



# OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS

## OFFICE OF STATE & COMMUNITY ENERGY PROGRAMS

FOA Applicant Webinar – Full Applications

July 18, 2023



**Bipartisan Infrastructure Law (BIL): Industrial Assessment Center (IAC) Program Expansion at Trade Schools, Community Colleges, and Union Training Programs; and Building Training and Assessment Centers (BTAC) Program**

**DE-FOA-0002940**

# Welcome

**This webinar is being recorded and will be published on the Infrastructure eXCHANGE website.**

- If you do not wish to have your voice recorded, please do not speak during the call.
- If you do not wish to have your image recorded, please turn off your camera or participate by phone.
- If you speak during the call or use a video connection, you are presumed to consent to recording and use of your voice or image.

**Please mute your phones and we'll begin momentarily.**

## Notice

- **NO NEW INFORMATION OTHER THAN THAT PROVIDED IN THE FOA WILL BE DISCUSSED IN THE WEBINAR.**
- There are no particular advantages or disadvantages to the application evaluation process with respect to participating in the webinar today.
- Your participation is completely voluntary.
- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0002940 and adhere to the stated submission requirements.
- This presentation summarizes contents of the FOA. If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document and applicants should rely on the FOA language and seek clarification by submitting a question.
- **Please put your questions in the chat; we will answer them in the public Q&A spreadsheet on [Infrastructure eXCHANGE](#)**

**Do NOT wait until the last minute to submit your application!**

# Agenda

## FOA Schedule

## FOA Overview

- Topic Areas
- Who is Eligible to Apply
- Budget

## Content and Form of the Full Application

- Full Application Content Requirements
- File Format and Page Limits
- Post Selection Information Requests

Questions about this FOA? Put them in chat or email [IACProgram@doe.gov](mailto:IACProgram@doe.gov)  
and find answers at [Infrastructure eXCHANGE](#)



# FOA Schedule

Preamble, page i

FOA Issue Date	4/7/2023
Informational Webinar	4/18/2023
Submission Deadline for Concept Papers	6/16/2023
Second Informational Webinar (for Concept Paper Applicants)	7/18/2023
Submission Deadline for Full Applications	<b>8/15/2023 (5PM ET)</b>
Expected Date for DOE Selection Notifications	Fall 2023
Expected Timeframe for Award Negotiations	Fall/Winter 2023-2024



# FOA Overview

**FOA Title:** Bipartisan Infrastructure Law: Industrial Assessment Center (IAC) Program – IACs at Trade Schools, Community Colleges, and Union Training Programs; and Building Training and Assessment Centers (BTAC) Program

**FOA Number:** DE-FOA-0002940

**Main Objective:** To establish IACs at trade schools, community colleges, and union training programs (including joint labor-management training programs), as well as to establish BTACs.

- The IAC Program will support IAC awardees to deliver hands-on technical training necessary for high-quality clean energy jobs and career pathways while concurrently bolstering the nation's small- and medium-sized manufacturing base by promoting best practices for reducing industrial emissions and enhancing energy efficiency and productivity.
- The BTAC Program focuses on commercial and institutional buildings to train building energy efficiency professionals in energy-efficient design and operation to meet local and regional workforce demand, and to provide critical energy efficiency assessments and upgrades to improve the environmental performance of commercial and institutional buildings, especially those in areas that have been historically underserved.

## Topic Areas (TAs):

1. IACs at Community Colleges and Trade Schools
2. IACs at Union Training Programs
3. Building Training and Assessment Centers Program



# Topic Area 1: IACs at Community Colleges and Trade Schools

## Section I. B. i

**The objective of this Topic Area** is to support the establishment of new IACs at community colleges and trade schools that will build upon the demonstrated success of the applied learning environment and hands-on training approach of the traditional IACs, while simultaneously drawing on the unique strengths, geographic reach, and faculty/student composition of trade schools and community colleges.

**Applications are invited** from **individual community colleges or trade schools or entities that comprise multiple eligible entities** such as State community college systems.

**Applicants should describe** in detail the **industry-recognized credentials** or degrees that students will achieve or progress toward by participating in IAC programming.

**Applications should also describe** how the organization will develop and deliver effective **technical assistance for regional Small and Medium Manufacturers (SMMs) consistent with the purposes of the IAC Program\*** but adjusted to the context of applying institutions and their surrounding communities, while concurrently offering training, **hands-on experience**, and career supports for students.

### Technical areas of interest include but are not limited to:

- Additive Manufacturing
- Advanced Manufacturing
- Battery Energy Storage
- Carbon Capture Utilization and Sequestration (CCUS)
- Combined Heat and Power (if net-zero aligned)
- Energy Efficiency
- Energy Management
- Geothermal Technologies
- HVAC with focus on Heat Pump Technologies
- Hydrogen and Fuel Cell Technologies
- Solar Energy
- Smart Manufacturing
- Sustainable Manufacturing
- Water and Wastewater Management
- MESC also will consider innovative proposals that incorporate other IAC-supported areas, such as cybersecurity, supply chain management, or industrial and manufacturing processes, provided that they incorporate elements of optimizing operations and reducing emissions consistent with the objectives of the IAC program.

\* See Section I.A.i., e.g., providing in-depth assessments of SMM plant site facilities, services, operations; identify opportunities for SMMs to optimize energy efficiency and performance; promote applications of emerging concepts and technologies; etc.

# Who is Eligible to Apply As a Prime Recipient? Topic Area 1:

## Section III. A. i.

Only the following entities are eligible to apply as **prime recipients**\* under this Topic Area:

- **Community colleges,**
- **Community College Systems, and**
- **Trade schools**, which are defined as educational institutions, other than community colleges and union training programs, that offer career and technical education leading to industry-recognized credentials or degrees. Trade schools include entities that are nested within larger institutions that grant bachelor's or graduate degrees (e.g., extension schools), but proposed projects must focus on students who are seeking non-bachelor's or graduate credentials.

\* The following types of domestic entities are eligible to participate as a subrecipient of this FOA:

1. Any institution eligible to be a prime recipient
2. Other institutions of higher education;
3. For-profit entities;
4. Non-profit entities; and
5. State and local governmental entities, and Indian tribes.



## Topic Area 2: IACs at Union Training Programs

### Section I. B. ii

**This Topic Area will support** the establishment of new IACs at union training programs (including joint labor-management programs) that will build upon the demonstrated success of the applied learning environment and hands-on training approach of the traditional IACs, while simultaneously drawing on the unique strengths, geographic reach, and incumbent worker-focused orientation of union training programs and joint labor-management training programs to support small and medium-sized manufacturers.

As with the IACs discussed in Topic Area 1, DOE intends that these new IACs will use innovative solutions to develop and deliver **hands-on technical training** necessary for high-quality clean energy jobs and career pathways while concurrently bolstering the nation's small- and medium-sized manufacturing base by **promoting best practices for reducing industrial emissions and enhancing energy efficiency and productivity, consistent with the purposes of the IAC program\***.

**Technical areas of interest include but are not limited to:**

- Additive Manufacturing
- Advanced Manufacturing
- Battery Energy Storage
- Carbon Capture Utilization and Sequestration (CCUS)
- Combined Heat and Power (if net-zero aligned)
- Energy Efficiency
- Energy Management
- Geothermal Technologies
- HVAC with focus on Heat Pump Technologies
- Hydrogen and Fuel Cell Technologies
- Solar Energy
- Smart Manufacturing
- Sustainable Manufacturing
- Water and Wastewater Management
- MESC also will consider innovative proposals that incorporate other IAC-supported areas, such as cybersecurity, supply chain management, or industrial and manufacturing processes, provided that they incorporate elements of optimizing operations and reducing emissions consistent with the objectives of the IAC program.

\* See Section I.A.i., e.g., providing in-depth assessments of SMM plant site facilities, services, operations; identify opportunities for SMMs to optimize energy efficiency and performance; promote applications of emerging concepts and technologies; etc.

## Who is Eligible to Apply? Topic Area 2:

### Section III. A. i.

Only the following entities are eligible to apply as **prime recipients\*** under this Topic Area:

- **Union Training Programs**, which are defined as credential-granting training programs (including joint labor-management training programs) administered by (a) a union or group of unions certified by the National Labor Relations Board or (b) a Joint Apprenticeship and Training Committee composed of an equal number of representatives of relevant employer(s) and employees represented by a collective bargaining agreement.

\* The following types of domestic entities are eligible to participate as a subrecipient of this FOA:

1. Any institution eligible to be a prime recipient
2. Other institutions of higher education;
3. For-profit entities;
4. Non-profit entities; and
5. State and local governmental entities, and Indian tribes.

## Topic Area 3: Building Training and Assessment Centers (BTAC) Program

### Section I. B. iii

**This Topic Area will provide grants to institutions of higher education to establish building training and assessment centers (BTACs)** to educate and train building technicians and engineers on implementing modern building technologies specific to commercial and institutional buildings.

**To the greatest extent practicable, BTACs should be co-located with IACs.** Applicants for funding should address how they intend to advance workforce development and **all the following**:

- Identify opportunities for optimizing energy efficiency and environmental performance in buildings
- Promote the application of emerging concepts and technologies in commercial and institutional buildings
- Train engineers, architects, building scientists, building energy permitting and enforcement officials, and building technicians in energy-efficient design and operation
- Assist institutions of higher education and Tribal Colleges or Universities in training building technicians
- Promote research and development for the use of alternative energy sources and distributed generation to supply heat and power for buildings, particularly energy-intensive buildings
- Coordinate with and assist State-accredited technical training centers, community colleges, Tribal Colleges or Universities, and local offices of the National Institute of Food and Agriculture and ensure appropriate services are provided under this section to each region of the United States

## Topic Area 3: Building Training and Assessment Centers (BTAC) Program

### Section I. B. iii

The funding for Building Training and Assessment Centers is provided solely by the Bipartisan Infrastructure Law. **Applicants should detail how they plan to use this seed funding to launch a program that can be sustained absent DOE funding.** Applicants may want to explore partnering with state workforce development entities or utility energy efficiency programs that may have funding to supplement the funding being awarded by DOE.

*Applications with some or all of the following elements are encouraged:*

- Community organization and/or local government partnerships, especially partnerships with organizations that work directly with disadvantaged communities.
- Partnerships with training providers, relevant certification bodies, and local/regional clean energy workforce employers.
- Partnerships with regional utilities, contractors, local grant or lending agencies to assist with financing and implementation of assessment recommendations.
- Trade unions, public employee unions, service sector unions and joint labor-management training programs, including registered apprenticeships.
- Programs that target small businesses or organizations owned or led by individuals from underrepresented groups in client outreach.
- Innovative ideas for partnership structure, training, and methods to bring energy efficiency upgrades to underserved commercial building clients.
- Coordination with the state workforce development agency or plan.

## Who is Eligible to Apply? Topic Area 3:

### Section III. A. i.

Only the following entities are eligible to apply as prime recipients under this Topic Area:

- **Institutions of higher education**; which means as an institution of higher education as defined under 20 U.S.C. § 1001.
- **Tribal colleges or universities**, which are defined as Tribal Colleges or Universities serving Indian students, as recognized in 20 U.S.C. § 1059c(b).

# Budget

## Section II. A. i.

<b>Total Amount to be Awarded</b>	Up to \$54,000,000*
<b>Award Amount</b>	Topic Area 1: \$450,000 - \$3,000,000, with <b>awards toward the larger end of that range, if made, especially likely to be to entities, such as State-wide community college systems, that <u>comprise multiple institutions</u></b>
	Topic Area 2: \$450,000 - \$9,000,000, with <b>awards toward the larger end of that range, if made, especially likely to be national entities that <u>work in multiple geographies</u></b>
	Topic Area 3: \$950,000 - \$1,100,000
<b>Type of Funding Agreements</b>	Cooperative Agreements
<b>Period of Performance</b>	36 months
<b>Cost Share</b>	Not required

\*Subject to the availability of appropriated funds



# Content and Form of the Full Application

## Section IV. D.

Applicants must complete the following application forms found on the Infrastructure eXCHANGE website at <https://infrastructureexchange.energy.gov/>.

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.



# Full Application Contents

## Section IV. D. i.

Component	File Format	Page Limit	File Name	Required?
1. Technical Volume	PDF	25	ControlNumber_LeadOrganization_TechnicalVolume	<b>Required</b>
2. Resumes	PDF	3 pages each	ControlNumber_LeadOrganization_Resumes	<b>Required for each project manager and key personnel</b>
3. Letters of Commitment	PDF	1 page each	ControlNumber_LeadOrganization_LOCs	If applicable
4. Community Partnership Documentation	PDF	10	ControlNumber_LeadOrganization_PartnerDoc	Optional
5. Statement of Project Objectives	MS Word	5	ControlNumber_LeadOrganization_SOPO	<b>Required</b>
6. SF-424: Application for Federal Assistance	PDF	n/a	ControlNumber_LeadOrganization_App424	<b>Required</b>
7. Budget Justification Workbook	MS Excel	n/a	ControlNumber_LeadOrganization_Budget_Justification	<b>Required</b>
8. Summary for Public Release	PDF	1	ControlNumber_LeadOrganization_Summary	<b>Required</b>
9. Summary Slide	MS PowerPoint	1	ControlNumber_LeadOrganization_Slide	<b>Required</b>
10. Subrecipient Budget Justification	MS Excel	n/a	ControlNumber_LeadOrganization_Subrecipient_Budget_Justification	If applicable
11. DOE Work Proposal for FFRDC, if applicable (see DOE O 412.1A, Attachment 2)	PDF	n/a	ControlNumber_LeadOrganization_WP	If applicable
12. Authorization from cognizant Contracting Officer for FFRDC	PDF	n/a	ControlNumber_LeadOrganization_FFRDCAuth	If applicable
13. SF-LLL Disclosure of Lobbying Activities	PDF	n/a	ControlNumber_LeadOrganization_SF-LLL	<b>Required</b>
14. Foreign Entity Waiver Requests and Foreign Work Waiver Requests	PDF	n/a	ControlNumber_LeadOrganization_Waiver	If applicable
15. Current and Pending Support	PDF	n/a	ControlNumber_LeadOrganization_CPS	If applicable
16. Locations of Work	PDF	n/a	ControlNumber_LeadOrganization_LOW	<b>Required</b>
17. Transparency of Foreign Connections	PDF	n/a	ControlNumber_LeadOrganization_TFC	If applicable
18. Potentially Duplicative Funding Notice	PDF	n/a	ControlNumber_LeadOrganization_PDFN	If applicable

**Do NOT wait until the last minute to submit your application!**

**Note:** Any document exceeding the page limit will not be reviewed past the limitation.

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



# 1. Technical Volume (required)

File Format: PDF

Page Limit: 25

The Technical Volume to the Full Application **may not be more than 25 pages**, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of the information in the following slides. The applicant should consider the weighting of each of the technical review criterion (see Section V. of the FOA) when preparing the Technical Volume.

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

Save the Technical Volume in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_TechnicalVolume”.

# Technical Volume Content Requirements (1/5)

File Format: PDF

Page Limit: 25

## 1. Cover Page

- Project title
- Topic Area
- Business point of contact
- Name(s) of the project manager(s)
- Names of team member organizations
- Names of senior/key personnel
- Project location(s)
- Any statements regarding confidentiality

## 2. Project overview (~10% of the technical volume):

- Background
- Project goals (incl. community and labor engagement, proposed facilities and equipment, and proposed project partners)
- Impact of DOE funding

See  
next  
slides

## 3. Project Description, Innovation, Impact and Community Benefits Plan (~50%)

## 4. Workplan (~20%)

## 5. Technical Qualifications and Resources (~20%)

# Technical Volume Content Requirements (2/5)

File Format: PDF

Page Limit: 25

## 3. Project Description, Innovation, Impact and Community Benefits Plan

(~50% of the Technical Volume):

- **Technical Training Area:** Descriptions of (a) the technical training that will be provided to participants, (b) curricula, equipment, and other resources, (c) technical services provided to clients during on-site training.
- **Regional Context:** The region to be served, with a focus on (a) clean energy workforce trends, (b) the needs of potential IAC or BTAC clients, and (c) alignment with place-based economic development strategies.
- **Innovation and Impact for Trainees:** The current regional baseline for training in the area and the advantages of the proposed project in improving upon that baseline.
- **Client Impact and Outreach:** Plans for reaching out to SMMs for the IAC program and small commercial buildings (50,000 square feet or less) or K-12 schools for the BTAC program.
- **Collaboration and Coordination:** Coordination with/leveraging of existing programs and training infrastructure/resources
- **Impact and Community Benefits plan:** *See next slide*

# Technical Volume Content Requirements (3/5)

File Format: PDF

Page Limit: 25

## 3. Project Description, Innovation, Impact and Community Benefits Plan

(~50% of the Technical Volume):

- **Community Benefits Plan:** addressing the following four core elements:
  - **Community and Labor Engagement:** E.g., actions and plans to engage unions, Tribal entities, and community-based organizations that support or work with disadvantaged communities).
  - **Job Quality and Development of a Skilled Workforce:** How the project will improve job quality through partnerships and employment opportunities including the highest standards of workplace health, safety and employees' free ability to organize. Plans for connecting students with pathways to employment.
  - **Diversity, Equity, Inclusion, & Accessibility:** E.g., how the applicant will recruit diverse participants and ensure access for students with barriers to employment, any plans to provide comprehensive support services, and any plans to partner to help address DEIA. The applicant should use the Council on Environmental Quality's Climate & Economic Justice Screening Tool to identify disadvantaged communities.
  - **Justice40 Initiative:** The benefits to disadvantaged communities that the project can deliver (e.g., an increase in high-quality job creation, the clean energy job pipeline, and job training for individuals, and other benefit categories described in the FOA).



# Technical Volume Content Requirements (4/5)

File Format: PDF

Page Limit: 25

## 4. Workplan (~20% of the Technical Volume)

- Project Objectives**, as well as the expected outcomes.
- Technical Scope Summary**, with performance periods that are separated by discrete, ~annual decision points and expected end results (incl. milestones in the Community Benefits Plan).
- Project Schedule (Gantt Chart or similar)**, incl. Go/No-Go decision points.
- Task Descriptions**: The work to be accomplished and specific activities to be conducted.
- Milestones**: 1+ milestone (which can be an activity-based progress measure) per quarter, as well as 1+ SMART milestone per year for the duration of the project in each of (1) Innovation and Impact for Trainees, (2) Innovation and Impact for Clients, (3) Community and Labor Engagement, (4) Job Quality and Development of a Skilled Workforce, (5) DEIA, and (6) Justice40.
- Go/No-Go Decision Points**: 1+ SMART milestone as a project-wide Go/No-Go decision point for each budget period.
- End of Project Goal**
- Whether Buy America Requirements for Infrastructure Projects are Applicable**: Whether the project will involve the construction, alteration, and/or repair of infrastructure in the U.S. (see Appendix D for more).
- Project Management**: Approach and organization for managing the work, role of each team member, management systems and practices, **risks and mitigation strategies**.

•*Workplan should be consistent with the “statement of project objectives” discussed later.*

# Technical Volume Content Requirements (5/5)

File Format: PDF

Page Limit: 25

## 5. Technical Qualifications and Resources (~20% of the Technical Volume)

- The project team's relevant qualifications, expertise, and experience.
- Relevant previous work efforts, and their demonstrated innovation and impact.
- The project team's existing equipment and facilities, and justification of any new equipment or facilities requested.
- The time commitment of the key team members.
- The technical services to be provided by DOE/NNSA FFRDCs, if any.
- 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 sublevels;
  - Business agreements between the applicant and any subs; and
  - How efforts will be integrated and managed.

## 2. Resumes (required for some team members)

File Format: PDF

Page Limit: 3 pages each

Applicants must submit a resume for each **project manager** and **key personnel** that includes :

1. Contact Information
2. Education
3. Training: (e.g., certification or credential from a Registered Apprenticeship)
4. Professional Experience
5. There should be no lapses in time over the past ten years or since age 18, which ever time period is shorter.

As an alternative to a resume, it is acceptable to use the biographical sketch format approved by the National Science Foundation (NSF). See <https://www.ncbi.nlm.nih.gov/sciencv/>, and <https://nsf.gov/bfa/dias/policy/nsfapprovedformats/biosketch.pdf>.

Effective 01/30/2023		NSF BIOGRAPHICAL SKETCH		OMB-3145-0058	
*NAME				*Required fields	
ORCID ID (Optional)					
*POSITION TITLE					
*PRIMARY ORGANIZATION & LOCATION					
*PROFESSIONAL PREPARATION - (see PAPPG Chapter II.D.2.h.i.a.3)					
PREVIOUS ORGANIZATION(S) & LOCATION(S)	DEGREE (if applicable)	RECEIPT DATE* (MM/YYYY)	FIELD OF STUDY		
<small>Note - For Fellowship applicants only, please include the start date of the Fellowship.</small>					
*APPOINTMENTS AND POSITIONS - (see PAPPG Chapter II.D.2.h.i.a.4)					
Start Date - End Date	Appointment or Position Title, Organization, and Location				

BS-1 of 3 (rev. 01/19/2023)

Save the resumes in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_Resumes".

### 3. Letters of Commitment (if applicable)

File Format: PDF

Page Limit: 1 page each

Submit letters of commitment from **all subrecipient and third-party cost share providers**. If applicable, the letter must state that the third party is committed to providing a specific minimum dollar amount or value of in-kind contributions allocated to cost sharing. The following information for each third party contributing to cost sharing should be identified:

- (1) the name of the organization;
- (2) the proposed dollar amount to be provided; and
- (3) The proposed cost sharing type – (cash or in-kind contributions).

Each letter must not exceed 1 page.

Letters of support or endorsement for the project from entities that do not have a substantive role in the project are not accepted.

Save the letters of commitment in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_LOCs”.

## 4. Community Partnership Documentation (optional)

File Format: PDF

Page Limit: 10

In support of the Community Benefits Plan, applicants **may submit documentation to demonstrate existing or planned partnerships with community entities**, such as, organizations that work with local stakeholders most vulnerable to or affected by the project, such as organizations that carry out workforce development programs, labor unions, Tribal organizations, and community-based organizations that work with disadvantaged communities.

The Partnership Documentation could be in the form of a letter on the partner's letterhead outlining the planned partnership signed by an officer of the entity, a Memorandum of Understanding, or other similar agreement. Such letters must state the specific nature of the partnership and must not be general letters of support. If the applicant intends to enter into a Workforce and Community Agreement as part of the Community Benefits Plan, please include letters from proposed partners as appropriate.

Each letter must not exceed 1 page. In total, the partnership documentation must not exceed 10 pages.

Save the partnership documentation in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_PartnerDoc".





## 6. SF-424: Application for Federal Assistance (required)

File Format: PDF

Page Limit: n/a

Applicants must complete the SF-424 Application for Federal Assistance, which is available under this FOA posting in **Infrastructure eXCHANGE**. Complete all required fields. 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** – not just the first project year.

View Burden Statement

OMB Number: 4040-0004  
Expiration Date: 12/31/2022

**Application for Federal Assistance SF-424**

\* 1. Type of Submission: ☐ Preapplication ☐ Application ☐ Changed/Corrected Application

\* 2. Type of Application: ☐ New ☐ Continuation ☐ Revision

\* If Revision, select appropriate letter(s):  
\* Other (Specify):

\* 3. Date Received:  4. Applicant Identifier:

5a. Federal Entity Identifier:  5b. Federal Award Identifier:

State Use Only:  
6. Date Received by State:  7. State Application Identifier:

8. APPLICANT INFORMATION:

\* a. Legal Name:

\* b. Employer/Taxpayer Identification Number (EIN/TIN):  \* c. UEI:

d. Address:  
\* Street 1:   
Street 2:   
\* City:   
County/Parish:   
\* State:   
Province:   
\* Country:  USA: UNITED STATES  
\* Zip / Postal Code:

e. Organizational Unit:  
Department Name:  Division Name:

f. Name and contact information of person to be contacted on matters involving this application:  
Prefix:  \* First Name:   
Middle Name:   
\* Last Name:   
Suffix:   
Title:   
Organizational Affiliation:   
\* Telephone Number:  Fax Number:   
\* Email:

Save the SF-424 in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_App424".

# 7. Budget Justification Workbook (required)

File Format: MS Excel

Page Limit: n/a

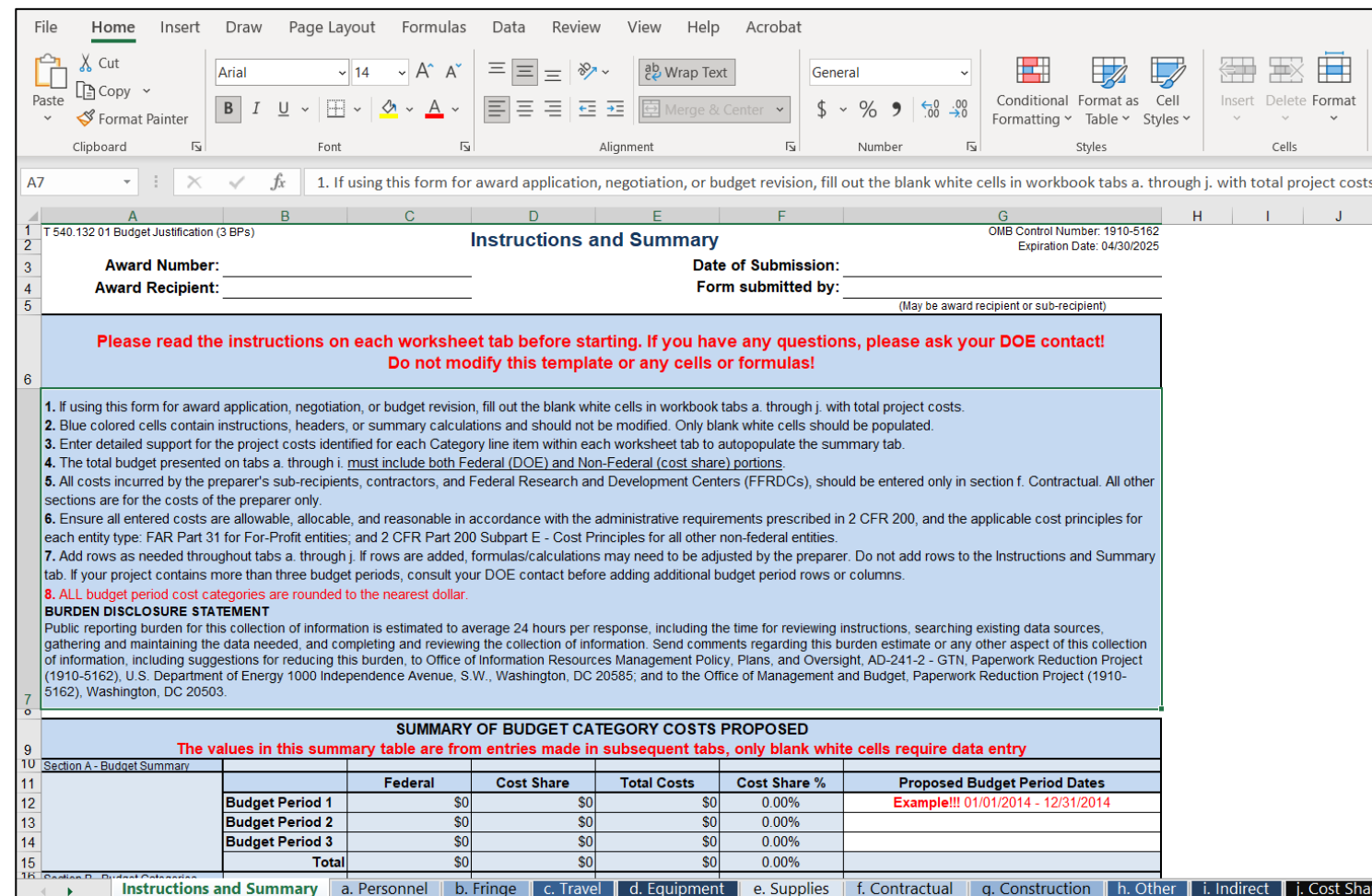
Applicants must complete the Budget Justification Workbook, which is available on Infrastructure eXCHANGE at <https://infrastructure-exchange.energy.gov/> under this FOA posting.

Applicants must complete each tab of the Budget Justification Workbook for the project as a whole, **including subrecipients and contractors.**

Include costs associated with implementing BIL-specific requirements (e.g., Buy America requirements for infrastructure projects, Davis Bacon, Community Benefits Plan, reporting, oversight) and with required annual audits and incurred cost proposals in their proposed budget documents. Such costs may be reimbursed as a direct or indirect cost.

The “Instructions and Summary” included with the Budget Justification Workbook will auto-populate as the applicant enters information into the Workbook. Please read the “Instructions and Summary” tab provided within the Budget Justification Workbook.

Save the Budget Justification Workbook in a single Microsoft Excel file using the following convention for the title “ControlNumber\_LeadOrganization\_Budget\_Justification”.



The screenshot displays the Microsoft Excel interface for the Budget Justification Workbook. The 'Instructions and Summary' tab is active, showing a series of instructions for users. The spreadsheet includes a title bar, a ribbon with tabs like File, Home, Insert, Draw, Page Layout, Formulas, Data, Review, View, Help, and Acrobat. The main area contains a table with columns A through J. The table includes a title 'T 540.132 01 Budget Justification (3 BPs)', a section for 'Award Number' and 'Date of Submission', and a 'SUMMARY OF BUDGET CATEGORY COSTS PROPOSED' table. The summary table has columns for 'Federal', 'Cost Share', 'Total Costs', 'Cost Share %', and 'Proposed Budget Period Dates'. The summary table includes rows for 'Budget Period 1', 'Budget Period 2', 'Budget Period 3', and a 'Total' row. The summary table also includes a row for 'Proposed Budget Period Dates' with an example date range of '01/01/2014 - 12/31/2014'. The summary table is followed by a row of tabs for 'a. Personnel', 'b. Fringe', 'c. Travel', 'd. Equipment', 'e. Supplies', 'f. Contractual', 'g. Construction', 'h. Other', 'i. Indirect', and 'j. Cost Share'.

	Federal	Cost Share	Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1	\$0	\$0	\$0	0.00%	Example!!! 01/01/2014 - 12/31/2014
Budget Period 2	\$0	\$0	\$0	0.00%	
Budget Period 3	\$0	\$0	\$0	0.00%	
Total	\$0	\$0	\$0	0.00%	

## 8. Summary for Public Release (required)

File Format: PDF

Page Limit: 1

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 project director(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), major participants (for collaborative projects), and the project's commitments and goals described in the Community Benefits Plan. This document must not include any proprietary or sensitive business information as **DOE may make it available to the public after selections are made.**

The summary must not exceed 1 page when printed using standard 8.5" x 11" paper with 1" margins (top, bottom, left, and right) with font not smaller than 12 point.

Save the Summary for Public Release in a single PDF file using the following naming convention "ControlNumber\_LeadOrganization\_Summary".

**Page Limit: 1**

**A fillable template is available** on Infrastructure eXCHANGE at <https://infrastructure-exchange.energy.gov/> under this FOA posting

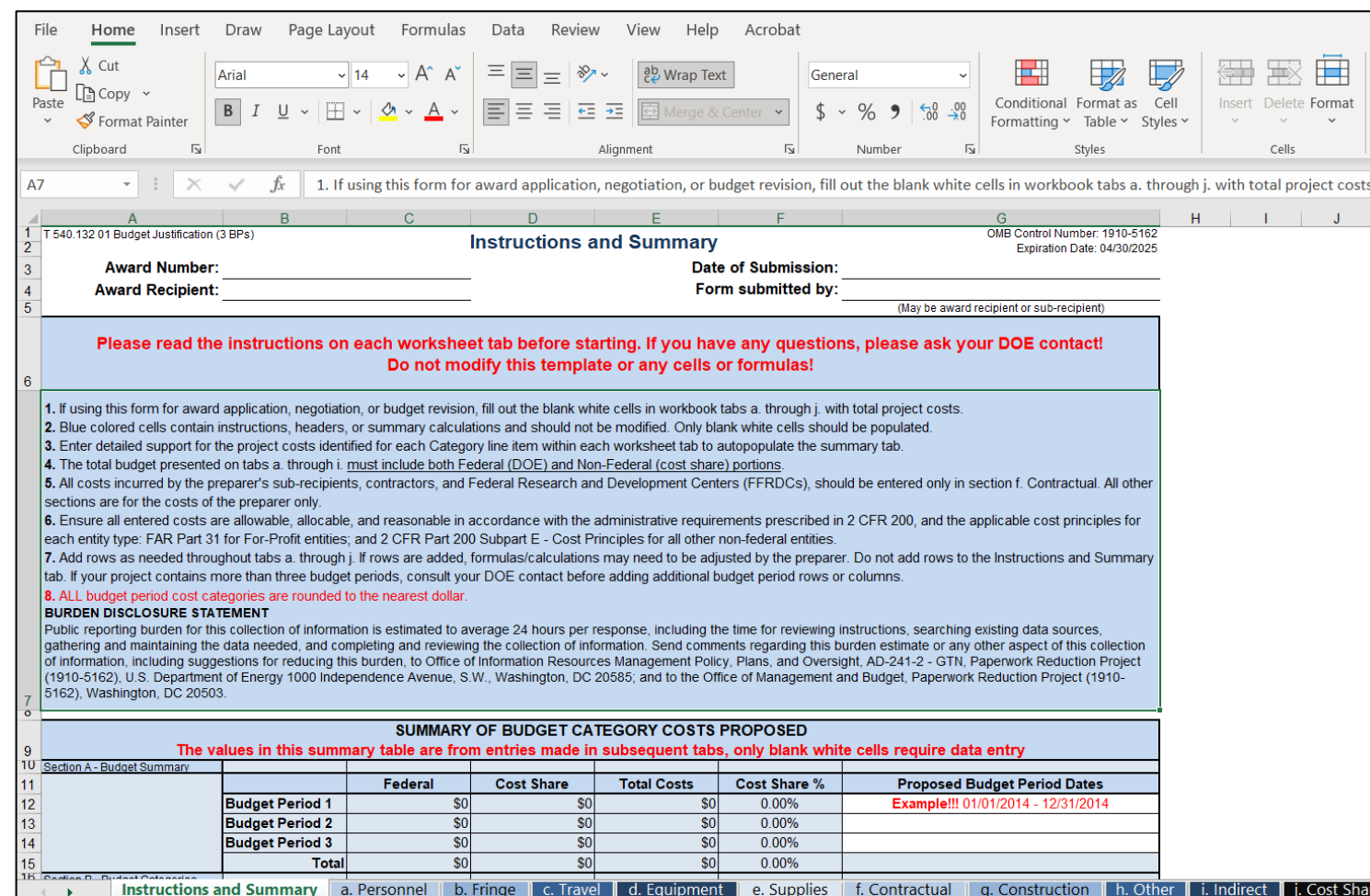
Save the Summary Slide in a single Microsoft PowerPoint file using the following convention for the title “ControlNumber\_LeadOrganization\_Slide”.

# 10. Subrecipient Budget Justification (if applicable)

File Format: MS Excel

Page Limit: n/a

Applicants must provide a **separate budget justification for each subrecipient** that is expected to perform work estimated to be more than \$250,000 or 25 percent of the total work effort (whichever is less). The budget justification must include the same justification information described in the “Budget Justification” section above.



File Home Insert Draw Page Layout Formulas Data Review View Help Acrobat

Clipboard Font Alignment Number Styles Cells

A7 1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs.

T 540.132 01 Budget Justification (3 BPs) Instructions and Summary OMB Control Number: 1910-5162 Expiration Date: 04/30/2025

Award Number: Date of Submission: Award Recipient: Form submitted by: (May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact! Do not modify this template or any cells or formulas!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs.  
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.  
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.  
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.  
5. All costs incurred by the preparer's sub-recipients, contractors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.  
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.  
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than three budget periods, consult your DOE contact before adding additional budget period rows or columns.  
8. ALL budget period cost categories are rounded to the nearest dollar.

**BURDEN DISCLOSURE STATEMENT**  
Public reporting burden for this collection of information is estimated to average 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

**SUMMARY OF BUDGET CATEGORY COSTS PROPOSED**  
The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary	Federal	Cost Share	Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1	\$0	\$0	\$0	0.00%	Example!!! 01/01/2014 - 12/31/2014
Budget Period 2	\$0	\$0	\$0	0.00%	
Budget Period 3	\$0	\$0	\$0	0.00%	
Total	\$0	\$0	\$0	0.00%	

Instructions and Summary a. Personnel b. Fringe c. Travel d. Equipment e. Supplies f. Contractual g. Construction h. Other i. Indirect j. Cost Share

Save each subrecipient budget justification in a Microsoft Excel file using the following convention for the title “ControlNumber\_LeadOrganization\_Subrecipient\_Budget\_Justification”.



# 11. Budget for DOE/NNSA FFRDC (if applicable)

File Format: PDF

Page Limit: n/a

If a DOE/NNSA FFRDC is to perform a portion of the work, the applicant must provide a DOE WP in accordance with the requirements in DOE Order 412.1A, Work Authorization System, Attachment 2, available at:

<https://www.directives.doe.gov/directives-documents/400-series/0412.1-BOrder-a-chg1-AdmChg>

DOE O 412.1A Chg 1 05-21-2014			
ADMINISTRATIVE CHANGE TO DOE O 412.1A, Work Authorization System			
Locations of Changes:			
Page	Paragraph	Changed	To
1	Header	This directive was reviewed and certified as current and necessary by Susan J. Grant, Director, Office of Management, Budget and Evaluation/Chief Financial Officer, 4-21-05.	Obsolete
1	3a	(See Attachment 1 for a complete list of Primary DOE Organizations.) This Order automatically applies to Primary DOE Organizations created after it is issued.	(See current listing at <a href="https://www.directives.doe.gov/references/DepartmentalElements">https://www.directives.doe.gov/references/DepartmentalElements</a> )
1	Footer	Office of Procurement and Assistance Management	Office of Acquisition and Project Management
3	4.d(3)	"...DOE O 241.1A, Scientific and Technical Information Management, dated 4-9-01;"	"DOE O 241.1B, Scientific Technical Information Management dated 12-13-10;"
5	5.c.(6)	...to the field promptly after submission of the AFP...	...to the field promptly with submission of the AFP...
6	5.e.	Office of Management, Budget and Evaluation.	Office of the Chief Financial Officer.
n/a*	6.	DEFINITIONS.	Delete entire paragraph. Link no longer exists and the paragraph is optional
7	7.	7. REFERENCES	6. REFERENCES
7	d.	DOE O 135.1, Budget Execution Funds Distribution and Control, dated 9-30-95, describes DOE systems, policies, and	DOE O 135.1A, Budget Execution Funds Distribution and Control, dated 1-9-06, describes DOE systems.

Save the WP in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_WP".





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

File Format: PDF

Page Limit: n/a

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".



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

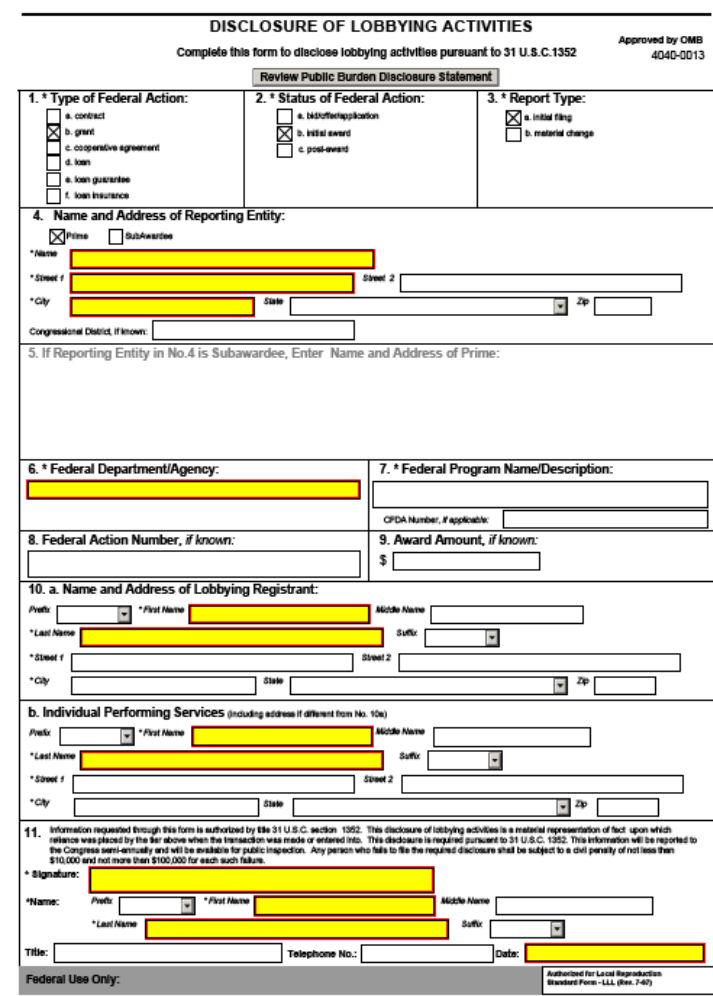
File Format: PDF

Page Limit: n/a

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” a template can be found under this FOA posting or <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.



The form is titled "DISCLOSURE OF LOBBYING ACTIVITIES" and includes the OMB approval number 4040-0013. It is divided into several sections for data entry:

- 1. \* Type of Federal Action:** Includes checkboxes for contract, grant, cooperative agreement, loan, loan guarantee, and loan insurance.
- 2. \* Status of Federal Action:** Includes checkboxes for initial application, initial award, and post-award.
- 3. \* Report Type:** Includes checkboxes for initial filing and material change.
- 4. Name and Address of Reporting Entity:** Includes fields for Name, Street 1, Street 2, City, State, Zip, and Congressional District.
- 5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:** A section for providing the prime entity's information.
- 6. \* Federal Department/Agency:** A text field for the federal agency.
- 7. \* Federal Program Name/Description:** A text field for the program name, with a sub-field for CFDA Number.
- 8. Federal Action Number, if known:** A text field for the action number.
- 9. Award Amount, if known:** A text field for the award amount.
- 10. a. Name and Address of Lobbying Registrant:** Includes fields for Name, Street 1, Street 2, City, State, Zip, and Congressional District.
- b. Individual Performing Services (including address if different from No. 10a):** Includes fields for Name, Street 1, Street 2, City, State, Zip, and Congressional District.
- 11. Information requested through this form is authorized by title 31 U.S.C. section 1352.** This section contains a signature line and fields for Name, Title, Telephone No., and Date.

Save the SF-LLL in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_SF-LLL”.

## 14. Waiver Requests (if applicable)

File Format: PDF

Page Limit: n/a

### Foreign Entity Participation

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

### Foreign Work Waiver Request

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

#### **APPENDIX C – WAIVER REQUESTS FOR: 1. FOREIGN ENTITY PARTICIPATION; AND 2. FOREIGN WORK.**

(Currently found on pages 105-107 of the FOA document) includes:

1. Waiver for Foreign Entity Participation
  - Waiver Criteria
  - Content for Waiver Request
2. Waiver for Performance of Work in the United States (Foreign Work Waiver)
  - DOE may require additional information before considering the waiver request.
  - DOE's decision concerning a waiver request is not appealable.

Save the Waivers in a single PDF file using the following convention for the title  
“ControlNumber\_LeadOrganization\_Waiver”.

## 15. Current and Pending Support (if applicable, 1/3)

File Format: PDF

Page Limit: n/a

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

For every activity, list the following items:

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

To identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support. Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided on request to either the applicant institution or DOE. Supporting documents of any identified source of support must be provided to DOE on request, including certified translations of any document.

Applicants may use this template: <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>

## Current and Pending Support (2/3)

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

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

The information may be provided in the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENCv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>, and is also available at <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>.

Save the Current and Pending Support in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_CPS".

# Current and Pending Support (3/3)

Effective 01/30/2023 NSF CURRENT AND PENDING (OTHER) SUPPORT OMB-3145-0058

\*Name:   
ORCID ID (Optional):   
\*Position Title :   
\*Organization:   
\*Location:

## Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to current, pending, and other support (both foreign and domestic) as defined in 42 U.S.C. §§6605. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§3729-3733 and 3802.

Signature   
(Please type out full name):  Date:

## \*Required fields

Note: NSF has provided 15 project/proposal and 10 in-kind contribution entries for users to populate. Please leave any unused entries blank.

## Projects/Proposals Section:

According to 42 U.S.C. §§ 6605, Current and Pending (Other) Support (A) means all resources made available, or expected to be made available, to an individual in support of the individual's research and development efforts, regardless of (i) whether the source of the resource is foreign or domestic; (ii) whether the resource is made available through the entity applying for a research and development award or directly to the individual; or (iii) whether the resource has monetary value; and (B) includes in-kind contribution information requiring a commitment of time and directly supporting the individual's research and development efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. If the time commitment or dollar value is not readily ascertainable, reasonable estimates should be provided.

CPOS- 1 of 27

(rev. 01/19/2023)

## Projects/Proposals

1.\*Project/Proposal Title :

\*Status of Support : ☐ Current ☐ Pending

Proposal/Award Number (if available):

\*Source of Support:

\*Primary Place of Performance :

\*Project/Proposal Start Date (MM/YYYY) :

\*Project/Proposal End Date (MM/YYYY) :

\*Total Award Amount : \$

\*Person-Month(s) (or Partial Person-Months) Per Year Committed to the Project

If the time commitment is not readily ascertainable, reasonable estimates should be provided.

*Year (YYYY)	*Person Months (##.##)	Year (YYYY)	Person Months (##.##)
1.	<input type="text"/>	4.	<input type="text"/>
2.	<input type="text"/>	5.	<input type="text"/>
3.	<input type="text"/>		

\*Overall Objectives :

\*Statement of Potential Overlap :

CPOS- 2 of 27

(rev. 01/19/2023)

## In-Kind Contribution Information

10.\*Status of Support : ☐ Current ☐ Pending

\*In-Kind Contribution Information Start Date (MM/YYYY) :

\*In-Kind Contribution Information End Date (MM/YYYY):

\*Source of Support :

\*Summary of In-Kind Contribution Information :

\*Person-Month(s) (or Partial Person-Months) Per Year Associated with the In-Kind Contribution Information

If the time commitment is not readily ascertainable, reasonable estimates should be provided.

*Year (YYYY)	*Person Months (##.##)	Year (YYYY)	Person Months (##.##)
1.	<input type="text"/>	4.	<input type="text"/>
2.	<input type="text"/>	5.	<input type="text"/>
3.	<input type="text"/>		

\*U.S. Dollar Value of In-Kind Contribution Information: \$

\*Overall Objectives :

\*Statement of Potential Overlap :

CPOS- 27 of 27

(rev. 01/19/2023)

## 16. Locations of Work (required)

File Format: PDF

Page Limit: n/a

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

Save the completed template as a MS Excel file using the following convention for the title  
“Control Number\_LeadOrganization\_LOW.”



## 17. Transparency of Foreign Connections (if applicable)

**File Format:** PDF

**Page Limit:** n/a

Applicants must identify the following as they relate to the proposed recipient and subrecipients:

1. Entity name, website address and mailing address;
2. The identity of all owners, principal investigators, project managers, and senior/key personnel who are a party to any *Foreign Government-Sponsored Talent Recruitment Program* of a foreign country of risk (i.e., China, Iran, North Korea, and Russia);
3. The existence of any joint venture or subsidiary that is based in, funded by, or has a foreign affiliation with any foreign country of risk, including the People's Republic of China;
4. Any current or pending contractual or financial obligation or other agreement specific to a business arrangement, or joint venture-like arrangement with an enterprise owned by a foreign state or any foreign entity;
5. Percentage, if any, that the proposed recipient or subrecipient has foreign ownership or control;
6. Percentage, if any, that the proposed recipient or subrecipient is wholly or partially owned by an entity in a foreign country of risk;
7. The percentage, if any, of venture capital or institutional investment by an entity that has a general partner or individual holding a leadership role in such entity who has a foreign affiliation with any foreign country of risk;
8. Any technology licensing or intellectual property sales to a foreign country of risk, during the 5-year period preceding submission of the proposal;
9. Any foreign business entity, offshore entity, or entity outside the United States related to the proposed recipient or subrecipient;
10. Complete list of all directors (and board observers), including their full name, citizenship and shareholder affiliation, date of appointment, duration of term, as well as a description of observer rights as applicable;
11. Complete capitalization table for your entity, including all equity interests (including LLC and partnership interests, as well as derivative securities). Include both the number of shares issued to each equity holder, as well as the percentage of that series and all equity on a fully diluted basis. Identify the principal place of incorporation (or organization) for each equity holder. If the equity holder is a natural person, identify the citizenship(s). If the recipient or subrecipient is a publicly traded company, provide the above information for shareholders with an interest greater than five percent;
12. A summary table identifying all rounds of financing, the purchase dates, the investors for each round, and all the associated governance and information rights obtained by investors during each round of financing; and
13. An organization chart to illustrate the relationship between your entity and the immediate parent, ultimate parent, and any intermediate parent, as well as any subsidiary or affiliates. Identify where each entity is incorporated.

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

Save the Transparency of Foreign Connections information in a single PDF file using the following convention for the title "ControlNumber\_LeadOrganization\_TFC."

## 18. Potentially Duplicative Funding Notice (if applicable)

File Format: PDF

Page Limit: n/a

**If the applicant or project team member has other active awards of federal funds**, the applicant must determine whether the activities of those awards potentially overlap with the activities set forth in its application to this FOA. If there is a potential overlap, the applicant must notify DOE in writing of the potential overlap and state how it will ensure any project funds (i.e., recipient cost share and federal funds) will not be used for identical cost items under multiple awards.

Likewise, for projects that receive funding under this FOA, if a recipient or project team member receives any other award of federal funds for activities that potentially overlap with the activities funded under the DOE award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under the DOE award.

If there are identical cost items, the recipient must promptly notify the DOE Grants 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."

# Questions

Questions about this FOA? Email [IACProgram@doe.gov](mailto:IACProgram@doe.gov) and find answers at [Infrastructure eXCHANGE](#)

Problems with Infrastructure Exchange?  
Email [InfrastructureExchangeSupport@hq.doe.gov](mailto:InfrastructureExchangeSupport@hq.doe.gov)  
Include FOA name and number in subject line

In addition to the 4/18/23 Webinar, this Webinar will be made available on eXCHANGE at:  
<https://infrastructure-exchange.energy.gov/Default.aspx#Foald7ab20cf6-b723-402a-ab29-12f58f41ca8d>

**Remember: Please do NOT wait until the last minute to submit your application!**







**MESC**  
OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS



**SCEP**  
STATE & COMMUNITY ENERGY PROGRAMS