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U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

WASTE: Waste Analysis and Strategies for Transportation End-uses FOA Webinar

FY24WASTEFOA@ee.doe.gov

FOA Webinar

DE-FOA-0003072

May 10, 2024

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 on the webinar today.

- Your participation is completely voluntary.

- A recording of this webinar, a transcript, and a copy of the slides will all be posted following the conclusion of the webinar on EERE eXCHANGE

Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0003072 **("FOA")** and adhere to the stated submission requirements.

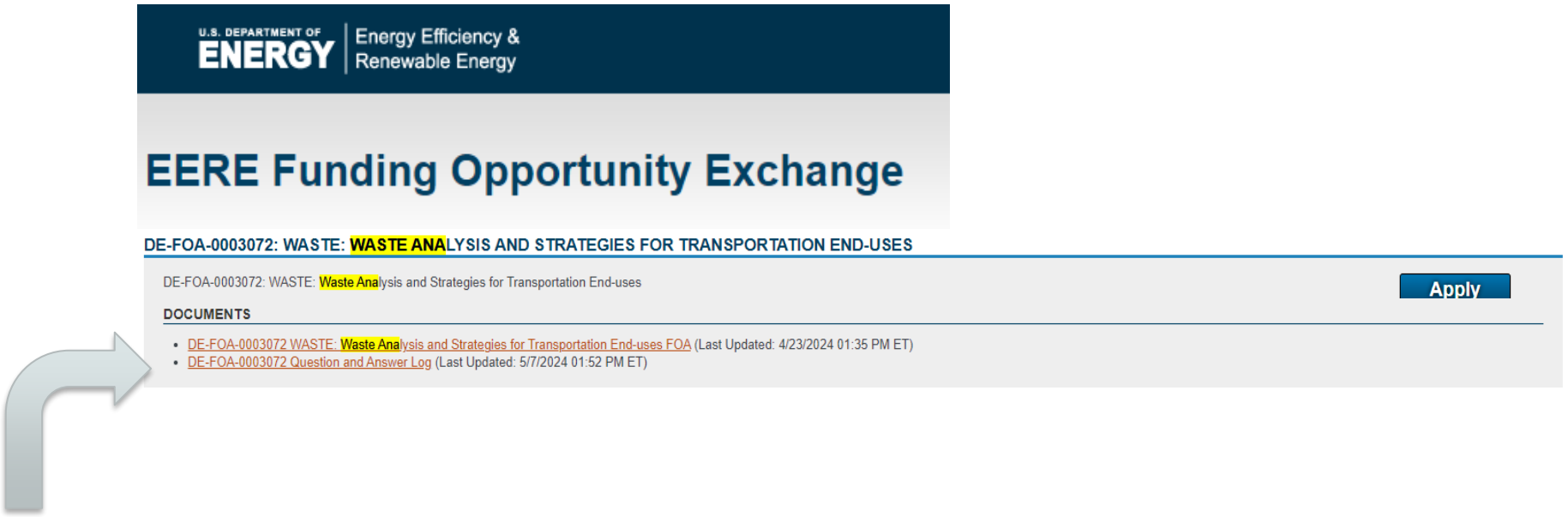
- This presentation summarizes the contents of the FOA. If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document, and applicants should rely on the FOA language and seek clarification by submitting a question to FY24WASTEFOA@ee.doe.gov

Do not expect a direct response (via email) to your question

  - You must select this specific FOA Number DE-FOA-0003072 to view the Q&As

  - EERE will attempt to respond to questions within 3 business days, unless a similar Q&A has already been posted on the website. This Q&A log will keep a running list of all questions asked

Notice



Answers to all questions received will be posted here (an excel workbook)

Anticipated Schedule:

FOA Issue Date:	April 25, 2024
Submission Deadline for Concept Papers:	June 19, 2024, 5:00 PM EDT
Submission Deadline for Full Applications:	August 14, 2024, 5:00 PM EDT
Expected Date for EERE Selection Notifications:	October 2024
Expected Timeframe for Award Negotiations:	October 24 – January 2025

Agenda

1) FOA Description (FOA section I.A)
2) Topic Areas (FOA section I.B)
3) Award Information (FOA section II)
4) Statement of Substantial Involvement (FOA section VI.B.x)
5) Cost Sharing (FOA section III.B)
6) FOA Timeline (FOA Cover Page)
7) Concept Papers (FOA section V.A.i)
8) Full Applications (FOA section V.A.ii)
9) Merit Review and Selection Process (FOA section V)
10) Registration Requirements (FOA section VI.B.i)

FOA Description – FOA Section I.A

This FOA will advance the Biden Administration's goals to put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050. The U.S. Department of Energy (DOE) is committed to catalyzing clean energy jobs through research, development, demonstration, and deployment, and ensuring environmental justice and inclusion of underserved communities.

The White House set a goal of reducing methane emissions by 30% by 2030. By developing strategies that can prevent the landfilling of these wastes, one of the major sources of fugitive methane can be mitigated. Holistic waste management strategies can also benefit communities by reducing other impacts associated with waste collection and processing infrastructure including reducing truck traffic, odors, litter, and other air, water, and health impacts.

This FOA is funded by two offices in the DOE: Office of Energy Efficiency and Renewable Energy's (EERE), Bioenergy Technologies Office (BETO) and the Vehicles Technologies Office (VTO)

FOA Description

Municipal entities and local transit authorities also have significant local demand for the energy that can be derived from these waste streams. Waste-derived biogas or renewable natural gas (RNG) are being used to fuel bus fleets and trash collection vehicles and produce hydrogen for hydrogen-fueled vehicles. These opportunities are often community-specific; thus this FOA is intended to provide funding to help communities and transit authorities realize these or similar synergies between waste infrastructure and sustainable transportation needs.

Permissible fuels from this FOA could include renewable natural gas, partially upgraded biogas, hydrogen, biocrude, renewable diesel, renewable di-methyl-ether, propane, or other renewable fuels.

Recognizing that communities may be at different states in their planning efforts, this FOA seeks a phased approach to address the challenges noted above:

Topic Area 1 will support Feasibility Study Development, to include such activities as feasibility studies, identification of transportation use cases, and sustainability indicator baselining.

For communities that are further along and may have already identified potential solutions for their waste/transportation needs, Topic Area 2 will support more detailed engineering design work to position these entities for future projects and demonstrations.

FOA Description

Topic Areas	Scope
Topic Area 1 – Feasibility Study Development *(12-18 months)* *$500K -$750K in federal funding*	Feasibility study development, transportation use case identification, sustainability indicator identification/baselining, ad other similar activities.
Topic Area 2 – Design work and Experimental Validation *(12-24 months)* *$1M - $2M in federal funding (Phase 1)* *Up to $10M in federal funding (Phase 2)*	Design basis definition, FEL-3 design, detailed siting, experimental validation/testing, transportation fuel testing, generation of data for permitting and air quality assessment.
Down-select to pilot phase (from Topic Area 2 projects only) Subject to future appropriations, EERE may fund an entity to pursue a pilot scale installation of a given project.	

Topic Areas – FOA Section I.B

Topic Area 1: Feasibility Study Development

Topic Area 1 is focused specifically on helping communities beyond a conceptualization phase by supporting more in-depth feasibility or scoping analysis. Oftentimes, staff and organizational capacity in communities (particularly in rural, remote, Tribal, or smaller communities) is limited. While technical assistance programs can accomplish some of these objectives, direct financial assistance can close this capacity gap.

Topic Area 1 aims to achieve the following three outcomes:

- Explore the potential for local beneficial utilization of waste
- Quantify the transportation energy savings compared to current practices/fuel usage
- Identify and quantify local environmental and social sustainability challenges and opportunities

Topic Area 1 Requirements & Guidelines

Topic Area Requirements

By the completion of the project (12-24 months), Topic Area 1 Recipients ***must*** complete all of the following activities:

- Identification of the most important community sustainability indicators and considerations
- Quantification of the business-as-usual (baseline) environmental and economic sustainability indicators (e.g., methane emissions, odors, disposal costs, waste sent to landfill, etc.) from the current practices
- Completion of a feasibility study and/or basic engineering design for a system/process that can quantify the impacts of increasing resource and energy recovery from waste and the impacts on economic and environmental sustainability indicators. This ***must*** also include information on the transportation use case(s) for the energy produced from the waste
- Documentation of the process for stakeholder engagement, partnering, business model development, sustainability indicator prioritization, etc.
- Demonstration of solutions and/or approaches that can be replicated by other communities, governments, or other entities
- Development of means of communicating and socializing resource and energy recovery solutions and/or approaches via public or open-source means
- Preliminary siting analysis that includes diversity, equity, and inclusion considerations. Environmental justice considerations should also be factored in and include consult from the community

Topic Areas – FOA Section I.B

Topic Area 2: Design Work and Experimental Validation

Topic Area 2 is targeted towards communities that have previously completed feasibility analysis and are seeking funding to further refine their project concept. Municipal and non-profit staff capacity and availability of funding often makes detailed design work out of reach for many communities and this topic aims to close that gap.

Topic Area 2 projects ***must*** include a renewable natural gas (RNG), hydrogen, or other waste-derived fuel and infrastructure pilot project to illustrate the synergies between waste infrastructure and sustainable transportation needs in a real-world operational environment (see permissible fuels in section I.A.ii). Pilot projects are required to emphasize the use of RNG, hydrogen, or other waste-derived fuel at or near the point of production through this fueling infrastructure. For example: fuel production via digesters and gas upgrading of raw biogas to RNG and RNG dispensing or waste derived hydrogen for a bus fleet.

Topic Area 2 Structure

<table>
<tr><th>Phases</th><th>Budget Periods</th><th>Scope</th></tr>
<tr><td>Phase 1 – Design Work of Pilot-scale and Experimental Validation
(12-24 Months)
Up to $2M federal funding</td><td>Budget Period 1</td><td>Design basis definition, FEL-3 design, detailed siting, experimental validation/testing, transportation fuel testing, generation of data for permitting and air quality assessment.</td></tr>
<tr><td colspan="3">Down-select (CD-2)
Approve project scope and begin design (Subject to future appropriations)</td></tr>
<tr><td rowspan="5">Phase 2 – Final Design, Construction, Operation Pilot-scale
(42-48 Months)
Up to $10M federal funding</td><td>Budget Period 2</td><td>Project Definition - preliminary planning and design</td></tr>
<tr><td colspan="2">Go/No-Go (CD-3)
Review to approve start of construction</td></tr>
<tr><td>Budget Period 3</td><td>Project Execution - complete final design and construction</td></tr>
<tr><td colspan="2">Go/No-Go (CD-4)
Performance test to verify readiness to begin operations</td></tr>
<tr><td>Budget Period 4</td><td>Operations</td></tr>
</table>

Topic Area 2 Requirements & Guidelines

Topic Area 2 Recipients ***must*** adhere to the following guidelines:

- Topic Area 2 design work and experimental validation ***must*** be on allowable waste streams or of blends thereof, as described in Appendix E
- By the completion of the Phase 1 of the project, recipients from Topic Area 2 ***must*** have completed a Front-End Loaded – 3 (FEL-3) Basic Engineering Design Package (see section I.B.ii)
- Recipients will also be required to perform a detailed siting analysis that considers a variety of factors, including localized air quality (VOCs, particulate matter, and NOx, at a minimum), net impact on traffic, noise, odors, and other sustainability indicators identified through the prior feasibility analysis
- Topic Area 2 will also allow a limited (up to 50% of the budget) amount of experimental work. The intent of this experimental work is to generate the data needed to refine the engineering design and/or data needed for permitting or air quality analysis.

Topic Area 2 Down-select Process

Selection for Phase 1 award does not guarantee a Phase 2 award. Phase 2 funds are subject to future appropriations and availability of funds, which may be obligated to successful Phase 2 awards once a down-select occurs (see section VI.C.).

Subject matter experts from academia, national laboratories, and industry may be used as reviewers (during the downselect), subject to conflict of interest and non-disclosure considerations. Projects will be evaluated based on all Phase 1 required deliverables stipulated under Topic Area 2 (see Section I.B.ii, Section I.C and Appendix H). This includes but is not limited to:

- Degree to which the FEL-3 design package present a comprehensive and complete description of the scope, schedule, and budget that will be required to execute a pilot phase;
- Demonstration that all prior-scale data which will be necessary to rapidly executed a pilot phase project has been obtained and incorporated into the project plans and engineering design package;
- The degree to which sufficient cost share, contingency, and other financial resources have been identified and secured to enable rapid execution of a pilot phase project; and
- Degree to which all other project resources such as, but not limited to: site access, required permitting and regulatory approvals, stakeholder and sponsor support, and any licensing agreements have been secured.

Additional Requirements of All Applicants

All applicants ***must*** describe in their applications their plans for communicating how the proposed project could make positive advancements towards economic, environmental, and social sustainability goals in their community. Applicants may want to consider the use of publicly available tools such as EJScreen or CalEnviroScreen to help address these and other sustainability indicators.

At a minimum, applicants ***must*** describe how the proposed project solution or process addresses the following sustainability indicators. Applicants are not required to have baseline levels for each of these required indicators at the time of the application, but the Feasibility Development components of the projects ***must*** include required economic, environmental, and social sustainability indicators (see Section I.C) during the duration of the projects, if awarded.

Permissible fuels from this FOA could include renewable natural gas, partially upgraded biogas, hydrogen, biocrude, renewable diesel, renewable di-methyl-ether, propane, or other renewable fuels.

In addition to these required sustainability indicators, applicants may self-select other appropriate economic, environmental, and social indicators that are relevant to their community.

Non-Responsive Applications

The following types of applications will be deemed **nonresponsive** and will **not** be reviewed or considered for an award:

- Applications that fall outside the technical parameters specified in Sections I.A. and I.B. of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Applications that are not led by a municipal entity, transit authority, or non-profit (See Section III.A)
- Applications that proposed feasibility analysis, design work, or experimental validation on waste streams, waste blends or feedstocks outside of those allowable as specified in Appendix E.
- Applications submitted under Topic Area 2 that propose experimental work based on model waste streams.

Award Information – FOA Section II

Total Amount to be Awarded	Approximately $17,500,000*
Average Award Amount	BETO/VTO anticipates making awards that range from $500,000 to $750,000 for Topic Area 1. BETO/VTO anticipates making awards that range from $1,000,000 to $2,000,000 for Topic Area 2 (phase 1). And Up to $10,000,000 for Topic Area 2 (phase 2)
Types of Funding Agreements	• Cooperative Agreements
Period of Performance	Topic Area 1: 12 to 18 months Topic Area 2: 24 months (Phase 1) + 48 months (Phase 2)
Cost Share Requirement**	Topic Area 1: 20% of Total Project Costs Topic Area 2: 20% of Total Project Costs (Phase 1) Topic Area 2: 50% of Total Project Costs (Phase 2)

*Subject to the availability of appropriated funds

**See section III.B for cost-share exceptions/waivers

Statement of Substantial Involvement – FOA Section VI.B.x

DOE has substantial involvement in work performed under awards made following this FOA. DOE does not limit its involvement to the administrative requirements of the award. Instead, DOE has substantial involvement in the direction and redirection of the technical aspects of the project. Substantial involvement includes, but is not limited to, the following

- DOE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.
- DOE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
- DOE may redirect or discontinue funding the Project based on the outcome of DOE's evaluation of the Project at that the Go/No Go decision point(s).
- DOE participates in major project decision-making processes.

Cost Sharing Requirements – FOA Section III.B

- Applicants are bound by the cost share proposed in their Full Applications if selected for award negotiations. **The cost share *must* be at least 20% of the total project costs**[1] for research and development projects.[2] The cost share ***must*** come from non-federal sources unless otherwise allowed by law.
- To assist applicants in calculating proper cost share amounts, DOE has included a cost share information sheet and sample cost share calculation as Appendices A and B to this FOA.
- See FOA for waivers and exceptions related to non-profits and Indian Tribes

Topic Area	Project Phase	Minimum Required Cost Share (see waivers and exceptions)
Topic Area 1	All phases	20%
Topic Area 2	Phase 1	20%
Topic Area 2	Phase 2	50%

[1] Total project costs is the sum of the government share, including FFRDC costs if applicable, and the recipient share of project costs.

[2] Energy Policy Act of 2005, Pub.L. 109-58, sec. 988. Also see 2 CFR 200.306 and 2 CFR 910.130 for additional cost sharing requirements.

Cost Share Contributions

- Contributions ***must*** be:
  - Specified in the project budget
  - Verifiable from the Prime Recipient's records
  - Necessary and reasonable for proper and efficient accomplishment of the project
- If you are selected for award negotiations, every cost share contribution ***must*** be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred
- Please note, vendors/contractors may NOT provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Allowable Cost Share

- Cost Share ***must*** be allowable and ***must*** be verifiable upon submission of the Full Application
- Refer to the following applicable Federal cost principles:

Entity	Cost Principles
For-profit entities	FAR Part 31 *http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm*
All other non-federal entities	2 CFR Part 200 Subpart E - Cost Principles *https://www.ecfr.gov/cgi-bin/text-idx?node=2:1.1.2.2.1.5&rgn=div6*

Allowable Cost Share

- Cash Contributions
  - May be provided by the Prime Recipient, Subrecipients, or a Third Party (may not be provided by vendors/contractors)

- In-Kind Contributions
  - Can include, but are not limited to, the donation of volunteer time or the donation of space or use of equipment.

See the Cost Share Appendices A and B in the FOA

Unallowable Cost Share

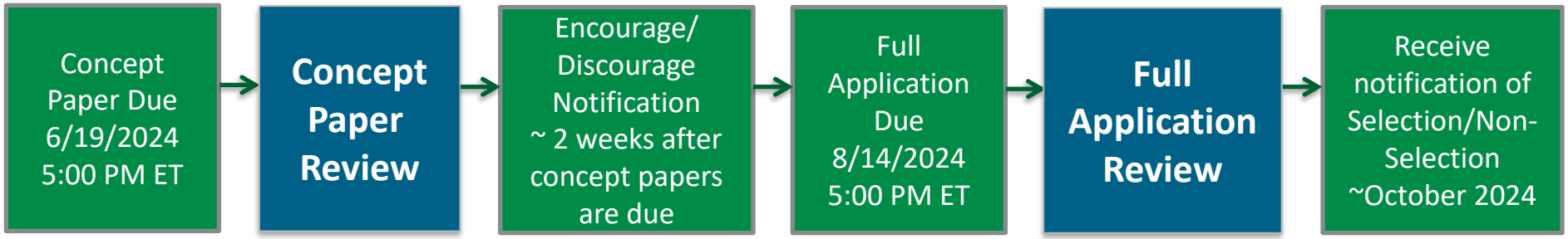
The Prime Recipient may **NOT** use the following sources to meet its cost share obligations including, but not limited to:

- Revenues or royalties from the prospective operation of an activity beyond the project period
- Proceeds from the prospective sale of an asset of an activity
- Federal funding or property
- Expenditures reimbursed under a separate Federal program
- The same cash or in-kind contributions for more than one project or program
- Vendor/contractor contributions

Cost Share Payment

- Recipients ***must*** provide documentation of the cost share contribution, incrementally over the life of the award
- The cumulative cost share percentage provided on each invoice ***must*** reflect, at a minimum, the cost sharing percentage negotiated
- In limited circumstances, and where it is in the government's interest, the DOE Contracting Officer may approve a request by the Prime Recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. See Section III.B.vi of the FOA.

FOA Timeline – FOA Cover Page



DOE anticipates making awards by December 31, 2024

Concept Papers – FOA section V.A.i

- Applicants ***must*** submit a Concept Paper
  - Each Concept Paper ***must*** be limited to a single concept or technology
- Section IV.C of the FOA states what information a Concept Paper should include and the page limits.
  - Failure to include the required content could result in the Concept Paper receiving a "discouraged" determination or the Concept Paper could be found to be ineligible
- Concept Papers ***must*** be submitted by 6/19/2024 5:00 PM ET, through EERE eXCHANGE website
- DOE provides applicants with: (1) an "encouraged" or "discouraged" notification, and (2) the reviewer comments

Concept Paper Review – FOA Section V.A.i

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 how the proposed technology or process is feasible for the target community/ies;
- The submission communicates how the proposed work can help the community/ies make positive advancements towards the sustainability (economic, environmental, and social) goals specified;
- The applicant has identified risks and challenges of the technology, regulatory and financial aspects of the proposal including possible mitigation strategies, and has shown the impact that EERE funding and the proposed project would have on the relevant field and application;
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project; and
- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

Full Applications – FOA Section IV.D.ii

The Full Application includes:

- **SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.
- **Technical Volume:** The key technical submission - info relating to the technical content, project partners, etc.
- **Resumes**
- **Letters of Commitment**
- **Statement of Project Objectives (SOPO)**
- **Diversity Equity and Inclusion Plan**
- **SF424A & Budget Justification:** a detailed budget and spend plan for the project.
- **Summary for Public Release**
- **Summary Slide**
- **Subrecipient Budget Justification(s) (if applicable)**
- **DOE work proposal for FFRDCs (if applicable) and authorization from FFRDC Contracting Officer**

Full Applications – FOA Section IV.D.ii, Continued

Administrative Documents:

- **SF-LLL Disclosure of Lobbying Activities**
- **Foreign Entity Waiver Requests and Foreign Work Waiver**
- **Current and Pending Support**
- **Locations of Work**
- **Transparency of Foreign Connections**
- **Potentially Duplicative Funding Notice**

Full Applications: Technical Volume Content

Technical Volume: the key technical component of the Full Application

Content of Technical Volume	Suggested % of Technical Volume
Cover Page	
Project Overview	10%
Technical Description, Innovation and Impact	30%
Workplan	40%
Technical Qualifications and Resources	20%

Full Application Eligibility Requirements

- Applicants ***must*** submit a Full Application by **8/14/2024 5:00 PM ET**
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity, see Section III.A of FOA
  - The Applicant submitted an eligible Concept Paper
  - The Cost Share requirement is satisfied Section III.B of FOA
  - The Full Application is compliant Section III.C of FOA; and
  - The proposed project is responsive to the FOA Section III.D of FOA
  - The Full Application meets any other eligibility requirements listed in Section III of the FOA

Who is Eligible to Apply?

This FOA has restricted eligibility requirements to the following entities:

Type of Applicant	Allowed as a prime recipient?	Allowed as subrecipients?
Individuals	No	Yes
Domestic Entities:		
States	**Yes**	Yes
Local, Tribal, and Intrastate Government Entities and Instrumentalities	**Yes**	Yes
Nonprofit Organizations, except as described in the FOA	**Yes**	Yes
Transit Authorities, as defined in the FOA	**Yes**	Yes
For-profit Organizations other than Transit Authorities	No	Yes
Institutions of Higher Education	No	Yes
DOE and Non-DOE FFRDCs	No	Yes
Federal Agencies and Instrumentalities	No	Yes
Foreign Entities	No	Yes

For purposes of this FOA, a "transit authority" is (1) either a government agency or a municipally, regionally or tribally contracted for- or non-profit company; (2) that provides or operates public transportation services on behalf of one or more municipalities or regional or tribal governments.

For-profit entities, other than transit authorities as defined above, that are incorporated (or otherwise formed) under the laws of a particular state or territory of the United States and have a physical location for business operations in the United States are eligible to apply for funding as a subrecipient but are not eligible to apply as a prime recipient.

Who is Eligible to Apply? - Continued

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

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

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.

Foreign Entities

In limited circumstances, DOE may approve a waiver to allow a foreign entity to participate as a prime recipient or subrecipient. A foreign entity may submit a Full Application to this FOA, but the Full Application ***must*** be accompanied by an explicit written waiver request. Likewise, if the applicant seeks to include a foreign entity as a subrecipient, the applicant ***must*** submit a separate explicit written waiver request in the Full Application for each proposed foreign subrecipient.

Appendix C 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.

Teaming Partner List

- To facilitate the formation of new project teams for this FOA, a Teaming Partner List is available at:

https://eere-exchange.energy.gov/TeamingPartners.aspx

- Any organization that would like to be included on this list should submit the following information through eXCHANGE :
  - Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities
- By submitting this information, you consent to the publication of the above-referenced information
- By facilitating this Teaming Partner List, EERE does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List

Multiple Applications

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

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

Merit Review and Selection Process (Full Applications) - FOA Section V

- The Merit Review process consists of multiple phases that each include an eligibility review and a thorough technical review
- Rigorous technical reviews 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, to make the selection decisions

Technical Merit Review Criteria

Criterion 1: Technical Merit, Innovation, and Impact (40%)

This criterion involves consideration of the following factors:

<u>Technical Merit and Innovation</u>

- Extent to which the proposed technology or process is technically feasible for the target community/ies;
- Sufficiency of technical detail in the application to assess whether the proposed work is technically meritorious, including relevant data, calculations and discussions of prior work in the literature with analyses that support the viability of the proposed work;
- Extent to which the submission communicates how the proposed work can help the community/ies make positive advancements towards the sustainability (economic, environmental, and social) goals specified; and
- Extent to which the submission clearly and convincingly demonstrates how the proposed work can help the community/ies successfully address resource and energy recovery from waste objectives, challenges and opportunities beyond the current level of development or practice.

Technical Merit Review Criteria – Criterion 1 Continued

Impact of Proposed Project

- Extent to and manner in which the project supports the topic area objectives and target specifications and metrics;
- Extent to which the proposed approach is likely to yield tangible and transformative economic and environmental benefits to the community/ies.
- Identification of the interest and extent of industry adoption of the technology/process;
- Extent to which the application demonstrates that the DOE funding will materially and substantially impact the outcome of the proposed effort and result in sustained positive impact to the community/ies; and
- Extent to which project and project outcomes can be model approaches for other communities.

Technical Merit Review Criteria – Criterion 2

Criterion 2: Project Research and Market Transformation Plan (25%)

This criterion involves consideration of the following factors:

Research Approach, Workplan, and SOPO

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

Identification of Technical Risks

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

Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline environmental, economic, and social indicators, metrics, and milestones/targets; and
- Degree to which outcomes and outputs can measure environmental improvement and/or can be directly linked to sustainability improvements, through quantitative and/or qualitative data collection and analysis. Include quantitative targets as appropriate.

Technical Merit Review Criteria – Criterion 2 Continued

- Adequacy, reasonableness, and soundness of the project schedule, as well as periodic Go/No-Go decisions prior to further funds disbursement, interim milestones, and metrics to track process;

Identification of Technical Risks

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

Baseline, Metrics, and Deliverables

- 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.

Technical Merit Review Criteria – Criterion 2 Continued

Market Transformation Plan

- Identification of target market, competitors, and distribution channels for proposed technology along with known or perceived barriers to market penetration, including mitigation plan; and
- Comprehensiveness of market transformation plan including but not limited to product development and/or service plan, commercialization timeline, financing, product marketing, legal/regulatory considerations including intellectual property, infrastructure requirements, and product distribution.

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

Technical Merit Review Criteria – Criterion 3

Criterion 3: Team and Resources (15%)

This criterion involves consideration of the following factors:

- Capability of the Principal Investigator(s) and the proposed 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;
- Extent to which the proposed approach is likely to build organizational and/or staff capacity to support the installation of clean energy technologies located in the community/ies, and/or support the community's/ies' participation in the clean energy economy;
- Diversity of expertise and perspectives of the team and the inclusion of industry partners that will amplify impact;
- Sufficiency of the facilities to support the work;
- Degree to which the proposed consortia/team demonstrates the ability to facilitate and expedite further demonstration, development and commercial deployment of the proposed technologies;
- Level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan; and
- Reasonableness of the budget and spend plan for the proposed project and objectives.

Technical Merit Review Criteria – Criterion 4

Criterion 4: Diversity, Equity, and Inclusion (20%)

This criterion involves consideration of the following factors:

Energy Equity and Environmental Justice

- Clear workplan tasks, staffing, research, and timeline for engaging energy equity stakeholders and/or evaluating the possible near and long-term implications of the project for the benefit of the American public, including, but not limited to public health and public prosperity benefits;
- Degree to which applicant has identified business-as-usual practices and how the proposed approach could confer benefits to the community;
- Degree to which the proposed project will share learnings with community members and other interested communities;
- Approach, methodology, and expertise articulated in the plan for addressing energy equity and justice issues associated with the technology innovation; and
- Likelihood that the plan will result in improved understanding of distributional public benefits and costs related to the innovation if successful.

Technical Merit Review Criteria – Criterion 4 Continued

Workforce Implications

- Clear and comprehensive workplan tasks, staffing, research, and timeline for engaging workforce stakeholders and/or evaluating the possible near- and long-term implications of the project for the U.S. workforce;
- Approach to document the knowledge, skills, and abilities of the workforce required for successful commercial deployment of innovations resulting from this research;
- Extent to which the proposed approach is likely to build organizational and/or staff capacity to support the installation of clean energy technologies located in the community/ies, and/or support the community's/ies' participation in the clean energy economy; and
- Likelihood that the plan will result in improved understanding of the workforce implications related to the innovation if successful

Diversity, Equity, Inclusion and Accessibility (DEIA)

- Clear articulation of the project's goals related to diversity, equity, inclusion, and accessibility;
- Quality of the project's DEIA goals, as measured by the goals' depth, breadth, likelihood of success, inclusion of appropriate and relevant SMART milestones, and overall project integration;
- Degree of commitment and ability to track progress toward meeting each of the DEIA goals; and
- Extent of engagement of organizations that represent DACs as a core element of their mission, including Minority Serving Institutions (MSIs), Minority Business Entities, and nonprofit or community-based organizations.

Reviewer Comments

EERE will provide applicants with reviewer comments following the evaluation of all eligible Full Applications. Applicants will have a brief opportunity to prepare a short Reply to Reviewer Comments (Reply). The Reply ***must*** not exceed three pages. If a Reply is more than three pages in length, EERE will review only the first three 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.

EERE will post the reviewer comments in EERE eXCHANGE. The expected submission deadline is on the cover page of the FOA; however, it is the applicant's responsibility to monitor EERE eXCHANGE 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 EERE 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.

Selection Factors

Each of BETO and VTO's Selection Officials may consider the merit review recommendations, program policy factors, and the amount of funds available in arriving at selections for their respective Topic Areas in this FOA.

Program Policy Factors

The Selection Official may consider the following program policy factors in making his/her selection decisions:

- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives;
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers;
- 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; and

Program Policy Factors - Continued

The Selection Official may consider the following program policy factors in making his/her selection decisions:

- 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 contributes to the diversity of organizations and organization types and sizes selected from the subject FOA when compared to the existing DOE project portfolio.
- 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 research goals and objectives.
- The degree to which the proposed project enables new and expanding market segments.
- The degree to which the project's solution or strategy will maximize deployment or replication.
- The degree to which the project promotes increased coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer.

Registration Requirements

- To apply to this FOA, Applicants ***must*** submit application materials through EERE eXCHANGE:
  - Beginning in July 2022*, eXCHANGE will be updated to integrate with Login.gov. As of Sept. 29, 2022*, applicants must have a Login.gov account to access EERE eXCHANGE. Please ensure that the email address associated with Login.gov matches the email address associated with your eXCHANGE account. For more information, refer to the eXCHANGE Multi-Factor Authentication (MFA) Quick Guide in the Manuals section in eXCHANGE.
- **Obtain a "control number" at least 24 hours before the first submission deadline.**
- Although not required to submit an Application, the following registrations ***must*** be complete to receive an award under this FOA:

Registration Requirement	Website
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

*Date subject to change

Means of Submission

- Concept Papers and Full Applications ***must*** be submitted through EERE eXCHANGE at

  https://eere-eXCHANGE.energy.gov

  - EERE will not review or consider applications submitted through other means

- The Users' Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements can be found at https://eere-eXCHANGE.energy.gov/Manuals.aspx

Key Submission Points

- Check entries in EERE eXCHANGE
  - Submissions could be deemed ineligible due to an incorrect entry
- DOE strongly encourages Applicants to submit 1-2 days prior to the deadline to allow for full upload of application documents and to avoid any potential technical glitches with EERE eXCHANGE
- Make sure you hit the submit button
  - Any changes made after you hit submit will un-submit your application and you will need to hit the submit button again
- For your records, print out the EERE eXCHANGE page at each step, which contains the application's Control Number

Applicant Points-of-Contact

- Applicants ***must*** designate primary and backup points-of-contact in EERE eXCHANGE with whom DOE will communicate to conduct award negotiations
- It is imperative that the Applicant/Selectee be responsive during award negotiations and meet negotiation deadlines
  - Failure to do so may result in cancellation of further award negotiations and rescission of the Selection

Questions

- Questions about this FOA? Email FY24WASTEFOA@ee.doe.gov All Q&As related to this FOA will be posted on EERE eXCHANGE

Do not expect a direct response (via email) to your question

  - You must select this specific FOA Number DE-FOA-0003072 to view the Q&As
  - EERE will attempt to respond to questions within 3 business days, unless a similar Q&A has already been posted on the website. This Q&A log will keep a running list of all questions asked
  - 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

- Problems logging into EERE eXCHANGE or uploading and submitting application documents with EERE eXCHANGE? Email EERE-eXCHANGESupport@hq.doe.gov.
  - Include FOA name and number in subject line