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

FY22 Bioenergy Technologies Office

Waste Feedstocks and Conversion R&D FOA

FY22FeedstockConversionFOA@ee.doe.gov

FOA Webinar

DE-FOA-0002636

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Welcome

This webinar is being recorded and will be published on the EERE eXCHANGE website

- **<u>Participant's camera and microphone functions will be turned off and inaccessible</u>**
  - You will not be able to turn them on during the webinar
- **Questions? Please enter them into the zoom Q&A function**
- **Answers will be provided after the webinar on EERE eXCHANGE**

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.

Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0002636 **("FOA")** and adhere to the stated submission requirements.
- This presentation summarizes the contents of 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 FY22FeedstockConversionFOA@ee.doe.gov.

Anticipated Schedule:

FOA Issue Date:	3/22/2022
Submission Deadline for Concept Papers:	4/18/2022 (5pm EDT)
Submission Deadline for Full Applications:	6/7/2022 (5pm EDT)
Submission Deadline for Replies to Reviewer Comments:	7/14/2022 (5pm EDT)
Expected Date for EERE Selection Notifications:	8/24/2022
Expected Timeframe for Award Negotiations:	August-September 2022

Agenda

1) FOA Description
2) Diversity, Equity, and Inclusion
3) Topic Areas/Technical Areas of Interest
4) Award Information
5) Statement of Substantial Involvement
6) Cost Sharing
7) FOA Timeline
8) Concept Papers
9) Full Applications
10) Merit Review and Selection Process
11) Registration Requirements

FOA Description

Building a clean and equitable energy economy and addressing the climate crisis are top priorities of the Biden Administration. This FOA will advance the Biden Administration's goals to "deliver an equitable, clean energy future, and put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050" to the benefit of all Americans.

Additionally, this FOA will support the Biden Administration's new action items to produce 3 billion gallons of Sustainable Aviation Fuels (SAFs) per year and reduce aviation emissions by 20% by 2030, both of which will unlock the potential for a fully zero-carbon aviation sector by 2050.

This FOA supports development of high-impact technology R&D to accelerate the growth of the bioeconomy by requesting applications across BETO's mission space in Feedstock Technologies and Conversion R&D.

- R&D on feedstock technologies and co-product development for energy and resource recovery from waste streams, and reduction of environmental and health impacts.
- R&D on conversion technologies to address process robustness and improve the economic viability of sustainable biofuels production.

FOA Description (continued)

The FOA has four topic areas:

1. Topic Area 1 MSW Feedstock Technologies
2. Topic Area 2 Robust Microbial Cells
3. Topic Area 3 Robust Catalytic Processes
4. Topic Area 4 Community Scale Resource and Energy Recovery from Organic Wastes

Importantly, BETO invests in novel approaches to achieve resource and energy recovery from waste streams. This includes providing communities with technical assistance and decision-making support. Many communities are facing immediate and significant environmental, social, and economic challenges with the organic waste streams that are generated and disposed of within. Often, these waste streams are managed by municipal entities or organizations contracted by municipal entities and advanced solutions requires significant effort in regard to strategic planning and coordinating.

Diversity, Equity, and Inclusion (DEI)

It is the policy of the Biden Administration that:

[T]he Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality.

This FOA seeks to encourage the participation of underserved communities and underrepresented groups. Applicants are highly encouraged to include individuals from groups historically underrepresented in STEM on their project teams.

As part of the application, applicants are required to describe how DEI objectives will be incorporated in the project. Specifically, applicants are required to submit a DEI Plan that describes the actions the applicant will take to foster a welcoming and inclusive environment, support people from underrepresented groups in STEM, advance equity, and encourage the inclusion of individuals from these groups in the project; and the extent the project activities will be located in or benefit underserved communities.

This plan will be evaluated as part of the application technical review process and incorporated into the award if selected.

Topic Area 1: MSW Feedstock Technologies

Subtopic Area 1a: Advanced MSW Preprocessing for Conversion-Ready Feedstocks

Specific MSW preprocessing technologies of interest to improve the critical characteristics needed to produce conversion-ready feedstocks include, but are not limited to:

- Advanced decontamination and/or stabilization technologies to reduce contamination and stabilize quality over time.
- Blending, formulation, and/or homogenization technologies to improve quality and reduce variability.
- Storage and preservation of MSW quality for year-round feedstock supply and improved critical quality characteristics.
- Novel physical, chemical, and biological preprocessing to improve critical quality characteristics.

Metric	Minimum Targets
MSW Quality Improvement	Targets will be project-specific. Project must propose to significantly improve the quality of the MSW stream to enable conversion into a biofuel. The applicant must specify at least three quality characteristics and a relevant percent improvement over baseline for each characteristic to meet the desired conversion specifications.

*Please see FOA document page 12-14 for Specific Requirements

Topic Area 1: MSW Feedstock Technologies (continued)

Subtopic Area 1b: High Value Co-product Development from MSW

Specific areas of interest include, but are not limited to:

- Mechanical, thermal, chemical, electrochemical, or biological processes to transform the low-quality MSW fractions and enhance their formulation to produce a final proof-of-concept co-product.
- Screening techniques to separate low-quality fractions or slipstreams from the MSW biofuel feedstock that enable high quality co-product development.
- Decontamination/preprocessing technologies to improve and achieve feedstock specifications that enable high quality co-product development.

Co-product opportunities of interest include, but are not limited to: cellulosic fiber composites, nanomaterials, high surface area carbon materials to use as water absorbents, macronutrients, soil amendments, biocomposites, plastics resin, medical composites, packaging, green hydrogen, and building materials. Applications are encouraged to explore and utilize available data from the scientific literature and governmental agencies.

Metric	Minimum Target
MSW Feedstock Value	Project must demonstrate the proposed co-product development technologies can significantly increase the total value of MSW streams relative to the cost of the original MSW streams through TEA and market analysis.

*Please see FOA document page 15 for Specific Requirements

Topic Area 2: Robust Microbial Cells

Subtopic Area 2a: Overcoming and Understanding Batch-to-Batch and Cell-to-Cell Variability

- Build understanding of how and why microbial performance varies, and how organisms can be engineered for reduced variability and improved performance.
- Explores variability in microbial production, at both the single cell and batch level.
- Specific emphasis will be placed on microbial systems demonstrated at pre-pilot and pilot scale for industry relevance.

Definitions: performance of microorganisms… suffer from variability on a single cell basis (**cell-to-cell variability**) and between batches (**batch-to-batch variability**).

Metric	Minimum Targets
Understanding variability	Work focusing on gaining mechanistic understanding of variability must characterize variability in at least one industrially relevant system. Results from mechanistic work must be designed for actionability to enable reduction of variability in future work.
Reducing variability	Work focused on reducing variability must quantify the starting variability and achieve a reduction in either cell-to-cell or batch-to-batch variability of >50% by the end of the project. Reduction in variability must improve titer, rate, or yield metrics by >50% by the end of the project period.

Topic Area 2: Robust Microbial Cells (continued)

Subtopic Area 2a Specific Areas of Interest (includes but not limited to*):

- Projects that aim to understand batch-to-batch variability or why batches may unexplainably fail
- Work cataloging and characterizing cell-to-cell and batch-to-batch variability and measuring the impact of variability on titer/rate/yield (TRY) metrics
- Engineering of pathways designed to reduce variability in production
- Process engineering efforts to reduce variability
- Reduction of metabolic burden to decrease variability
- Design of genetic circuits to reduce variability
- Biosensor or reporter development to track single cell performance
- Implementation of evolutionary pressure to favor expression of heterologous pathways

*see FOA document page 19 for full list

Specific Requirements (not complete list*):

- Applications must characterize and/or reduce cell-to-cell or batch-to-batch variability
- Recipients will be required to contribute major project results and findings for inclusion in a Case Study Report to be coordinated and published by BETO

*see FOA document page 19 for full list

Topic Area 2: Robust Microbial Cells (continued)

Subtopic Area 2b: Improving the Longevity of Microbial Production

- Uncover why organisms lose viability or productivity during a cultivation and develop approaches to prolong microbial production.
- An emphasis will be placed on understanding the mechanism that limits extended microbial production so that this knowledge may inform the design of related systems.

Metric	Minimum Targets
Understanding longevity	Work focused on gaining mechanistic understanding of microbial production should characterize production limitations in at least one industrially relevant system and should be designed for actionability to enable prolonged production in future work.
Increasing longevity	Work focused on prolonging production should increase the duration of productivity by >50% by the end of the project and the extension of performance[#] should improve titer, rate, or yield metrics by >50% by the end of the project period.

[#] updated in modification 00002 of the FOA. Please refer to Exchange.gov for details

Topic Area 2: Robust Microbial Cells (continued)

Subtopic Area 2b Specific Areas of Interest (includes but not limited to*):

- Projects that aim to extend the duration of productivity, or aim to understand why production may unexplainably end prematurely
- Work cataloging and characterizing loss of productivity over time
- Engineering of pathways designed to prolong duration of production
- Process engineering efforts to prolong production
- Biosensor or reporter development to track single cell performance
- Reduction of metabolic burden to prolong production
- Design of genetic circuits to prolong production
- Implementation of evolutionary pressure to favor expression of heterologous pathways over extended periods of time

*see FOA page 20 for full list

Specific Requirements (not complete list*):

- Projects focused on characterizing production duration# must characterize longevity of microbial production and identify factors that contribute to extending the duration of production
- Projects that develop engineering solutions must improve longevity of production and work to understand why the approach may increase longevity
- Recipients will be required to contribute major project results and findings for inclusion in a Case Study Report to be coordinated and published by BETO

*see FOA document page 21 for full list

updated in modification 00002 of the FOA. Please refer to Exchange.gov for details

Topic Area 3: Robust Catalytic Processes

Topic 3 Specific Areas of Interest and Requirement (not full list)*

- Catalyst development for biomass and waste resources conversion processes such as, but not limited to, syngas to fuel, ethanol to fuel, and catalytic upgrading of thermochemical or biochemical intermediates to sustainable aviation fuel, renewable diesel, and marine fuel.
- Develop catalysts that are tolerant of contaminants present in biomass.
- The applicant must demonstrate that their process generates the selected fuel i.e., sustainable aviation fuel, renewable diesel, or marine fuel.
- Engineered catalyst forms relevant to the industrial application must be used to validate performance metrics for key milestones including verifications and Go/No-Go decision points.

*see FOA document page 23 for full list

Metric	Minimum Targets
Catalyst robustness	Catalysts must be tested for at least 500 continuous hours in a real bio-derived stream by the end of the project, with no more than 2 on-stream regenerations. The catalyst should not undergo more than 15% conversion loss after 500 hours time-on-stream.
Catalyst performance	By the end of the project, the applicant must develop a catalyst with a conversion of at least 80% and a selectivity to the desired compound of at least 80%.

Subtopic Area 4a: Feasibility Development

By the end of the project, applicants must attain the following outcomes:

- Complete engineering and/or feasibility analysis quantifying the impacts of resource and energy recovery from wastes

- Quantify the impact, positive and negative, that this approach could have on key economic, environmental, and social sustainability indicators. At a minimum:
  - Economic: Energy yield, nutrient recovery, total cost of waste management for the community
  - Environmental: GHGs (esp CH_4, CO_2, and N_2O), water quality, malodorous compounds (e.g. sulfur, ammonia), compliance with current or pending disposal regulations, total waste disposed at landfills
  - Social: Project siting, community engagement/ownership of project, localized health impacts (e.g. respiratory impacts)

- Evaluate the degree to which this project/business model could be replicable in other communities

- Complete a siting analysis including equity considerations

Topic Area 4: Community Scale Resource and Energy Recovery from Organic Wastes (continued)

Subtopic Area 4b: Feasibility Development & Technology Testing

By the end of the project, applicants must achieve all requirements of Topic 4a, plus:

- Experimental demonstration of a system or process that can increase the degree of resource and energy recovery from waste by at least 10% compared to the current practices in the community as a whole (as measured by total energy yield/ton of waste and/or total mass of resources recovered/ton of waste)
- Experimental demonstration of a system or process that can improve upon *all* required environmental and economic sustainability indicators using real wastes from the community compared to the current practices in the community as a whole

Topic Area 4: Community Scale Resource and Energy Recovery from Organic Wastes (continued)

Required Metric and Criteria	Subtopic 4a: Feasibility Development	Subtopic 4b: Feasibility Development and Technology Testing
Feasibility Development Objectives and Outcomes	Yes	Yes
Sustainability Objectives and Outcomes	Yes	Yes
Technology Testing Objectives and Outcomes	No	Yes
Maximum Federal Award Size	$500,000	$1,500,000
Required Cost Share	20% of Total Project Cost	20% for Feasibility Development Track Activities and 20% for Technology Testing Track Activities
Anticipated Project Length	18-24 months	Up to 3 years

Topic Area 4: Community Scale Resource and Energy Recovery from Organic Wastes (continued)

Eligible Applicants:

Prime Applicants: State, local, county, and tribal governments and intergovernmental groups, non-profits

As Subrecipients/partners: Universities, FFRDCs, for-profit companies

Type Of Applicant	Allowed As A Prime Applicant?	Allowed As Subrecipients/Partners?
Individuals	No	Yes
Domestic Entities:		
Local, State, Tribal, and Intrastate Government Entities	Yes	Yes
Nonprofit Organizations*	Yes	Yes
For-profit Organizations	No	Yes
Institutes of Higher Education	No	Yes
DOE and Non-DOE FFRDCs	No	Yes
Federal Agencies	No	Yes
Foreign Entities:	No	Yes
Incorporated Consortia	No	Yes
Unincorporated Consortia	No	Yes

*Non-profit organizations that are **not** 501(c)(4) organizations engaged in lobbying activities. As stated in Section III.A.ii., 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.

Acceptable Feedstocks for Topic Areas

Topic Area	Biomass (general definition, see next page)	Biomass Breakdown per Topic Area					Other Feedstocks			
		Lignocellulosic Feedstocks	Algae	Organic Wet Waste	Sorted Municipal Solid Waste	Biogas	Waste Carbon Dioxide	Syngas (derived from other allowable feedstocks)	Grain Starch	Oilseed Crops
1: MSW Feedstock Technologies	Yes	Yes, only if for blending with MSW at up to 50%	Yes, only if for blending with MSW at up to 50%	Yes	Yes	No	No	No	Yes, only if for blending with MSW at up to 50%	Yes, only if for blending with MSW at up to 50%
2a/2b: Robust Microbial Cells	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3: Robust Catalytic Processes	Yes	Cellulosic sugars only	Yes	Yes	Yes	Yes	No	Yes	No	No
4a/4b: Community Organic Waste	No	No	No	Yes	Yes	Yes	No	No	No	No

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 Section I.A or I.B of the FOA.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics).
- Applications identified in each Topic Area or Subtopic Area as “Applications Specifically Not of Interest” for that Topic Area or Subtopic Area.

Award Information

Topic Area Number	Topic Area Title	Anticipated Number of Awards	Anticipated Minimum Award Size for Any One Individual Award (Fed Share)	Anticipated Maximum Award Size for Any One Individual Award (Fed Share)	Approximate Total Federal Funding Available for All Awards	Anticipated Period of Performance (months)
1	MSW Feedstock Technologies	6-10	$1,250,000	$2,250,000	$13,000,000	24-36
2	Robust Microbial Cells	2-6	$1,000,000	$2,500,000	$9,500,000	36
3	Robust Catalytic Processes	2-3	$1,250,000	$2,500,000	$7,000,000	36
4	Community Scale Resource and Energy Recovery from Organic Wastes	5-8	$500,000	$1,500,000	$5,000,000	18-36

Statement of Substantial Involvement

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

- EERE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.

- EERE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.

- EERE may redirect or discontinue funding the Project based on the outcome of EERE's evaluation of the Project at the Go/No Go decision point.

- EERE participates in major project decision-making processes.

Cost Sharing Requirements

For all Topic Areas, the cost share must be at least 20% of the total allowable costs for research and development projects (i.e., the sum of the government share, including FFRDC costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-federal sources unless otherwise allowed by law. (See 2 CFR 200.306 and 2 CFR 910.130 for the applicable 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 (continued)

- 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.

For more information, see the Cost Share Appendix A in the FOA

Unallowable Cost Share

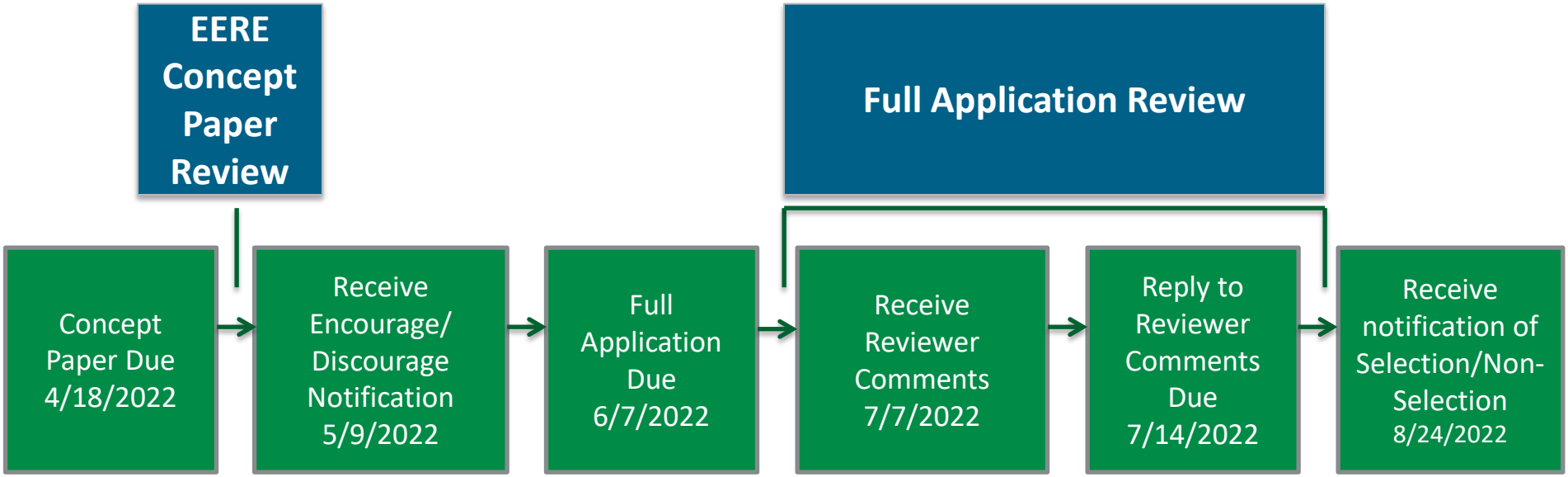
The Prime Recipient may **NOT** use the following sources to meet its cost share obligations including, but not limited to:

- 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 Technology Office
- 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 EERE 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



EERE anticipates making awards by September 2022

Concept Papers

- 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 4/18/2022 by 5:00 PM EDT, through EERE Exchange
- EERE provides applicants with: (1) an “encouraged” or “discouraged” notification, and (2) discouraged applicants will receive consolidated reviewer comment feedback with their “discouraged” notification.

Concept Paper Review

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

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

This criterion involves consideration of the following factors:

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

Full Applications

The Full Application includes:

- **Technical Volume**: The key technical submission - info relating to the technical content, project team members, etc.
- **Resumes**
- **Letters of Commitment**
- **Statement of Project Objectives**
- **SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.
- **SF-424A Budget & Budget Justification:** a detailed budget and spend plan for the project.
- **Summary for Public Release**
- **Summary Slide**
- **Diversity, Equity, and Inclusion Plan**
- **Current and Pending Support**
- **Subrecipient Budget (if applicable)**
- **FFRDC Work Proposal and Authorization (if applicable)**
- **Authorization from cognizant Contracting Officer for FFRDC (if applicable)**
- **Disclosure of Lobbying Activities (if applicable)**
- **Foreign Entity and Foreign Work Waivers (if applicable)**

See IV.d.i of the FOA for all requirements

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 & Market Transformation Plan	40%
Technical Qualifications and Resources	20%
Diversity, Equity, Inclusion	As needed to throughout Technical Volume. A separate DEI Plan is required

Full Application Eligibility Requirements

- Applicants must submit a Full Application by 6/7/2022 5PM EDT
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity 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;
  - 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.
  - Limitation on number of concept papers and full applications eligible for review Section III.F of the FOA

Who is Eligible to Apply?

Eligible applicants for the FOA differ for Topic Areas 1-3 and Topic Area 4. The next slide includes the additional eligibility for Topic Area 4.

Eligible applicants for Topic Areas 1-3 of this FOA include:

1. U.S. citizens and lawful U.S. permanent residents
2. For-profit entities
3. Educational institutions
4. Nonprofits
5. State, local, and tribal government entities
6. DOE/NNSA and non-DOE/NNSA FFRDCs are eligible to apply for funding as a subrecipient but are not eligible to apply as a prime recipient (for all Topic Areas)
7. Each FFRDC is permitted to participate as a Subrecipient with effort equivalent to up to 50% of the total estimated cost of the project; however, in aggregate, total FFRDC effort shall not exceed 50% of the total estimated cost of the project.

For more detail about eligible applicants, please see Section III.A of the FOA

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.

Prime Recipients must be in must be incorporated (or otherwise formed) under the laws of a State or territory of the United States and have a physical location for business operations in the United States. See Section III.A.iii for requirements applicable to foreign entities applying under this FOA.

Who is Eligible to Apply? (continued)

For Topic Area 4:

Applications will be accepted *only* from the following eligible prime applicants: States (including the District of Columbia, Puerto Rico, Virgin Islands, American Samoa, and Northern Mariana Islands), local, Tribal, intrastate government agencies and instrumentalities, and non-profit organizations that are not 501(c)(4) organizations engaged in lobbying activities. Other types of entities, including but not limited to Individuals, Institutes of Higher Education, FFRDCS, and for-profit organizations, are eligible to apply for funding as a subrecipient but are not eligible to apply as a prime recipient.

Multiple Applications

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

Merit Review and Selection Process (Full Applications)

- 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 Topic Areas 1-3

See section V.a.ii

- **Criterion 1: Technical Merit, Innovation, and Impact (50%)**
  - Technical Merit and Innovation
  - Impact of Technology Advancement

- **Criterion 2: Project Research and Market Transformation Plan (25%)**
  - Research Approach, Workplan and SOPO
  - Identification of Technical Risks
  - Baseline, Metrics, and Deliverables
  - Market Transformation Plan

- **Criterion 3: Team and Resources (15%)**

- **Criterion 4: Diversity, Equity, and Inclusion (10%)**

Technical Merit Review Criteria Topic Area 4

See section V.a.ii

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

- Technical Merit and Viability
  - 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

- Impact of Proposed Project
  - Extent to which the proposed approach is likely to yield tangible and transformative economic and environmental benefits to the community/ies.
  - 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;

Technical Merit Review Criteria Topic Area 4 (continued)

See section V.a.ii

Criterion 2: Project Workplan and Goals (20%)

This criterion involves consideration of the following factors:

- Research Approach, Workplan and SOPO
- Identification of Risks
  - Thoroughness of discussion and demonstrated understanding of the key technical, political, and socio-economic 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 Topic Area 4 (continued)

See section V.a.ii

Criterion 3: Multi-Stakeholder Team Composition and Capacity Building (30%)

- Capacity/Expertise
  - 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;
- Multi-stakeholder Involvement
  - Extent to which the proposed approach is likely to increase the community's/ies' ownership of and/or decision-making regarding elements of the energy system or economy that are the source of the stated challenges and opportunities;
  - The extent to which the project addresses engagement with these communities and/or populations, especially local residents, to ensure their meaningful participation with respect to the design, project planning, and performance of the project;

Criterion 4: Diversity, Equity, and Inclusion (10%)

Replies to Reviewer Comments

- EERE provides applicants with reviewer comments
- Applicants are not required to submit a Reply - it is optional
- To be considered by EERE, a Reply must be submitted by 7/14/2022 at 5PM EDT and submitted through EERE Exchange
- Content and form requirements:

Section	Page Limit	Description
Text	2 pages max	Applicants may respond to one or more reviewer comments or supplement their Full Application.
Optional	1 page max	Applicants may use this page however they wish; text, graphs, charts, or other data to respond to reviewer comments or supplement their Full Application are acceptable.

Selection Factors

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available in arriving at selections for 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 is likely to lead to increased employment and manufacturing in the United States;

Program Policy Factors (continued)

- 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; and
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications).
- Whether the proposed project will occur in a Qualified Opportunity Zone or otherwise advance the goals of Qualified Opportunity Zones. The goals include spurring economic development and job creation in distressed communities throughout the United States.
- The degree to which the proposed project provides funding to disadvantaged communities or seeks to address environmental injustices that disproportionately affect disadvantaged communities in accordance with Executive Order 14008.

Registration Requirements

- To apply to this FOA, Applicants must register with and submit application materials through EERE Exchange: https://eere-Exchange.energy.gov/
- 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 received an award under this FOA:

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

Means of Submission

- Concept Papers, Full Applications, and Replies to Reviewer Comments 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
- EERE 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 EERE 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 FY22FeedstockConversionFOA@ee.doe.gov
  - All Q&As related to this FOA will be posted on EERE Exchange
    - You must select this specific FOA Number in order to view the Q&As
  - EERE will attempt to respond to a question within 3 business days, unless a similar Q&A has already been posted on the website
- 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
- All questions asked during this presentation will be posted on EERE Exchange