Developing and Demonstrating Nanosensor Technology to Detect, Monitor, and Degrade Pollutants Funding Opportunity Informational Webinar

Questions and Answers

August 29, 2024

1. **Is this funding opportunity a second chance for previous projects not awarded under a similar EPA announcement?**
   Answer: No. This is a new funding opportunity, and all applications will be evaluated against the requirements and criteria specified in the funding opportunity.

2. **Because this opportunity requires two simultaneous research areas (specifically, sensing and degradation), can a proposal include one of the two technologies at a lower Technology Readiness Level (TRL) while the other is at higher TRL?**
   Answer: If an application includes one research area with a lower TRL, it may not be ranked as highly as other applications where both research areas are within a higher range. This funding opportunity is seeking higher ranges within the 4-6. If your application includes a lower range, it is suggested to include a rationale explaining why one is lower and how it will add to a higher range.

3. **Is a contractor working for a federal agency eligible to apply?**
   Answer: No. Neither private companies nor individuals are eligible to apply.

4. **Can an adjunct faculty of a state college or university be principal investigator (PI) or co-PI?**
   Answer: Yes. If the adjunct faculty member is affiliated with the university and is granted permission by the institution to serve as the PI or co-PI, then this person may serve as a PI or co-PI on the application.

5. **What is meant by the integration of detection and degradation?**
   Answer: EPA is interested in a holistic approach for detecting, monitoring, and degrading PFAS in groundwater or surface water that may be used as drinking water sources. Nanosensors to detect and monitor PFAS should be integrated with a nanotechnology-based treatment process focused on destruction of the C-F bond. Projects should make a case for a sensing solution as well as a degradation solution that does not create harmful by-products. Applications should demonstrate how the nanosensors have potential to be integrated into a comprehensive monitoring system.

6. **Is this funding opportunity seeking technology that includes integration of detection and degradation or can two modular technologies serve one purpose for each?**
   Answer: Applicants should be able to show how the two research areas are integrated, even if you're using two separate nanomaterials for detection and degradation. The only guidance in the funding opportunity is that the project should focus on the same PFAS across research areas.

7. **Is there a difference between the letter of support vs. intent?**
   Answer: Yes. The definitions of each type of letter are provided on page 33 of the funding opportunity and included below:
   a. Letters of intent to provide resources for the proposed research or to document intended interactions are limited to one brief paragraph committing the availability of a resource (e.g., use of a person's time or equipment) or intended interaction (e.g., sharing of data, as-needed consultation) that is described in the Research Plan. EPA employees are not permitted to provide letters of intent for any application.
   b. Letters of support do not commit a resource vital to the success of the application. A letter of support is written by businesses, organizations, or community members stating their support of the applicant's proposed project. EPA employees are not permitted to provide letters of support for any application.

8. **In PFAS detection, Technology Readiness Level (TRL) 4-6 was achieved at a small business that is collaborating with the academic PI who considers submitting the proposal. Would that count for fulfilment of requirement of prototype development?**
   Answer: This funding opportunity is seeking projects with a Technology Readiness Level 4-6, meaning there is a prototype that can be validated and/or demonstrated. EPA is not looking for proof-of-concept projects or the development of new prototypes under this funding opportunity Applications should clearly define the TRL of the proposed technology. More information about the TRLs can be found on page 8 of the funding opportunity.

   The Lead PI of the application must meet the eligibility requirements as described on page 13 of the funding opportunity. While for-profit businesses are not eligible to apply, they may serve as contractors/consultants to the project. The funding opportunity does not restrict who developed the original prototype, as long as the eligibility criteria are met.

9. **Is Nanotechnology or nanomaterials for treatment only responsive?**
   Answer: Yes. Research Areas 1 and 2 are seeking nanotechnology solutions for degradation and detection. Specifically, Research Area 2 is seeking nanotechnology with functionalized catalyst to degrade PFAS, so the catalysis of PFAS should create nano-enabled or non-toxic byproducts.

10. **Is there list of where to find groups, that could contribute or support, as collaborators?**
    Answer: No. EPA does not maintain lists of collaborators or consultants to share with eligible applicants.

11. **Is the funding opportunity seeking degradation or absorption removal to be considered for treatment?**
    Answer: Regarding treatment, this funding opportunity is seeking catalytic degradation. Applications that propose absorption or removal may be considered less responsive to Research Area 2.

12. **Can an international collaborator be a part of the team?**

Answer: Yes. An international academic institution or non-profit can be a part of a research team; however, international institutions may not be the lead institution.

13. **How many proposals does EPA approve for relevancy review?**
    Answer: There is no specific number or percentage of proposals that proceed to relevancy review after peer review.

14. **How many awards will be made under this funding opportunity? How much funding will be awarded?**
    Answer: This funding opportunity anticipates making one award for $1.5 million including direct and indirect costs.

15. **Is this funding opportunity intending to sense or degrade one PFAS or all PFAS?**
    Answer: This funding opportunity does not specify the number of PFAS; however, it does require applicants to study the PFAS listed in EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR 5). That list can be found under the Funding Opportunity Description in Section E.

16. **How much of basic science does this funding opportunity require or should all proposed ideas be focused on technology and development?**
    Answer: This funding opportunity is seeking validation and demonstration of technology with TRL of 4-6 and is not seeking the development of new prototypes. More information about the TRLs can be found on page 8 of the funding opportunity.

17. **Is this funding opportunity seeking a single system that can detect, monitor, and degrade PFAS all on one platform, or separate systems that perform these functions in a sequential process?**
    Answer: The funding opportunity does not define whether projects should be a single system that can detect, monitor, and degrade PFAS in one platform, or separate systems that perform these functions sequentially. Applications should show how the detection and degradation functions are integrated, even if you're using two separate platforms and/or nanomaterials.

18. **Will selection of detection target become a selection criterion defined beyond the merit review?**
    Answer: No. The evaluation criteria for selection are listed in the funding opportunity.

19. **Should the by-products resulting from the degradation be investigated?**
    Answer: The degradation process should aim to break the C-F bonds, resulting in full mineralization of PFAS rather than creating shorter chain PFAS. The funding opportunity does not further define the investigation of by-products resulting from the degradation.