Table of Contents
Modifications and Updates........................................................................................................................... 1
General.......................................................................................................................................................... 2
Eligibility........................................................................................................................................................ 4
Budget........................................................................................................................................................... 5
Pre-application and Application.................................................................................................................... 6
Review, Selection and Award Management................................................................................................. 8
Portfolio Analysis and Management System (PAMS).................................................................................. 10

Modifications and Updates
The following changes were made between Version 1.0 and Version 1.1 of this FAQ

1. Style and formatting: questions and answers were indented, page numbers were added, and questions were numbered within each section.
2. These questions and/or answers were modified:
   b. Eligibility: Minor: 2, 3, and 4.
   c. Budget: Minor: 2
   d. Pre-application and Application: 1, 2, 6, and 7.
   e. Review, Selection and Award Management: Minor: 1,3-5,8 and 9.
3. These new questions were added:
   a. General: 9-13
   b. Eligibility: No additional questions.
   c. Budget: 3-5
   d. Pre-application and Application: 8-11
   e. Review, Selection and Award Management: No additional questions.
   f. Portfolio Analysis and Management System (PAMS): No additional questions.
1. **Q: Where will the slides and the recorded webinar be posted?**  
   A: On the Fusion Energy Sciences (FES) Funding Opportunities Page, just below the FOA announcement: [https://science.osti.gov/fes/Funding-Opportunities](https://science.osti.gov/fes/Funding-Opportunities)

2. **Q: May I come to the Department of Energy for a demonstration?**  
   A: No, potential applicants may not visit the Department of Energy for a demonstration. DOE must treat all applicants the same, which precludes arranging for demonstrations from individual entities. Please note that finalists will have the opportunity to give an oral presentation.

3. **Q: How many awards are expected?**  
   A: As Section II.D states, between 3-5 awards are expected, subject to availability of funds and the number of meritorious applications selected.

4. **Q: The community benefits plan is a novel addition to the merit review process. Nonetheless, it is probably not the expertise of many of the organizations applying. Can FES recommend subject matter experts (perhaps as paid consultants) that can help the applicants come up with impactful plans? Can FES recommend particular model Diversity, Equity, and Inclusion activities or approaches?**  
   A: Teams are responsible for ensuring that their team has or has access to all the appropriate expertise to address all the milestones in their application. DOE cannot recommend teaming partners. The FOA provides information on DEIA activities.

5. **Q: To what degree will DOE scrutinize or audit private sector accounts?**  
   A: As stated in the FOA, applicants requesting a fixed-support TIA are not subject to all the Federal cost principles and audit requirements. However, milestone payments under fixed-support TIAs should be associated with the well-defined, observable, and verifiable technical outcomes. Expenditure-based TIAs are subject to cost principles and accounting standards and require detailed budget information as part of the application (see Section IV). Negotiation and payment of estimated milestones under expenditure-based TIAs may require more detailed reviews of budget information, incurred costs, audit reports, verification of non-federal contributions, etc. Additional information is found in Section VIII of the FOA.

6. **Q: What levels of risk / TRL are appropriate?**  
   A: Risk is discussed in Section I, “FUNDING OPPORTUNITY DESCRIPTION” of the FOA. Applicants are encouraged to be thoughtful about identifying and addressing the most significant technical or physics risks of their approach within the timeframe discussed in the FOA. This FOA invites applications for “applied R&D to resolve scientific and technological issues toward the successful design of a fusion pilot plant (FPP).” Applicants should pay particular attention to the five-year deliverables specified for both tiers, as these deliverables will inform risk and TRL levels.
7. **Q:** If performing/completing a related SBIR I, can these funds supplement the associated SBIR II? If so, would completion of those phases be considered appropriate milestones?  
**A:** No, these funds cannot be used to supplement the associated SBIR Phase II awards. Duplication of effort under the Milestone-Based Fusion Development Program and the SBIR Program is not permitted.

8. **Q:** What can applicants assume about contributions from the publicly funded programs?  
**A:** If work at a national lab or university is included in an application, it should be viewed as part of it (i.e., as a sub-award). Applicants may also make assumptions that the public sector will develop certain capabilities as part of ongoing research and development programs. These assumptions should be clearly indicated within the proposal.

9. **Q:** What is the process for receiving a waiver to perform work (e.g., a demonstration) outside the United States?  
**A:** A foreign work waiver may be provided on a case-by-case basis to allow performance of some work outside of the United States, whether the work is done by US or non-US entities. Applicants who anticipate a potential need for a foreign work waiver should indicate this in their application.

10. **Q:** Is a foreign work waiver needed for a team with foreign sub-awardees if all the work is performed in the United States?  
**A:** A team with foreign sub-awardees does not necessarily require a foreign work waiver if no work is performed outside of the United States. Applicants should list their sub-awardees (noting any foreign sub-awardees) and the location of any proposed work in their application.

11. **Q:** Are letters of support permitted? Who should these letters of support be addressed to?  
**A:** Letters of support related to Diversity, Equity, Inclusion, and Accessibility (DEIA) may be included. Please review section I (page 8) of the FOA which states: “Applicants may provide letters of support from representative organizations reflecting substantive engagement and feedback on applicant’s approach to community benefits (including to the American workforce) and DEIA.” Beyond DEIA considerations, letters of support are not allowed. Section IV D (page 17) of the FOA states that letters of support are not allowed--only letters confirming collaborations or access to capabilities can be submitted. Letters of collaboration should be addressed to the Principal Investigator (PI).

12. **Q:** May I have a call with you to discuss my application?  
**A:** Calls are not permitted. DOE must treat all potential applicants equally, so DOE cannot offer individual guidance on phone calls.

13. **Q:** How will the IP and data provisions stated in the FOA (e.g. 20-year data protection and IP to partner) be reconciled with the standard CRADA terms that the Labs may be expecting (e.g. 5 year protection on data, Labs have rights to joint inventions). Will there be a new or modified CRADA?  
**A:** Lead organizations will need to work with the labs to negotiate SPPs or CRADAs with terms to mutual satisfaction to fulfill the spirit of the FOA.
Eligibility

1. Q: May a private company have a PI or other team members who are also employed by a national laboratory? (e.g., 50% time at the private company, 50% at a national laboratory)  
   A: This arrangement should be worked out between the company and the national laboratory, including adherence to all applicable conflict-of-interest policies of each entity.

2. Q: Are entities without a subsidiary or affiliate in the US eligible to apply?  
   A: Please review Section III A “ELIGIBILITY INFORMATION”, of the FOA for eligibility details. Applications may only be submitted by for-profit domestic entities or the subsidiaries/affiliates of for-profit foreign entities that are incorporated in the United States, including U.S. territories.

3. Q: Is it required or optional for the lead private applicant to have one or more public partners?  
   A: Public partners are not required. However, the FOA states that “applicant teams should have a demonstrable range of technical and non-technical expertise needed for fusion energy Research and Development and eventual demonstration and commercialization. In addition, one of the program policy factors that will be considered in making selections is “synergy and teaming between private and public partners.”

4. Q: Our company is incorporated outside the United States, and now preparing to establish a subsidiary in the United States. Is it preferable to partner with any companies originally based in US instead of applying alone? If so, what kind of partners should we find? other fusion companies? Energy company? Research institution? or other?  
   A: Please review the FOA merit review criteria in Section V, A. “CRITERIA” and the eligibility requirements in section III.A of the FOA. The Department of Energy cannot comment on specific team composition.

5. Q: Given the high probability that foreign entities will be involved in this program, I am concerned about the depth of the guidance addressing FFRDC’s and foreign entities working together. Difficulties in navigating foreign involvement is an issue we’ve run into in the past and this is far more involved.  
   A: The Department of Energy’s national laboratories have established processes for working with international partners, and nothing in this FOA supersedes the requirements under the laboratories’ contracts with DOE. FFRDCs sponsored by other agencies must comply with the terms of their contracts with their agencies.

6. Q: Does the applying US entity have to be fully incorporated when applying or when the award is granted?  
   A: The US entity must be fully incorporated when the application is submitted. The FOA, Section III – Eligibility Information, Eligibility, states that "Applications may only be submitted by for-profit domestic entities or the subsidiaries/affiliates of for-profit foreign entities that are incorporated in the United States."
Budget

1. **Q:** Can the non-federal contribution be something besides cash?
   **A:** Yes, non-federal funding can be cash and/or in-kind contributions. Section III.B of the FOA provides more detail on the non-federal contribution.

2. **Q:** While the funds are not yet appropriated, do you have a ballpark goal for the remainder of the 60 months program (e.g. beyond the first 18 months?) For example $500M split over the 3-5 awards?
   **A:** Applicants are encouraged to include an estimate for the funds required for your team to achieve your five (5)-year performance goals, consistent with the targets in the FOA. DOE cannot speculate about or comment on future appropriations.

3. **Q:** Given that FFRDC’s may need up-front payment to perform any work - how will their up-front payment schedules be reconciled with the retroactive milestone-based payment schedule of the overall program?
   **A:** Section II.A. of the FOA notes that “If a DOE/NNSA FFRDC contractor is a part of a teaming arrangement, it is expected that the DOE/NNSA FFRDC contractor will perform work under the laboratory’s Management and Operating (M&O) contract through a Strategic Partnership Project (SPP) agreement, Agreement for Commercializing Technology (ACT), or Cooperative Research and Development Agreement (CRADA) as negotiated with the lead entity. Funding for another Federal agency or its FFRDC may also be received through a CRADA or other agreement as negotiated by the lead organization.” Section VIII.A.2 includes information on how federally affiliated organizations may participate and be funded. In general, the lead entity is responsible for ensuring their team members have the resources needed. For fixed-support TIAs this may require that the lead entity provide resources to members of their team (e.g., FFRDCs, universities) before payments have been received from the Department of Energy.

4. **Q:** If milestones are fulfilled before the award date would those milestones be funded immediately? For instance, if a milestone is fulfilled 7/1/23 but the award is not made until 9/30/23, could the team be paid immediately upon award?
   **A:** If an applicant achieves a milestone prior to award, and that milestone has been verified, a payment may be made at the time of award or soon after. Please note that applicants are encouraged to include substantial, meaningful milestones, which means their milestones are not likely to be achievable prior to the project start date, barring substantial delays in award.

5. **Q:** We understand that sub-awardees like National Labs will need to submit a budget justification. What are the documentation requirements for vendors providing goods and services towards a milestone?
   **A:** Section IV.D.4, “Research and Related Budget”, provides additional information on the level of detail required for budget justifications for both fixed-support and expenditure-based TIAs. In general, applicants should include enough detail for the DOE Contracting Officer and program manager to judge reasonableness.
Pre-application and Application

1. **Q: Are the merit review criteria applicable to the pre-application or only the full application?**
   
   **A:** The merit review criteria are applicable to the full application. The pre-application is relatively short, and it will be reviewed internally. DOE will review the responsiveness to the objectives of this program. The full application will be reviewed by subject-matter experts.

2. **Q: The FOA indicates that a table of numbered milestones are required including the Milestone title, Completion criteria, estimated total cost, requested federal share, and quarter due (from award date). For each item in the table, please indicate which elements are negotiable during the time between the proposal submission and the award.**
   
   **A:** The milestones are negotiable and will depend on the funding level. However, DOE has some milestones that must be included and are clearly labeled in the FOA. For example, a FPP preconceptual design milestone must be included no later than Quarter 6. For more detail, see Section I of the FOA.

3. **Q: Can you go more into Tier 2 awards and what’s in scope? For example, can we focus on a specific fusion-relevant technology that can substantially improve overall FPP performance if enhanced? Are broad technology solutions that could be applied to multiple fusion reactor concepts of interest? Or should teams aim to address the fusion device more broadly in the application?**
   
   **A:** For Tier 2 applications, significant performance improvements may be defined by the applicant. Applicants should articulate how their proposed performance improvements can lead to a credible preliminary design of a fusion pilot plant (FPP) by the early 2030s. It is expected that a credible case for a full FPP would require advancing both the physics basis and multiple technologies in parallel, not just one technology. Applicants may wish to think of Tier 2 as being about five years behind Tier 1 in schedule. Please note that this FOA is not designed to advance components that will be of use to multiple concepts. This solicitation is focused on the fusion pilot plant, and therefore funding for a single component like a tritium loop or a neutral beam is out-of-scope for this FOA.

4. **Q: Will milestones be adjusted during project execution?**
   
   **A:** This is possible, but please note the target quarters for specific goals (e.g., a FPP technology roadmap no later than Q6) should be adhered to as much as possible.

5. **Q: Should applicants specify what region/city of the US the work will be performed in? Would it be beneficial to the application to describe how to engage with the community?**
   
   **A:** Yes. Please review Section IV for application requirements, including the location of the work to be performed. Section I includes a description of the Community Benefits Plan, which describes how projects are expected to “(1) support meaningful community and labor engagement; (2) invest in America’s workforce; and (3) advance DEIA.”

6. **Q: Do you anticipate a difference in selection rate or award size for Tier 1 vs Tier 2?**
A: DOE cannot speculate on selection rates since they will depend on available funds and the merit of the applications received.

7. Q: In addition to the two requested milestones (preconceptual design and technology roadmap) we are planning to include several design milestones that are in our plan over the first 18-months, plus some initial hardware milestones. Is that appropriate? I.e., additional milestones in the first 18-month period can be related to anything in our plan – they are not just activities related to developing the two request milestones?
   A: In addition to the required 18-month milestones of a pre-conceptual design and technology roadmap, other milestones as proposed by the applicant are allowable as long as they are in support of the program objectives, as well as the 18-month and/or five (5)-year deliverables.

8. Q: Is the milestone table required for the pre-application?
   A: The table is required for the full application. Section IV B of the FOA includes instructions for the pre-application. The bulleted list on page 16 notes that a “Sparse outline/schedule of major milestones to be proposed...” is requested, not the full table.

9. Q: Can we switch partners and collaborators after submitting the pre-application and before the final application is due?
   A: Yes, applicants may switch partners and collaborators after submitting the pre-application and before the submission of the final proposal. Please notify us of such changes since DOE often use the information in the pre-application to select potential reviewers without conflict of interest.

10. Q: How do I submit an application?

11. Q: How do I submit a pre-application?
Review, Selection and Award Management

1. Q: Will merit review be difficult or "more novel" because of the very real and much more dynamic possible conflicts of interest both financially, competitively, and/or internationally?
   A: The DOE has a robust merit review process, which will be followed to ensure a fair and comprehensive review of all compliant and responsive proposals received.

2. Q: How much preference would be given to Tier I proposals and proposals with a higher amount of cost share compared to Tier II with lower cost share?
   A: All compliant and responsive proposals will be evaluated in accordance with the merit review criteria. Factors beyond technical merit-- such as high leveraging of federal funds through a substantive non-federal contribution-- will be taken into account through Program Policy Factors.

3. Q: What are Program Policy Factors and how will they be applied to this FOA?
   A: Program Policy Factors for this FOA are listed in section in Section V.B.2 of this FOA and are further defined in the DOE guide to financial assistance ([https://www.energy.gov/sites/prod/files/GuidetoFinancialAssistance.pdf](https://www.energy.gov/sites/prod/files/GuidetoFinancialAssistance.pdf)). Program policy factors help the agency consider factors beyond technical merit, such as geographic distribution, EJ/DEIA, high leveraging of federal funds, and whether an entity is majority US-owned (among several other factors) in thinking about the selections. DOE cannot predict exactly how program policy factors will be applied to this or any solicitation.

4. Q: Can you comment on how reviewers will be selected to assess the new requirements on, for example, commercialization and DEI? Will they be the same or different as those assessing the scientific merit?
   A: In accordance with the Energy Act of 2020 the peer review process will include reviewers with appropriate expertise from the private sector, the investment community, and experts in the science engineering of fusion and plasma physics. DOE's goal is to have a broad representation of expertise during the review process. If reviewers have expertise in multiple areas and can review multiple aspects of the proposals, DOE will welcome it.

5. Q: Does DOE need help finding peer reviewers to address these applications? How will the DOE go about finding reviewers?
   A: The DOE, Office of Science is always open to suggestions about individuals with appropriate backgrounds, expertise, and abilities to serve as reviewers. Please be aware that the DOE strictly enforces conflict of interest rules, including institutional affiliation. If a potential reviewer is an employee of an institution submitting an application, that reviewer is precluded from seeing or helping evaluate an application from that institution. The DOE, Office of Science also holds itself to an academic conflict of interest standard in which an applicant may never be reviewed by graduate school advisor or advisee.

6. Q: The FOA indicates that key team members will be indicated in the pre-application as well as the application in the section related to subawards. During the period of performance, are additions, removals or modifications of subawards allowed? What is the process for entering into negotiations for modifications of subawards?
A: Modifying, adding, or removing sub-awardees is possible. The process for modifying a subaward is to request the agency’s approval, particularly if the change in subawards would change the scope of work or otherwise constitute a substantive change. The TIA may include a term and condition requiring DOE’s approval of new subawards and modifications after execution of the TIA base award.

7. **Q:** Do you have any guidance on the consequences of late or missed milestones?

   **A:** It is expected that these situations will be addressed on a case-by-case basis between the awardee and the DOE management team. The overarching desire from DOE’s perspective is for projects to succeed within reasonable adherence to original federal budgets and project plans.

8. **Q:** The FOA suggests that the Fusion Pilot Plant (FPP) Preliminary Design Review (PDR) is the final milestone of the program. However, a team may plan to reach its PDR before the 5-year milestone program concludes. In this case, is a team free to reach the PDR milestone before program conclusion, and follow it on with further milestones towards the design and construction of the FPP (with associated business/commercial impact)?

   **A:** Awardees may complete deliverables ahead of schedule. However, the FOA scope does not include activities beyond the Preliminary Design Review.

9. **Q:** The FOA is clear that we need to have yearly SMART objectives related to EJ/DEIA. However, while 60% of the merit review criteria are on commercial and business objectives, there is no corresponding requirement to have a certain number or frequency of commercial or business milestones. Should ~60% of our milestones relate directly to business or commercial accomplishments? How should the high business/commercial merit weighting be reflected in our milestones?

   **A:** There is no direct connection between the milestones and the merit review criteria. There is no requirement on a specific fraction of milestones in each area. Determining milestone type and frequency is the responsibility of the applicant, taking into consideration risk management, federal payment or reimbursement frequency, and credibility of the overall plan.
Portfolio Analysis and Management System (PAMS)

1. **Q:** How do I register a new institution in PAMS?
   
   A: Please contact the PAMS helpdesk at [PAMS-Helpdesk@science.doe.gov](mailto:PAMS-Helpdesk@science.doe.gov) for assistance.

2. **Q:** Given the short window between the FOA announcement and pre-application due-date and the backlog at sam.gov in assigning UEI numbers, will there be any exemption for entities that don’t receive a UEI in time to submit? Is there a workaround in which the private company submission is sent by an existing registered entity?

   A: The UEI does not need to be fully assigned in SAM.gov to be able to submit an application in Grants.gov. Applicants must be registered in the System for Award Management (SAM), which means starting the process not actual receipt of the UEI. The application forms in grants.gov will ask for an UEI, but they will not reject an application if it is left blank. Applicants in this situation may proceed with submitting an application. Our expectation is that by the time the merit review selection, and negotiation process is complete a UEI will be assigned, or suitable workarounds will have been identified.