



## Hydrogen and Fuel Cell Technologies Research, Development, and Demonstrations

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FOA Webinar  
DE-FOA-0001224  
3/10/2015

# Hydrogen and Fuel Cell Technologies Research, Development, and Demonstrations

## Anticipated Schedule: DE-FOA-0001224

<b>FOA Issue Date:</b>	3/2/2015
<b>FOA Informational Webinar:</b>	3/10/2015
<b>Submission Deadline for Concept Papers:</b>	4/2/2015
<b>Submission Deadline for Full Applications:</b>	6/4/2015
<b>Submission Deadline for Replies to Reviewer Comments:</b>	7/17/2015
<b>Expected Date for EERE Selection Notifications:</b>	September 2014
<b>Expected Timeframe for Award Negotiations:</b>	October/November 2015

# Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0001224 (“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 only through the FOA mailbox.
- If you believe there is an inconsistency, please contact [FY15FCTOofficewideFOA@ee.doe.gov](mailto:FY15FCTOofficewideFOA@ee.doe.gov)

# Agenda

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- 1) FOA Description
- 2) Award Information
- 3) Applicant Eligibility
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# FOA Description

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This Funding Opportunity Announcement (FOA) covers a broad spectrum of the FCTO portfolio with areas of interest ranging from research and development (R&D) to demonstration and deployment projects.

In particular, the R&D areas of interest for this FOA include hydrogen production via microbial biomass conversion; low platinum group metals (PGM) catalyst development for polymer electrolyte membrane (PEM) fuel cell applications; development of an integrated intelligent hydrogen dispenser; and fuel cell and hydrogen manufacturing R&D focusing on hydrogen delivery pipeline manufacturing.

This FOA also includes demonstration subtopics that will help to accelerate adoption of hydrogen and fuel cell technologies with specific interest in mobile hydrogen refuelers, fuel cell powered range extenders for light duty hybrid electric vehicles, and a Communities of Excellence subtopic featuring hydrogen and fuel cell technologies.



# Award Information

Topic Area	Technology Readiness Level (TRL)	Anticipated Number of Awards	Max. Federal Funding per Award	Maximum Project Duration (years)	Minimum Required Non-Federal Cost Sharing %
<b>Area of Interest 1: Fuel Cell and Hydrogen Technologies Research and Development (R&amp;D)</b>					
Subtopic 1a: Microbial Biomass Conversion	3-4	1-3	\$1,500,000	3	20%*
Subtopic 1b: Catalysts and Supports	2-3	2-5	\$3,000,000	3	20%*
Subtopic 1c: Integrated Intelligent Hydrogen Dispensers for 700 bar Gaseous Refueling of Fuel Cell Electric Vehicles	5-6	1-2	\$2,000,000	2	20%*
Subtopic 1d: Innovative Hydrogen Delivery Pipeline Manufacturing	3-5	1	\$1,500,000	3	20%*
<b>Area of Interest 2: Demonstrations and Deployments to Enable Early Adoption of Fuel Cell and Hydrogen Technologies</b>					
Subtopic 2a: Design, Deployment, and Validation of Advanced, Low-cost Mobile Hydrogen Refuelers	6	1	\$1,500,000	3	50%
Subtopic 2b: Demonstration and Deployment of Battery - Fuel Cell Hybrid Electric Vehicle	7-9	1-3	\$3,000,000	4	50%
Subtopic 2c: America's Climate Communities of Excellence	7	1	\$250,000	2	50%

\* A special cost share reduction determination is available for domestic institutions of higher education, domestic nonprofit entities, FFRDCs, and U.S. State, local, and tribal government entities.

# Eligibility for All Subtopics Except Subtopic 2c

Eligible applicants for all subtopics in this FOA except Subtopic 2c, America's Climate Communities of Excellence include:

1. Individuals
2. Domestic Entities
3. Foreign Entities
4. Incorporated Consortia
5. Unincorporated Consortia

## **CORRECTION AFTER WEBINAR WAS HELD**

~~FFRDCs will not be allowed to apply as the prime recipient.~~

**DOE/NNSA Federally Funded Research and Development Centers (FFRDCs) and DOE Government-Owned, Government-Operated laboratories (GOGOs) are eligible to apply for funding as a Prime Recipient or Subrecipient.**

**Non-DOE/NNSA FFRDCs and non-DOE GOGOs are eligible to apply for funding as a Subrecipient, but are not eligible to apply as a Prime Recipient.**

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.

Also, note that all Prime Recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. If a foreign entity applies for funding as a Prime Recipient, it must designate in the Full Application a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a State or territory of the United States to be the Prime Recipient. The Full Application must state the nature of the corporate relationship between the foreign entity and domestic subsidiary or affiliate.

# Eligibility for Subtopic 2C

**For Subtopic 2c, America's Climate Communities of Excellence, the following restricted eligibility determination applies:**

The Fuel Cell Technologies Office intends to restrict eligibility for Subtopic 2c, America's Climate Communities of Excellence, to U.S. local and tribal governments, or consortia thereof. For the purposes of this FOA, local governments may include a county, municipality, city, town, township, local public authority (including any public and Indian housing agency), school district, special district, intrastate district, council of governments, any other regional or interstate government entity, or any agency or instrumentality of a local government.

To be considered as a tribal government for purposes of this FOA, the entity must be any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688) [43 U.S.C. 1601 et seq.], which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.



# Topic Areas/Technical Areas of Interest

## Subtopic 1a: Microbial Biomass Conversion

Applications are invited for the R&D of hydrogen production technologies in the area of microbial biomass conversion demonstrating the potential of the pathway to meet the FCTO cost goals for hydrogen production (i.e., excluding delivery, compression, storage and dispensing). Technologies for hydrogen production using biomass through microbial processes such as fermentation or microbially-aided electrolysis systems or hybrid processes that integrate multiple systems are of interest. Areas of emphasis could include, but are not limited to:

- Development of microbial strains or co-cultures with improved hydrogen yields;
- Reactor designs to improve hydrogen production yields or reduce costs (e.g., designs that improve the hydraulic retention time or use lower-cost materials);
- Hybrid systems to maximize the hydrogen produced per unit of biomass (e.g., integrating systems where the waste product of one process is utilized as the feedstock of the next); and/or
- Technologies that reduce external energy inputs (e.g. by removing or reducing the need for feedstock heat-treatments or external electricity inputs).

# Topic Areas/Technical Areas of Interest

## Subtopic 1b.1: Low PGM Cathode Catalysts

FCTO seeks approaches that show the potential to decrease PGM loadings below the 2020 target, while increasing durability, especially in the high power density region. Applicants should clearly state the status of their current catalyst technology and provide sufficient justification that the approach can reduce total PGM content below 0.125 g/kW. Rare or precious metals other than platinum group metals can be part of the strategy, but prices of these materials can increase dramatically with demand; therefore, minimizing loading of rare or precious metals is desired. If other rare or precious metals are included, expected loadings of these materials should also be provided.

Catalyst performance under high power conditions in real operating environments is critical to meeting fuel cell cost targets. Applicants should discuss performance issues at current densities of 1.5 A/cm<sup>2</sup> and above and strategies for overcoming transport and durability issues for performance at high current density. Performance degradation at high current density has been correlated to a loss in electrochemical surface area. Applicants should outline strategies to decrease ECSA losses with potential cycling as well as strategies to deal with other degradation losses their approach may incur, such as decreased ionomer conductivity due to ion exchange of proton conducting sites with leached metal ions.

# Topic Areas/Technical Areas of Interest

## Subtopic 1b.2: Catalyst Supports

Catalyst support composition and structure changes are known to affect electrode performance and durability. FCTO seeks approaches that address support performance and chemical and structural stability by development of novel carbon-based or non-carbon support compositions and/or structures. Concepts should possess appropriate properties such as high surface area, high protonic/electronic conductivities, and facile reactant/product transport. Catalyst deposition and stable anchoring of the catalyst on the support should be discussed. Possible effects of the support on the catalytic activity through modified dispersion or through catalyst-support interactions should be described.

Long-term compatibility with other cell components in real-world environments, including Accelerated Stress Test (AST) cycling described in Table E2 of Appendix E, must be demonstrated in MEAs ( $\geq 50\text{cm}^2$ ). Proposals should address durability during fuel starvation, cell reversal, and stop/start events.

Applicants should clearly state the status of their current catalyst support technology as it relates to the state-of-the-art and provide sufficient justification that the approach has the potential to meet or exceed relevant DOE targets, including performance at high power density in air, durability, and cost.

# Topic Areas/Technical Areas of Interest

## Subtopic 1c: Integrated Intelligent Hydrogen Dispensers for 700 bar Gaseous Refueling of Fuel Cell Electric Vehicles

This subtopic addresses the development of the next generation of integrated intelligent hydrogen dispensers for 700 bar refueling. The integrated intelligent dispenser includes the hose, meter, and control system necessary to deliver hydrogen safely per SAE J2601 using a Type A dispenser for fast-fill capability. Intelligent controls should allow the dispenser to adapt to other fill methods as necessary. Capability to perform communication fills is required. Proposals which include the development of innovative, low-cost components for robust communication to replace the current IR technology are encouraged.

The dispensing accuracy must reach at least 4% over the full range of operation; the conditions range from -40°C to +85°C, at flow rates between 2 - 60 g/s and at service pressures up to 875 bar. Designs are encouraged which exceed the 4% target and move the technology toward meeting the 1.5% system accuracy and other requirements as defined in NIST Handbook 44. Applicants must define the current status of their proposed technology and the expected status at the end of the project in the metrics table.

Innovative, low-cost, designs must be developed to be compliant with SAE J2600, SAE J2799 and other applicable refueling and dispenser standards. The dispenser must also be capable of refueling vehicles to the J2601 Type A fills and able to maintain the fuel quality to meet the SAE J2719 standard.

# Topic Areas/Technical Areas of Interest

## Subtopic 1d: Innovative Hydrogen Delivery Pipeline Manufacturing

FCTO seeks applications to develop innovative, low-cost processes for manufacturing fiber-reinforced composite pipe (FRP) that eliminates O-ring failure and is capable of carrying hydrogen at 100 bar, is durable for 50 years, and has a reasonable leak rate. The proposed solution should lead to installed FRP costs that are equivalent to or lower than the cost of installing a natural gas pipeline of the same size (~\$320,000/inch ID of pipe-mile excluding the cost of right-of-way) and be scalable to high volume manufacturing. Examples of approaches include continuous on-site manufacturing of fiber-reinforced pipeline with no pipe-to-pipe joints, and improved joining techniques for FRP such as fusion bonded or welded FRP joints.

Applicants must clearly define the current status of their proposed technology and the expected status at the end of the project in the metrics table. Applicants must provide details illustrating how their proposed manufacturing process will advance the state-of-the-art and meet the DOE target of hydrogen delivery at < \$2/gge from the point of production to the point of use.



# Topic Areas/Technical Areas of Interest

## **Subtopic 2a: Design, Deployment, and Validation of Advanced, Low-cost Mobile Hydrogen Refuelers**

FCTO seeks applications to design, develop, deploy, and validate economically viable mobile hydrogen refuelers that are flexible in meeting customers' needs. The basic concept of a mobile refueling unit involves a truck or trailer with hydrogen storage vessels; control and metering equipment; pump or compressor; dispenser with hose and nozzle; and safety systems.

Mobile refuelers can support evolving markets by providing service to new station locations, with the aim to fill in gaps in both existing station capacity vs. demand, and in station coverage. Mobile units may also be used as temporary fueling devices while constructing full-scale hydrogen fueling stations, or when an established station is down for maintenance or other reasons. These refuelers may also serve special events, such as student competitions, or education/outreach events.

Projects resulting from this subtopic must submit performance data for independent analysis by NREL's National Fuel Cell Technology Evaluation Center.

# Topic Areas/Technical Areas of Interest

## Subtopic 2b: Demonstration and Deployment of Battery - Fuel Cell Hybrid Electric Vehicle

Subtopic 2b will accelerate the development and deployment of battery-fuel cell hybrid powered electric vehicles that substantially increase the zero-emission driving range, thereby increasing the viability of these electric vehicles and reducing petroleum consumption and related emissions. FCTO seeks projects to demonstrate and deploy battery-fuel cell hybrid all electric vehicles (Class 1, 2, or 3) for parcel delivery or freight distribution, or corporate utility transportation such as service call vehicles. The vehicle fleet applications of interest are commercially available vehicles that would be retrofitted with a battery dominant power train and a fuel cell to extend vehicle range.

Costs of the base electric vehicles and costs of hydrogen infrastructure are considered out of scope for this subtopic.

Projects resulting from this subtopic must submit performance data for independent analysis by NREL's National Fuel Cell Technology Evaluation Center.

# Topic Areas/Technical Areas of Interest

## Subtopic 2c: America's Climate Communities of Excellence:

FCTO seeks proposals for projects from local, regional, and tribal government entities that are leading emissions reductions and climate resilience and are in need of technical and financial assistance to further implement hydrogen and fuel cell technologies to reduce greenhouse gases and prepare their communities for the impacts of climate change. In particular, there will be a focus on dual-purpose actions that address both of those goals, where possible. Examples include the following:

- Expanding installation of distributed energy sources using fuel cells for combined heat and power
- Supporting the deployment of fuel cell electric vehicles (FCEVs) through the installation of hydrogen infrastructure in applications such as for vehicle fleets
- Supporting the deployment of transportation technologies with zero emissions such as fuel cell powered lift trucks; ground support equipment for airports; zero emission, heavy-duty vehicles such as drayage trucks at ports; and medium-duty vehicles such as parcel delivery vans
- Converting landfill and sewage treatment plant waste into usable fuel such as hydrogen for power generation or transportation applications

# Non-Responsive Applications

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

- Applications that fall outside the technical parameters specified in Section I.B of the FOA, including but not limited to, hydrogen production technologies other than microbial biomass conversion (see Subtopic 1a); non PGM catalyst R&D; hydrogen storage projects; mobile refuelers that include on-board generation/production of hydrogen; and basic science and proof of principal R&D projects.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics).

# 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 that the Go/No Go decision point.
- EERE participates in major project decision-making processes.



# Cost Sharing Requirements

- The cost share must be at least 20% of Total Project Costs for research and development projects (Subtopics 1a, 1b, 1c, and 1d), with one special exception.

EERE has issued a Cost Share Reduction determination pursuant to Section 988(b)(3) of the Energy Policy Act of 2005 that is applicable to certain entities applying under this FOA. Specifically, recipient cost share requirement for applied research and development projects is reduced from 20% to 10% where:

1. The Prime Recipient is a domestic institution of higher education; domestic nonprofit entity; FFRDC; or U.S. State, local, or tribal government entity; and
  2. The Prime Recipient performs more than 50% of the project work, as measured by the Total Project Cost.
- The cost share must be at least 50% of Total Project Costs for demonstration projects (Subtopics 2a, 2b, and 2c).
  - Please review Section III.B and Appendix B of the FOA for more information on cost sharing.

# Means of Submission and Multiple Applications

## 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>.

## Multiple Applications

Applicants may submit more than one application to this FOA, provided that each application describes a unique, scientifically distinct project

# Concept Papers

Applicants must submit a Concept Paper. If an applicant fails to submit an eligible Concept Paper, the applicant is not eligible to submit a Full Application.

- Each Concept Paper must be limited to a single concept or technology
- The Concept Paper must include a technology description (See Section IV.C of the FOA)
  - The technology description is limited to 3 pages
  - The Concept Paper can also include graphs, charts, or other data (limited to 1 page)
- Concept Papers must be submitted by 4/2/2015, 5 PM ET through EERE Exchange, and must comply with the content and form requirements in Section IV.C of the FOA
- EERE provides applicants with: (1) either an “encouraged” or “discouraged” notification, and (2) general comments; A “discouraged” notification conveys EERE’s lack of programmatic interest in the proposed project. An applicant who receives a “discouraged” notification may still submit a Full Application.

# Concept Paper Review Criteria

For all subtopics except Subtopic 2c, America's Climate Communities of Excellence, Concept Papers are evaluated based on the following criteria:

## **Criterion 1: Impact of the Proposed Technology Relative to State of the Art (50%)**

- Method used to identify current state-of-the-art technology
- If technical success is achieved, the proposed idea would significantly improve technical and economic performance relative to the state of the art.

## **Criterion 2: Overall Scientific and Technical Merit (50%)**

- The proposed technology is unique and innovative.
- The proposed approach is without major technical flaws.

# Concept Paper Review Criteria

For Subtopic 2c, America's Climate Communities of Excellence, Concept Papers are evaluated based on the following criteria:

## **Criterion 1: Impact of the Community of Excellence Proposal (50%)**

- Clear identification of the benefits of implementation of proposed hydrogen and fuel cell technologies within the community
- If success is achieved, the proposed project would promote early adoption of hydrogen and fuel cell technologies.

## **Criterion 2: Overall Technical Merit (50%)**

- The proposal is innovative.
- The proposed approach is without major technical or economic flaws.



# Full Applications

The Full Application includes the following components:

- **Technical Volume:** The key technical submission - info relating to the technical content, project team members, etc.
- **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 for the project.
- **Summary for Public Release**
- **Summary Slide**
- **Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, Waiver requests for foreign entities and work outside the U.S., etc.

# Full Application Eligibility Requirements

- Applicants must submit a Full Application by 6/4/2015.
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity;
  - The Applicant submitted an eligible Concept Paper;
  - The Cost Share requirement is satisfied;
  - The Full Application is compliant
  - The proposed project is responsive to the FOA; and
  - The Full Application meets any other eligibility requirements listed in Section III of the FOA.

# Merit Review and Selection Process (Full Applications)

- The Merit Review process consists of multiple phases that each include an initial 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

For all subtopics except Subtopic 2c, America's Climate Communities of Excellence, applications will be evaluated against the following merit review criteria:

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

### Technical Merit and Innovation

- Extent to which the proposed technology or process is innovative and has the potential to advance the state of the art
- Degree to which the current state of the technology and the proposed advancement are clearly described
- Extent to which the application specifically and convincingly demonstrates how the applicant will move the state of the art to the proposed advancement
- Sufficiency of technical detail in the application to assess whether the proposed work is scientifically meritorious and revolutionary, including relevant data, calculations and discussion of prior work in the literature with analyses that support the viability of the proposed work

### Impact of Technology Advancement

- How the project supports the subtopic objectives and target specifications and metrics
- The potential impact of the project on advancing the state of the art

# Technical Merit Review Criteria - Continued

## **Criterion 2: Project Research and Market Transformation Plan (30%)**

### Research Approach and Workplan

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

### Identification of Technical Risks

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

### Baseline, Metrics, and Deliverables

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

### 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
- Comprehensiveness of commercialization 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, U.S. manufacturing plan, etc., and product distribution

# Technical Merit Review Criteria - Continued

## Criterion 3: Team and Resources (20%)

- The capability of the Principal Investigator(s) and the proposed team to address all aspects of the proposed work with a good chance of success; qualifications, relevant expertise, and time commitment of the individuals on the team
- The sufficiency of the facilities to support the work
- Degree to which the proposed consortia/team demonstrates the ability to facilitate and expedite further 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
- Reasonableness of budget and spend plan for proposed project and objectives

# Technical Merit Review Criteria - Continued

For Subtopic 2c, America's Climate Communities of Excellence, applications will be evaluated against the following merit review criteria:

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

### Technical and Economic Merit and Innovation

- Extent to which the proposal is innovative and has the potential to advance early adoption of hydrogen and fuel cell technologies
- Degree to which the current community adoption of hydrogen and fuel cell technologies and other “green” technologies are clearly described
- Extent to which the application specifically and convincingly demonstrates how the proposal will reduce energy cost and/or reduce greenhouse gas emissions through early adoption of hydrogen and fuel cell technologies
- Sufficiency of technical detail in the application to assess whether the proposed work is economically and scientifically meritorious, including relevant data, calculations, and discussion of prior work with hydrogen and fuel cell technology with analysis that supports the viability of the proposed Community of Excellence project

### Impact of Technology Advancement

- How the project supports the subtopic objectives and target specifications and metrics
- The potential impact of the project with respect to promoting energy efficiency, reducing energy costs, and/or reducing greenhouse gas emissions

# Technical Merit Review Criteria - Continued

## Criterion 2: Project Research (30%)

### Research Approach and Workplan

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

### Identification of Technical and Economic Risks

- Discussion and demonstrated understanding of the key technical and 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, metrics, and milestones
- Relative to a clearly defined 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 - Continued

## Criterion 3: Team and Resources (20%)

- The capability of the Principal Investigator(s) and the proposed team to address all aspects of the proposed work with a good chance of success; qualifications, relevant expertise, and time commitment of the individuals on the team
- The sufficiency of the facilities to support the work
- Degree to which the proposed consortia/team demonstrates the ability to facilitate and expedite further 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
- Reasonableness of budget and spend plan for proposed project and objectives

# 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 7/17/2015 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.

Please save the reviewer comments you receive in the Exchange system. EERE does not have a formal debrief process and will not resend these comments after the reviewer comment reply period ends.

# Program Policy Factors

The Selection Official may consider the merit review recommendations, available funding, and program policy factors in making his/her selection decisions:

For all subtopics except Subtopic 2, America's Climate Communities of Excellence, the following Program Policy Factors will be used:

- The degree to which the proposed project optimizes the use of available EERE funding to achieve programmatic objectives
- The level of industry involvement and demonstrated ability to commercialize energy or related technologies
- Technical, market, organizational, and environmental risks associated with the project
- Whether the proposed project is likely to lead to increased employment and manufacturing in the United States based on the proposed U.S. Manufacturing Plan
- Whether 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 directly addresses EERE's statutory mission and strategic goals

# Program Policy Factors - Continued

For Subtopic 2, America's Climate Communities of Excellence, the following Program Policy Factors will be used:

- The degree to which the proposed project optimizes the use of available EERE funding to achieve programmatic objectives
- Technical, market, organizational, and environmental risks associated with the project
- Whether the proposed project is likely to lead to increased employment and manufacturing in the United States
- Whether 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 directly addresses EERE's statutory mission and strategic goals
- The degree to which the proposed project is complementary to other DOE and government projects which promote early adoption of "green" energy technologies
- Whether the proposed project will advance the goals of the Climate Action Champion initiative, as committed to by the designated Champion pursuant to its designation agreement. The Climate Action Champion initiative goals include improving climate resilience and reducing greenhouse gas emissions.

# 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 receive an award under this FOA:

Registration Requirement	Website
DUNS Number	<a href="http://fedgov.dnb.com/webform">http://fedgov.dnb.com/webform</a>
SAM	<a href="https://www.sam.gov">https://www.sam.gov</a>
FedConnect	<a href="https://www.fedconnect.net">https://www.fedconnect.net</a>
Grants.gov	<a href="http://www.grants.gov">http://www.grants.gov</a>

# Questions

- If you have questions about this FOA, you must Email:  
FY15FCTOofficewideFOA@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
- If you have problems logging into EERE Exchange or uploading and submitting application documents, please Email: ExchangeSupport@hq.doe.gov.
  - Include the FOA name and number in subject line