



REQUEST FOR APPLICATIONs – NSF EPSCoR RII Track-1 Research Ideas

Call for Proposal Deadline: Feb. 28, 2023 (5 p.m. CT)

Notice of Funding Opportunity Summary

The Oklahoma NSF EPSCoR (Established Program to Stimulate Competitive Research) program is soliciting ideas for potentially transformative research which builds off of the current NSF EPSCoR Research Infrastructure Improvement Track-1 project titled *Socially Sustainable Solutions for Water, Carbon, and Infrastructure Resilience in Oklahoma (S³OK)*. Proposed research ideas should develop and test science-based solutions for complex (“wicked”) problems at the intersection of land use, water availability, and infrastructure in Oklahoma. Details about the Oklahoma EPSCoR and NSF EPSCoR programs are available at <https://www.okepscor.org/> and <https://beta.nsf.gov/funding/initiatives/epscor>.

Applications will be accepted by the State EPSCoR Committee from any Oklahoma institution of higher education. Proposals should describe research to be completed over a period of up to 5-year duration with budgets in the range of \$1M to \$1.5M.

Oklahoma NSF EPSCoR’s overarching goal is to increase the state’s research competitiveness through strategic support of research instruments and facilities, research collaborations, and integrated education and research programs. To promote and stimulate research competitiveness, the Oklahoma EPSCoR Committee plans to select thematic research areas that can impact pressing societal needs/problems using interactive teams of researchers across a spectrum of institutions, disciplines, and levels of emphasis. Selected themes will form the basis of the next Oklahoma NSF EPSCoR RII Track I program.

By consciously promoting interactivity among researchers across the spectrum from basic to application-oriented, the Oklahoma NSF EPSCoR program seeks to not only improve research outcomes, but also increase the overall benefit to society.

Submission Information

Research proposals must be submitted as a single .pdf file to ok.nsf.epscor@okepscor.org by 5:00 p.m., Tuesday, February 28, 2023. In the e-mail subject line, write: Letter of Application-PI’s Last Name, and Institution name.

Applications should be 6–8 pages in length, have 1-inch margins, and use no smaller than 12-point font.

Late submissions will not be accepted and any proposals not following the page, margin, or font size limits will not be considered.

Program Description

This will be a multi-phase process, open to collaborative teams led by faculty researchers at universities throughout Oklahoma. The multi-phased process outlined in this Request for Application (RFA) is designed to give full voice to Oklahoma's faculty researchers in proposing what teams of researchers and outside partners are most poised to advance S³OK research addressing important societal problems.

This first phase is essentially an idea challenge to determine those thematic areas that appear most promising and the teams that have the potential to expand under the Track-1 project.

Teams showing the most promise as NSF EPSCoR Track-1 research candidates will be selected by the State EPSCoR Committee to work with internal and external partners to further build out their respective teams and ideas to develop the full Track-1 proposal (during the second phase occurring later in 2023).

Research Priorities

Proposals are being requested for research that contributes to the broader research of the S3OK project. The unifying research question of this project is, *"Can science-based assessment of the intersections of wicked problems, coupled with systematic and iterative engagement with OK opinion leaders and input/feedback from members of the OK public, result in development of socially sustainable solutions?"* Key challenges being addressed by the project include shifting subseasonal to seasonal weather patterns; wastewater reuse; carbon sequestration via terrestrial processes; increasing wildfire threats; resiliency of water, electric, and transportation infrastructure; and related social dynamics. Research may include physical, biological or social sciences, engineering, and projects that advance related data science, data analytics, informatics, and data visualization.

Highest priority will be given to research that demonstrates the "potential to advance knowledge" and "potential to benefit society and contribute to the achievement of specific, desired, societal outcomes." Within this framework, the proposals should emphasize how the research:

1. Advances S3OK research
2. Achieves broader impacts:
 - a. Involve Primarily Undergraduate Institutions and/or Minority Serving Institutions (PUI- MSI) in Oklahoma
 - b. Involve early career faculty and/or underrepresented groups
 - c. Involve tribal partners or include significant tribal engagement and/or involve multi-stakeholder collaboration
 - d. Include public or stakeholder education/engagement as part of the project

Funding Information

Proposals totaling up to \$1.5M (direct plus IDC) will be accepted; however, smaller proposals will also be considered.

Project Period

Proposed research should be completed in 5 years

Special Budgetary Guidelines and Constraints

- PI salary dollar requests cannot exceed 2 months of funding.
- Grant recipients are allowed to charge institutionally negotiated indirect cost rate on the prime award.

Eligibility

Individual researchers and research teams comprised of researchers at any institutions of higher education in Oklahoma are eligible to apply. We encourage *diverse participation* particularly involvement of faculty at Minority Serving Institutions (MSIs) and Primarily Undergraduate Institutions (PUIs) in Oklahoma. Multiple proposals from the same researcher(s) are welcome as long as each application represents a distinct research project.

Review and Selection Process

Proposals will be evaluated by the State EPSCoR Committee. Evaluation elements will include:

REVIEW CRITERIA
Relevance: Degree to which proposal advances S ³ OK research
Scientific Merit: Innovative &/or significantly contributes to knowledge in field; scientifically sound and appropriate methods used; cognizant of past work and status of the science
Collaboration: Level of involvement of multiple disciplines and institutions, and range of faculty (from early career faculty to full professors)
Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
Broadening Participation: Level of involvement of OK PUI or MSI faculty, underrepresented groups, and Tribal partners; integration with public or stakeholder education/engagement

Proposal Guidelines

Proposals must adhere to the following formatting guidelines:

- Font size must be at least 12-point
- Margins must be at least one inch in all directions
- Line spacing must not exceed six lines of text per vertical inch
- Page size must be letter (i.e., 8.5 inches × 11 inches)

Proposals should be 6–8 pages in length and must include the following:

- PI Information: Name, Title, Institution, Department and email
- Name, professional title, department, and institution of all collaborating investigators
- A descriptive title
- Rationale
- Overall hypothesis or goal
- Specific objectives
- Approach
 - Provide clear descriptions and justification of the methods for the integrated and transdisciplinary approach to be used to achieve the desired goal(s)
- Potential impact and expected outcomes
- Proposed outreach and/or integration with current NSF EPSCoR outreach activities
- Anticipated budget
 - Submit a written statement (2 pages maximum) estimating the total 5-year budget and summarizing how the team anticipates the budget will be used (not included in page count).
 - The budget should be included in the NSF format
- References Cited (not included in page count)
- 3-pg CVs (per NSF format) for PIs and co-PIs (not included in page count)