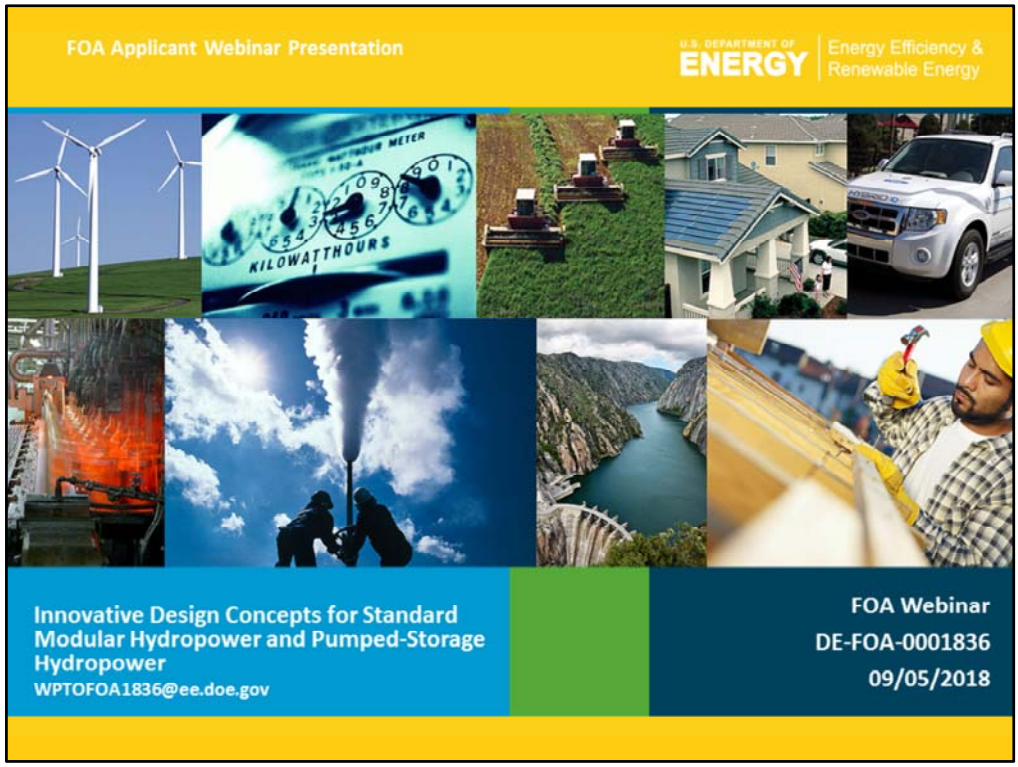


Hello everyone and welcome to our webinar. Thank you for your interest in the U.S. Department of Energy's efforts on renewable energy and energy efficiency. You are joining us for the Informational Webinar for Applicants and other Interested parties for the Innovative Design Concepts for Standard Modular Hydropower and Pumped-Storage Hydropower Funding Opportunity Announcement, or FOA, which was issued on 08/08/2018. My name is Corey Vezina and I am a Technology Manager in the Water Power Technologies Office within the DOE's Office of Energy Efficiency and Renewable Energy. We hope to cover the basic aspects of this FOA during the webinar.

Before we begin, I'd like to draw your attention to the email address on the left hand side of this cover page. This is the official mailbox to direct all of your questions during the entire FOA process. Please do not contact EERE individuals directly with questions, including myself. All questions received at this mailbox are posted publicly at the Q&A section of the FOA page on EERE Exchange in an anonymous way. The official answers to your questions will typically also be posted within 3 business days. Please be careful not to submit any language that might be business sensitive, proprietary or confidential.

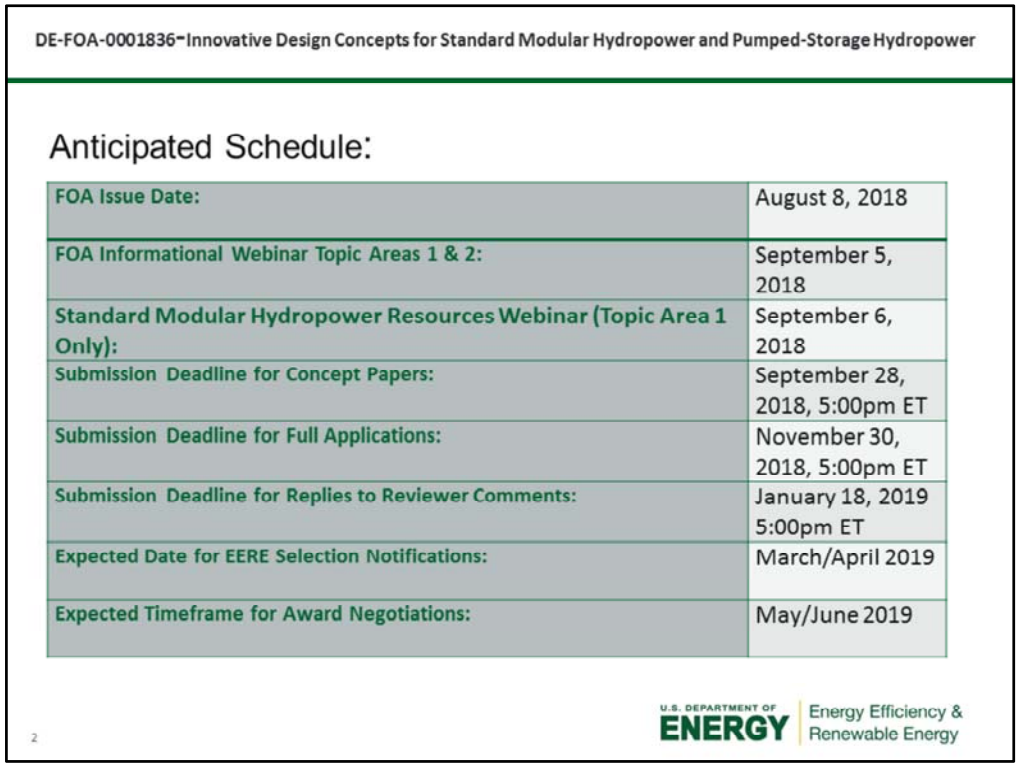
We will have a live Q&A period at the end of the webinar, please feel free to type in your questions as they come up in the Q&A box and we will attempt to address them at the end. Again, please be careful not to submit any language that might be business sensitive, proprietary or confidential. We will be posting all Q&As to EERE Exchange after the

webinar. There may be questions that require further discussion among EERE staff and will not be addressed today. If you don't hear your question addressed during the Webinar, please check EERE Exchange in the next few days as answers to all questions raised today, whether addressed live or not, will be posted there.

Please be aware that we are recording this webinar and will be posting the recording, the slides, and transcripts of this webinar to EERE Exchange.

Also, just to be clear, 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.

Let's get started!



This slide shows the anticipated schedule for the FOA. The FOA has already been posted, and we are conducting the FOA Informational Webinar right now. Please note that there are a few requirements that we will go over in the presentation that are different than in past FOAs, such as Replies to Reviewer Comments – we will cover all requirements for this FOA later in the presentation.

Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0001836 **("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 from EERE.
- If you believe there is an inconsistency, please contact WPTOFOA1836@ee.doe.gov.

READ SLIDE

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.

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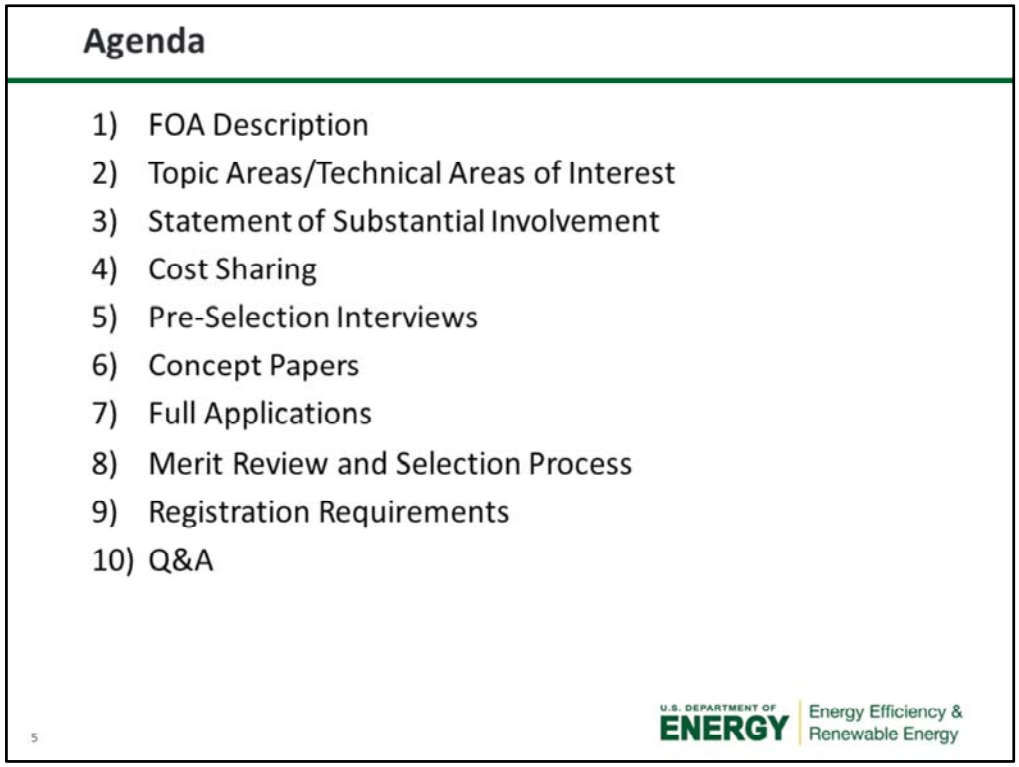

The agenda for this presentation is as follows: READ SLIDE

We encourage you to have a copy of the FOA in front of you for reference as we go through the presentation.

Due to the procurement sensitive nature of the FOA process, we will not be able to answer every question live in this webinar. For all questions raised, including the ones we are able to respond to live, we will post responses on EERE Exchange.

To ask a questions, please type in your questions at any time into the Q&A box and we will address them, if we can, when we get to the Q&A portion of the webinar.

FOA Background

- The Water Power Technologies Office (WPTO) is committed to lowering the cost and build time of hydropower and pumped storage systems, further increasing their ability to provide essential reliability services and contribute to the resilience of the grid, and continuing to reduce their environmental impacts and permitting timelines.
- Realizing this potential, however, will require deep technological and scientific innovations, from radically new designs and manufacturing techniques to significant advancements in both power system and hydrological modeling.

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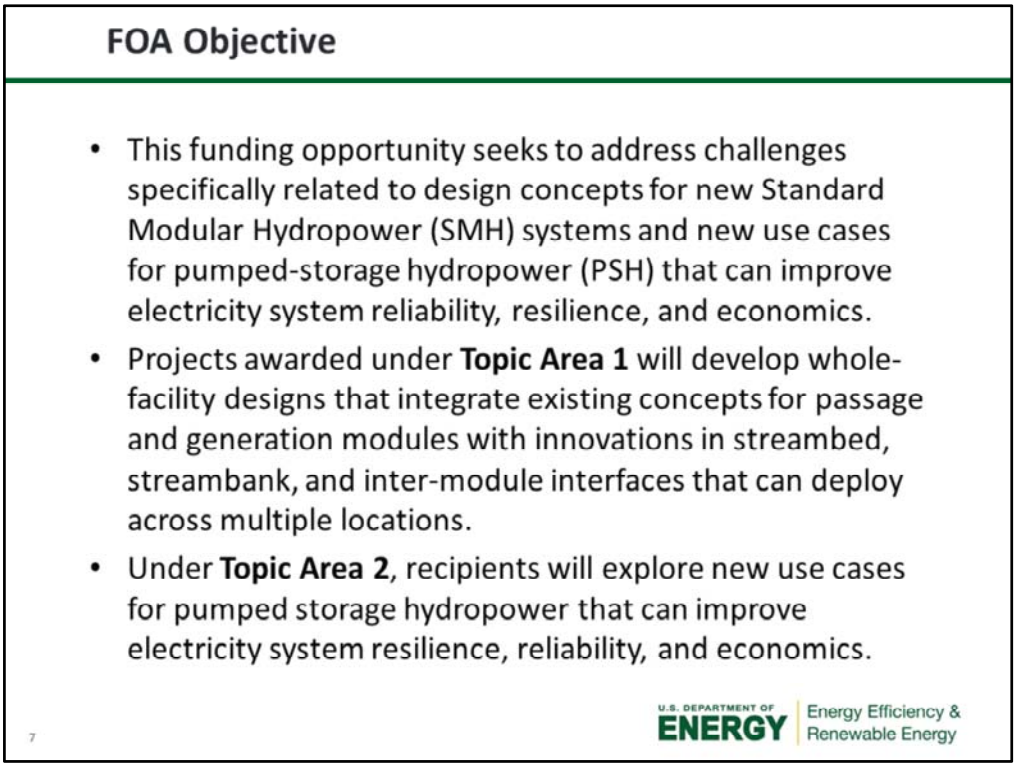

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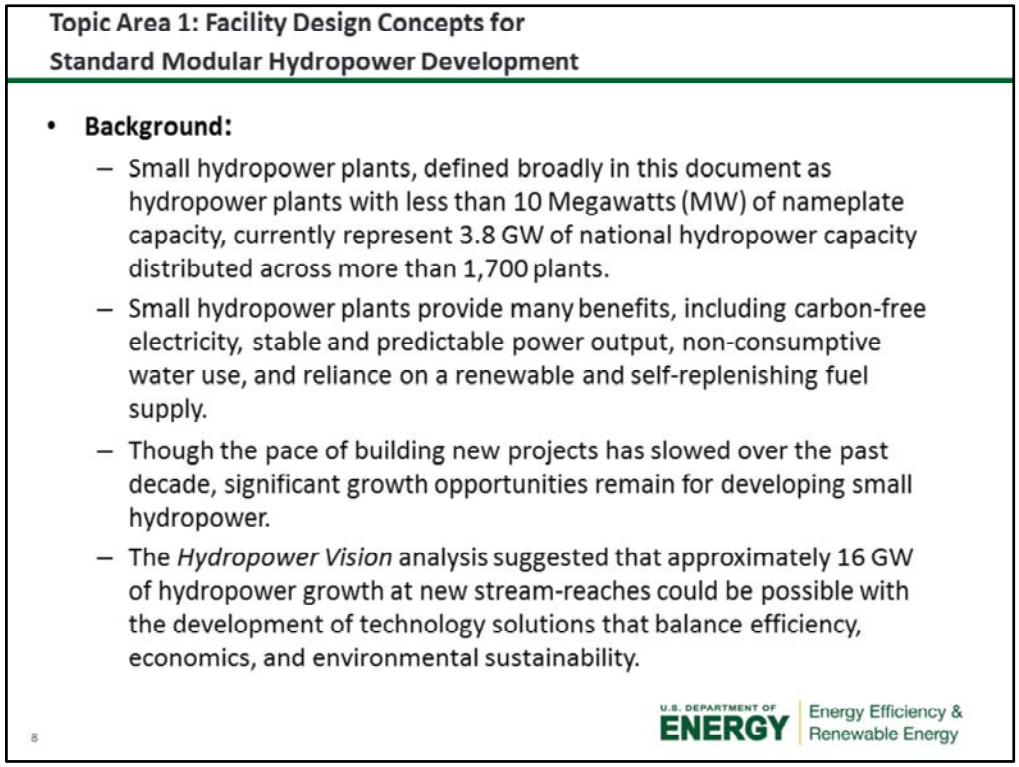
Marisol Bonnet and Sam Bockenhauer, Technology Managers from the Water Power Technologies Office, will now describe in detail each Topic Area.

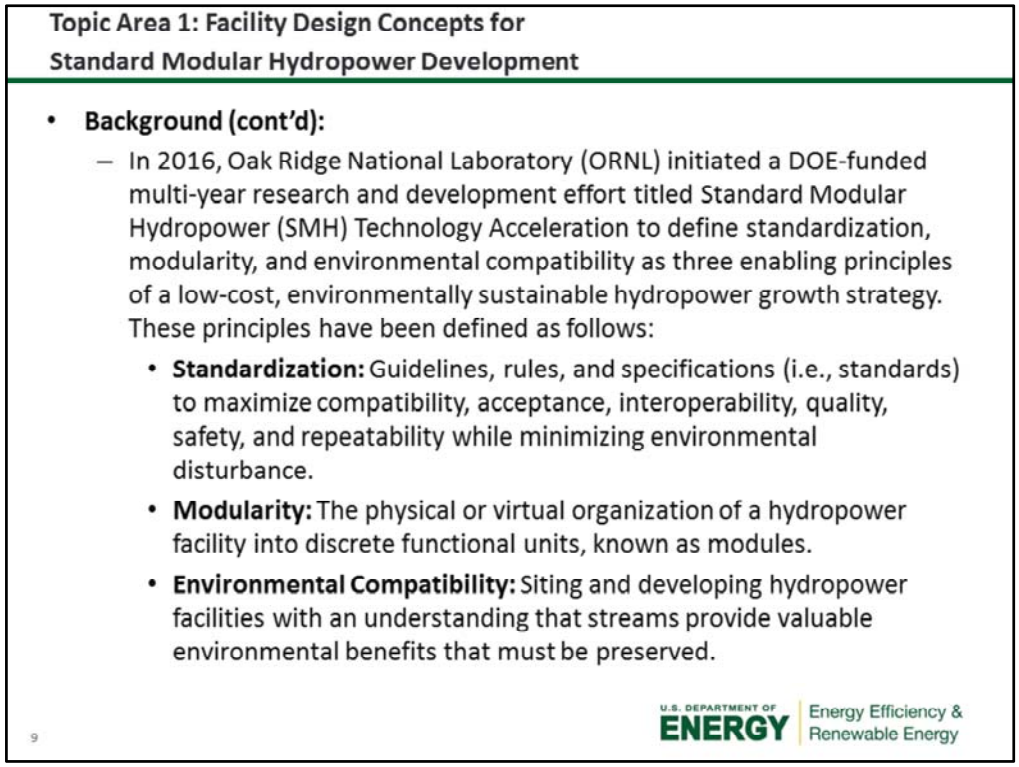


Thank you, Corey.

I will be providing an overview of Topic Area 1, titled 'Facility Design Concepts for Standard Modular Hydropower Development.'

The focus of this topic area is on small hydropower.

[READ SLIDE]



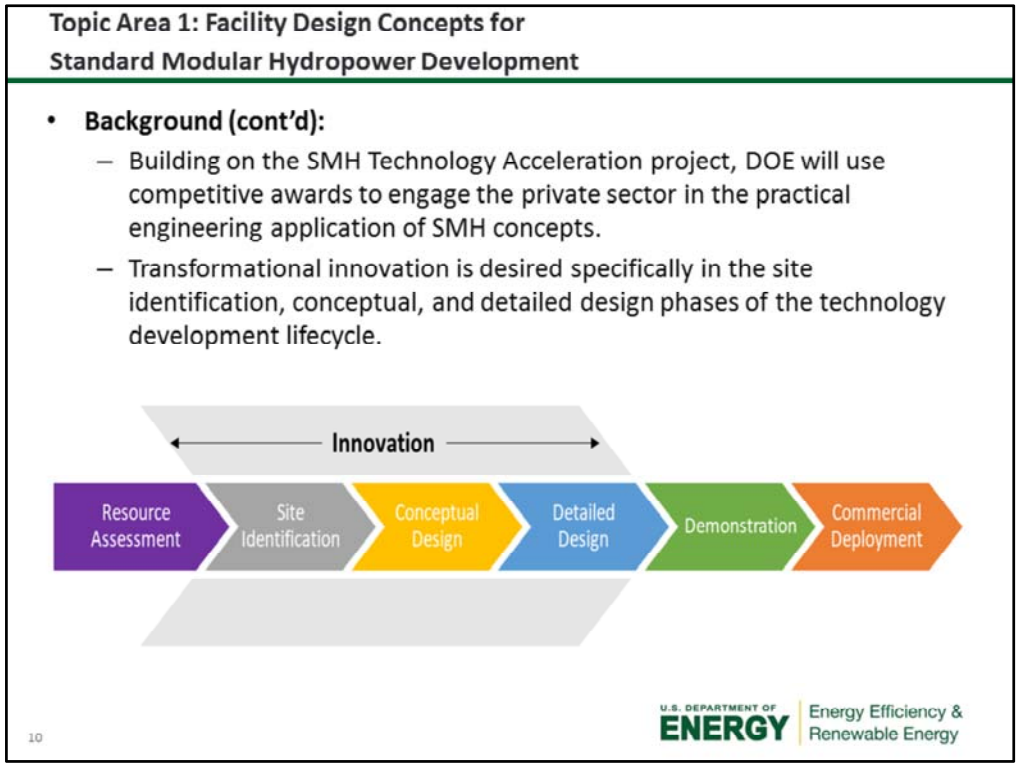
To get at these technology solutions, DOE funded Oak Ridge National Laboratory to conduct a multi-year R&D effort titled Standard Modular Hydropower Acceleration.

This project defines standardization, modularity, and environmental compatibility as three enabling principles of a low-cost, environmentally sustainable hydropower growth strategy.

Standardization: In a hydropower context, standardization of design, review, regulation, manufacturing, operations, maintenance, and other features is intended to reduce site specificity and project costs.

Modularity: In SMH, the entire facility is envisioned as a modular structure, with generation, passage, and foundation modules assembled to deliver energy and environmental benefits at many different sites.

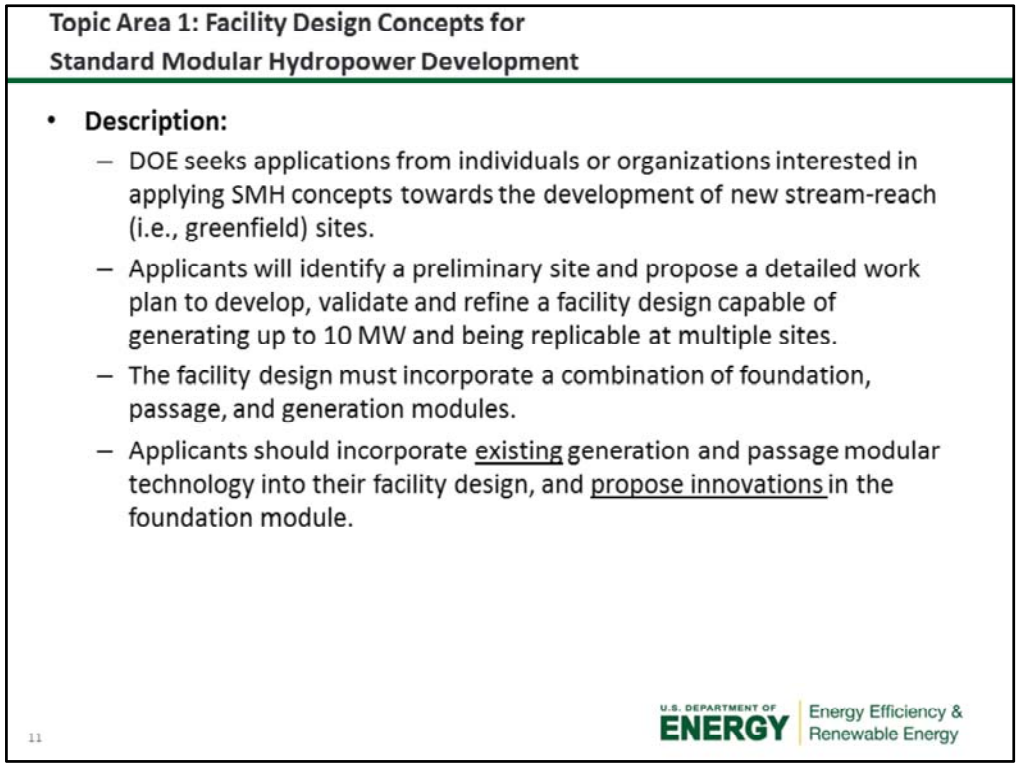
Environmental Compatibility: That means understanding how hydropower systems can minimize disturbances to landscape features, water quantity, connectivity, geomorphology, water quality, and biota.



So, building on the Standard Modular Hydropower project, DOE is using this competitive award to engage the private sector in the practical engineering application of SMH concepts.

The gray region outlined in this figure will be the focus of this FOA. Transformational innovation is desired specifically in the site identification, conceptual, and detailed design phases of the technology development lifecycle.

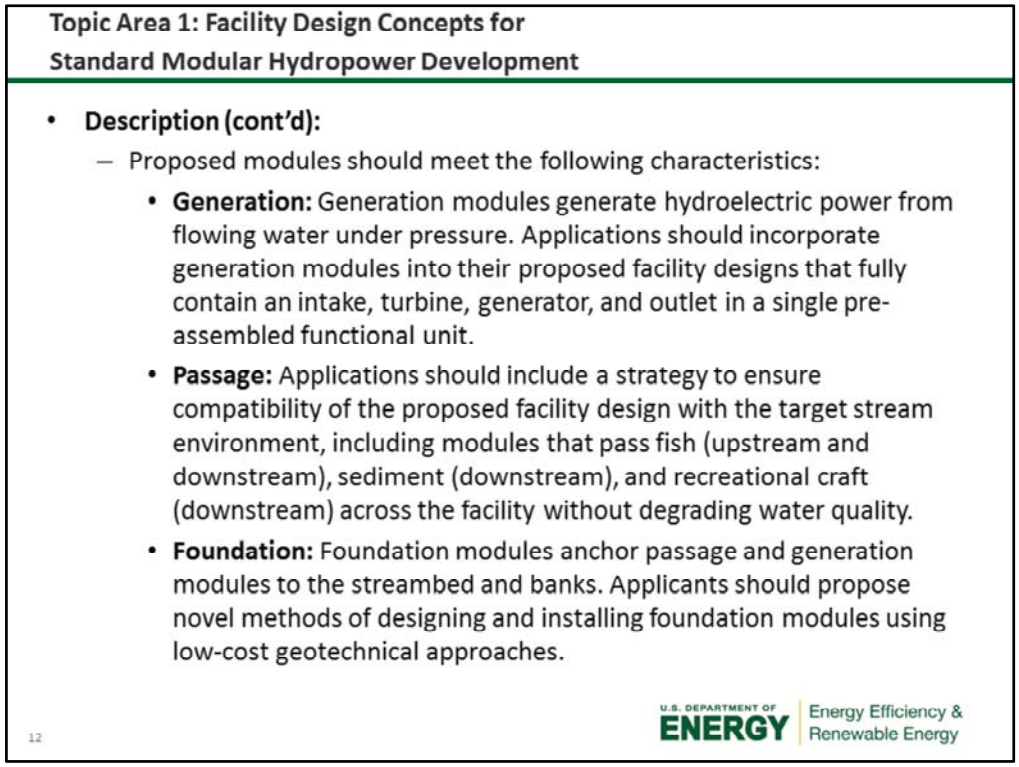
Demonstration and commercial deployment are outside the scope.



Getting into the topic area description and what we are looking for.

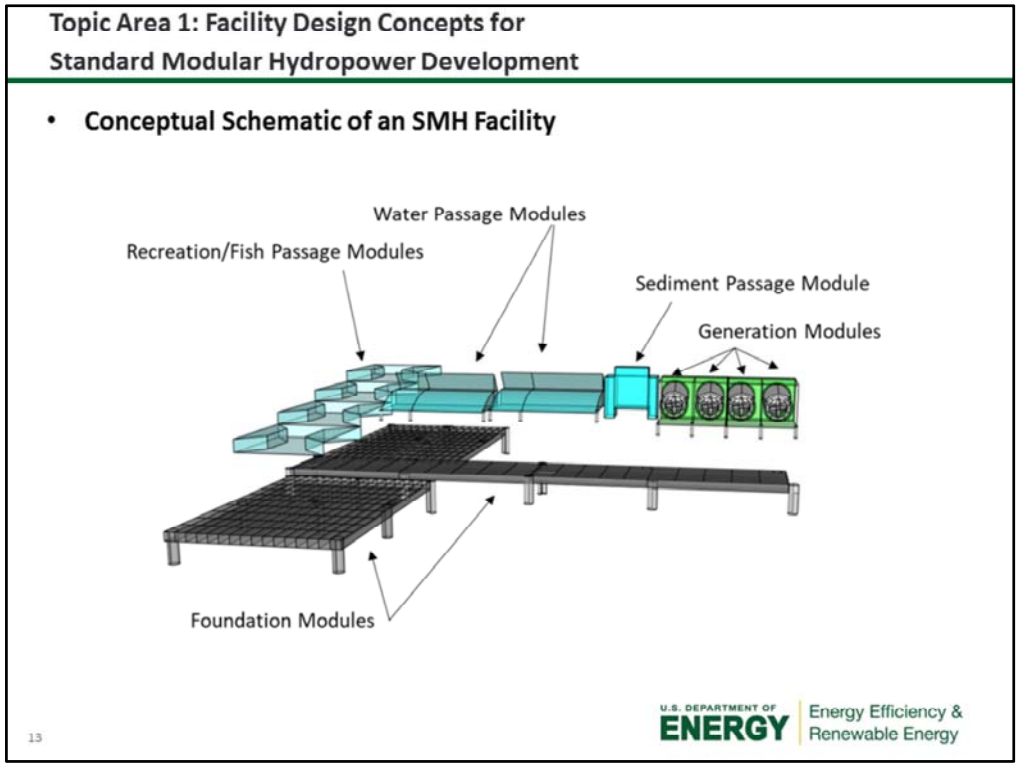
[READ SLIDE]

The FOA defines facility designs as the detailed engineering drawings, analytical calculations, and numerical modeling used to demonstrate the technical, environmental, and economic viability of modular hydropower facilities.



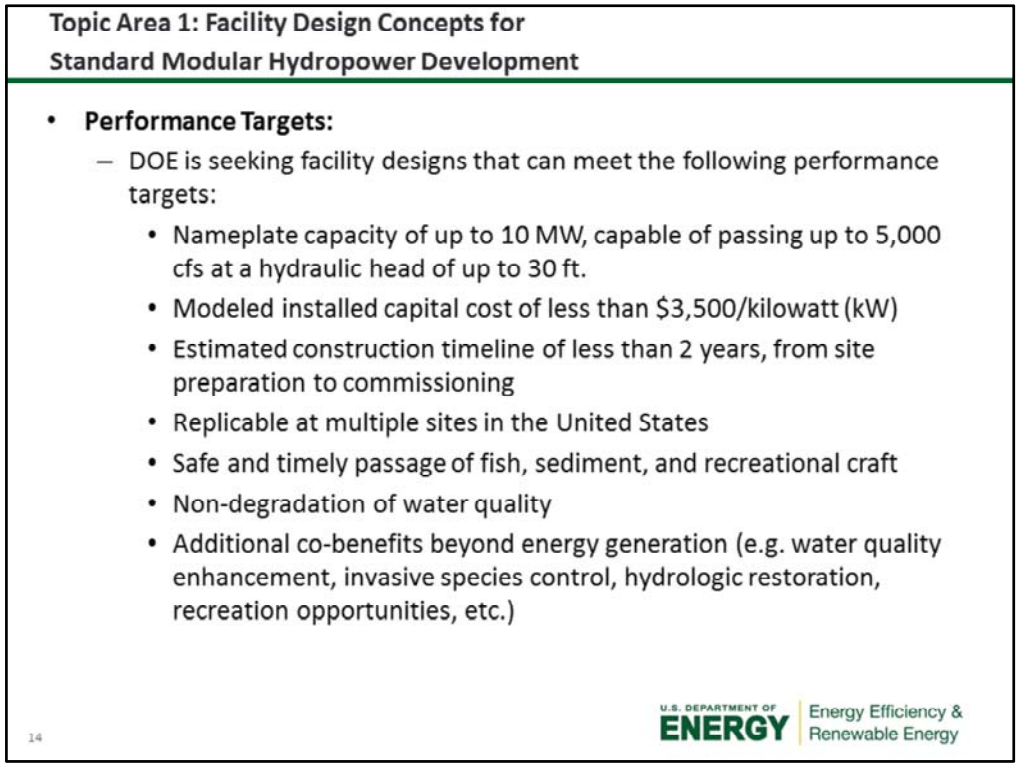
[READ SLIDE]

Examples of innovative geotechnical approaches include methods that minimize dewatering during construction, avoid the use of cofferdams, and enable construction and access from a single abutment (i.e., left or right stream bank).

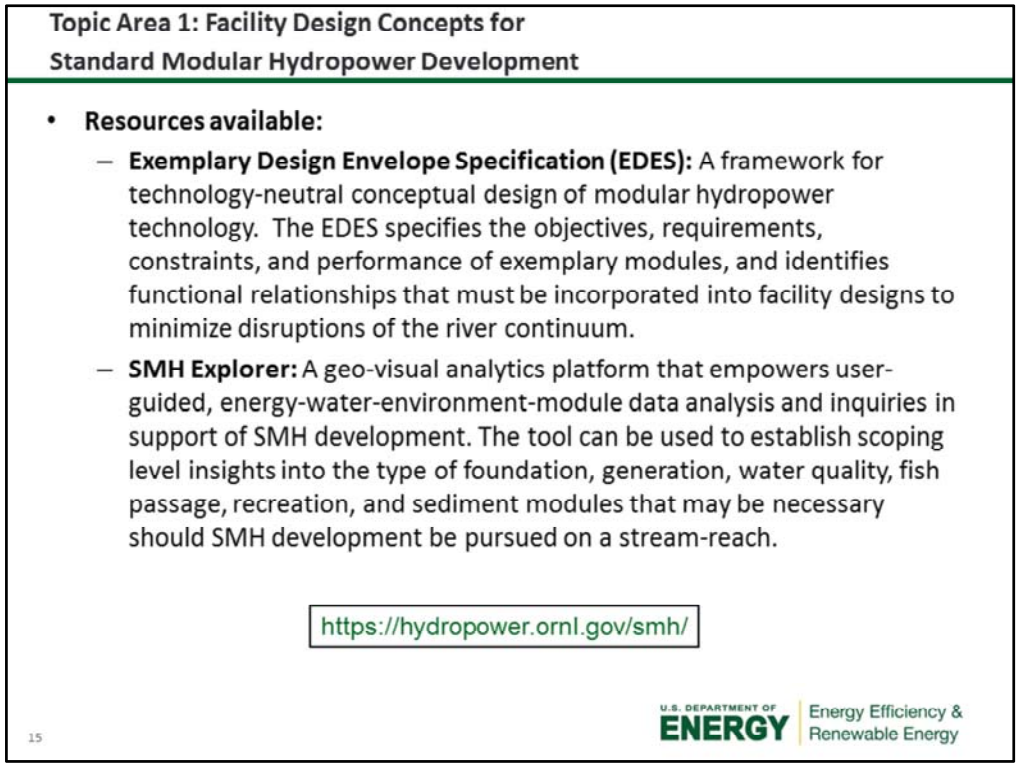


This figure illustrates a conceptual schematic of a SMH facility. This is just an example to show that the basic building blocks of the facility are individual modules that can scale across an individual site and across many sites.

Depending on the characteristics of the selected site, the facility will have foundation modules anchoring recreation and/or fish passage modules, water passage modules, sediment passage, and generation modules.



These are the performance targets that the proposed facility should meet [READ SLIDE]

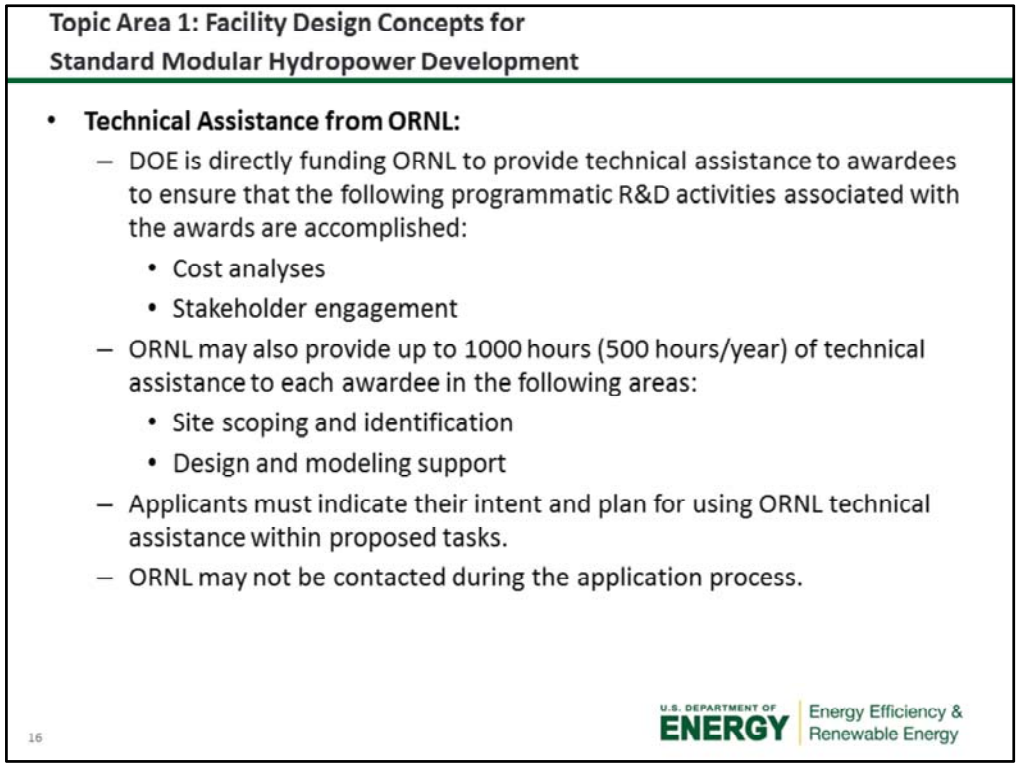


ORNL has produced a set of guidelines and tools to help apply SMH concepts in practice.

Applicants are strongly encouraged to utilize these resources in the development of their application.

[READ SLIDE]

Webinar tomorrow at 1pm EST led by ORNL to go into detail. You can register on Exchange.



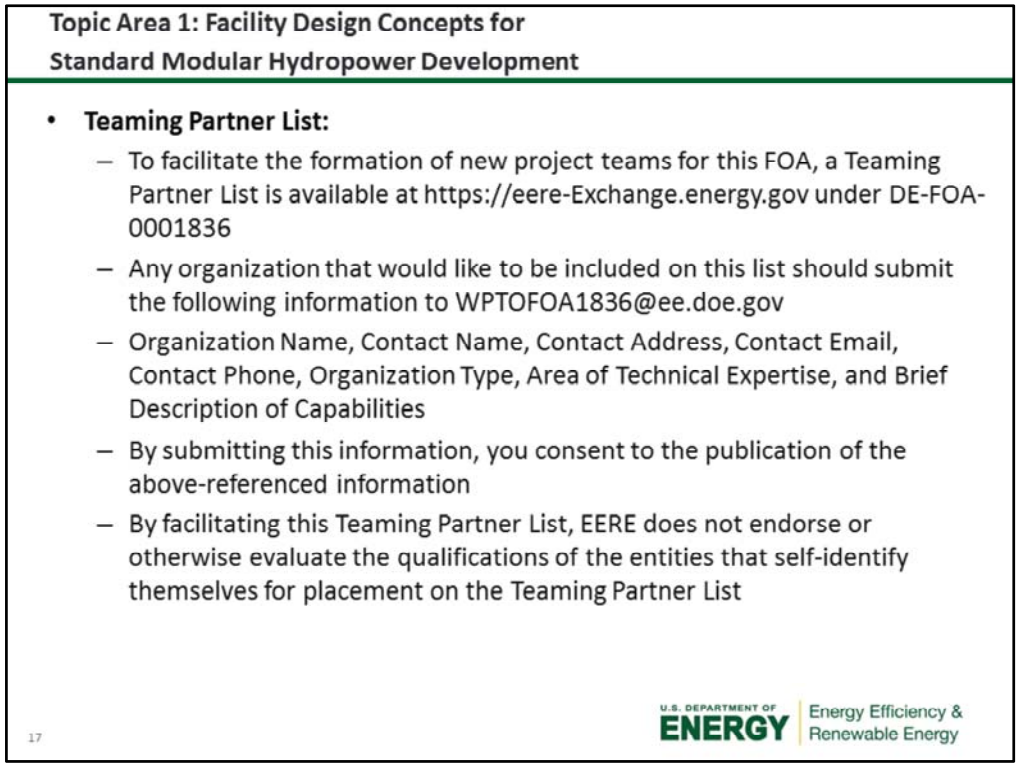
In addition to financial assistance, DOE is directly funding ORNL to provide technical assistance to work with awardees on the following two activities:

The first is one Cost Analyses, including estimation of cost targets for development, and economic modeling to set initial capital costs and LCOE estimates. The second one is stakeholder engagement to facilitate stakeholder discussion and understanding of facility design, and assess stakeholder acceptance

The detailed tasking and phasing of this technical assistance will be determined during the award negotiation period. ORNL will enter into necessary and appropriate non-disclosure agreements with awardees to ensure that awardee business sensitive data are protected.

In addition, ORNL may also provide up to 1000 hours of technical assistance to each awardee in these areas:

The first is Site scoping and identification (gathering data on a specific site to inform facility design, identifying engineering design criteria, and screening sites with similar characteristics), and the second is Design and Modeling Support (developing analytical predictions of technical and environmental performance of individual and integrated modules)



For this topic area, DOE is compiling a Teaming Partner List to facilitate the formation of new project teams. Participation is not a requirement of this FOA and is completely voluntary.

The teaming Partner List is available on Exchange and will be updated periodically.

Any organization that would like to be included on this list should submit the information shown on this slide to the email address provided.

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.

Topic Area 1: Facility Design Concepts for Standard Modular Hydropower Development

- **Information Recommended for Application:**
  - Description of the reference site used to establish the initial facility design. The reference site will be used for information purposes only; it is not required that an applicant have a preliminary permit or license.
  - Methodology for assessing environmental attributes of the reference site and identification of design targets for fish, sediment, and recreation passage.
  - Detailed description of the operating principles of each generation, passage, and foundation module. If available, applications must include references of prior testing, validation, or deployment.
  - Preliminary diagrams and sketches of the individual modules and integrated facility design.
  - Preliminary costs and discussion concerning the cost effectiveness of the proposed facility design. Applications must make the case that the facility design can meet established cost targets at multiple sites.
  - Identification and prioritization of technical assistance from ORNL.

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Topic Area 1: Facility Design Concepts for Standard Modular Hydropower Development

- **Applications Specifically Not of Interest:**
  - Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
  - Applications that fall outside the technical parameters specified in the FOA, including but not limited to:
    - Applications that propose testing, demonstration, or deployment of any kind.
    - Applications for facility designs at non-powered dams, canals, conduits, or other locations with existing hydraulic infrastructure.
    - Applications for research and development of individual modules (e.g. generation)
  - Applications for marine or in-river hydrokinetic technologies.

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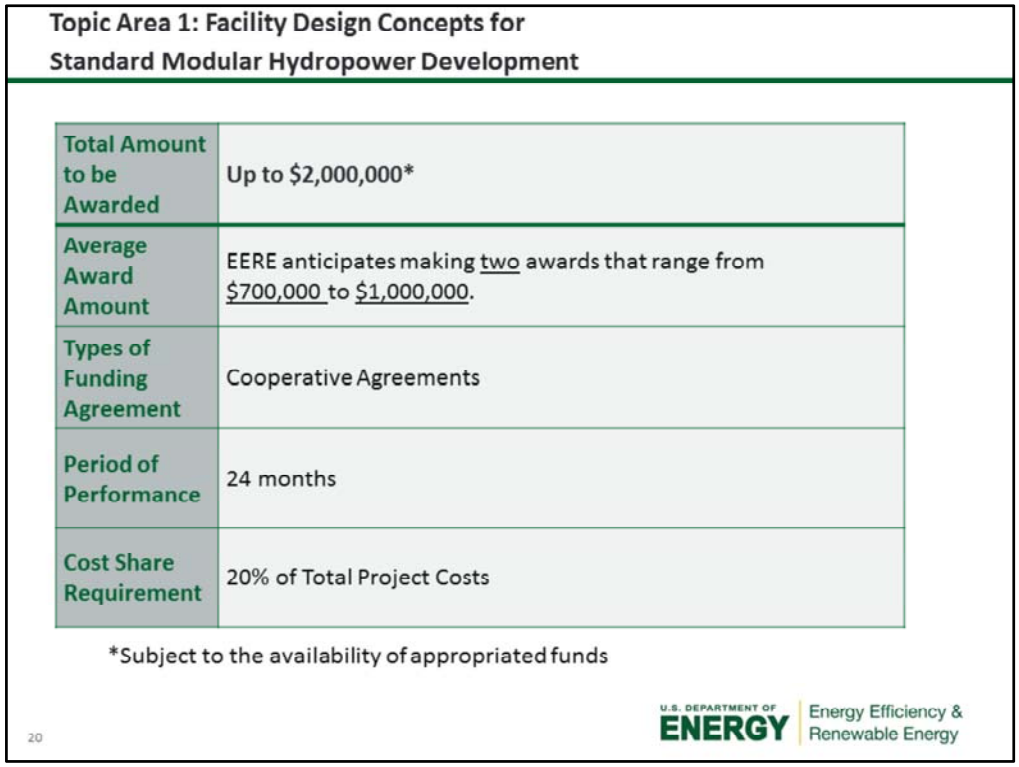
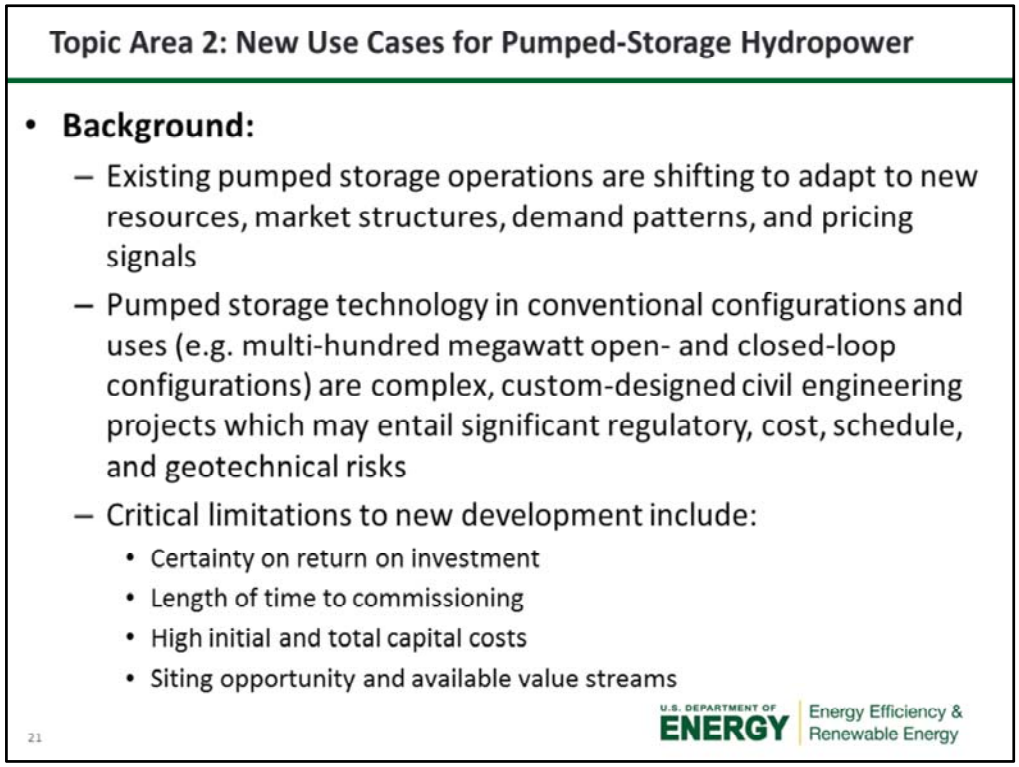


The total award amount available for this topic area is 2 million dollars. We anticipate making two awards ranging from 700 thousand to 1 million per award.

The type of funding agreement is Cooperative Agreements, which will be discussed later.

The period of performance is 24 months.

And there is a cost share requirement is 20% of total project costs.



Potential Applicants are encouraged to see the details of each of the critical limitations in the FOA document

Topic Area 2: New Use Cases for Pumped-Storage Hydropower

- **Description:**
  - To address the critical barriers mentioned above, Topic Area 2 explores new use cases for pumped storage hydropower that can improve electricity system resilience, reliability, and economics
  - Applicants are expected to propose innovative technology concepts, analysis, or enhanced modeling capabilities that define a new, updated role for pumped storage in the evolving electricity system in the United States
  - Two sub-topics:
    - Sub-topic 2.1 – Innovative conceptual designs for pumped storage systems
    - Sub-topic 2.2 – Modeling and analyzing the role of pumped storage in asset and system optimization

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Sub-topic 2.1 – Innovative Conceptual Designs for Pumped Storage Systems

- This sub-topic includes novel pumped storage technology concepts that can be competitive in the current and future electricity system
- Concepts of interest include configurations, layouts, and technical designs that can markedly reduce costs of deployment and operation (e.g., time to commissioning); expand siting opportunities through non-traditional applications; or expand the value proposition of pumped storage developments by providing additional non-electric value streams or avoided costs to other entities
- This FOA intends to engage early-stage technology design concepts that present a significant departure from pumped storage layouts available today. To that end, minimum thresholds for project performance are intended to balance innovation with assurance that all applications are capable of delivering the essential elements of electrical storage through a water medium

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Sub-topic 2.1 – Innovative Conceptual Designs for Pumped Storage Systems

Minimum Thresholds:

Project Element	Minimum Threshold
Project size	Minimum 1 MW power output, preferably with scale-up capabilities.
Project service lifetime	No minimum lifetime required, as a shorter lifetime may present opportunities for substantial cost reductions. Lifetime must be estimated and justified.
Cycling capability	Capable of multiple starts and stops per day.
Overall roundtrip efficiency	Minimum 60% for each cycle.
Energy storage	Minimum 2 hours at full power output.
Hydraulic connection	Closed and open-loop technologies are eligible.

- Responsive applications should:
  - Identify how the conceptual design meets the minimum eligibility thresholds and if relevant, the preferred characteristics indicated in the sections below;
  - Demonstrate that achieving one or more of the performance targets is possible, should the technology reach full commercialization scale;
  - Propose work that will have a substantial, measurable impact to developing the conceptual design toward the performance target(s); and
  - Include detailed justification to support cost estimates

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Sub-topic 2.1 – Innovative Conceptual Designs for Pumped Storage Systems

Performance Targets:

– Responsive application will address one or more of the four critical barriers below:

Area of Focus	Performance Targets
Cost Reduction	$1,500/kW
Timeline to Commissioning	Less than five (5) years from complete project design and site selection to commissioning.
Siting	Radical departure in pumped storage siting norms that is replicable and requires research and feasibility assessments in order to mature
Value Improvements and Hybrid Approaches	Identification of project non-power value streams of substantial economic benefit or equivalent to 20% of revenues of standard pumped storage

– All applicants must respond to the capital cost barrier by providing a cost estimate, with detailed justification (including but not limited to methodology) to substantiate the proposed estimates; applicants are strongly encouraged to describe the application's responsiveness to all relevant barriers.

– Proposed concept designs that would advance a performance target but that clearly require unacceptable performance qualities in other categories (e.g. extreme environmental effects) are not of interest.

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Sub-topic 2.1 – Innovative Conceptual Designs for Pumped Storage Systems

Anticipated Outcomes:

At the end of the period of performance, it is expected that awardees will produce a detailed conceptual design of a pumped storage hydropower innovation and the results will be presented in the form of a report that includes engineering design, modeling, and analysis in the following areas:

- Technical Concept Feasibility
- Achievements toward Performance Target
- Techno-Economic Analysis
- Technology Comparison

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Sub-topic 2.2: Modeling and Analyzing the Role of Pumped Storage in Asset and System Optimization

- This sub-topic will support analysis of the technical capabilities of pumped storage to improve electricity system resilience, reliability, and economic efficiency, or to improve the performance of other grid assets
- To reduce the uncertainty regarding future investments and illustrate the value of storage at the bulk scale, this FOA invites applications for analyses and modeling enhancements that would collectively advance an understanding of the capabilities of pumped storage hydropower in electric system optimization or optimization of other grid assets, inclusive of generation and transmission
- This Sub-topic is intended to recruit applications for:
  - Analyses that would illustrate to what extent, and in which cases, pumped storage hydropower can provide one or more specific material optimization benefits to electric system performance and/or other specific grid assets, or
  - Modeling enhancements that would make the benefits of pumped storage hydropower more visible, more effectively analyzed, or possible within existing electric system operations and planning practices.

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Sub-topic 2.2: Modeling and Analyzing the Role of Pumped Storage in Asset and System Optimization

- Applications in this sub-topic should evaluate the potential for pumped storage hydropower to provide one or more specific benefits that accrue either to the system or to other assets, in particular benefits that are currently not well understood
- An application must articulate its additional value to the current state of knowledge, and make explicit any linkages to benefits to other grid assets
- Applications should select a real system, rather than theoretical systems and assets, at a meaningful scale. Benefits should be measurable and linked to grid properties such as resilience, reliability, sustainability, or economic efficiency
- Proposed modeling enhancements should address gaps in effective characterization of new advanced pumped storage or full utilization of pumped storage assets
- Applications for modeling enhancements should use the gaps analysis provided in [Appendix E] as a guideline for focus areas with the greatest need and the greatest opportunity for impact
- The proposed enhancement is not required to be open source in order to be eligible for award under this sub-topic
- However, applications should strike a balance between two objectives:
  - Impact (that at the conclusion of the work, the enhancement will be used and useful) and availability (that others can access the enhancement and understand how well it works without excessive cost).
  - Applicants must describe a licensing and dissemination strategy that will effectively strike a balance between these two objectives

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Sub-topic 2.2: Modeling and Analyzing the Role of Pumped Storage in Asset and System Optimization

- Applications for modeling enhancements should incorporate operations and planning entities that would take advantage of such enhancements as part of the project team
- If the proposed work involves a new feature of an existing model under commercial license, applicants should include a demonstration of support or engagement with the owner of that model
- Applicants are strongly encouraged to incorporate partners and stakeholders into the proposed work beyond a demonstration of support
- Responsive applications will:
  - Identify how the analysis or modeling enhancement meets the requirements established in Table 3 below or in modeling enhancements Appendix E;
  - Demonstrate that the analysis or modeling enhancement would produce an innovative result or an innovative approach within the execution of the work;
  - Propose work that will have a substantial, measurable impact on advancing an understanding of the full suite of benefits of pumped storage hydropower; and
  - Propose a plan to disseminate the analysis or modeling enhancement to as wide an audience as possible (e.g., publication in the open literature, licensing strategy, such as open source or commercial).

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For a description of these areas please refer to the FOA document

Sub-topic 2.2: Modeling and Analyzing the Role of Pumped Storage in Asset and System Optimization - Table 3: Proposed analyses requirements

Data choice	**Data should be appropriate for the work-product goals. For instance, analytical work that focuses on curtailment reduction should use load and variable generation forecasts and operating data that accurately capture curtailment challenges**
Project Team	Where an analysis would describe the optimization of an asset or a system, the project team should include the owner or operator of that asset or system, at minimum evidenced by a letter of support. Applicants are strongly encouraged to incorporate partners and stakeholders into the proposed work beyond a demonstration of support.
Benefits	Benefits must be measurable and linked to grid properties such as resilience, reliability, sustainability, or economic efficiency. For economic benefits, the results should clearly show the lasting value provided to all stakeholders – measured by net benefits such as lower electricity cost, efficient utilization of renewables and load, and others as applicable.
Assumptions and Definitions for Proposed Analysis	• Analyses should be representative of a real system, rather than theoretical systems and assets. • The analysis baseline should be representative of existing or expected near-term conditions (e.g., 2020 RPS-based generation mix). • Models used to represent variable generation (e.g., wind and PV solar) should be realistic in terms of generation mix as well as spatial and temporal accuracy (e.g., the variability is not over- or under-represented, plant siting does not skew the results). • The approach to generator retirement should be clearly stated (e.g., if additional generation is added to a model, is some of the existing generation retired, and if so, how were the retirement choices determined?). • The underlying generation mix assumptions for forward-looking grid representations should be clearly defined (e.g., scenario X captures 2030 RPS requirements, scenario Y increases the amount of renewable generation from the current 20% on an annual energy basis to 40%). • Where unexpected forced outages are used in the analysis or modeling efforts, the nature of the forced outage should be described (e.g., fixed in time and amplitude across scenarios or varies from scenario to scenario). • The relevant geographic region should be clearly defined along with the regions connections and reliance on surrounding systems. • The generation mix for the baseline and each scenario should be clearly identified by generation type (e.g., airframe-derivative, open cycle combustion turbines) and capacity. The generation mix of interconnected systems to the relevant region should also be reported. • The flexibility assumptions (e.g., ramp rate per minute as a percentage of rated capacity, minimum stable level, and start time) for each type (and size class, if applicable) of generation should be clearly stated. • The capacity reserve for the system (and each scenario or sensitivity) should be clearly stated. • Peak variable generation penetration should be reported both in terms of time of occurrence and percent of peak load. • The type of pumped storage hydropower technology should be clearly defined (synchronous, inverter-based, variable speed pumping, and so forth).

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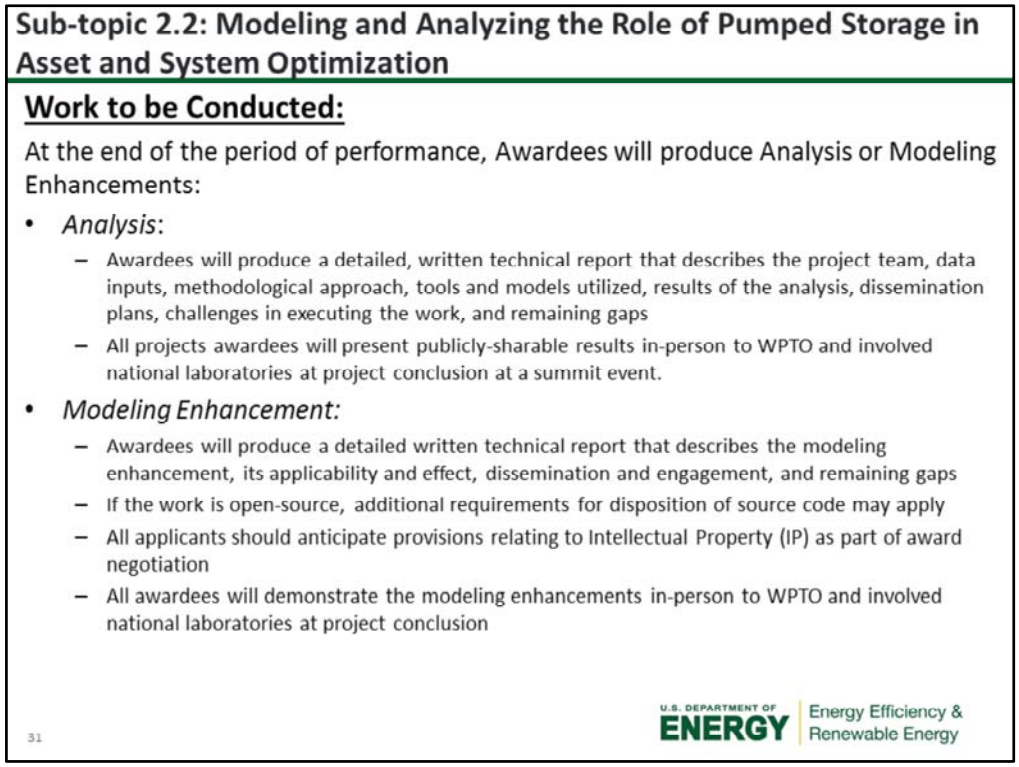

For a description of these areas please refer to the FOA document

Topic Area 2: New Use Cases for Pumped-Storage Hydropower

Applications Specifically Not of Interest:

Topic Area 2

- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the laws of thermodynamics).
- Applications that fall outside the technical parameters as specified in the topic area description of the FOA, including but not limited to:
  - Applications that advance innovation that is highly site specific and not broadly applicable.
  - Applications that are related to permitting and development of a specific site.

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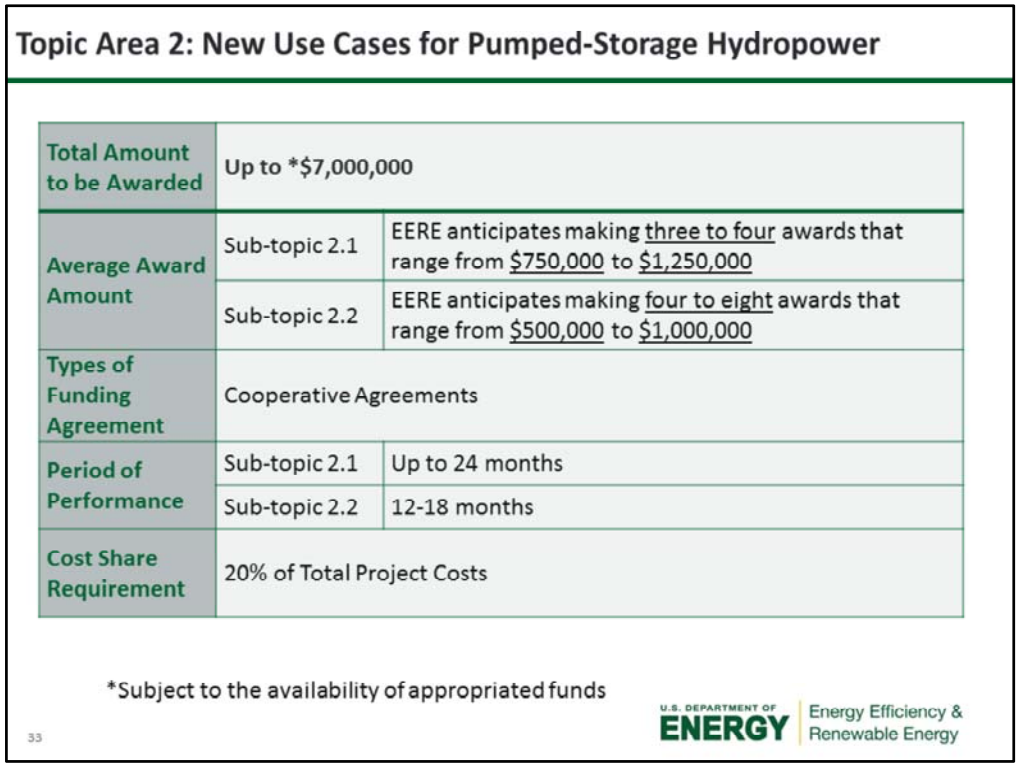

Topic Area 2: New Use Cases for Pumped-Storage Hydropower

Total Amount to be Awarded	Up to *$7,000,000	
Average Award Amount	Sub-topic 2.1	EERE anticipates making three to four awards that range from $750,000 to $1,250,000
	Sub-topic 2.2	EERE anticipates making four to eight awards that range from $500,000 to $1,000,000
Types of Funding Agreement	Cooperative Agreements	
Period of Performance	Sub-topic 2.1	Up to 24 months
	Sub-topic 2.2	12-18 months
Cost Share Requirement	20% of Total Project Costs	

*Subject to the availability of appropriated funds

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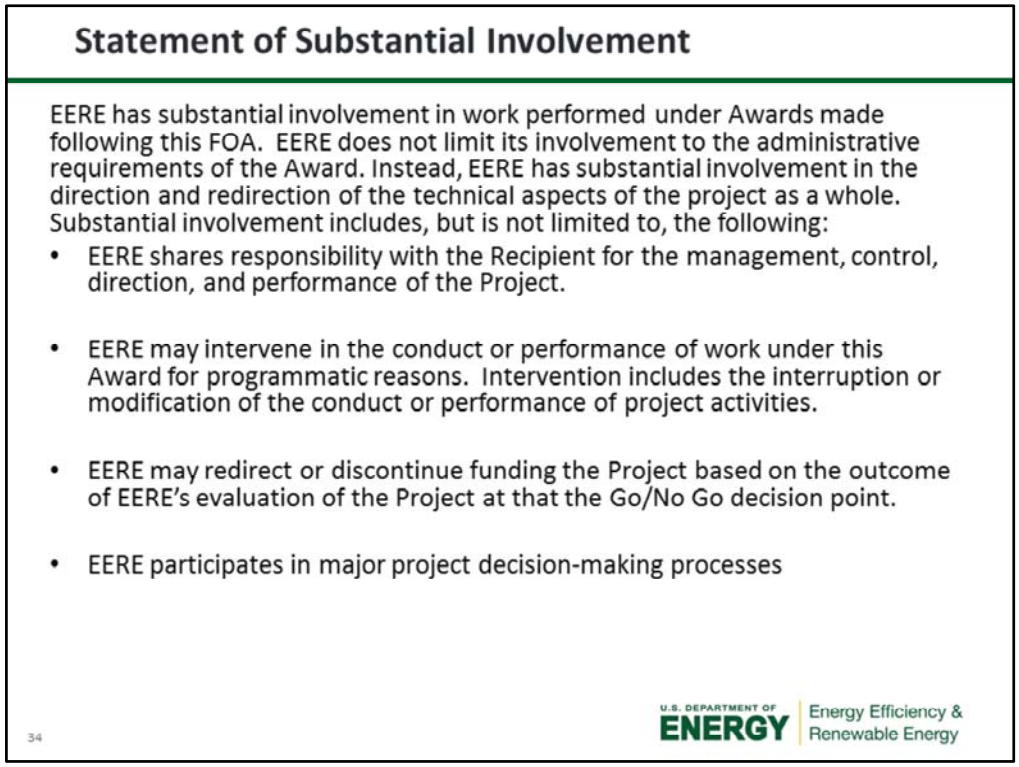
EERE expects to make approximately $9 (TA 1 $2 million and TA 2 $7 million) million of Federal funding available for new awards under this FOA subject to the availability of appropriated funds. The average award amount is anticipated to range from $500,000 to $1,250,000.

EERE intends to fund mostly cooperative agreements under this FOA, Work Authorizations, and Interagency Agreements. Cooperative Agreements include Substantial Involvement, which we will discuss next.



- Under cooperative agreements, there will be what is known as "substantial involvement" between EERE and the Recipient during the performance of the project.

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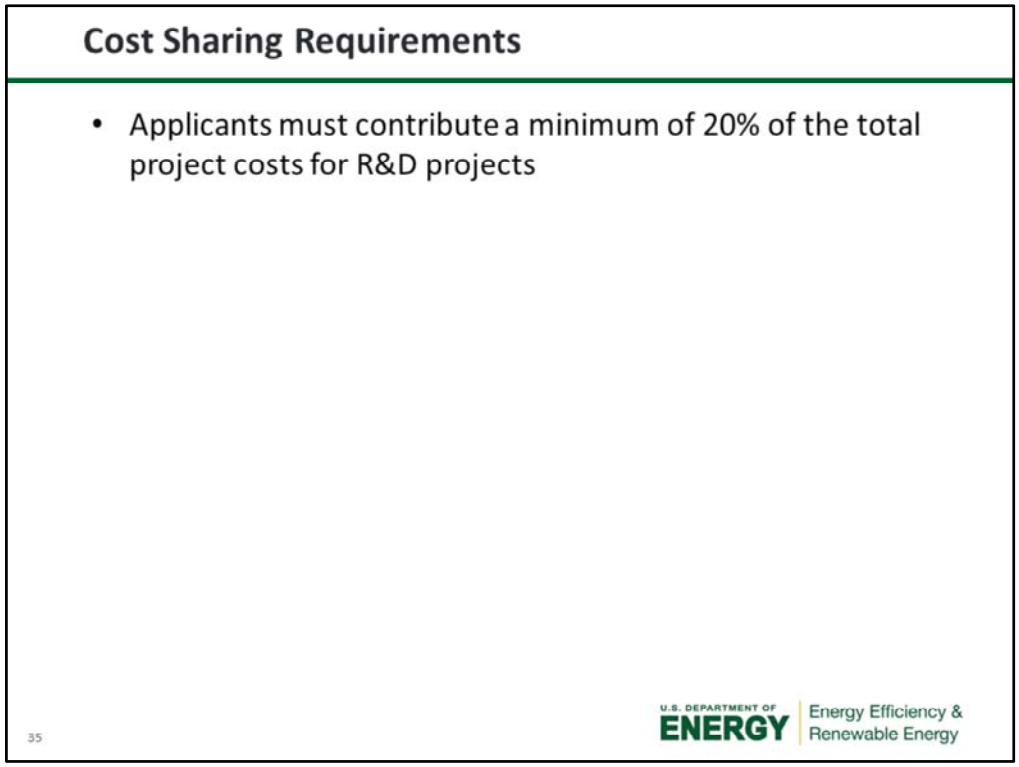

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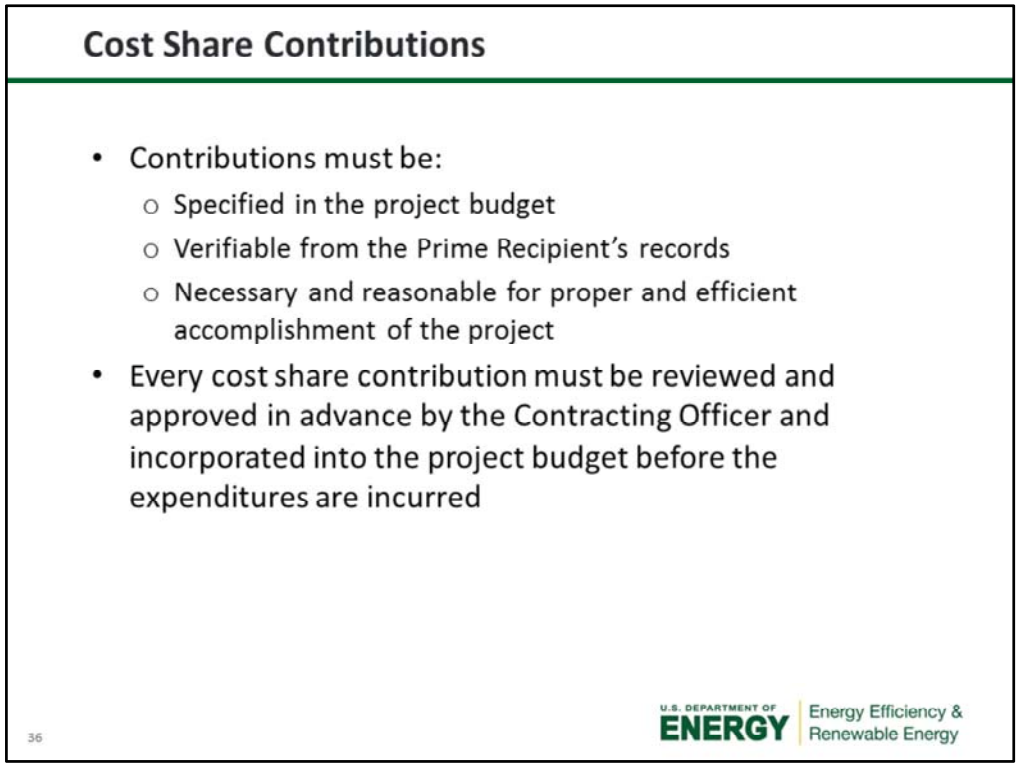
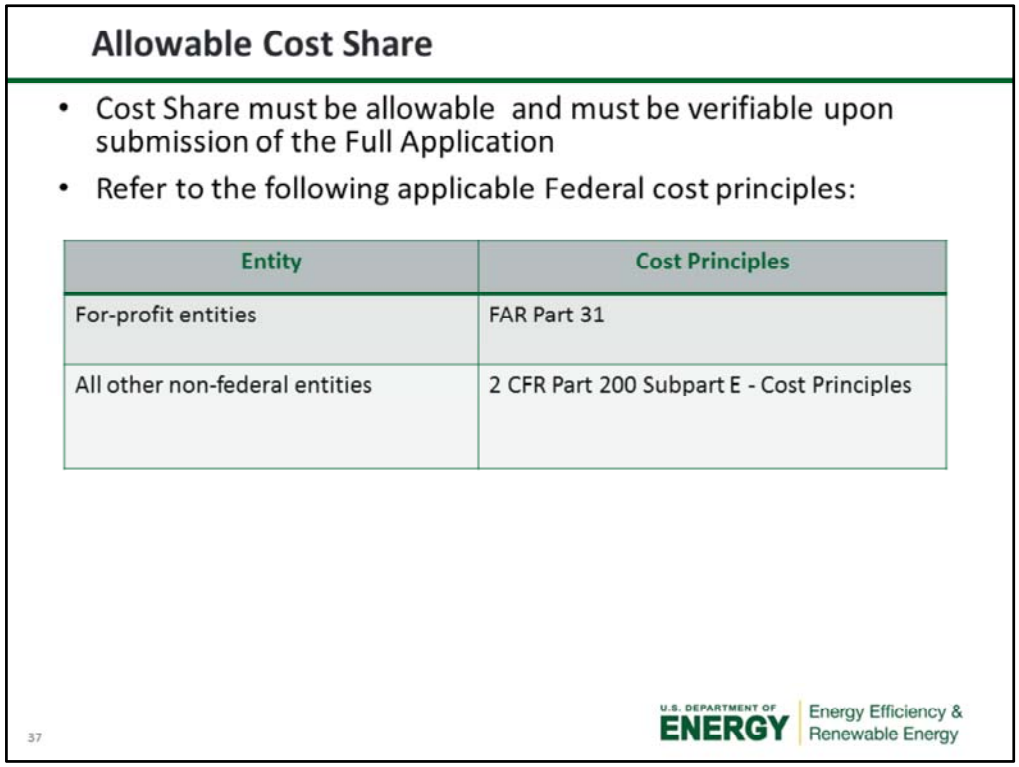
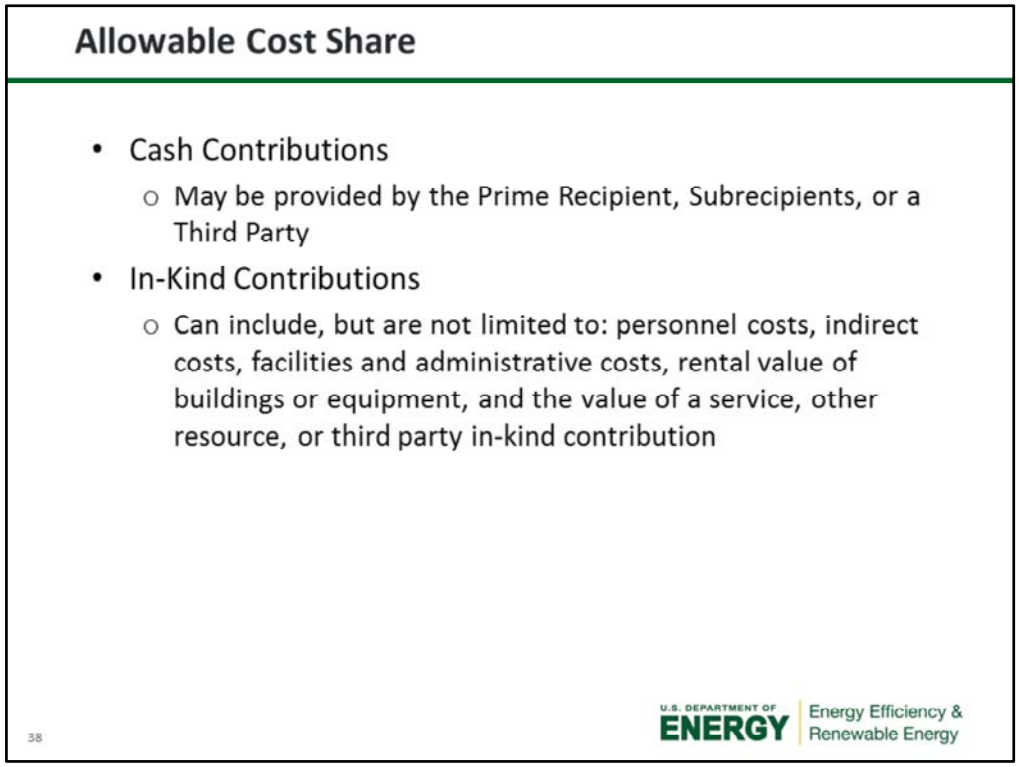
Applicants who believe their project qualifies for the reduced recipient cost share must be able to provide verification that the above requirements are satisfied



The total budget presented in the application must include both Federal (DOE), and Non-Federal (cost share) portions, thereby reflecting TOTAL PROJECT COSTS proposed. All costs must be verifiable from the Recipient's records and be necessary and reasonable for the accomplishment of the project.



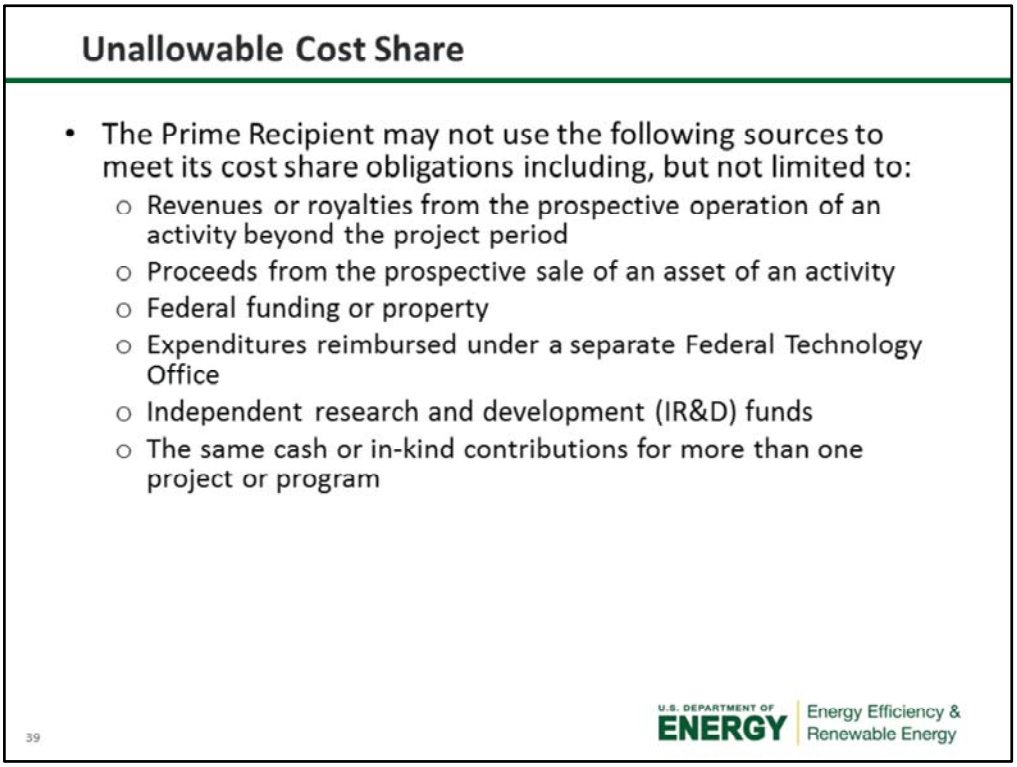
Cost Share must be allowable and must be verifiable upon submission of the Full Application. Please refer to this chart for your entity's applicable cost principles. It is imperative that you follow the applicable cost principles when creating your budget for the full application.



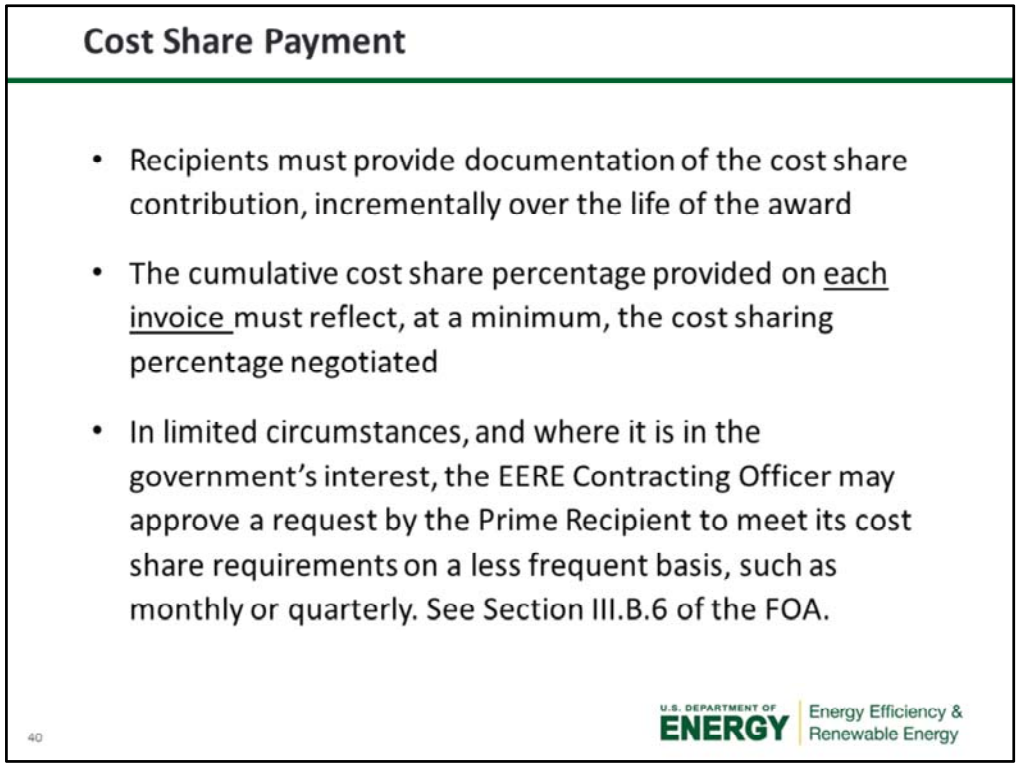
Cost share can provided in cash and/or in-kind. It can be provided by the Prime Recipient, subs, or a third party.

The basic definition of in-kind cost share is the donation of personnel time, equipment, facilities, or other items that an organization will contribute to the project. It can take many forms, each of which must be assigned a dollar value to be included in the budget. Some examples of in-kind cost share are the donation

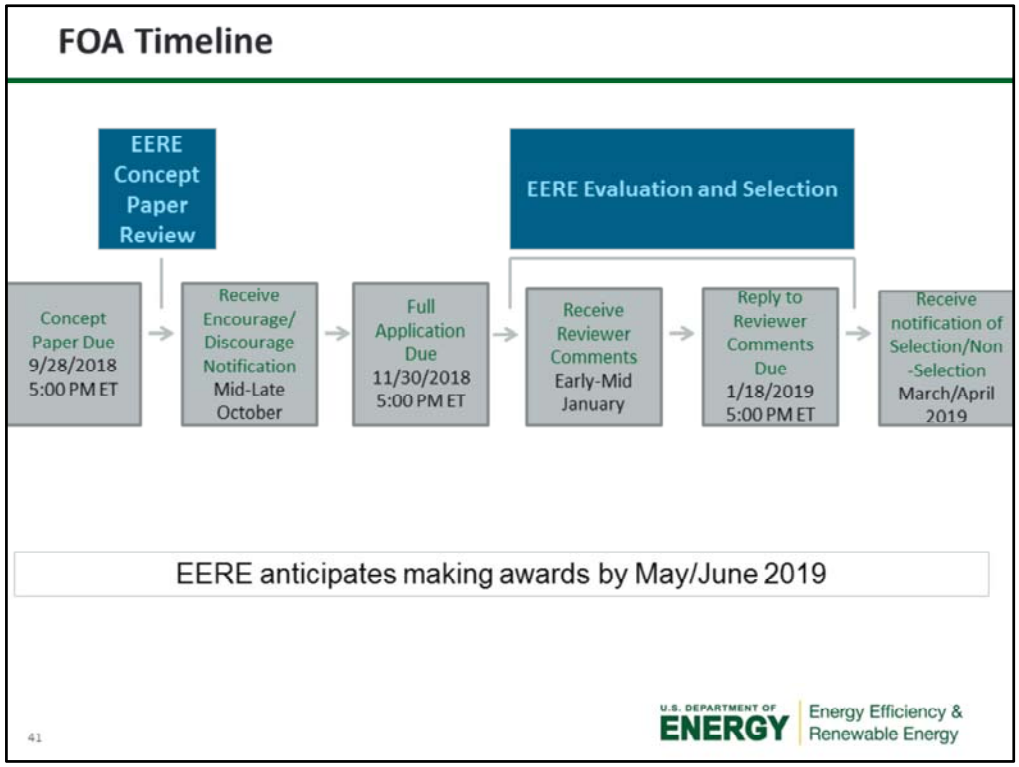
of work hours, facility use, equipment use.



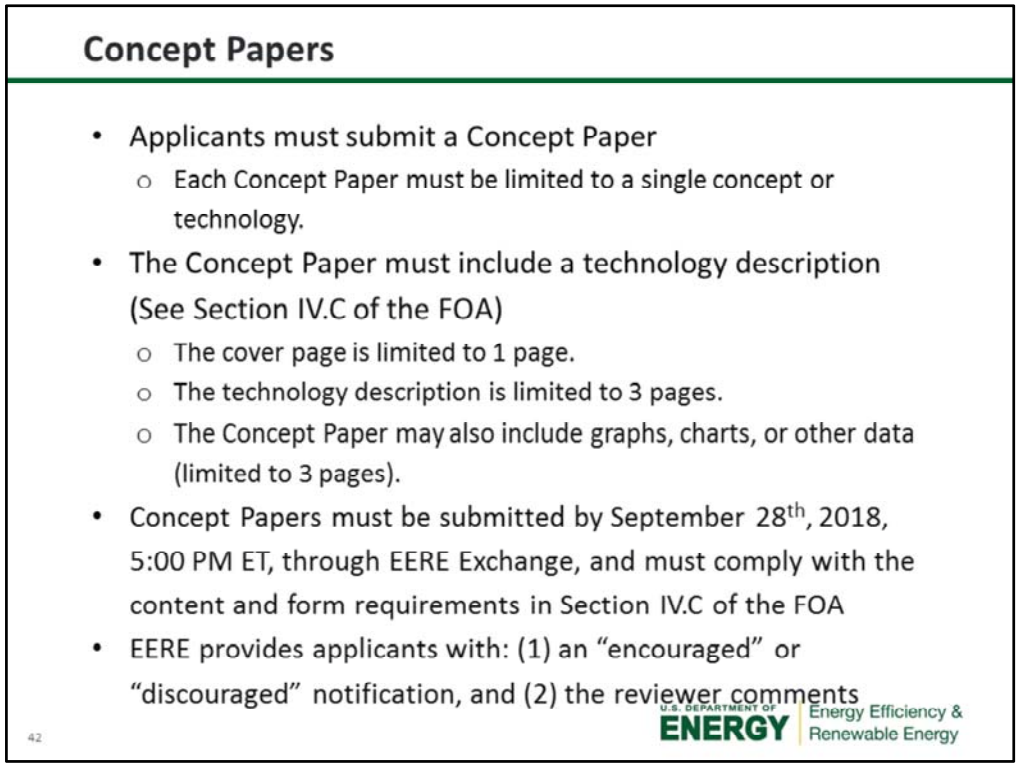
Be aware that there are items that are considered unallowable cost share. If a cost is considered unallowable, it cannot be counted as cost share. This slide provides some examples of cost share that is unallowable.



Cost Share must be provided on an invoice basis, unless a waiver is requested and approved by the DOE Contracting Officer.



EERE's Evaluation and Selection Process is shown in blue here. EERE will review Concept Papers, Replies to Reviewer Comments (which we will cover later in the presentation), and Full Applications. The gray boxes represent the actions that apply to applicants throughout the FOA process.

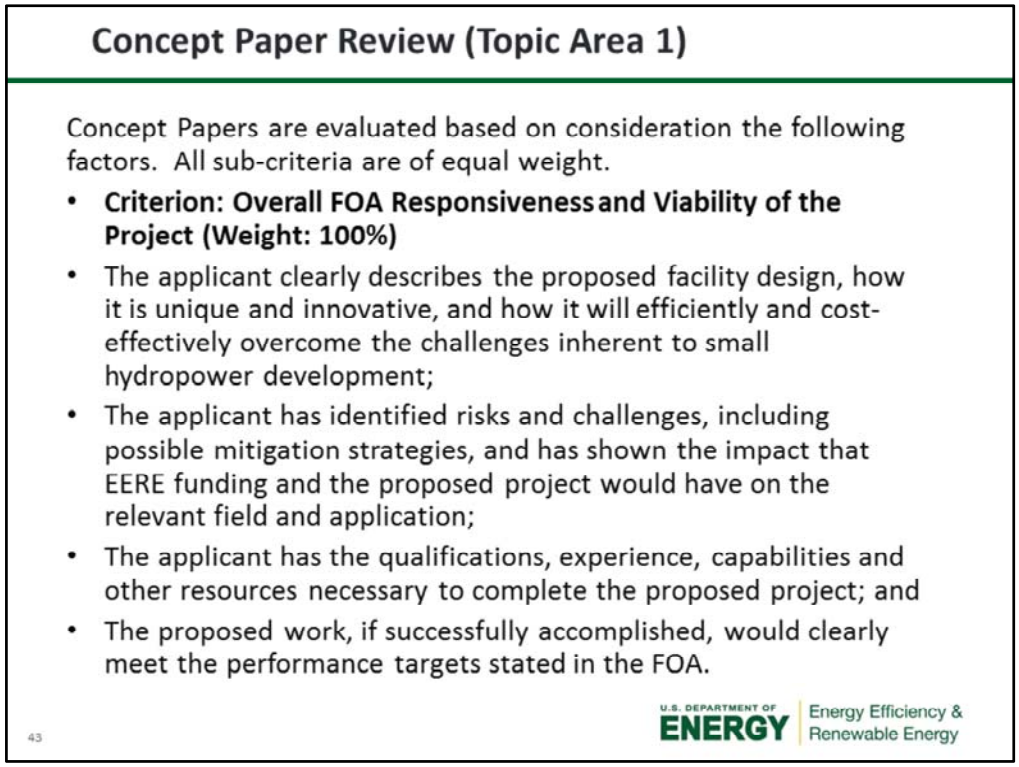


Concept Papers are required for this FOA. Concept Papers are brief descriptions of the proposed project. It allows applicants to submit their ideas with minimal time and expense. EERE will provide feedback on the proposed project so the Applicant can make an informed decision whether to expend additional resources to prepare a full application.

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

Concept Papers must be submitted by September 28th, 2018, 5:00 PM ET, through EERE Exchange.

EERE will provide applicants with either an encouraged or discouraged notification. 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.



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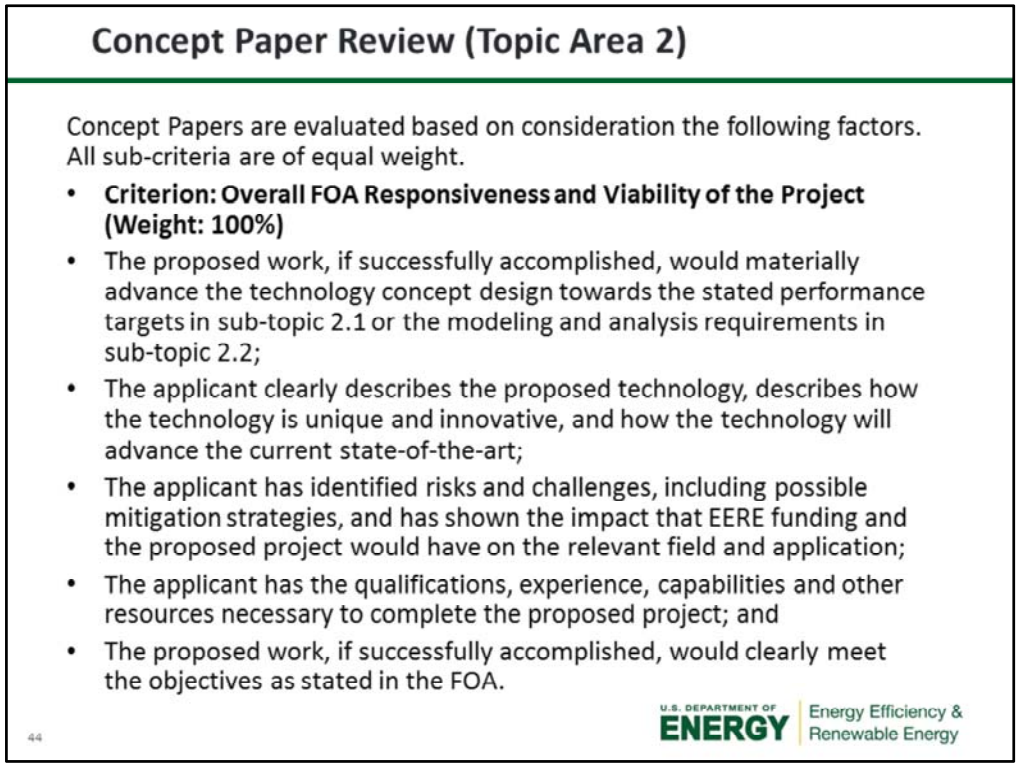
EERE will provide applicants with (1) either an “encouraged” or “discouraged” notification, and (2) the reviewer comments.

Please note that regardless of the date applicants receive the Encourage/Discourage notifications, the submission deadline for the

Full Application remains the date stated on the FOA cover page



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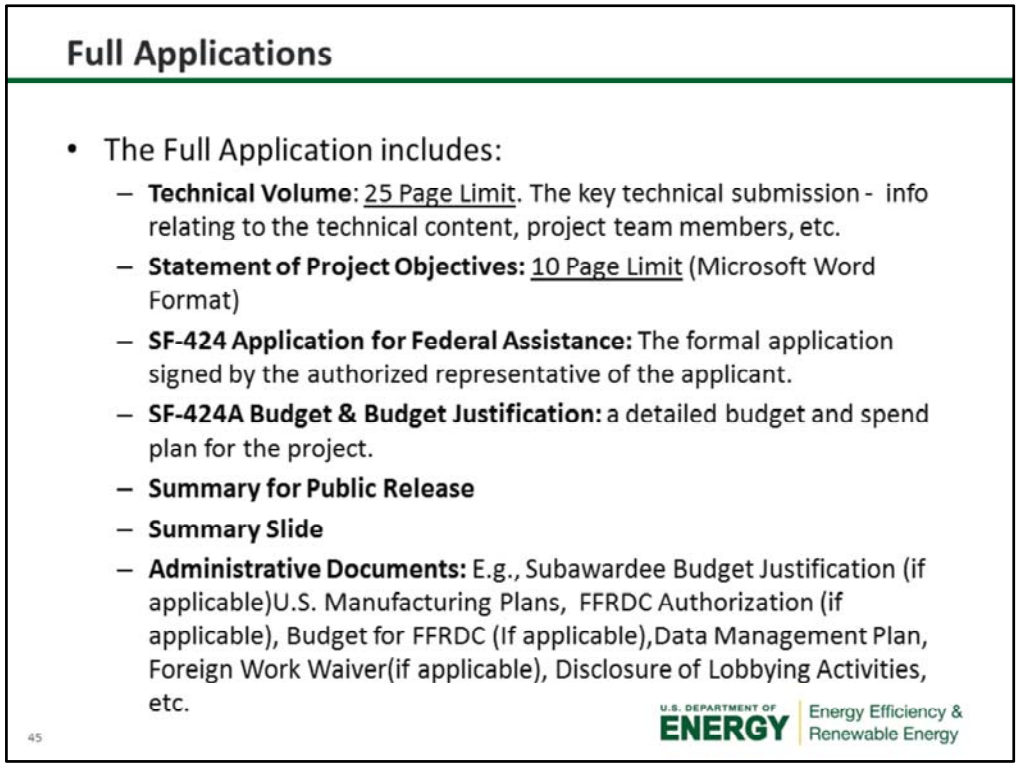


The Full Application includes:

Technical Volume: 25 Page Limit. This is the key technical submission. Applicants submit info pertaining to the technical content, project team members, etc.

Statement of Project Objectives: 10 Page Limit (Microsoft Word Format)

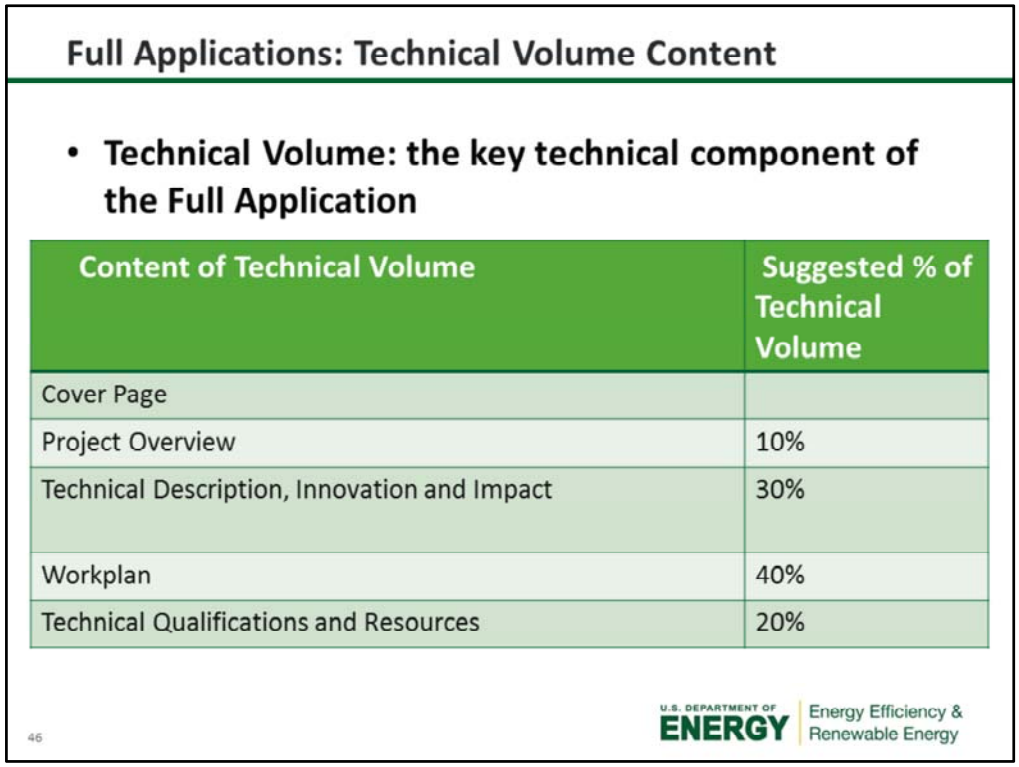
SF-424 Application for Federal Assistance: The formal application signed by the authorized representative of the applicant. Includes cost share amounts and Federal certifications and assurances.

SF-424A Budget & Budget Justification: Budget documents that asks applicants to submit a detailed budget and spend plan for the project.

Summary for Public Release: Applicants must provide a 1 page summary of their technology appropriate for public release.

Summary Slide: Powerpoint slide that provides quick facts about the technology. Slide content requirements are provided in the FOA.

Administrative Documents: E.g., Subawardee Budget Justification (if applicable)U.S. Manufacturing Plans, FFRDC Authorization (if applicable), Budget for FFRDC (If applicable),Data Management Plan, Disclosure of Lobbying Activities, etc.



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%

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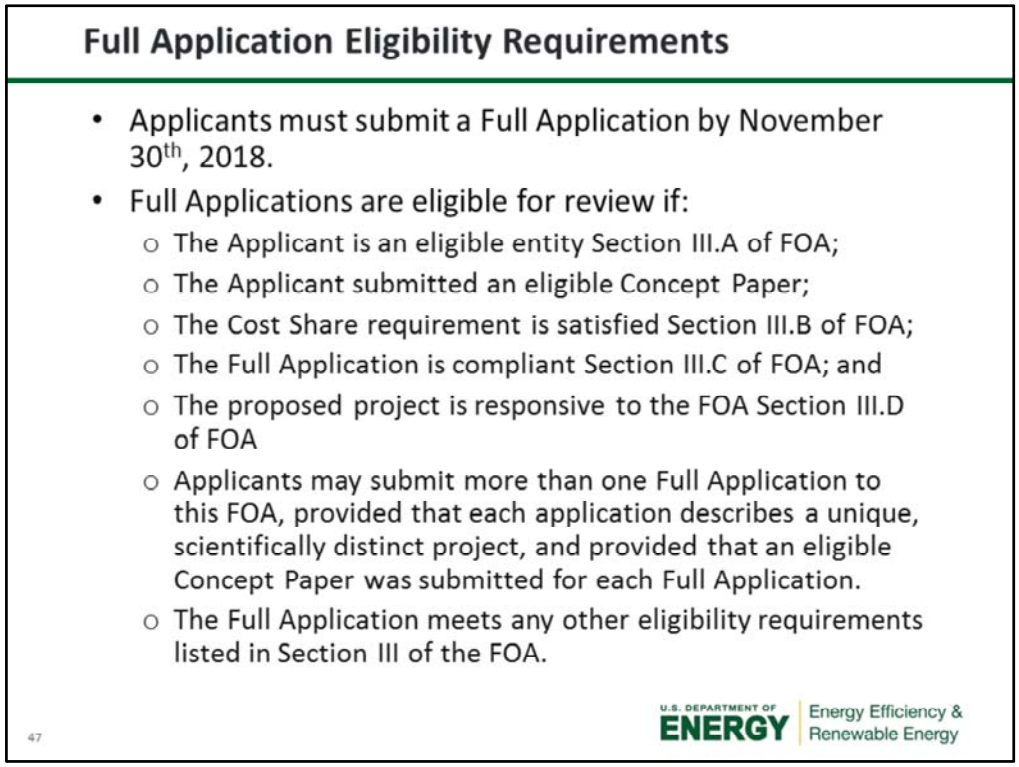
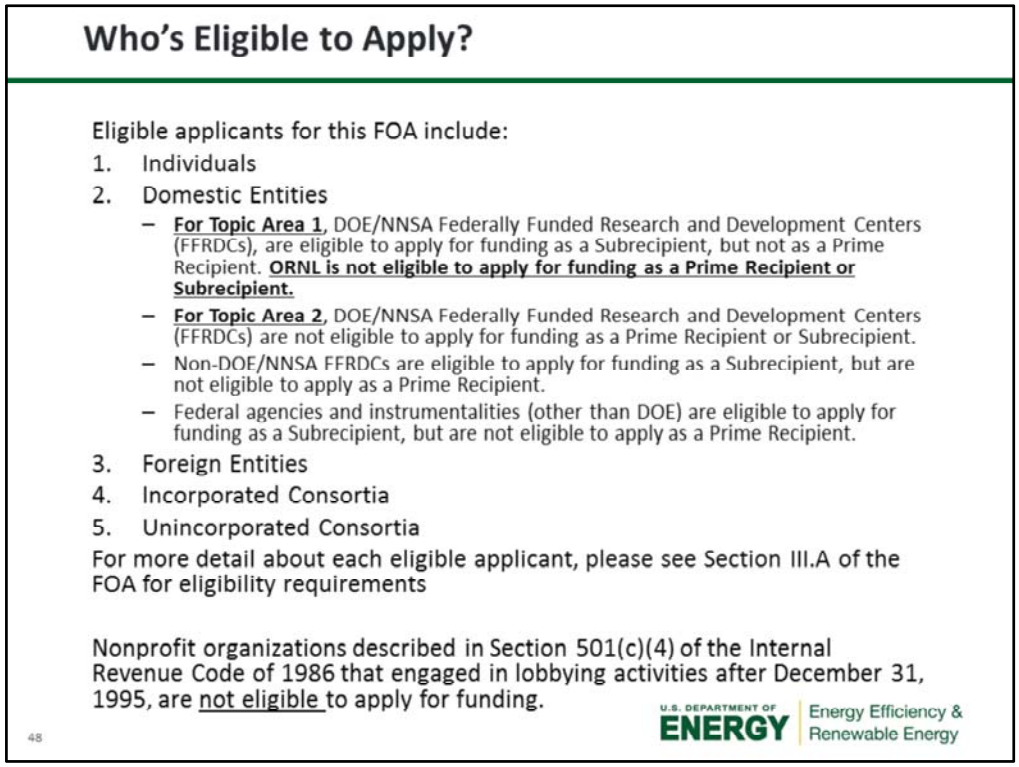
The key technical component of the full application is the Technical Volume, which helps applicants frame the technical information that the application will be evaluated on. The Technical Volume provides information regarding what the project is, how the project tasks will be accomplished, and the project timetable.

The Technical Volume may not be more than 25 pages and is comprised of a cover page, project overview, technical description, innovation, and impact, workplan, and technical qualifications and resources. Please note that the percentages listed here are suggested and are not mandatory.

- The Cover Page will be a one page document and provides basic information on their project, such as title, topic area, points of contact, etc.
- The Project Overview constitutes approximately 10% of the Technical Volume and provides information on project background, goals, impact of EERE funding
- The Technical Description, Innovation, and Impact section is approximately 30% of the Technical Volume. It provides information on project relevance and outcomes, feasibility, and innovation/impacts. This ultimately provides the justification as to why EERE should fund the project.
- The Workplan is the key element to the Technical Volume, and constitutes approximately 40% of the Technical Volume. It details the proposed milestones and project schedule. If selected for award negotiations, the Workplan serves as the starting point when negotiating the Statement of Project Objectives.
- The Technical Qualifications and Resources section is approximately 20% of the Technical Volume. It provides applicants and opportunity to provide information about the proposed project team and demonstrate how the applicant will facilitate the successful completion of the proposed project.
- [List any FOA Specific Requirements and provide an explanation]



As we previously pointed out, applicants must submit full applications by [Insert Date]. EERE will conduct an eligibility review, and full application will be deemed eligible if: READ SLIDE



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Please note that nonprofit organizations described in Section 501(c)(3) 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.

Multiple Applications

Applicants may submit more than one 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.

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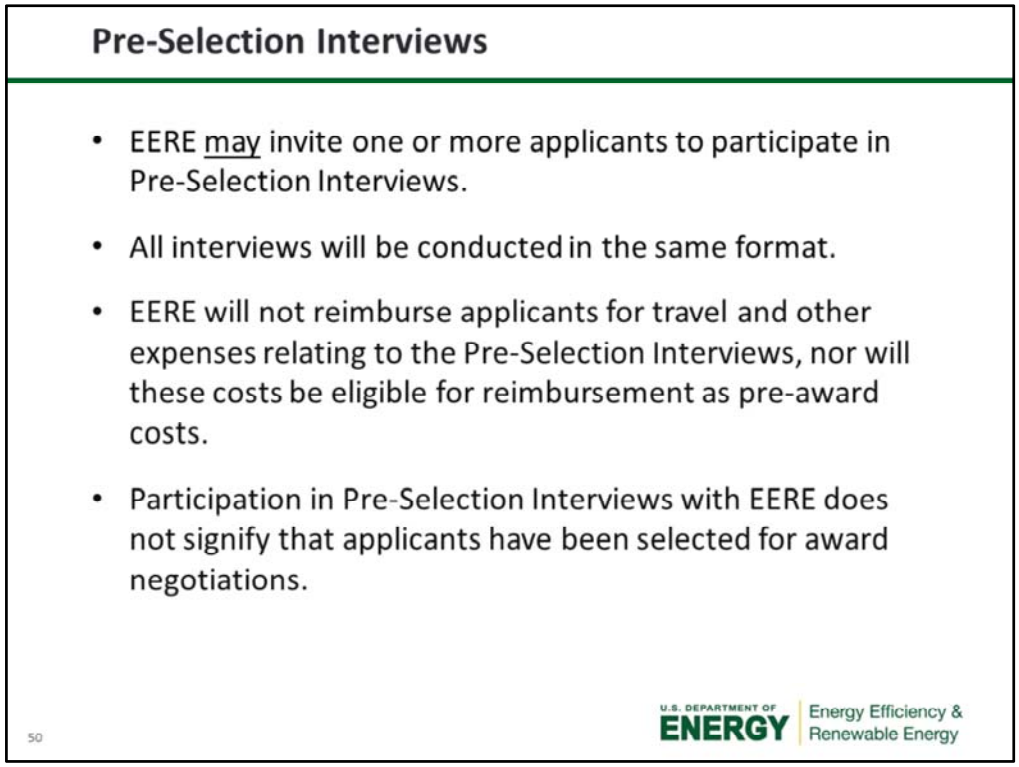

As part of the merit review process, EERE **may** invite certain applicants to participate in Pre-Selection Interviews. EERE may obtain additional information through Pre-Selection Interviews that will be used to make a final selection determination. EERE may select applications for funding and make awards without Pre-Selection Interviews. Participation in Pre-Selection Interviews with EERE does not signify that applicants have been selected for award negotiations.

If Pre-Selection Interviews are conducted, the invited applicants will meet with EERE to allow the Merit Review Panel to seek clarification on the contents of the Full Applications and otherwise ask questions regarding the proposed project. The information provided by applicants to EERE through Pre-Selection Interviews contributes to EERE's selection decisions.

EERE will arrange to meet with the invited applicants in person at EERE's offices or a mutually agreed upon location. EERE may also arrange site visits at certain Applicants' facilities. Alternatively, EERE may invite certain applicants to participate in a one-on-one conference with EERE via webinar, videoconference, or conference call.

EERE will not reimburse applicants for travel and other expenses relating to the Pre-Selection Interviews, nor will these costs be eligible for reimbursement as pre-award costs.

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

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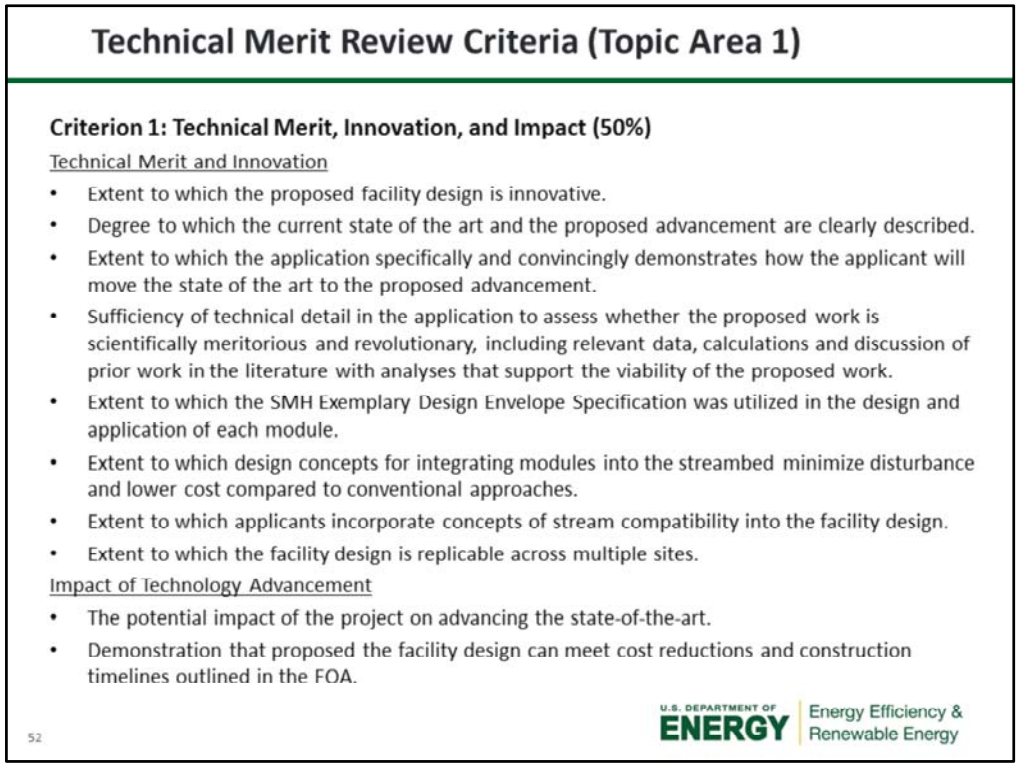

It is important that applicants review the following Technical Merit Review Criteria. Please refer back to these merit review criterion while developing your application.

For Topic Area 1, applications will be evaluated against the following merit review criteria:

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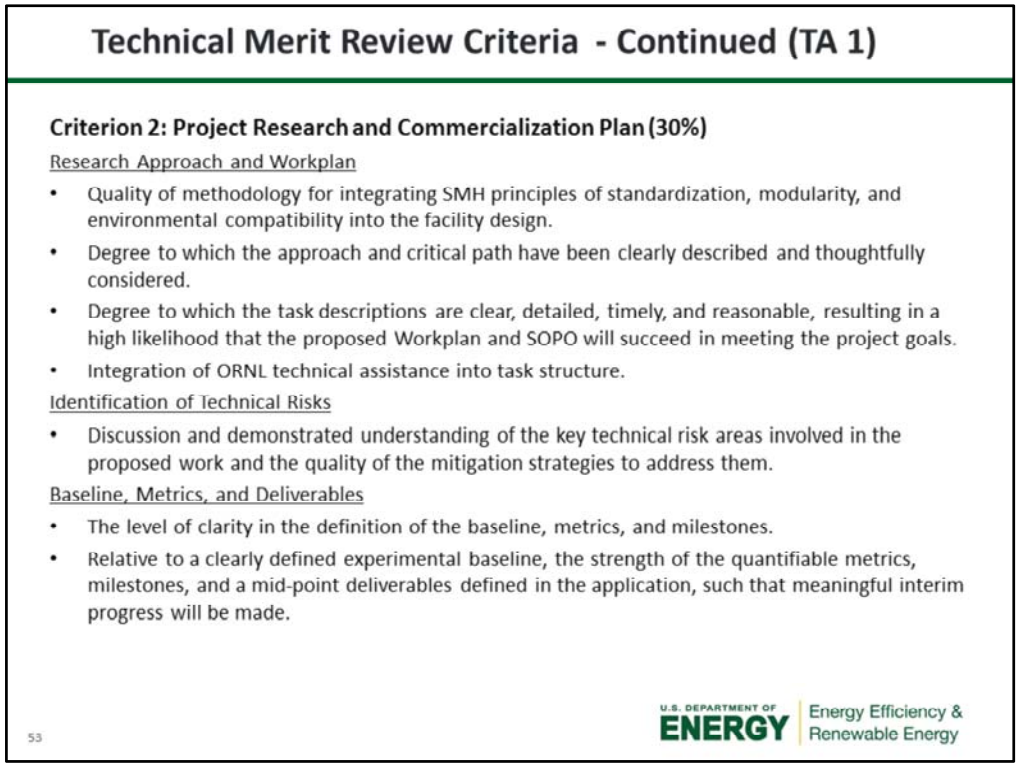

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Technical Merit Review Criteria – Continued (TA 1)

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 high probability of success.
- The qualifications, relevant expertise, and time commitment of the individuals on the team, particularly:
  - Track record of pursuing development of small hydropower sites, developing innovative technologies for small hydropower, and/or designing hydraulic infrastructure;
  - Evidence of prior work in assessing environmental functionalities of streams; and
  - Evidence of previous collaborative engagement with regulatory agencies.
- The degree to which the proposed consortia/team demonstrates the ability to facilitate and expedite further development and commercial deployment of the proposed technologies.
- The level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan.
- The reasonableness of the budget and spend plan for the proposed project and objectives.

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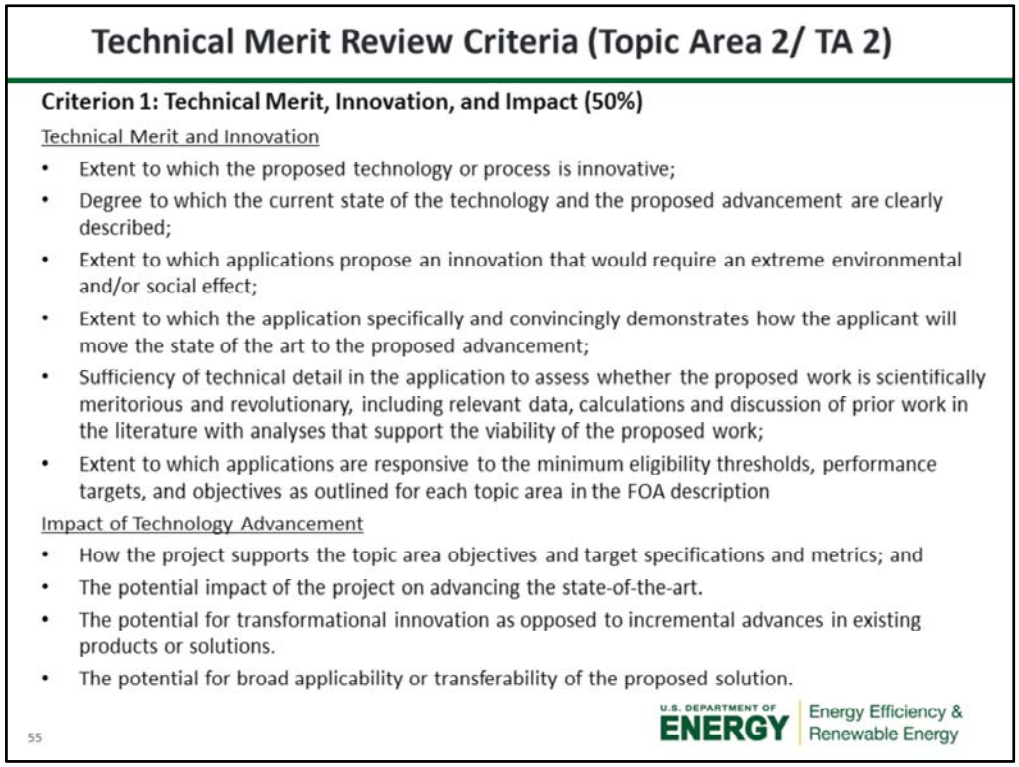

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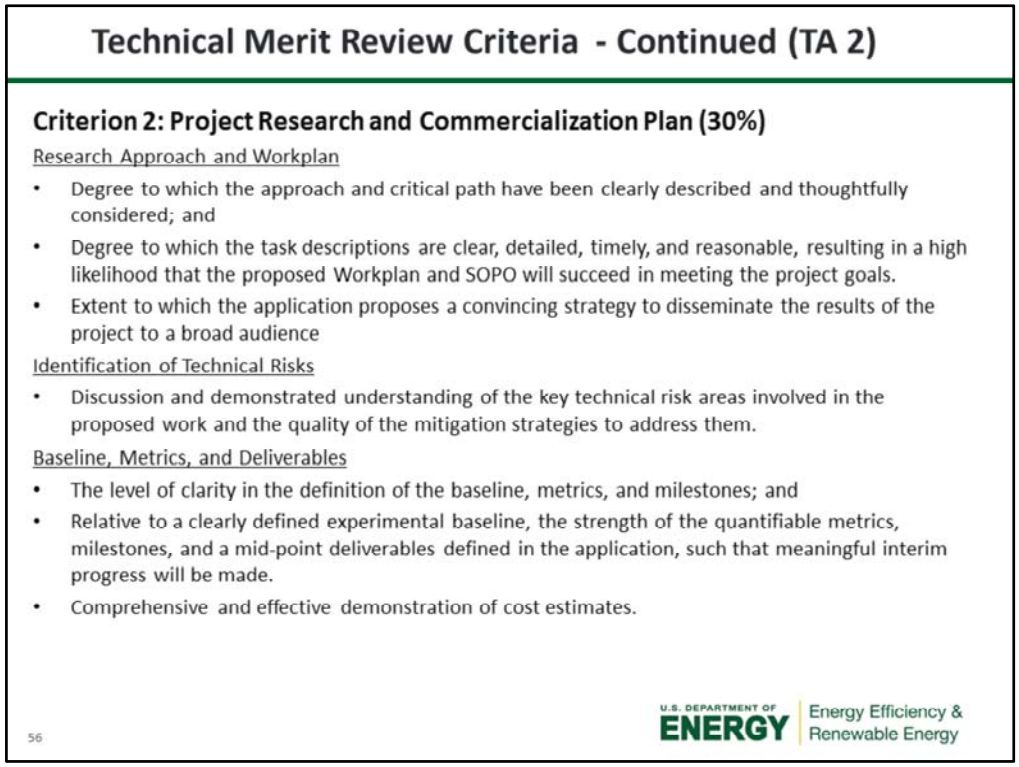

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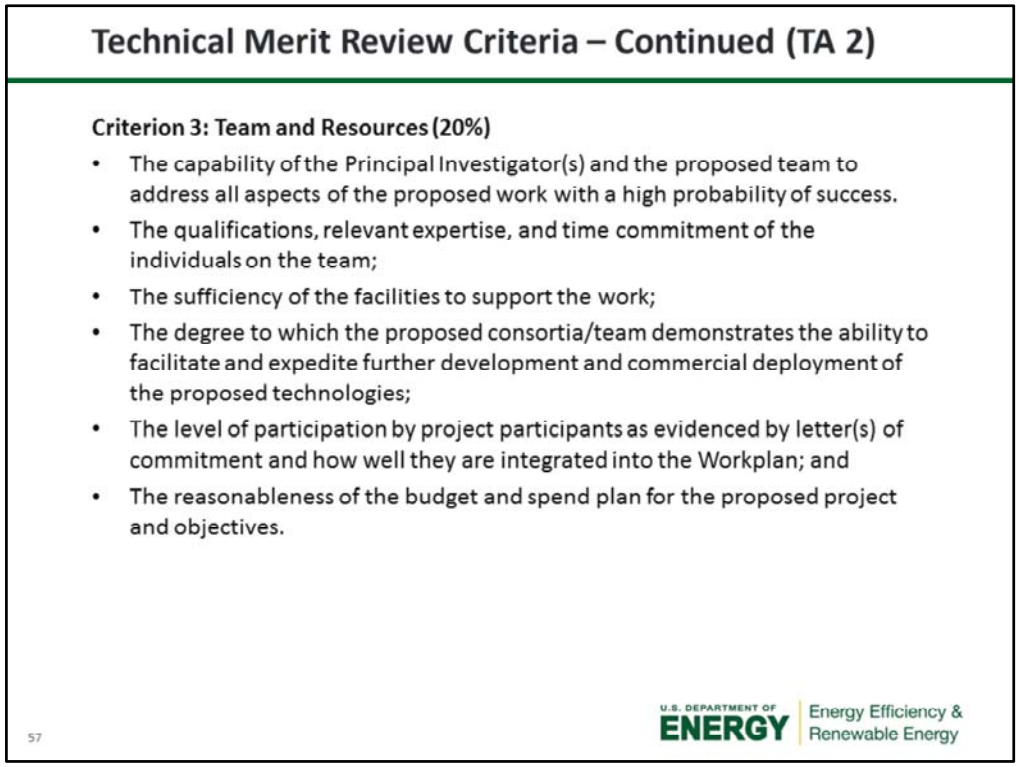

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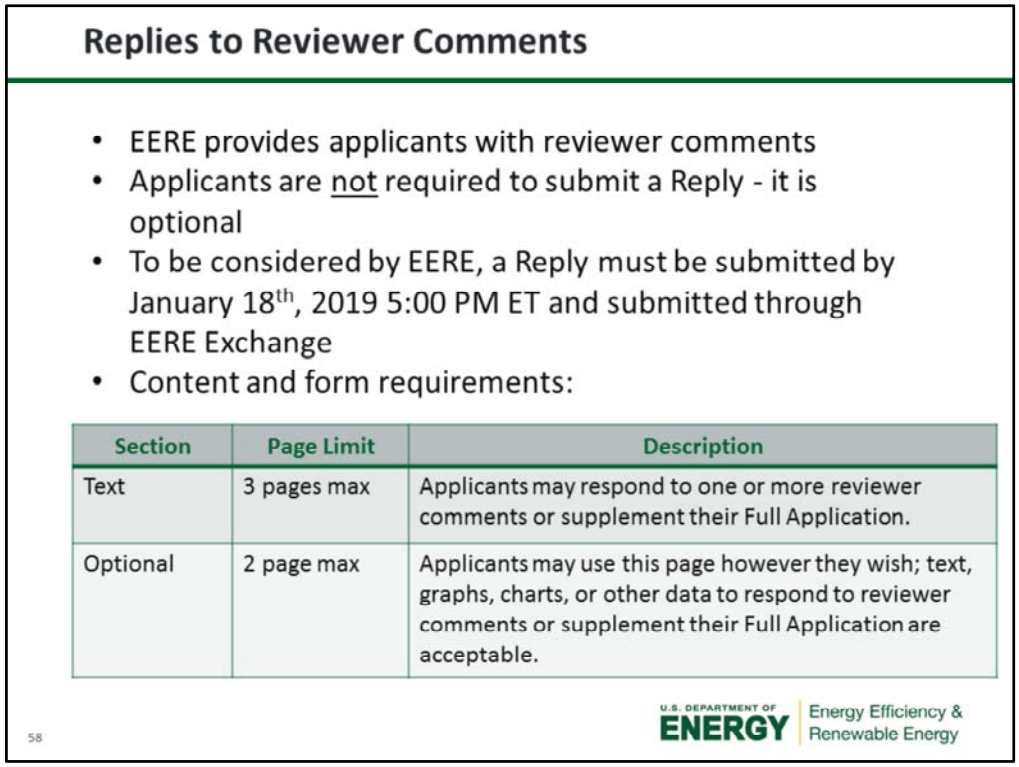

Full Applications are reviewed by experts in the FOA topic area(s). After those experts review the applications, EERE will provide applicants with reviewer comments. Applicants will have a brief opportunity to review the comments and prepare a short Reply to Reviewer Comments responding to comments however they desire. The Reply to Reviewer Comments is due by the date and time provided on this slide. Applicants should anticipate receiving the independent reviewer comments approximately three business days before this due date. The Reply to Reviewer Comments is an optional submission; applicants are not required to submit a Reply to Reviewer Comments.

This a **customer centric** process that provides applicants with a unique opportunity to correct misunderstandings and misinterpretations and to provide additional data that might influence the selection process in their favor. The Replies are considered by the reviewers and the selection official.

Replies to Reviewer Comments must conform to the content and form requirements listed here, including maximum page lengths. If a Reply to Reviewer Comments is more than three pages in length, EERE will review only the first three pages and disregard any additional pages.

Please see Sections IV.F. and V.A.3 for additional information regarding Replies to Reviewer Comments

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.

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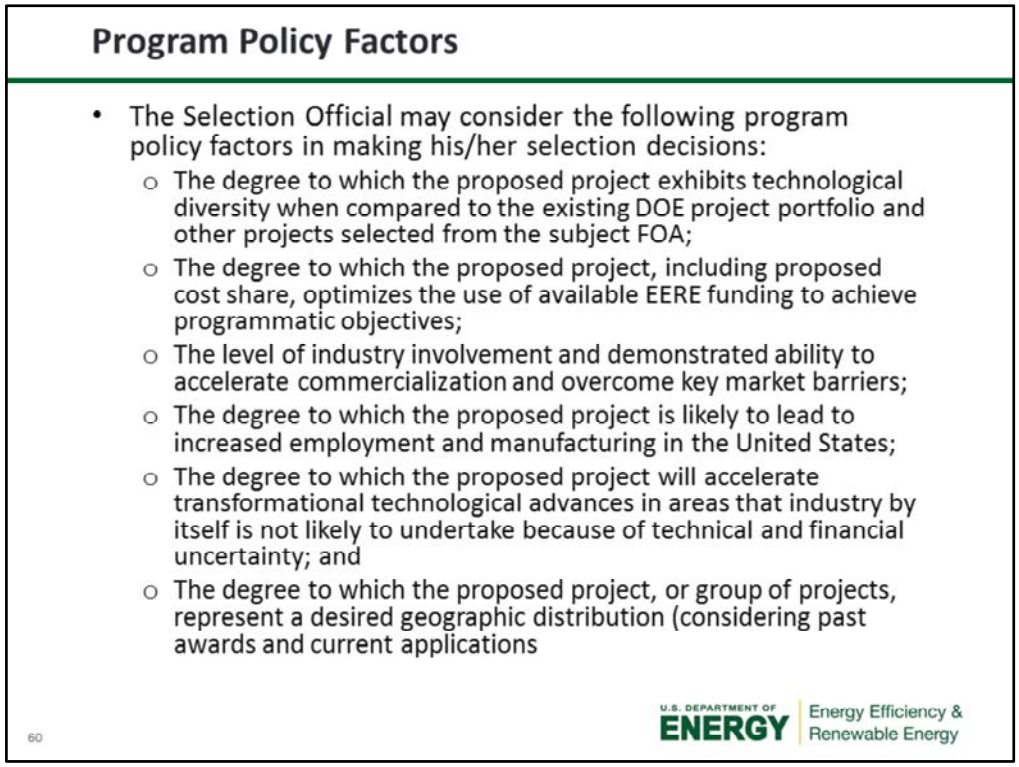

After the Merit Review process, the Selection Official may consider program policy factors to come to a final selection decision.

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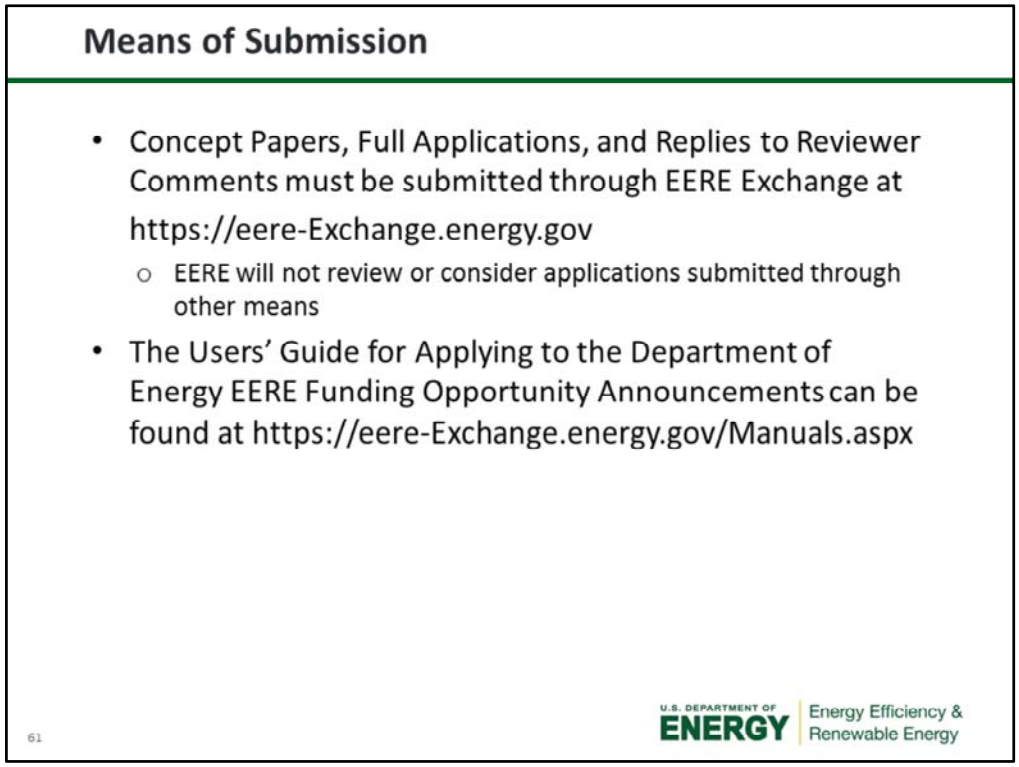

All required submissions must come through EERE Exchange. EERE will not review or consider applications submitted through any other means.

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 Confirmation page at each step, which contains the application's Control Number

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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

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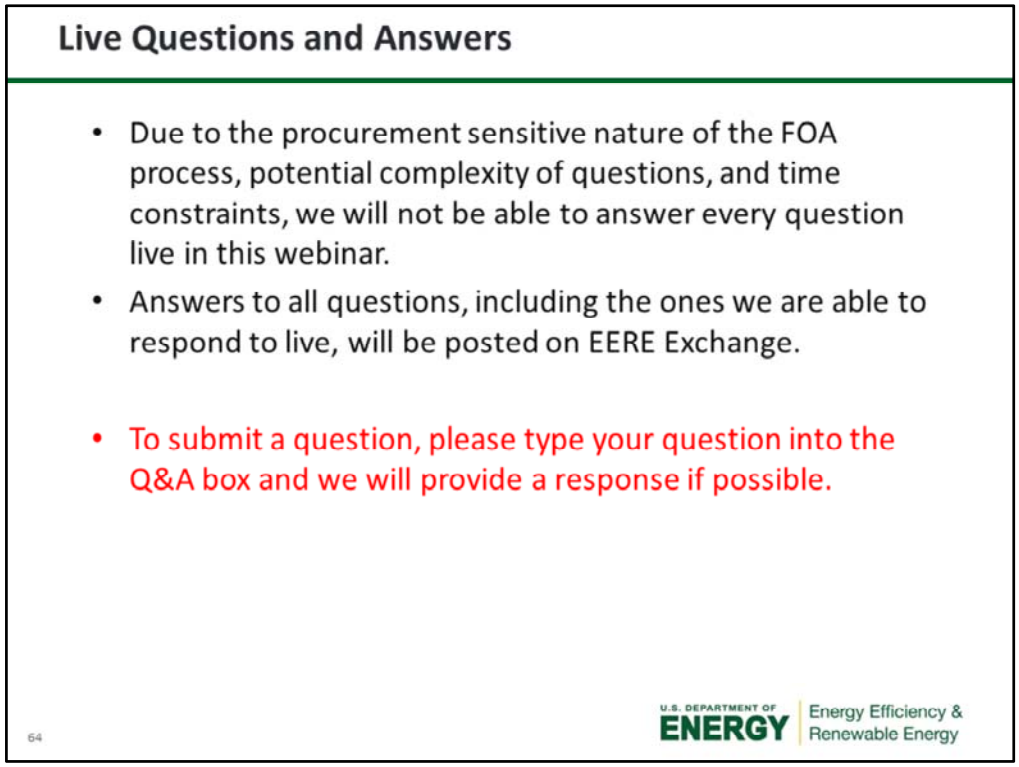

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We will now review your questions and address those which we can at this time. Reminder: All questions that have been sent in will be addressed and posted on EERE Exchange.

The question was, "… … … ...". We are unable to provide an answer to this question at this time, but will provide a written response on EERE Exchange.

Questions

- Questions about this FOA?
  Email: WPTOFOA1836@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

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