

Questions and Answers **Updated 23 April 2020**

Regarding the Advanced Reactor Demonstration Program (ARDP) Funding Opportunity Announcement (FOA)

Interested parties may submit questions regarding the ARDP and/or FOA in writing to advancedreactordemonstration@id.doe.gov.

DOE will make reasonable efforts to answer questions asked within three working days. Questions of general interest or deemed necessary for public dissemination will be posted to this Q&A document.

1. QUESTION: Has the solicitation been issued? If not, when will it be issued?
ANSWER: The solicitation has not yet been issued; DOE intends to release the ARDP FOA in late April 2020. UPDATE: Now anticipated for early May 2020.
2. QUESTION: Does DOE intend to issue a draft ARDP FOA for comment by interested parties?
ANSWER: No, a draft ARDP FOA is not planned.
3. QUESTION: If a draft ARDP FOA is not planned, how does DOE plan to get feedback from interested parties and hear their concerns, questions, and suggestions on the language of the ARDP FOA?
ANSWER: In order to address industry needs, the Department issued a Request for Information/Notice of Intent in February 2020 to provide stakeholders with an early opportunity to help DOE shape the content of the ARDP FOA. Going forward, DOE will provide interested parties with the opportunity to ask questions on the ARDP FOA and provide answers. DOE will also conduct an Industry Day for interested parties to learn more about the program and solicitation requirements, including additional opportunities for Q&A.
4. QUESTION: What program elements will the ARDP FOA include?
ANSWER: The ARDP FOA will be comprised of three separate technology development and demonstration pathways. Applicants will need to determine which pathway is the best fit for their proposed project.

Pathway 1: Advanced Reactor Demonstrations (Demos) – Projects supported under this pathway are expected to result in a fully-functional, advanced light-water or non-light water nuclear fission reactor to be licensed by the U.S. Nuclear Regulatory Commission (NRC) and be operational within five to seven years of award. DOE will support all activities, including construction, required to achieve the operational demonstration.

Pathway 2: Risk Reduction for Future Demonstrations Program (Risk Reduction) – Projects supported under this pathway will focus on preparing/maturing those reactor designs and technologies that are ~~nearly not yet~~ ready for selection under the Demos so that they can be demonstrated in the near- to mid-term (i.e., approximately five years later than the Demos). Activities proposed under this program would address technical, operational, and regulatory challenges facing the designs, such as: developing representative test facilities and conducting experiments; performing modeling and simulation of the design to address operational and safety issues; developing of innovative plant safety systems; development and submittal of a design certification application, construction permit, and/or site license application, depending on the preferred licensing pathway; and major component or system prototyping and/or manufacture, proving the ability to design and operate innovative capabilities.

Pathway 3: Advanced Reactor Concepts 2020 (ARC-20) Program – Projects supported under the ARC-20 pathway will focus on innovative and diverse designs that are lower on the Technology Readiness Level (TRL) scale than Demos or Risk Reduction projects, and that have a commercialization horizon in the mid-2030s. These programs are expected to be in the conceptual design phase, during which essential functions and capabilities of the proposed reactor technology are being identified, design specifications are being solidified, and early licensing requirements established.

5. QUESTION: How does the Advanced Small Modular Reactor (SMR) Research and Development (R&D) Program relate to this FOA?

ANSWER: The Advanced SMR R&D Program is NOT part of the ARDP FOA. Government support for the Advanced SMR R&D Program is awarded separately from the ARDP FOA. The Advanced SMR R&D Program is intended to facilitate industry's development of a variety of near- to mid-term SMR designs that have the potential to replace much of the existing fossil generation infrastructure due to their potential for improved affordability, resilience, siting flexibility, and safety profiles. The program focuses on cost-shared, private-public R&D partnerships to address technical, operational, and regulatory challenges specific to SMRs such as multi-module control, integrating primary components inside a reactor pressure vessel, and reduction of emergency planning zones. Competitive awards for the Advanced SMR R&D Program are supported through the U.S. Industry Opportunities for Advanced Nuclear Technology Development Funding Opportunity Announcement (Industry FOA).

Per Congressional direction, any entity other than a national laboratory that receives fiscal year 2020 funds of more than \$200,000 under the Advanced SMR R&D program is not eligible to receive fiscal year 2020 funds from the ARDP.

6. QUESTION: Can you provide other detail about the ARDP FOA schedule?

ANSWER: DOE intends to issue the ARDP FOA in ~~late April~~ early May 2020. DOE will plan for an Industry Day approximately three weeks after issue of the FOA. Approximately one to two weeks following the Industry Day, DOE will require Letters of Intent from all interested applicants. Full application submittals will be required somewhere between 60-90 days following final FOA release. Timing of award review and selection processes will differ for each of the FOA pathways. After selection announcements, award negotiations and processing will occur, followed by the actual issuance of the awards. Demos awards are tentatively expected to be issued in the last quarter of CY20, with Risk Reduction and ARC-20 awards expected in the first quarter of CY21.

7. QUESTION: Where and how will the final ARDP FOA be released to the public?

ANSWER: The ARDP FOA will be officially announced and posted on the Government's [Grants.gov](https://www.Grants.gov) website. DOE will make efforts to ensure the public is notified of the ARDP FOA release through multiple channels, including postings on the DOE [FedConnect](#) website, the DOE's Office of Nuclear Energy ([NE](#)) website, the DOE's Idaho Operations Office [ARDP FOA website](#) for this FOA, and on the National Reactor Innovation Center (NRIC) website (being developed) and the Gateway for Accelerated Innovation ([GAIN](#)).

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8. QUESTION: The DOE sought industry feedback on this solicitation with a prior Request for Information/Notice of Intent (RFI/NOI); will DOE share what this feedback was?

ANSWER: There was much valuable feedback provided that has helped inform DOE's process and shaped how the FOA will read. A summary of some of the main feedback received is as follows:

- Government approach of using a single FOA is preferable to industry, including both Demonstrations and Risk Reduction activities
- NRC needs to be actively engaged
- HALEU supply for demonstrations and commercial deployment is a major concern for nearly all respondents
- Consistent DOE funding due to federal government budget process
- Preference for a payment for milestone approach
- Industry desires a Draft FOA to comment on before the official release
- Industry prefers graded implementation of cost share

Some of these feedback ideas will be implemented, while others may not. DOE very much appreciates the feedback provided.

9. QUESTION: For the Risk Reduction and the ARC-20 program, is the period of time over which the award must be spent limited to one year or can the funds be spent over a longer term?

ANSWER: The amounts DOE has to obligate are fiscal year 2020 appropriations, and these are to initiate the awards. These funds can be spent over a longer term (across multiple years). We also anticipate additional funding in future years, depending on congressional appropriations.

10. QUESTION: Is fuel fabrication and qualification allowed under the cost share?

ANSWER: Yes, so long as the costs for it occur within the project period of performance and are otherwise found to be allowable, allocable, and reasonable.

11. QUESTION: Will the total amount of the awards under the Risk Reduction pathway and ARC20 still be \$30 million and \$20 million, respectively?

ANSWER: The Risk Reduction and ARC-20 respective \$30 million and \$20 million amounts represent available Fiscal Year 2020 funding to initiate the awards under these two pathways; they do not necessarily represent total amounts for individual awards.

12. QUESTION: Will the number of potential awardees under the Risk Reduction pathway still be up to 5 awardees? How many potential awardees will there be under ARC-20?
ANSWER: DOE anticipates selecting between 2 - 5 Risk Reduction awards, and up to two ARC-20 awards. The available funding this fiscal year will be split among these awards. We plan to incrementally fund awards and anticipate future appropriations to continue to fund the awards going forward.

13. QUESTION: The RFI indicated that work under the award must be performed in the United States, but talked about a waiver process. Can you please elaborate on the waiver process?
ANSWER: It is anticipated that the FOA will require that all work under the awards resulting from the FOA must be performed in the U.S., unless otherwise waived by DOE, but that this requirement will not apply to the purchase of services or equipment at or below \$250,000. However, it is also anticipated that the Awardee should make reasonable efforts to purchase services and equipment within the U.S.

For foreign equipment purchases or for labor over this threshold to be done outside the U.S., it is anticipated that a waiver will be necessary. The FOA will list the necessary information that must be included in a request to waive the Performance of Work in the U.S. requirement. DOE anticipates that the waiver request process will apply to both pre-award as part of the application, and post-award during performance for foreign purchases or work that was not proposed/approved as part of the application process.

14. QUESTION: What about other foreign involvement apart from labor and supplies? Will the FOA permit foreign investment, including to be used as part of awardee cost share?
ANSWER: It is anticipated that preference may be given for U.S. content, technology, expertise, etc., in selecting applicants for award under the FOA.

Applications that have the potential to enhance U.S. nuclear infrastructure may also be given preferential consideration, although it is anticipated that DOE may also consider potential contributions of foreign expertise and supply chains.

It is anticipated that DOE may consider foreign influence in the selection of applications, including type and amount of foreign involvement in the project, as well as any foreign ownership, control, or influence (FOCI) issues.

Regarding foreign investment, including use of foreign funds for recipient cost sharing, DOE anticipates that this will be permitted. However, applicants should also be aware that as part of the US Nuclear Regulatory Commission (NRC) licensing process, foreign ownership and control may also be a consideration, and while some level of foreign investment is permitted, the NRC may require a negation action plan or other instrument to make sure safety and security decisions are not made by foreign interests. Applicants should work directly with NRC on this matter.

15. QUESTION: The Answer to Question 4 above provided additional detail about Pathway 2. However, comparatively less detail was provided about Pathway 3. Can more information be provided about Pathway 3, either now or before the FOA is issued? Also, the Answer to Question 4 says that Pathway 3 will focus on innovative and diverse designs. Can more information be provided about this focus? For example, in assessing the innovation and diversity of a design, what will be the reference set for this assessment (e.g., those applying under Pathway 3, designs generally being funded under the ARD program, or some other basis)?

ANSWER: Pathway 3, ARC-20, is a research and development (R&D) effort to focus on innovative and diverse advanced reactor technologies in their earliest phases of design, with the potential of being demonstrated much later - in the 2035 timeframe. The awards resulting from this pathway will support this overall project objective but include only those activities in the applicant's proposed work scope that can be completed within the next five years from the effective date of the award.

16. QUESTION: Can we get our background information protected at the DOE National Labs if we work with them on this project and they get access to this data?

ANSWER: Applicants desiring to protect background data at National Laboratories industry are encouraged to use the CRADA process for this purpose.

17. QUESTION: Question 1 above says, "DOE intends to release the ARDP FOA in late April 2020". Can you please confirm if that is still the schedule?

ANSWER: The FOA will likely get released in early May 2020.

18. QUESTION: In the RFI stage, DOE emphasized the importance of the applicant having a Federally approved indirect rate agreement. Can you please provide additional information on this as well as assistance for who we contact to get this in place?

ANSWER: As part of your application you must submit a detailed narrative description of the proposed project (i.e., a project plan) and an associated budget with supporting justification. The budget is the financial plan for the proposed project. The budget will normally include indirect costs. When deciding whether to submit an application in response to the FOA, determine if your organization already has a federally established indirect cost rate. If so, identify this in your budget supporting documentation along with a copy of any federally established rate agreement. If not, you will need to:

a. Determine if you are eligible to use a de minimus indirect rate of 10% (see 2 CFR 200.414 for details), or

b. Obtain a federally established indirect cost rate. If you do not have a current federally established indirect cost rate you will be required to submit additional information including an indirect rate cost proposal, and additional Government reviews will be

required to evaluate, negotiate and determine an appropriate rate. **These actions can take an extended period of time (up to six months) to complete so it is vitally important to begin these as early on as possible so as not to unduly delay the application submittal or award process.**

To start the process if you do not have a federally established indirect cost rate: Identify and contact your cognizant federal agency for indirect costs (see 2 CFR 200.19) and/or request the agency provide you with information/requirements needed to submit an indirect rate cost proposal. The process to establish indirect rates and information needed to do this may vary between agencies.

If you are unable to identify your cognizant agency or do not have a cognizant agency, please send an email to advancedreactordemonstration@id.doe.gov to notify DOE of your need to establish a federally approved rate agreement, including to provide the following: Organization name, address and organization representative name, title and email address. Following this, we will contact you with the next steps.

19. QUESTION: We are interested in getting DOE approval for pre-award costs. How soon can we do this; is it acceptable to request approval for pre-award costs before the issuance of the FOA?

ANSWER: Pre-award costs are those incurred prior to the effective date of the Federal award directly pursuant to the negotiation and in anticipation of the Federal award where such costs are necessary for efficient and timely performance of the approved project. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the Federal award and only with the written approval of the contracting officer.

As specified in 2 CFR Part 200.308, all costs incurred before DOE makes the award are at the recipient's risk (i.e. DOE is under no obligation to reimburse such costs for if for any reason the applicant does not receive a Federal award or if the Federal award is less than anticipated and inadequate to cover such costs).

There is no set time as to when an applicant can submit a request to the contracting officer for a pre-award cost approval. In practice, however, they are requested after issuance of the FOA, and typically are made after selection announcement but prior to award.