicant clearly describes the proposed project, including the proposed code for adoption (or already adopted code if applicable), an implementation and compliance strategy, and how the project will deliver impact, advance the FOA goals, and achieve the targeted outcomes, savings and benefits;

- The applicant has identified risks and challenges associated with the project work, including possible mitigation strategies, and has shown the impact that SCEP funding and the proposed project would have on the relevant jurisdiction and buildings;
- The applicant clearly demonstrates need for the proposed project;
- The applicant is an eligible entity for this FOA and 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.

Criterion 1: Technical Merit, Innovation, and Impact (40%) – *Topic Area 1 Only*

This criterion involves consideration of the following factors:

Impact of the Proposed Project

- Clear articulation of the proposed, or already adopted, qualified building energy code(s) including all relevant amendments and alterations, as defined in Appendix C, to be adopted and implemented;
- Extent to which the proposed project addresses the rapid adoption of a qualifying building energy code;
- Magnitude and persistence of energy and consumer bill savings to be delivered by the proposed project;
- Prospective compliance plan and ability to implement the plan;
- Long-term support for capacity building, workforce development and training efforts to establish place-based jobs and support community-level implementation;
- Extent to which the application specifically and appropriately demonstrates how the applicant will move from the current code(s) to the adoption, implementation and enforcement of the applicable qualifying building energy code;
- Extent to which project has documented buy-in from needed stakeholders to ensure success of adoption, implementation, compliance, and enforcement;
- Extent to which project has the potential to reduce emissions and provide clean energy acceleration benefits for a community or region; and sufficiency of existing capacity, or plans to achieve that capacity, to support adoption and implementation of proposed code;
- Extent to which project has sufficient existing capacity, or sufficient plans to achieve that capacity, to support adoption and implementation of proposed code;
- Extent to which the project supports the topic area objectives and target specifications and metrics;
- Extent to which adoption and implementation efforts are replicable and may lead to future code adoption efforts; and
- Extent to which the project facilitates stakeholder relationships across new or existing stakeholders to gain buy-in and increase potential for future adoption efforts.

Project Management

- Adequacy of proposed project management systems including the ability to track scope, cost, and schedule progress and changes;
- Reasonableness of budget and spend plan as detailed in the budget justification workbook for proposed project and objectives;
- Adequacy of contingency funding based on quality of cost estimate and identified risks;
- Adequacy, reasonableness, and soundness of the project schedule, as well as annual, or more frequent Go/No-Go decisions, 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.

Criterion 1: Technical Merit, Innovation, and Impact (40%) – *Topic Areas 2 and 3 Only*

This criterion involves consideration of the following factors:

Impact of the Proposed Project

- Extent to which the proposed project addresses the rapid adoption of a qualifying building energy code;
- Extent to which the proposed project incorporates activities that will result in implementing a plan to achieve full compliance for a qualifying building energy code, or a building energy code that achieves equivalent energy savings;
- Magnitude and persistence of energy and utility bill savings to be delivered by the proposed project;
- Clear articulation of the current and proposed, or already adopted, qualified building energy code(s) including all relevant amendments and alterations, to be adopted and implemented;
- Prospective compliance plan and ability to implement the plan;
- Long-term support for capacity building, workforce development and training efforts to establish place-based jobs and support community-level implementation;
- Degree to which the current code(s) and the proposed code(s) are clearly described, including key differences between the two and the impact of adopting the proposed code(s);
- Extent to which the application specifically and appropriately demonstrates how the applicant will move from the current code(s) to the adoption, implementation and enforcement of the proposed building energy code;
- Sufficiency of technical 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;
- Extent to which project has buy-in from needed stakeholders to ensure success of adoption, implementation, compliance, and enforcement;
- Extent to which project has the potential to reduce emissions and provide clean energy acceleration benefits for a community or region; and sufficiency of existing

capacity, or plans to achieve that capacity, to support adoption and implementation of proposed code;
- Ability of the project to advance industry adoption;
- Extent to which the project supports the topic area objectives and target specifications and metrics;
- Potential impact of the project on advancing the state of the art;
- Extent to which adoption and implementation efforts are replicable and may lead to future code adoption efforts; and
- Extent to which the project facilitates stakeholder relationships across new or existing stakeholders to gain technical buy-in and increase potential for future adoption efforts.

Project Management

- Adequacy of proposed project management systems including the ability to track scope, cost, and schedule progress and changes;
- Reasonableness of budget and spend plan as detailed in the budget justification workbook for proposed project and objectives;
- Adequacy of contingency funding based on quality of cost estimate and identified risks;
- Adequacy, reasonableness, and soundness of the project schedule, as well as annual, or more frequent, Go/No-Go decisions, interim milestones, and metrics to track process;
- Adequacy, reasonableness, and soundness of the project schedule, as well as annual Go/No-Go decisions, 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; and
- Soundness of a plan to expeditiously address environmental, siting, and other regulatory requirements for the project, including evaluation of resilience to climate change.

Criterion 2: Adoption, Implementation and Compliance Plans (30%)

This criterion involves consideration of the following factors:

Approach and Workplan

- 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 will succeed in meeting the project goals.

Identification of Risks

- Discussion and demonstrated understanding of the key risk areas involved in the proposed work and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables

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

Adoption, Implementation and Compliance Plan

- Identification of known or perceived barriers to adoption, including mitigation plan; and
- Comprehensiveness of Adoption, Implementation and Compliance plan including but not limited to adoption, implementation, and compliance activities, supportive programs to ensure equitable outcomes, workforce development plans, community and stakeholder engagement plans, etc.

Ongoing Adoption Plan

- Identification of the interest and extent of the applicant and related jurisdictions' plan to ensure ongoing code updates with the provision of sufficient capacity and workforce support.

Criterion 3: Team and Resources (10%)

This criterion involves consideration of the following factors:

- Degree to which the proposed project team represents partnership comprised of key stakeholders as specified in the FOA;
- Demonstrated capacity to carry out the proposed project;
- The capability of the project team to address all aspects of the proposed work with a high probability of success. The qualifications, relevant expertise, and time commitment of the individuals on the team;
- Capability of the project team to influence the adoption and implementation of updated building energy codes in the target region, including the demonstration of strategic relationships and skills necessary to ensure the success of the project;
- The diversity of the proposed team and demonstrated success on the similar projects, particularly those that are critical to energy code updates and implementation;
- Degree to which the proposed consortia/team demonstrates the ability to facilitate and expedite further demonstration, development and commercial deployment of the proposed technologies;
- The degree to which the proposed team demonstrates the ability to facilitate and expedite further development of technical assistance in the implementation of the building energy codes;
- Level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan;
- The Reasonableness of the budget for the proposed project and objectives; and
- Need for federal assistance.

Criterion 4: Community Benefits Plan (20%)

This criterion involves consideration of the following factors:

Community and Labor Engagement

- Extent to which the applicant demonstrates community and labor engagement to date that results in support for the proposed project;
- Extent to which the applicant has a clear and appropriately robust plan to engage local stakeholders, labor unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities.
- Extent to which the applicant has considered accountability to affected workers and community stakeholders, including those most vulnerable to project activities, with a plan to publicly share SMART Community Benefits Plan commitments; and
- Extent to which the applicant demonstrates that community and labor engagement will lead to the delivery of high-quality jobs, minimal environmental impact, and allocation of project benefits to disadvantaged communities.

Job Quality and Workforce Continuity

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

Diversity, Equity, Inclusion, and Accessibility

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

Justice40 Initiative

- Extent to which the Community Benefits Plan identifies specific, measurable benefits for disadvantaged communities that code can deliver, how the benefits will flow to the disadvantaged communities, and how a modernized code will reduce energy bills and improve the indoor air quality within the disadvantaged communities; and
- Extent to which the project would contribute to meeting the objective that 40% of the benefits of climate and clean energy investments will flow to disadvantaged communities.

iii. Criteria for Replies to Reviewer Comments

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

B. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA, by the standards set forth in DOE'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 optimizes the use of available DOE funding to achieve the FOA outcome, including the need of the eligible entity for assistance;
- The degree to which the proposed project optimizes the use of available DOE funding over all potential phases to achieve the FOA outcomes and broader programmatic objectives;
- The degree to which the proposed project is likely to lead to increased high-quality employment and manufacturing in the United States;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications);
- The degree to which the proposed project incorporates applicant or team members from Minority Serving Institutions (e.g., Historically Black Colleges and Universities (HBCUs)/other Minority Institutions (OMIs)); and partnerships with Minority Business Enterprises, minority-owned businesses, woman-owned businesses, veteran-owned businesses, or Indian Tribes;
- The degree to which the proposed project, when compared to the existing DOE project portfolio and other projects to be selected from the subject FOA, contributes to the total portfolio meeting the goals reflected in the Community Benefits Plan criteria;
- The degree to which the proposed project will employ procurement of U.S. iron, steel, manufactured products, and construction materials;

- The degree to which the proposed project collectively represents a diversity of applicant types and sizes of applicant organizations;
- The degree to which the proposed project has broad public support from the communities most directly impacted by the project;
- The degree to which the proposed project avoids duplication/overlap with other publicly or privately funded work;
- The degree to which the proposed project supports complementary efforts or projects, which, when taken together, will best achieve the program's goals and objectives;
- The degree to which the proposed project enables new and expanding market segments; and
- The degree to which the project's solution or strategy will maximize deployment or replication.

D. Evaluation and Selection Process

i. Overview

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

ii. Pre-Selection Clarification

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

The information provided by applicants to DOE through pre-selection clarifications is incorporated in their applications and contributes to the merit review evaluation and DOE's selection decisions. If DOE contacts an applicant for pre-selection clarification purposes, it does not signify that the applicant has been selected for negotiation of award or that the applicant is among the top ranked applications.

DOE will not reimburse applicants for expenses relating to the pre-selection clarifications, nor will these costs be eligible for reimbursement as pre-award costs.

iii. Recipient Responsibility and Qualifications

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any responsibility and qualification information about the applicant that is in the entity information domain in SAM.gov (see 41 U.S.C. § 2313).

The applicant, at its option, may review information in the entity information domain in SAM.gov and comment on any information about itself that a federal awarding agency previously entered and is currently in the entity information domain in SAM.gov.

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

iv. Selection

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

E. Anticipated Notice of Selection and Award Negotiation Dates

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

VI. Award Administration Information

A. Award Notices

i. Ineligible Submissions

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

ii. Concept Paper Notifications

DOE will notify applicants of its determination to encourage or discourage the submission of a Full Application. DOE will post these notifications to Infrastructure eXCHANGE. DOE may include general comments provided from reviewers on an applicant's Concept Paper in the encourage/discourage notifications.

Applicants may submit a Full Application even if they receive a notification discouraging them from doing so. By discouraging the submission of a Full Application, DOE intends to

convey its lack of programmatic interest in the proposed project. Such assessments do not necessarily reflect judgments on the merits of the proposed project. The purpose of the Concept Paper phase is to save applicants the considerable time and expense of preparing a Full Application that is unlikely to be selected for award negotiations.

iii. Full Application Notifications

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

iv. Applicants Selected for Award Negotiations

Successful applicants will receive written notification that they have been selected for award negotiations. Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an application is selected for award negotiations, it is not a commitment by DOE to issue an award nor is it a guarantee of federal government funding. Applicants do not receive an award unless and until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the prime recipient in FedConnect.

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

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

v. Alternate Selection Determinations

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

vi. Unsuccessful Applicants

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

B. Administrative and National Policy Requirements

i. Registration Requirements

There are several required one-time actions applicants must take before applying to this FOA. Some of these actions may take several weeks, so it is vital applicants build in enough time to complete them. Failure to complete these actions could interfere with application or negotiation deadlines or the ability to receive an award if selected. These requirements are as follows:

1. DOE Funding Opportunity Infrastructure Exchange

Register and create an account on Infrastructure eXCHANGE at https://infrastructure-exchange.energy.gov/.This account will allow the user to apply to any open FOAs in Infrastructure eXCHANGE.

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

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

2. System for Award Management

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

3. FedConnect

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

4. Grants.gov

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

5. Electronic Authorization of Applications and Award Documents

Submission of an application and supplemental information under this FOA through electronic systems used by the DOE, including Infrastructure eXCHANGE and FedConnect, 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 supplemented by 2 CFR Part 910.

iii. Foreign National Participation

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

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

iv. Subaward and Executive Reporting

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

v. National Policy Requirements

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

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

DOE's decision whether and how to distribute federal funds under this FOA is subject to NEPA (42 U.S.C. § 4321, *et seq.*). NEPA requires federal agencies to integrate environmental

values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE's NEPA website at https://www.energy.gov/nepa.

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

vii. Applicant Representations and Certifications

1. Lobbying Restrictions

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

2. Corporate Felony Conviction and Federal Tax Liability Representations

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

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

For purposes of these representations, a corporation is any for-profit or nonprofit entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations].

3. Nondisclosure and Confidentiality Agreements Representations

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

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

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

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

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

(2) Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the U.S. government, may contain provisions appropriate to the activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received during such activity unless specifically authorized to do so by the U.S. government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the U.S. Department of Justice, that are essential to reporting a substantial violation of law.

viii. Statement of Federal Stewardship

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

ix. Subject Invention Utilization Reporting

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

x. Intellectual Property Provisions

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

xi. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, attached to the award agreement. Awards initiated since 10/1/2010 are subject to the requirement of Reporting Subawards and Executive Compensation to comply with the Federal Funding and Transparency Act of 2006 (FFATA). Additional information about this requirement can be found in the Special Terms and Conditions of the Grantee's award, at https://www.fsrs.gov, and in 2 CFR Part 170.
Additional information regarding reporting will be available from the SCEP Program website, at: https://www.energy.gov/scep/state-energy-program-guidance.

xii. Go/No-Go Review

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

decision; (7) the recipient's submission of a continuation application;[17] and (8) written approval of the continuation application by the Contracting Officer.

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

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

xiii. Conference Spending

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

xiv. Uniform Commercial Code (UCC) Financing Statements

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

Properly record, and consent to the Department's ability to properly record if the recipient fails to do so, UCC financing statement(s) for all equipment in excess of $5,000 purchased with project funds. These financing statement(s) must be approved in writing by the

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[17] 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.

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.

xv. Real Property and Equipment

Subject to the vesting of any property pursuant to Section 309 of the FY23 Consolidated Appropriations Act (Pub. L. No. 117-328), Division D, Title III, which is at the discretion of the Secretary or the Secretary's designee, real property and equipment purchased with project funds are subject to the requirements at 2 CFR 200.310, 200.311, 200.313, and 200.316 (non-federal entities, except for-profit entities) and 2 CFR 910.360 (for-profit entities). For projects selected for awards under this FOA, the recipients may (1) take disposition action on the real property and equipment; or (2) continue to use the real property and equipment after the conclusion of the award period of performance with Contracting Officer approval. The recipient's written request for Continued Use must identify the property and include: a summary of how the property will be used (must align with the authorized project purposes); a proposed use period, (e.g., perpetuity, until fully depreciated, or a calendar date when the recipient expects to submit disposition instructions); acknowledgement that the recipient shall not sell or encumber the property or permit any encumbrance without prior written DOE approval; current fair market value of the property; and an estimated useful life or depreciation schedule for equipment.

When the property is no longer needed for authorized project purposes, the recipient must request disposition instructions from DOE. For-profit entity disposition requirements are set forth in 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310 – 200.316. However, pursuant to the FY23 Consolidated Appropriations Act (Pub. L. No. 117-328), Division D, Title III, Section 309, the Secretary or a designee of the Secretary may, at their discretion, vest unconditional title or other property interests acquired under this project regardless of the fair market value of the property at the end of the award period.

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

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

xvii. Participants and Collaborating Organizations

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

xviii. Current and Pending Support

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

xix. U.S. Manufacturing Commitments

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

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

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

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

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

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

xx. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)[18] is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. The term "Investigator" means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE. Recipients must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities. Further, for DOE funded projects, the recipient must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/unmanageable) in its initial and ongoing FCOI reports.

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

[18] 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.

the other requirements set forth in DOE's interim COI Policy. Prior to award, the applicant must certify that it is, or will be within 180 days of the award, compliant with all requirements in the COI Policy.

xxi. Fraud, Waste, and Abuse

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

The OIG maintains a hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit https://www.energy.gov/ig/ig-hotline.

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

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

Applicants and subrecipients (if applicable) are encouraged to allocate sufficient costs in the project budget to cover the costs associated for personnel and data infrastructure needs to support performance management and program evaluation needs, including but not limited to independent program and project audits to mitigate risks for fraud, waste, and abuse.

xxii. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with DOE funding is subject to the requirements of DOE Order 443.1C, Protection of Human Research Subjects, 45 CFR Part 46, Protection of Human Subjects (subpart A which is referred to as the "Common Rule"), and 10 CFR Part 745, Protection of Human Subjects. Additional information on the DOE Human Subjects Research Program can be found at: HUMAN SUBJECTS Human Subjects Pr... | U.S. DOE Office of Science (SC) (osti.gov).

VII. Questions/Agency Contacts

Upon the issuance of a FOA, DOE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question

and answer process described below. Questions regarding this FOA must be submitted to iracodes@hq.doe.gov no later than three (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 Infrastructure eXCHANGE at https://infrastructure-exchange.energy.gov/. **You must first select the FOA Number to view the questions and answers specific to this FOA (DE-FOA-0003056)**. SCEP will attempt to respond to a question within three (3) business days unless a similar question and answer has already been posted on the website.

Questions related to the registration process and use of the Infrastructure eXCHANGE website should be submitted to InfrastructureExchangeSupport@hq.doe.gov.

VIII. Other Information

A. FOA Modifications

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

B. Government Right to Reject or Negotiate

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

C. Commitment of Public Funds

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

D. Treatment of Application Information

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

If an application includes trade secrets or business-sensitive, proprietary, or otherwise confidential information, it is furnished to the federal government in confidence with the understanding that the information shall be used or disclosed only for evaluation of the application. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for

inadvertent disclosure, DOE will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for merit review of the application or as otherwise authorized by law. This restriction does not limit the federal government's right to use the information if it is obtained from another source.

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

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

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

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

E. Evaluation and Administration by Non-Federal Personnel

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

F. Notice Regarding Eligible/Ineligible Activities

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

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

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

H. Requirement for Full and Complete Disclosure

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

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

I. Retention of Submissions

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

J. Government Rights in Subject Inventions

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

Government Use License

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

March-In Rights

The U.S. government retains march-in rights with respect to all subject inventions. Through "march-in rights," the government may require a prime recipient or subrecipient who has

elected to retain title to a subject invention (or their assignees or exclusive licensees), to grant a license for use of the invention to a third party. In addition, the government may grant licenses for use of the subject invention when a prime recipient, subrecipient, or their assignees and exclusive licensees refuse to do so.

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

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

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

K. Rights in Technical Data

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

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

Government Rights in Technical Data Produced Under Awards: The U.S. government normally retains unlimited rights in technical data produced under government financial assistance awards, including the right to distribute to the public.

L. Copyright

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

M. Export Control

The United States government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the United States to

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

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

N. 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 to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use *covered telecommunications equipment or services* as a substantial or essential component of any system, or as critical technology as part of any system. As described in Section 889 of Public Law 115-232, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

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

O. Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. "PII" refers to information that can be used to distinguish or trace an individual's identity, such as their name, Social Security number, or biometric records, alone or combined with other personal or identifying information linked or linkable to a specific individual, such as date and place of birth or mother's maiden name. (See OMB Memorandum M-17-12 dated January 3, 2017.)

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).

P. Annual Independent Audits

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

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

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

Q. Informational Webinar

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

Attendance is not mandatory and will not positively or negatively impact the overall review of any applicant submissions. 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. The webinar dates are listed on the cover page of the FOA.

Appendix A – Waiver Requests For: 1. Foreign Entity Participation; and 2. Foreign Work

Waiver for Foreign Entity Participation

Many of the technology areas DOE funds fall in the category of critical and emerging technologies (CETs). CETs are a subset of advanced technologies that are potentially significant to United States national and economic security.[19] For projects selected under this FOA, all recipients and subrecipients must be organized, chartered or incorporated (or otherwise formed) under the laws of a state or territory of the United States; have majority domestic ownership and control; and have a physical location for business operations in the United States. To request a waiver of this requirement, an applicant must submit an explicit waiver request in the Full Application.

Waiver Criteria

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

a. Its participation is in the best interest of the United States industry and United States economic development;
b. The project team has appropriate measures in place to control sensitive information and protect against unauthorized transfer of scientific and technical information;
c. Adequate protocols exist between the United States subsidiary and its foreign parent organization to comply with export control laws and any obligations to protect proprietary information from the foreign parent organization;
d. The work is conducted within the United States and the entity acknowledges and demonstrates that it has the intent and ability to comply with the United States Competitiveness Provision (see Section VI (B)(xix)); and
e. The foreign entity will satisfy other conditions that may be deemed necessary by DOE to protect United States government interests.

Content for Waiver Request

A Foreign Entity waiver request must include the following:

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

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

c. The rationale for proposing a foreign entity participate (must address criteria above);
d. A description of the project's anticipated contributions to the United States economy;
e. How the project will benefit the United States, including manufacturing, contributions to employment in the United States and growth in new markets and jobs in the United States;
f. How the project will promote manufacturing of products and/or services in the United States;
g. A description of how the foreign entity's participation is essential to the project;
h. A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP; and
i. Countries where the work will be performed. (Note: if any work is proposed to be conducted outside the United States, the applicant must also complete a separate request foreign work waiver.)

DOE may also require:

- A risk assessment with respect to IP and data protection protocols that includes the export control risk based on the data protection protocols, the technology being developed, and the foreign entity and country. These submissions could be prepared by the project lead (if not the prime recipient), but the prime recipient must make a representation to DOE as to whether it believes the data protection protocols are adequate and make a representation of the risk assessment – high, medium, or low risk of data leakage to a foreign entity.
- Additional language be added to any agreement or subagreement to protect IP, mitigate risk, or other related purposes.

DOE may require additional information before considering the waiver request.

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

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

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

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

1. The rationale for performing the work outside the United States ("foreign work");

2. A description of the work proposed to be performed outside the United States;
3. An explanation as to how the foreign work is essential to the project;
4. A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the United States economy;
5. The associated benefits to be realized and the contribution to the project from the foreign work;
6. How the foreign work will benefit the United States, including manufacturing, contributions to employment in the United States and growth in new markets and jobs in the United States;
7. How the foreign work will promote manufacturing of products and/or services in the United States;
8. A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
9. The total estimated cost (DOE and recipient cost share) of the proposed foreign work;
10. The countries in which the foreign work is proposed to be performed; and
11. The name of the entity that would perform the foreign work. Information about the entity(ies) involved in the work proposed to be conducted outside the United States. (i.e., entity seek a waiver and the entity(ies) that will conduct the work).

DOE may require additional information before considering the waiver request.

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

Appendix B – Required Use of American Iron, Steel, Manufactured Products, and Construction Materials

Buy America Requirements for Infrastructure Projects

A. Definitions

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

Construction materials includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives[20]—that is or consists primarily of:

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

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

Moreover, according to the OMB guidance document:

> When determining if a program has infrastructure expenditures, Federal agencies should interpret the term "infrastructure" broadly and consider the definition provided above as illustrative and not exhaustive. When determining if a particular construction project of a type not listed in the definition above constitutes "infrastructure," agencies should consider whether the project will serve a public function, including whether the project is publicly owned and operated, privately operated on behalf of the public, or is a place of public accommodation, as opposed to a project that is privately owned and not open to the public. Projects with the former qualities have greater indicia of infrastructure, while projects with the latter quality have fewer. Projects consisting solely

[20] BIL, § 70917(c)(1).

of the purchase, construction, or improvement of a private home for personal use, for example, would not constitute an infrastructure project.

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

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

B. Buy America Requirements for Infrastructure Projects ("Buy America" requirements)

In accordance with Section 70914 of the BIL, none of the project funds may be used for a project for infrastructure unless:

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

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

(3) all construction materials[21] are produced in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

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

These requirements must flow down to all sub-awards, all contracts, subcontracts, and purchase orders for work performed under the proposed project, except where the prime recipient is a for-profit entity. Based on guidance from the Office of Management and Budget (OMB), the Buy America requirements of the BIL do not apply to DOE projects in which the

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

prime recipient is a for-profit entity; the requirements only apply to projects whose prime recipient is a State, local government, Indian Tribe, Institution of Higher Education, or nonprofit organization.

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

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

C. Waivers

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

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

(1) Applying the Buy America requirements would be inconsistent with the public interest;

(2) The types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or

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

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

- A detailed justification for the use of "non-domestic" iron, steel, manufactured products, or construction materials to include an explanation as to how the non-domestic item(s) is essential to the project
- A certification that the applicant or recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with potential suppliers
- Applicant/Recipient name and Unique Entity Identifier (UEI)

- Total estimated project cost, DOE and cost-share amounts
- Project description and location (to the extent known)
- List and description of iron or steel item(s), manufactured goods, and construction material(s) the applicant or recipient seeks to waive from Domestic Content Procurement Preference requirement, including name, cost, country(ies) of origin (if known), and relevant PSC and NAICS code for each
- Waiver justification including due diligence performed (e.g., market research, industry outreach) by the applicant or recipient
- Anticipated impact if no waiver is issued

DOE may require additional information before considering the waiver request.

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

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

Appendix C – Qualified Building Energy Codes for Topic Area 1

1) The following is a list of the qualifying residential building energy codes and building energy code pathways:
   a) 2021 IECC Residential, unamended.
   b) A successor edition of IECC Residential for which the Secretary has published in the Federal Register an affirmative determination that the updated code will improve energy efficiency compared to the previous edition of the corresponding standard or code.
   c) 2021 IECC, or a qualified successor edition, amended with one or more of the provisions detailed under Appendix C, Section 3 of this document.
   d) 2024 IECC Residential, unamended.[22]
   e) 2024 IECC Residential, amended with one or more of the provisions detailed under Appendix C, Section 3 of this document.
   f) The zero energy code provisions in the 2021 IECC-Appendix RC, unamended.
   g) The zero energy code provisions in the 2021 IECC-Appendix RC, amended with any of the provisions as detailed under Appendix C, Section 3 of this document.

2) The following is a list of the qualifying commercial building energy codes and building energy code pathways:
   a) ASHRAE Standard 90.1-2019, unamended.
   b) A successor edition of ASHRAE Standard 90.1 for which the Secretary has published in the Federal Register an affirmative determination that the updated code will improve energy efficiency compared to the previous edition of the corresponding standard or code.
   c) ASHRAE Standard 90.1-2019, or a qualified successor edition, amended with one or more of the provisions as detailed under Appendix C, Section 3 of this document.
   d) ASHRAE Standard 90.1-2022, unamended.
   e) ASHRAE Standard 90.1-2022, amended with one or more of the provisions detailed under Appendix C, Section 3 of this document.
   f) 2021 IECC Commercial (ASHRAE Standard 90.1-2019 as a compliance pathway), unamended.

[22] For the purpose of this FOA and based on the Energy Savings Analysis 2024 Residential IECC Interim Progress Indicator (available at https://www.iccsafe.org/wp-content/uploads/2024-IECC-Interim-Residential-Progress-Indicator-to-ICC_Updated_01102023.pdf), the 2024 IECC is eligible under Section 50131 of the IRA. This is based on available information about the final 2024 IECC on the date of Mod 0003. The final 2024 IECC will supersede this reference upon publication.

g) 2021 IECC Commercial (ASHRAE Standard 90.1-2019 as a compliance pathway), amended with one or more of the provisions detailed under Appendix C, Section 3 of this document.
h) The zero energy code provisions in 2021 IECC-Appendix CC, unamended.
i) The zero energy code provisions in 2021 IECC-Appendix CC, amended with any of the provisions as detailed under Appendix C, Section 3 of this document.

3) DOE has determined a list of amendments to the qualifying building energy codes and zero energy codes that will not reduce the energy savings of the those building energy codes when adopted by States. Only these amendments to a qualifying code may be included in a State's code adoption to be considered eligible for this formula funding. This list is below:
   a) Strengthening Amendments
      i) Residential Strengthening Amendments, relative to the 2021 IECC:
         - Require higher R-values or lower U-factors for building components (ceilings, walls, floors, foundation or fenestration) than the values in the prescriptive compliance tables
         - Require larger homes over a certain square footage to meet a higher number of "Additional Efficiency Packages" or a lower energy usage compared to smaller homes
         - Require all supply and return registers to be sealed
         - Reduce allowable whole building maximum air leakage rate
         - Require cool roofs in warm climate zones
         - Require increased pipe insulation levels
         - Extend requirement for Heat Recovery Ventilation (HRV) to additional climate zones
         - Require buildings using the "Total Building Performance Path" to meet a lower thermal envelope UA backstop (UA backstop is the area (A) multiplied by the U-factor (U))
         - Require lower energy rating index (ERI) targets than the levels in section R406
         - Require additions and alterations to meet "Additional Efficiency Packages" requirements
         - Require alterations to meet duct testing and maximum allowable leakage requirement, unless all ducts are located in a conditioned space
         - Require lower ERI targets (without on-site power production (OPP)) than the levels in Appendix RC
         - More stringent efficiency backstop
      iii.) Commercial Strengthening Amendments, relative to ASHRAE 90.1-2019:
         - Require "Additional Efficiency Credits" for complying with code
         - Require lower interior Lighting Power Density (LPD) values for the space-byspace calculation
         - Require lower exterior LPD values than those included in the prescriptive table
         - Require manual dimming or automatic occupant-based lighting controls for dwelling units

- Require dimming lighting systems with central and zonal controls for increased percentage of building floor area
- Require centralized master switch for apartments
- Remove or lower "additional lighting power allowance" for decorative and retail sales categories in 90.1-2019
- Extend requirement for cool roofs or increased ceiling insulation beyond minimum prescriptive levels to climate zone 4
- Require full under slab insulation in additional building types and in more climate zones beyond just climate zone 8
- Require air leakage testing for additional buildings (i.e., greater than 10,000 ft2)
- Reduce allowable whole building maximum air leakage rate
- Require Demand Controlled Ventilation (DCV) in more building spaces with fewer exceptions, including exceptions for Energy Recovery Ventilation (ERV)
- Require ERV for smaller system sizes
- Higher enthalpy recovery ratios for ERVs
- Require increased pipe insulation levels, which results in increased R-value
- Require increased duct insulation levels, which results in increased R-value
- Increase requirements for automatic off-hour, setback, and shutdown HVAC controls
- Lower fan power allowance in terms of W/CFM
- Add economizer requirements for small systems
- Add minimum efficiency requirements for heat pump and heat recovery chillers
- Require more efficient cooling towers
- Require more efficient elevators
- Require more efficient elevator cab lighting and ventilation
- Bring building performance path up to the level of the prescriptive requirements including "additional efficiency credits"
- Reduce the system size thresholds for when condenser heat recovery for service water heating is required
- Reduce the system size thresholds for when condenser heat recovery for space heating and/or reheat is required.

iv.) Neutral Amendments – the following include amendments that may not affect the energy performance outcome of the code(s), but are often included as amendments to the energy code for alternate reasons, such as enabling electric vehicle (EV) charging

a.) Commercial Neutral Amendments

- EV Charging: Plug-in for EV Charging Infrastructure
- Grid interactive/demand response controls requirements ii. Residential Neutral Amendments
- EV Charging: Plug-in for EV Charging Infrastructure
- Electric-ready: Plug-in for electric-readiness
- Grid interactive/demand response controls requirements

- Electric energy storage provisions
- EV charging infrastructure provisions
- On-Site renewable energy provisions
- Electric-ready building provisions
- HVAC Total System Performance Ratio (TSPR) pathways
- Energy Credit pathways

b.) Residential Neutral Amendments

- EV Charging: Plug-in for EV Charging Infrastructure
- Electric-ready: Plug-in for electric-readiness[23]
- Grid interactive/demand response controls requirements
- Solar-ready provisions
- Electric energy storage provisions
- EV charging infrastructure provisions
- On-Site renewable energy provisions
- Electric-ready building provisions
- Operational carbon rating and energy reporting

c.) Editorial, clarifying or formatting changes intended to improve the readability of the code would be considered neutral as long as the changes do not alter the stringency of code requirements

d.) Amendments that set a major renovation trigger or percentage serviced square footage trigger for energy code compliance in existing buildings

e.) On-site renewable energy requirements

Proposals may *not* include combinations of strengthening and weakening amendments. Due to the complex nature of such combinations in both commercial and residential building energy codes, additional analysis will be required to determine whether each proposal meets the "equivalent or greater energy savings" – such proposals will not be eligible activities in Topic Area 1.

[23] https://www.energycodes.gov/sites/default/files/2021-10/TechBrief_Electric_Readiness_Oct2021.pdf

Appendix D – List of Acronyms

ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BIL	Bipartisan Infrastructure Law
BPS	Building Performance Standards
CETs	Critical and Emerging Technologies
CEJST	Climate and Economic Justice Screening Tool
CFR	Code of Federal Regulations
COI	Conflict of Interest
CRADA	Cooperative Research and Development Agreement
DEC	Determination of Exceptional Circumstances
DEIA	Diversity, Equity, Inclusion, and Accessibility
DMP	Data Management Plan
DOE	U.S. Department of Energy
DOI	Digital Object Identifier
DOL	Department of Labor
EERE	Energy Efficiency and Renewable Energy
ERI	Energy Rating Index
FARC	Federal Assistance Reporting Checklist
FAR	Federal Acquisition Regulation
FCOI	Financial Conflicts of Interest
FFATA	Federal Funding and Transparency Act of 2006
FOA	Funding Opportunity Announcement
FOIA	Freedom of Information Act
FFRDC	Federally Funded Research and Development Center
GAAP	Generally Accepted Accounting Principles

GIS	Geographic Information System
HBCUs	Historically Black Colleges and Universities
HVAC	Heating, Ventilation and Air Conditioning
IBC	International Building Code
ICC	International Code Council
IECC	International Energy Conservation Code
IRA	Inflation Reduction Act of 2022
IRB	Institutional Review Board
IRC	International Residential Code
M&O	Management and Operating
MFA	Multi-Factor Authentication
MPIN	Marketing Partner ID Number
MSI	Minority-Serving institution
MYPP	Multi-Year Program Plan
NDA	Non-Disclosure Acknowledgement
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NNSA	National Nuclear Security Agency
NSF	National Science Foundation
OFCCP	Office of Federal Contractor Compliance Programs
OIG	Office of Inspector General
OMB	Office of Management and Budget
OSS	Open-Source Software
OSTI	Office of Scientific and Technical Information
OTA	Other Transactions Authority
PAGE	Performance and Accountability for Grants in Energy

PII	Personal Identifiable Information
RD&D	Research, Development, and Demonstration
RFI	Request for Information
RFP	Request for Proposal
SAM	System for Award Management
SCEP	State and Community Energy Programs
SciENcv	Science Experts Network Curriculum Vita
SMART	Specific, Measurable, Achievable, Relevant, and Timely
SOPO	Statement of Project Objectives
SPOC	Single Point of Contact
STEM	Science, Technology, Engineering, and Mathematics
TAA	Technical Assistance Agreement
TIA	Technology Investment Agreement
TRL	Technology Readiness Level
UEI	Unique Entity Identifier
UCC	Uniform Commercial Code
UEI	Unique Entity Identifier
WBS	Work Breakdown Structure
WP	Work Proposal
ZEC	Zero Energy Code