



Funding Opportunities

October 31, 2022

Department of Energy, Office of Science

Atmospheric System Research (ASR)

Pre-Application: December 8, 2022 | Full: February 23, 2023

Summary: The DOE SC program in Biological and Environmental Research (BER) hereby announces its interest in receiving applications for Atmospheric System Research (ASR) within BER's Earth and Environmental Systems Sciences Division (EESDD). ASR supports research on key cloud, aerosol, precipitation, and radiative transfer processes that affect the Earth's radiative balance and hydrological cycle, especially processes that limit the predictive ability of regional and global models. This FOA solicits research grant applications for observational, data analysis, and/or modeling studies that use observations supported by BER, including the Atmospheric Radiation Measurement (ARM) user facility, to improve understanding and model representation of: 1) Cloud, aerosol, precipitation, and thermodynamic processes from ARM's Tracking Aerosol Convection Interactions Experiment (TRACER); 2) Cloud, aerosol, precipitation, and radiation processes from ARM's Surface Atmosphere Integrated Field Laboratory (SAIL); 3) Warm boundary layer atmospheric processes; and 4) Southeast U.S. atmospheric processes through early use of observations from the third ARM Mobile Facility (AMF3). All research supported by awards under this FOA is intended to benefit the public through increasing our understanding of the Earth system.

Requests for research support under this FOA must address one of the following research topics. PIs should clearly indicate to which topic or topics they are responding.:

1. Cloud, aerosol, precipitation, and thermodynamic processes from ARM's Tracking Aerosol Convection Interactions Experiment (TRACER):
2. Cloud, aerosol, precipitation, and radiation processes from ARM's Surface Atmosphere Integrated Field Laboratory (SAIL)
3. Warm boundary-layer atmospheric processes
4. Southeast U.S. atmospheric processes through early use of observations from the third ARM Mobile Facility (AMF3)

Estimate Funding: The ceiling and floor described in this FOA represent the expected range of award sizes. Ceiling: \$945,000 total for 3-year projects submitted to topics 1, 2, or 3; \$630,000 total for 2-year or 3-year projects submitted to topic 4 or for 2-year projects submitted to topics 1, 2, or 3.

Estimated Number of Awards: Approximately 20 to 25 awards are expected.

Additional Information: [DE-FOA-0002850](#)

Department of Energy, Building Technologies Office
(NOI) Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT)

Summary: The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Building Technologies Office (BTO), a Funding Opportunity Announcement (FOA) entitled “Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) - 2022”.

This potential FOA is expected to support the development, validation, and demonstration of novel building technologies and retrofit practices that have significant potential for equitable carbon savings through building electrification, energy efficiency, and demand flexibility. The FOA will also enhance building and grid resilience, affordability of efficient technologies and practices, and ensure environmental justice and inclusion of underserved communities.

It is anticipated that the FOA may include the following Areas of Interest:

- Heating, Ventilation, and Air Conditioning (HVAC) and Water Heating (WH)
- Thermal Energy Storage (TES)
- Battery Energy Storage Systems (BESS)
- Plug Loads/Lighting
- Opaque Building Envelope

Additional Information: [DE-FOA-002787](#)

Department of Energy, Office of Clean Energy Demonstrations
(RFI) Energy Improvements in Rural or Remote Areas (ERA)

Responses Due: November 28, 2022

Summary: The Department of Energy is seeking input on a new program to improve energy systems in areas with Fewer than 10,000 People. The Office of Clean Energy

Demonstrations will manage the ERA program and is charged with identifying and demonstrating innovative solutions to make energy systems in rural or remote communities more resilient to the worst effects of climate change, while also supporting new economic opportunities and creating high-quality jobs.

The ERA program will provide federal support to rural or remote communities to:

- Improve the overall cost-effectiveness of energy generation, transmission, or distribution systems;
- Site or upgrade transmission and distribution lines;
- Reduce greenhouse gas emissions from energy generation by rural or remote areas;
- Provide or modernize electric generation facilities;
- Develop microgrids; and
- Increase energy efficiency.

DOE welcomes public input from a wide range of stakeholders, including energy project developers, utilities, community organizations, environmental justice organizations, as well as state, local and Tribal governments to shape this program. To help inform implementation of the ERA program, the RFI seeks input on the types of energy demonstration projects, programmatic design considerations, equity, environmental and energy justice, and workforce and transfer of knowledge gained through ERA demonstrations to ensure that the projects selected are scalable and replicable.

DOE expects to announce a funding opportunity to solicit project proposals in 2023.

Additional Information: [DE-FOA-0002841](https://www.energy.gov/foia/foia-0002841)

National Science Foundation

Dear Colleague Letter: Reproducibility and Replicability in Science

Summary: A 2019 consensus study report published by the National Academies of Sciences, Engineering, and Medicine (NASEM) discussed the meaning of the terms replicability and reproducibility and identified approaches for researchers, academic institutions, journals, and funders to improve reproducibility and replicability in science [1]. In July 2021, at NSF's request, NASEM convened an expert meeting focused on National Science Foundation (NSF) policies and investments to make reproducible and replicable science easier for scientific communities to understand and execute and to embed reproducibility and replicability within the fundamental scientific method.

Through this Dear Colleague Letter (DCL), NSF reaffirms its commitment to advancing reproducibility and replicability in science. NSF is particularly interested in proposals addressing one or more of the following topics:

1. **Advancing the science of reproducibility and replicability.** Understanding current practices around reproducibility and replicability, including ways to measure reproducibility and replicability, what reproduction and replication means in practice, the right degree of replicability to target, quantitative measures of progress to understand the effectiveness of interventions to improve reproducibility and replicability, and exploration of reasons why studies may fail to replicate.
2. **Research infrastructure for reproducibility and replicability.** Developing and facilitating adoption of cyberinfrastructure tools and/or research methods that enable use of reproducible and replicable practices across one or more science and engineering communities.
3. **Educational efforts to build a scientific culture that supports reproducibility and replicability.** Enabling training in science and engineering communities to identify and encourage best practices for reproducibility and replicability, providing community-building and institutional support, and supporting broad public outreach about rigor, reproducibility, and replicability in science.

Investigators who wish to submit proposals on any of these topics, or others related to advancing reproducibility and replicability in research, are encouraged to reach out to programs and program officers to discuss the fit of their ideas to existing funding opportunities.

Additional Information: [NSF-23018](#)