U.S. DEPARTMENT OF ENERGY | Office of Science

Informational Webinar

Climate Resilience Centers (CRCs) Funding Opportunity Announcement (FOA)

DE-FOA-0002915

Pre-Application Deadline: January 19, 2023, at 5:00 pm ET

Full Application Deadline: March 30, 2023, at 11:59 pm ET

Jeff Stehr, Bob Vallario, and Brian Benscoter

December 9, 2022

Disclaimer: *This presentation summarizes the contents of the FOA. Nothing in the webinar is intended to add to, take away from, or contradict any of the requirements in the FOA. If there are inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document.*

Agenda and Speakers

- Welcome and Introduction
  - Dr. Asmeret Berhe, Director, Office of Science
- Greeting from Earth and Environmental Sciences Division (EESSD)
  - Gary Geernaert, Division Director, EESSD
- Background on BER and EESSD
  - Jeff Stehr, Program Manager
- CRC FOA Overview and Context
  - Bob Vallario, Program Manager
- Applying to the CRC FOA
  - Brian Benscoter, Program Manager
- Q&A

Questions During the Webinar?

Please submit questions using the Zoom Q&A feature at any time during the webinar.

It should be accessible at the bottom of your Zoom window.

Dr. Asmeret Berhe, Director of the Office of Science

- Fellow of the American Geophysical Union
- Fellow of the Geological Society of America
- Member of the inaugural class of the U.S. National Academies New Voices in Science, Engineering, and Medicine
- Ph.D. in Biogeochemistry from the University of California, Berkeley
- M.Sc. in Political Ecology from Michigan State University
- B.Sc. in Soil and Water Conservation from the University of Asmara

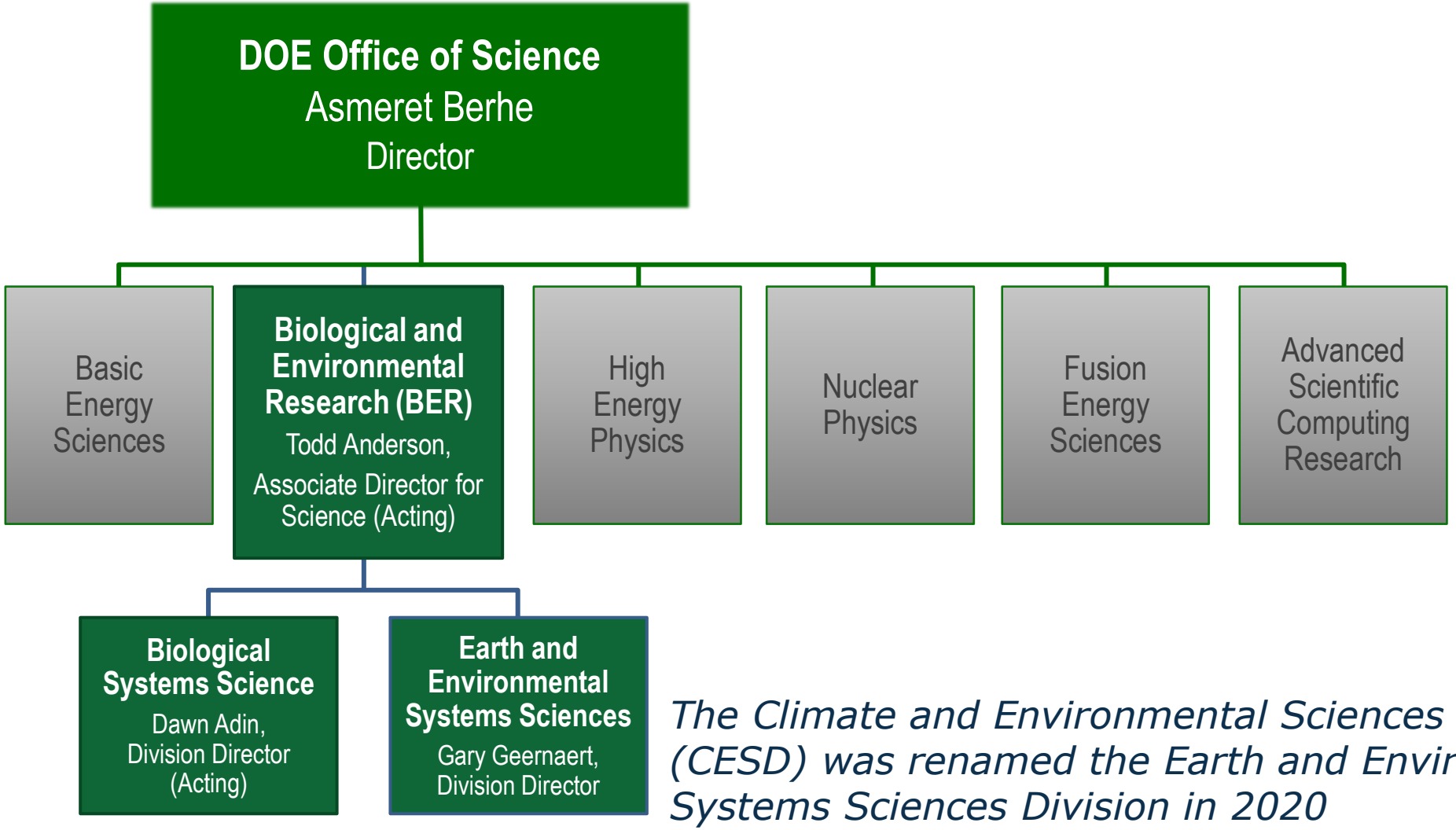
Welcome from EESSD

Dr. Gary Geernaert

Division Director

Earth and Environmental Systems Sciences Division (EESSD)

Office of Science Programs



The Climate and Environmental Sciences Division (CESD) was renamed the Earth and Environmental Systems Sciences Division in 2020

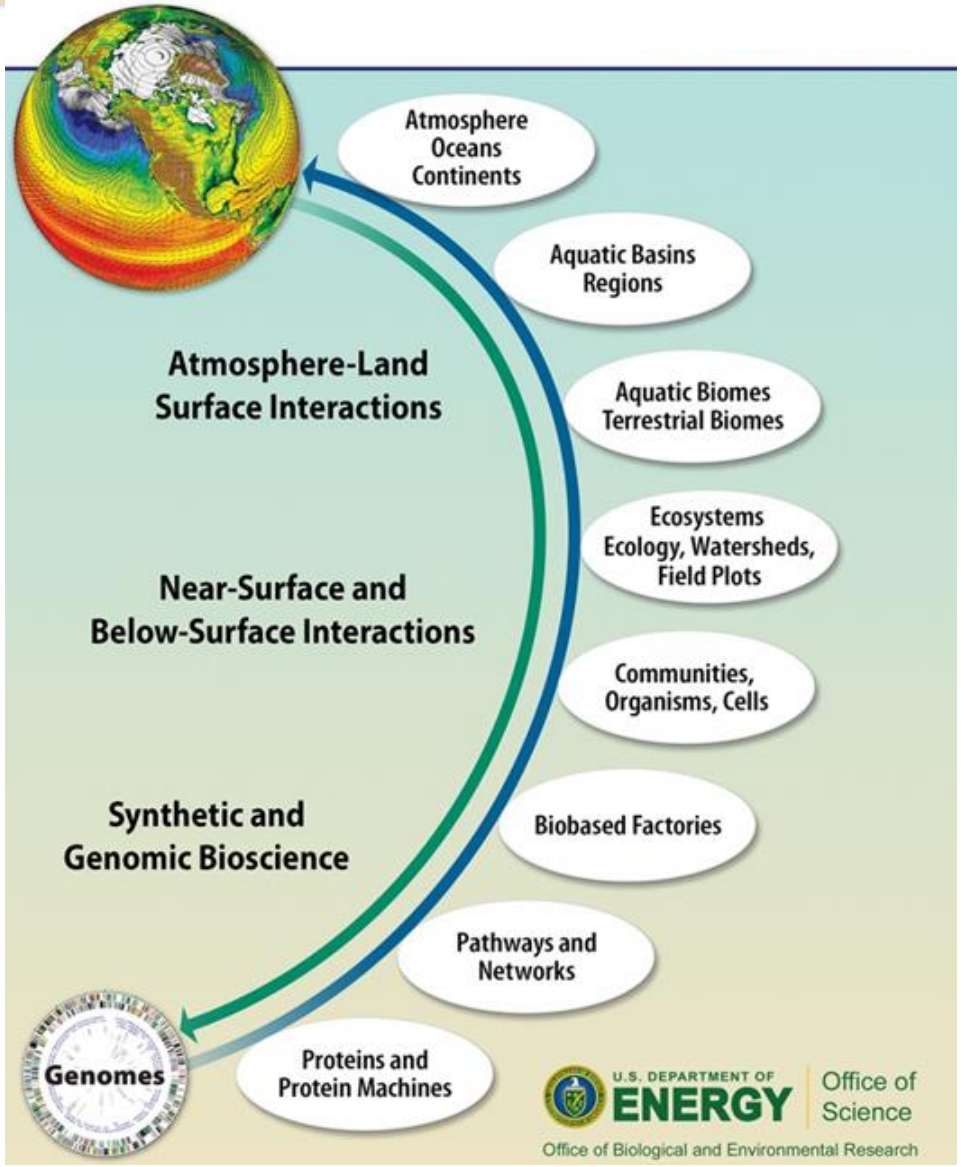
Biological and Environmental Research (BER)

Understanding complex biological, Earth, and environmental systems

Explore frontiers of genome-enabled biology

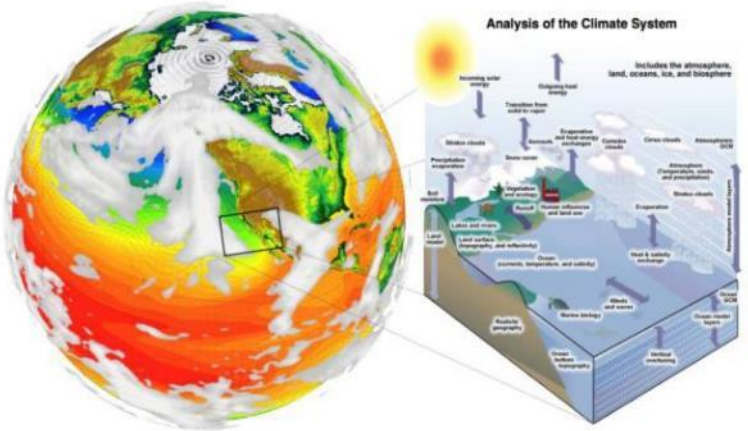
Understand physical and biogeochemical Earth system processes

Enable innovation and discovery through user facilities



https://science.osti.gov/ber

BER's Earth and Environmental Systems Sciences Division (EESSD)



Atmospheric System Research

- Atmospheric Science
- Atmospheric Radiation Measurement (ARM) facility

Earth and Environmental Systems Modeling

- Climate and Earth System Modeling
- Climate resilience

Environmental System Science

- Ecosystem and Watershed Sciences
- Environmental Molecular Sciences Laboratory (EMSL)

Climate Resilience Centers, FAIR, RENEW, Urban IFL

Data Management for Earth and Environmental Sciences

Earth and Environmental Systems Science Division

Gary Geernaert
Division Director

Paul Bayer
EMSL User Facility

Jennifer Arrigo

Brian Benscoter

Dan Stover

Mike Kuperberg
USGRCP

Environmental System Science

Olga Tweedy
AAAS Fellow

Justin Hnilo
Data Management

Andrew Flatness
Program Specialist

Sally McFarlane
ARM User Facility

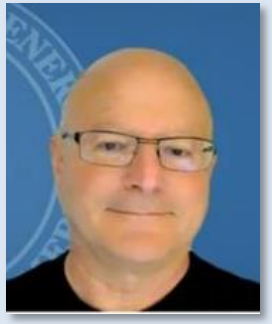
Shaima Nasiri

Jeff Stehr

Atmospheric System Research

Xujing Davis

Renu Joseph



Bob Vallario

Earth and Environmental Systems Modeling

EESSD Research Investment

Laboratory Research

- Science Focus Areas (SFA)
- Large Projects
  - NGEE-Arctic; NGEE-Tropics; AmeriFlux, IDEAS, ESGF, ESM SciDAC
- Boutique Projects
- Can include university collaborations
- Lab researchers can collaborate on university-led projects

University Research

- Supported through Funding Opportunity Announcements (FOAs)
- Topically focused projects
- Vary in size and duration
- Programmatic or Division-wide
- Urban Integrated Field Laboratory
  - Large, multi-institution projects
- Early Career Research Program
- RENEW and FAIR

EESSD User Facilities and Resources

DOE Scientific User Facilities Provide researchers with the most advanced tools of modern science, including accelerators, colliders, supercomputers, light and neutron sources, as well as facilities for studying the nano world, the environment, and the atmosphere.

ARM

https://arm.gov/

EMSL

https://www.emsl.pnnl.gov/

EESSD supports two world class scientific user facilities:

- **Atmospheric Radiation Measurement (ARM)**
- **Environmental Molecular Sciences Laboratory (EMSL)**

Free access to instruments and analysis via annual/regular user proposals.

All ARM data is freely available https://adc.arm.gov/discovery

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Overview and Context for the Climate Resilience Centers FOA

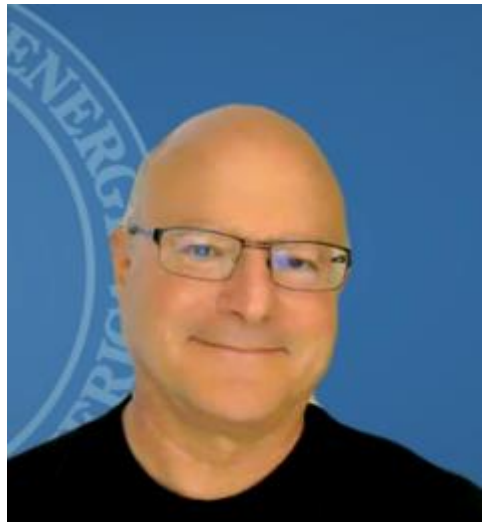
DE-FOA-0002915

DOE Program Manager FOA Contacts

Scientific/Technical Contacts:

Brian Benscoter
brian.benscoter@science.doe.gov

Jeff Stehr
jeff.stehr@science.doe.gov



Robert (Bob) Vallario
bob.vallario@science.doe.gov

BER Climate Resilience & CRCs

- Climate resilience is the ability of a community or region to reach full recovery after being exposed to climate-induced stresses and damages, using strategies that adjust its adaptive capacity at minimal impact to natural, socioeconomic, infrastructure, and financial systems.

- CRCs will provide an embedded, community focused research agenda that aligns with the BER mission and community priorities to promote accessibility and utility for subsequent use in community decision-making and action.

BER Climate Resilience Centers

- This is SC's first FOA with a focus on establishing CRCs at non-R1 Minority Serving Institutions (MSIs), Historically Black Colleges and Universities (HBCUs), and Emerging Research Institutions (ERIs). CRCs will focus on basic climate science research to inform the needs of stakeholders and frontline communities, including equitable solutions in response to the climate crisis.
- CRCs will:
  - Extend DOE-supported climate science, capabilities, and research at the national labs to address regional resilience needs and impacts on natural, socioeconomic, or built systems and/or their intersections.
  - Foster capacity at regional and local scales by connecting with affected communities and stakeholders to translate basic research into actionable science to enhance climate resilience, as well as to identify research priorities for future DOE investments.
  - Form a nucleus for building and empowering a future pool of local talent and expertise, including young scientists, engineers, and technicians who will combine observational, experimental, and modeling science to address local resilience challenges and inform equitable solutions.

CRC Defining Attributes *(See Section I of the FOA)*

- The FOA will provide funding to build research capacity in climate resilience, leverage ongoing DOE climate science and capabilities at national laboratories and universities, and build two-way engagement between DOE funded research and community stakeholders. Funding will emphasize science accessibility, translation for improved climate response, training, networking, and outreach.
- Applications must include a connection to BER climate science, e.g., partnership with an existing SFA/project or clear use of BER research products.
- Research focus should be directly relevant to the applicant's community/region, focusing on climate science as it relates to equitable resilience and America's most vulnerable and disadvantaged communities.

Expectations for CRCs

- CRCs will focus on basic climate science research to inform the needs of stakeholders and frontline communities, including equitable solutions in response to the climate crisis.
- Importantly, the centers will *emphasize science translation*, linking climate resilience science with the local climate resilience needs to accelerate the deployment of equitable solutions through participatory engagement.
- Examples of science challenges that the CRCs may address include:
  - Developing contextualized, community-based definitions and models of resilience, illuminating the dynamic processes, quantifiable dimensions, and metrics that can be incorporated to measure progress.
  - Developing new and insightful prediction tools and exploring their use through model and data-driven stress testing to evaluate adaptation strategies that can achieve desired levels of equitable resilience over time horizons of interest.
  - Building or extending observational capabilities to provide the necessary data for new predictions or improve prediction accuracy in support of resilience strategies.
- CRCs are required to leverage the scientific products and/or capabilities at the DOE national laboratories

Contribution of CRCs to the BER portfolio

Climate Resilience Centers (CRC)

- Pursuit and translation of basic climate science for climate resilience with two-way engagement

Funding to Accelerate Inclusive Research (FAIR)

- Institutional research capacity building to accelerate competitiveness

Reaching a New Energy Sciences Workforce (RENEW)

- Experiential training of students in BER science areas

Urban Integrated Field Laboratory (Urban IFL)

- Multi-institution projects focused on basic research in urban systems

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Applying to the Climate Resilience Centers FOA

DE-FOA-0002915

Applying to the CRC Solicitation

- Pre-Application Deadline: Thursday January 19, 2023, at 5 pm ET
  - **Pre-applications are required**
  - Pre-applications submitted through PAMS **by SRO**
  - **Limit of two (2) pre-applications per institution as lead**
  - Encourage/Discourage Response: Fri. February 3, 2023, by 5pm ET via PAMS
  - Decision of 'Encourage' required to be eligible for full application submission
- Full Application Deadline: Thursday March 30, 2023, at 11:59 pm ET
  - Submitted through Grants.gov (by SRO)
  - **Limit of two (2) applications per institution as lead**
- Merit Review Criteria will be used to evaluate applications
- Program Policy Factors will be used to prioritize funding recommendations
- DOE anticipates that award selection will be completed by September 2023

Award Information

- Estimated funding: total of $5 million in FY23 funds anticipated.
- Period of performance: 3 years
- Minimum/maximum award size: $100,000 to $1,000,000 total
- Number of awards: approximately 5-7 awards are anticipated
- Type of award: Grants
- Institutions are limited to two (2) CRC pre-applications/ applications as the lead institution but may partner on additional applications.

Eligibility and Teaming Arrangements

- Lead applicant must be an HBCU, non-R1 MSI, or emerging research institution.
  - Institution Designation List: https://science.osti.gov/grants/Applicant-and-Awardee-Resources/Institution-Designations
- Multi-institutional teaming arrangements may occur through subawards, but their roles and budget requests must be justifiable and equitable.
  - National lab collaboration budgets are limited to up to 10% of the total award budget.
- BER will use the Program Policy Factors when making selections, including prioritizing participation of institutions historically underrepresented in the BER portfolio.

PIER Plan (Appendix 5)

- The Promoting Inclusive and Equitable Research (PIER) Plans should describe the activities and strategies to promote equity and inclusion as an intrinsic element of the research project
  - Describe plan to foster a positive, inclusive, and professional training and research environment
  - Should not be a re-statement of standard institutional policies or broad principles
- Max. page limit of 3 pages, submitted as Appendix 5 (does not count toward narrative page limit)
- For more information about PIER plans: https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans

Helpful Reminders for a Successful Application

REGISTER IN ALL SYSTEMS AS SOON AS POSSIBLE:

- www.grants.gov

  Support: 800-518-4726 or support@grants.gov

- www.sam.gov

  Support: 866-606-8220

- www.fedconnect.net

  Support: 800-899-6665

- DOE SC Portfolio Analysis and Management System (PAMS) - https://pamspublic.science.energy.gov

  Support: 855-818-1846 or sc.pams-helpdesk@science.doe.gov

  Helpdesk Hours: Monday-Friday, 9am – 5:30 pm ET

  PAMS Help Wiki: https://pamsexternalhelp.science.energy.gov/display/UTL2/PAMS+Help

- Any Other Applicable Systems

Check Registration in PAMS

- Because of the institutional limitation on submissions, preapplications must be submitted to PAMS via a "Submit to DOE" privileged account (e.g., SRO)
- Registering in PAMS is a lengthy process (days to weeks)
- Confirm in advance your institution's PAMS account:
  - Is active,
  - Has the correct and appropriate contact(s), and
  - If possible, has multiple registered contacts.
- PAMS Helpdesk closes at 5:30 pm ET

Helpful Reminders for a Successful Application

- Carefully review the 'Updates and Reminders' and 'Checklist for Avoiding Common Errors' sections at the beginning of the solicitation
- Provide budget sheets and budget justifications for the applicant institution and any subawards (including National Lab collaborators) requesting funding
  - National Lab budget request are limited to a max. of 10% of the total application budget
- Be sure to use the current standardized forms for the PI biosketches, current and pending awards, and know conflicts of interest documents (links provided in FOA)
- Be sure to include a Data Management Plan (DMP) for all applications, even if no experimental data is expected
  - SC Statement on Digital Data Management: https://science.osti.gov/funding-opportunities/digital-data-management

Helpful Reminders for Budget Preparation

- Provide a justification that explains all costs proposed in the budget
  - Budget sheets and budget justification must be consistent to nearest $1
  - Use the budget sheet sections to outline the budget justification (A. Senior Personnel, B. Other Personnel, etc)
- Capital Equipment (individual items >$5000)– up to total of $15,000 allowed
  - Material & Supplies are items with individual costs <$5000, even if the total for multiple items is >$5000
- Fringe/Indirect Rates must include the indirect cost rate agreement as part of the budget justification
- Personnel costs should be inclusive of salary and fringe (do not list separately)
- Travel - Include purpose, destination, dates of travel (if known) and number of individuals for each trip. If the dates of travel are not known, specify estimated length of trip (e.g., 3 days).

Where to find more information

Biological and Environmental Research (BER)	https://science.osti.gov/ber
Earth and Environmental Systems Sciences Division (EESSD)	https://science.osti.gov/ber/Research/eessd
Atmospheric System Research (ASR)	https://asr.science.energy.gov/
Environmental System Science (ESS)	https://ess.science.energy.gov/
Earth and Environmental System Modeling (EESM)	https://climatemodeling.science.energy.gov/
Data Management	https://science.osti.gov/ber/Research/eessd/Data-Management
Atmospheric Radiation Measurement (ARM) user facility	https://www.arm.gov/
Environmental Molecular Sciences Laboratory (EMSL)	https://www.emsl.pnnl.gov/
BER Funding Opportunities	https://science.osti.gov/ber/Funding-Opportunities
Office of Economic Impact and Diversity	https://www.energy.gov/diversity/office-economic-impact-and-diversity
Promoting Inclusive and Equitable Research (PIER)	https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans
HBCU, MSI, and emerging institution list	https://science.osti.gov/grants/Applicant-and-Awardee-Resources/Institution-Designations

Questions & Answers

Please submit questions using the Zoom Q&A feature. It should be accessible at the bottom of your Zoom window.

If your question is not answered today, or if you have additional questions:

- Questions about the topic → Program Manager(s)
- Questions about submitting application → FedConnect.net

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