

Grant Writing Tips and Insights Webinar

Jennifer Roizen

Office of Basic Energy Sciences



U.S. DEPARTMENT OF
ENERGY

Office of
Science

[Energy.gov/science](https://energy.gov/science)

**Getting Started with Grant Writing
(no prior experience at all)**

then

**Basic Energy Sciences (BES)
Perspective on Individual Applications**

If Submission of an Independent Proposal is a New Process for You

- Practice, practice, practice (editing, developing a network, engaging others early)
 - Welcome and hear others' feedback
 - Reciprocate generously
 - Use a timeline
- Identify productive writing time and strategies to navigate other demands of research
 - It is unlikely that your full-time position will provide the flexibility to work on a grant submission full-time

Diverse Experience Editing Documents Can Be Helpful

- Document types: manuscripts in preparation, sections of proposals, even resumes
- Document origins: advisors, mentors, peers, self
 - Review **references** for typos or inconsistent formatting (detail-oriented task)
 - Review others' **graphics** for typos, scientific clarity, and scientific accuracy
 - Mutually redundant with text, so point can be gleaned rapidly by time-pressed visual reader
 - Clear distinction between prior results, preliminary results, others' results
 - Accessible to readers with range of expertise
 - Review others' **text**
 - Within the first paragraph, differentiate anticipated research from vast associated field of research

Develop a Network of Trusted Editors, and the Ability to “Hear” their Recommendations

- Ask mentors for advice and trade documents with peers to build trust and skills
 - Short-form resume or Biosketch
 - Find a relevant Funding Opportunity Announcement (FOA).
 - Read the **review criteria** – make sure you address them.
 - Before you look at examples of what others have written, **craft your key ideas** – what distinguishes your response from those of others in the research area?
 - For each document, think about your **reader**. Reviewers may include experts in the topic area and scientists from related but somewhat “outside” fields.
 - Trust is important – will a friend or colleague share **a version of a successful grant proposal** (and perhaps even associated feedback)?
 - **Iterative learning process**: assume a document may need a few rounds of feedback, with 1-2 weeks between rounds. **Make a timeline.**

Engage Collaborators or Recommenders Efficiently and Early

- What type of letter is needed?
 - Collaborator: Is the text dictated by the FOA? Give the collaborator that text.
 - Recommendation: Make request more than six weeks in advance of deadline.
 - Request should include everything writer would need to write recommendation
 - First or second sentence of email contains the ask and deadlines
 - Pithy summary of FOA evaluation criteria
 - Resume or Biosketch
 - Anything else you're submitting
 - Welcome feedback
 - Establish timeline for follow-up (including deadlines)

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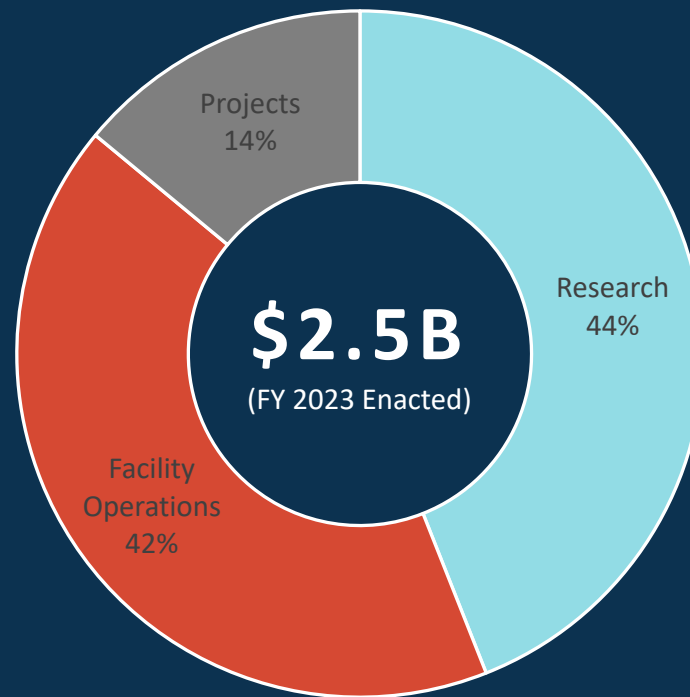


The nation's largest supporter of basic research in the physical sciences

Principal roles:

- Direct support of scientific research
- Direct support of the development, construction, and operation of unique, open-access scientific user facilities available for use by external researchers

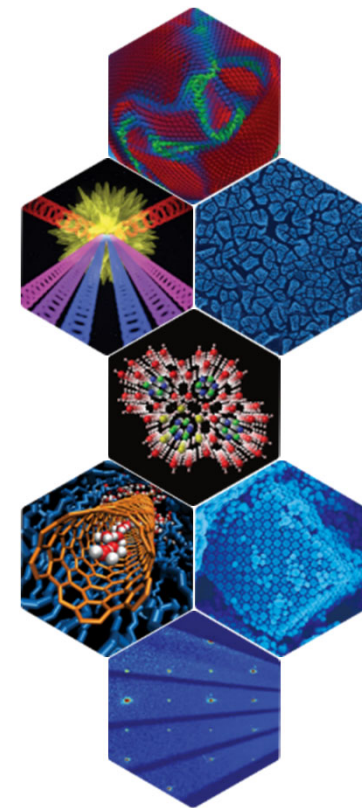
Office Basic Energy Sciences (BES) Budget



BES Mission

BES Mission: Understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels

- Connect to real-world phenomena **relevant to the energy mission**
- Start at the level of electrons, atoms and molecules
 - Complementary discovery and use-inspired fundamental research



SC Internship Programs and Opportunities



- Science Undergraduate Laboratory Internships Program
- The Community College Internships Program
- Office of Science Graduate Student Research
- Visiting Faculty Program

science.osti.gov/wdts

BES Funding Opportunity Announcements (FOA)



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Funding Opportunity Announcements (FOAs)

May be open to one or more institution types. For assistance with the Office of Science's Portfolio Analysis and Management System (PAMS) at <https://pamspublic.science.energy.gov>, please contact the Helpdesk at (855) 818-1846 (toll-free), (301) 903-9610, or sc.pams-helpdesk@science.doe.gov.

FY 2024 Continuation of Solicitation for the Office of Science Financial Assistance Program

Announcement Number: DE-FOA-0003177, Amendment
000001

Post Date: Friday, September 29, 2023

Close Date: Monday, September 30, 2024

Also known as
“The Open Call”

****No proposal due dates****

**Supports single investigators (~\$170K+/year) & small groups (\$200K-\$2M/yr, 3-yr).
Supports conference proposals (~5-10 K).**

<https://science.osti.gov/bes/Funding-Opportunities>



Office of
Science

More Info on the Continuation of Solicitation for the Office of Science Financial Assistance Program (annual “Open Call”)

The annual, broad, open solicitation that covers all research areas in the Office of Science and is open throughout the Fiscal Year.

For BES, the solicitation includes brief descriptions of 24 core research areas, with current priorities/areas of interest and contact information for program managers (contacting program managers is encouraged).

BES identifies the following “**overarching research priorities**” relevant to multiple core research areas for the Open Call:

- Fundamental Science to Enable Clean Energy
- Critical Materials/Minerals
- Fundamental Science to Transform Processing and Fabrication
- Artificial Intelligence and Machine Learning (AI/ML)

DEPARTMENT OF ENERGY (DOE)
OFFICE OF SCIENCE (SC)



FY 2024 CONTINUATION OF SOLICITATION FOR THE OFFICE OF SCIENCE FINANCIAL ASSISTANCE PROGRAM

FUNDING OPPORTUNITY ANNOUNCEMENT (FOA) NUMBER:
DE-FOA-0003177

FOA TYPE: AMENDMENT 000001
CFDA NUMBER: 81.049

Amendment 000001 is issued with a number of minor edits, detailed on the next page

FOA Issue Date:	September 29, 2023
Submission Deadline for Pre-Applications:	A Pre-Application is optional/encouraged
Submission Deadline for Applications:	Not Applicable This FOA will remain open until September 30, 2024, or until replaced by a successor FOA. Applications may be submitted any time during that period. Individual topics in this FOA may have scheduled review panels. Applications submitted after the panel's acceptance date may be held until the next review panel.

<https://science.osti.gov/bes/-/media/grants/pdf/foas/2023/DE-FOA-0003177-000001.pdf>

Common General Tip: Read the FOA Closely

Office of Science

Search

Science Features Universities User Facilities Funding Initiatives Programs

es (BES) | Funding Opportunities

Funding Opportunities

- New Grant Applications from Universities and Other Research Institutions

Office of Science Guidance on Accommodating Interruptions to Applications and Awardees due to COVID-19

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Post Date: Friday, September 29, 2023

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- What's the deadline for submission?

Engage the Program Manager (PM)

- To which Program Manager?

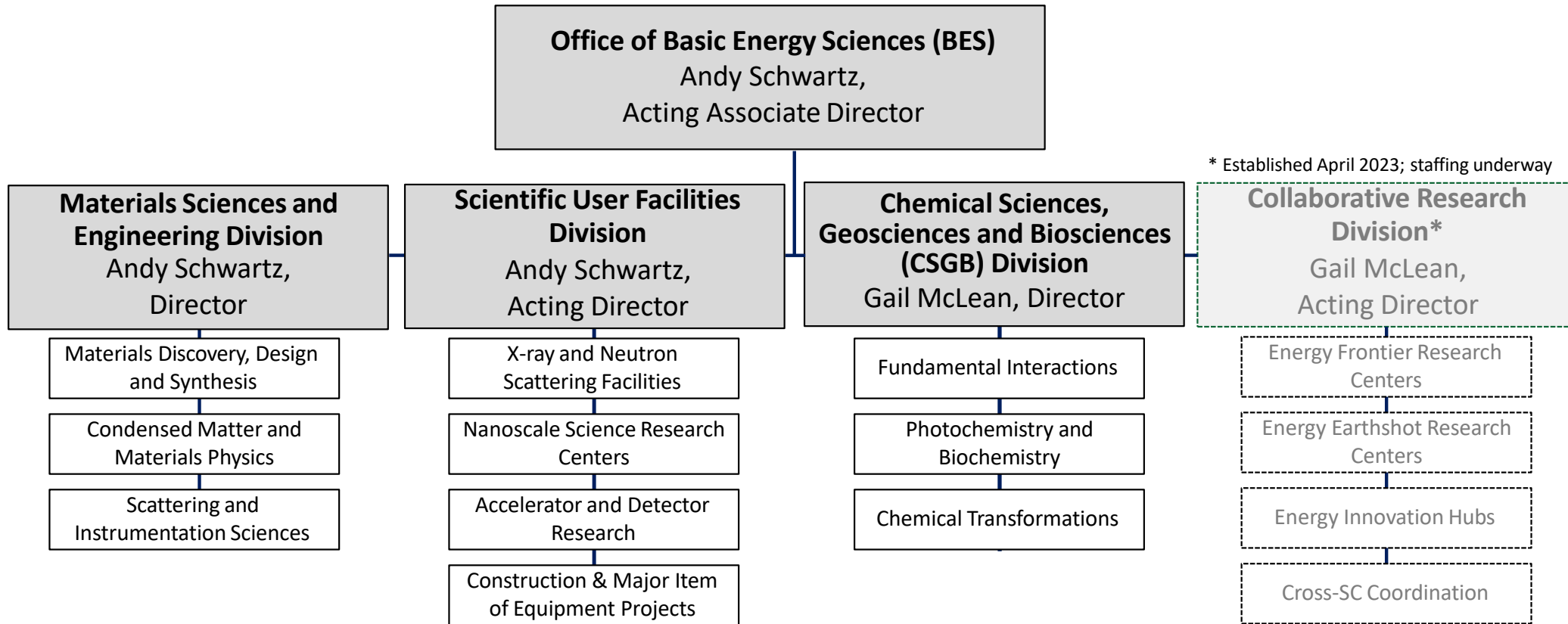
Explore based on research idea:

- FOA text
- Whisper network
- Manuscript acknowledgements
- Program PI Meeting abstract book

<https://science.osti.gov/bes/csgb> or [/mse](https://science.osti.gov/bes/mse)

<https://science.osti.gov/bes/Funding-Opportunities>

Basic Energy Sciences – Organization



Research grouped by scientific topics, each impacting many energy technologies

Administrative Staff

Teresa Crockett



Andy Schwartz
Director

Materials Science and Engineering Division

PM – Shawn Chen



Contact info for all PMs is
on the BES-MSE Website



Materials Discovery, Design, and Synthesis Team

Acting Team Lead – Craig Henderson



Materials Chemistry

PMs – Craig Henderson and Chris Chervin



Biomolecular Materials

PM – Aura Gimm



Synthesis and Processing Science

PM – James Dorman



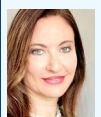
Batteries and Energy Storage Hub & Integrated Energy Research

PMs – Craig Henderson and John Vetrano



Condensed Matter and Materials Physics

Team Lead – Mick Pechan



Experimental Condensed Matter Physics

PM – Claudia Cantoni and Tim Mewes



Theoretical Condensed Matter Physics

PMs – Claudia Mewes and Matthias Graf



Physical Behavior of Materials

PM – Refik Kortan



Mechanical Behavior and Radiation Effects

PM – John Vetrano



Quantum Information Science

PM – Athena Sefat



Scattering and Instrumentation Sciences

Team Lead – Helen Kerch



X-Ray Scattering

PM – Lane Wilson



Neutron Scattering

PM – Mike Fitzsimmons



Electron and Scanning Probe Microscopies

PM – Jane Zhu



Experimental Program to Stimulate Competitive Research (DOE EPSCoR)

PM – Tim Fitzsimmons

Updated January 2024

Administrative Staff

Teresa Crockett



Gail McLean
Director

Chemical Sciences, Geosciences and Biosciences (CSGB) Division

Contact info for all PMs is
on the BES-CSGB Website



Fundamental Interactions Team

Team Lead – Tom Settersten



Atomic, Molecular, and Optical
Sciences

Acting PM – Tom Settersten



Gas Phase Chemical Physics

PM – Wade Sisk



Condensed Phase and Interfacial
Molecular Science

PM – Greg Fiechtner



Computational and Theoretical
Chemistry & Computational
Chemical Sciences

PM – Aaron Holder



Quantum Information Science

PM – Marat Valiev



Photochemistry and Biochemistry Team

Acting Team Lead – Gail McLean



Photosynthetic Systems

PM – Stephen Herbert



Physical Biosciences

PM – Kate Brown



Solar Photochemistry

PMs – Chris Fecko, Jenny Roizen



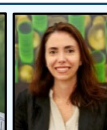
Fuels from Sunlight Energy
Innovation Hub

PMs – Chris Fecko, Jenny Roizen



Chemical Transformations Team

Team Lead – Raul Miranda



Catalysis Science

PMs – Chris Bradley, Viviane Schwartz



Separation Science

PM – Amanda Haes



Heavy Element Chemistry

PM – Philip Wilk



Geosciences

Acting PM – Philip Wilk

Approach PM with a White Paper (2-3 pages)

- Email submission: Mid-July – November (Solar Photochemistry) – *it's fine to resend if no response after 2-3 weeks*
- Content:
 - Put key predictive hypothesis (fundamental science) within the first paragraph
 - Differentiate anticipated research from vast associated field of research
 - Briefly address why this research is aligned with BES and with program goals
 - Write for both visual and verbal readers
 - Get feedback from colleagues and mentors before sending your white paper to the PM
 - Check that your white paper addresses the questions in the FOA (review criteria) that reviewers would use
 - Make clear: preliminary results, key prior publications (by you, some by others)
 - Short and longer-term vision
 - Why should this research be done now? How will it advance fundamental science?

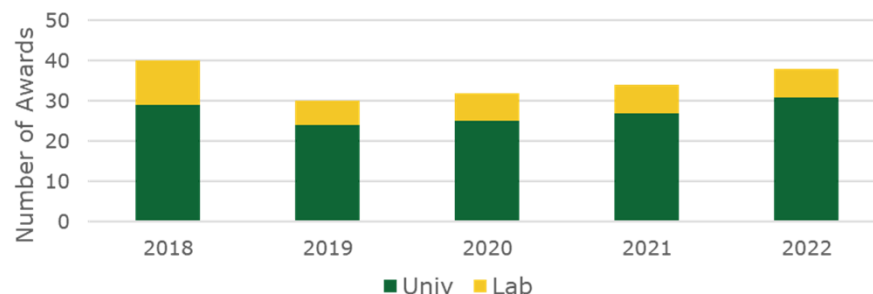
Other FOAs, such as the Early Career Research Program, use proposal deadlines, but this type of information is not available until the FOA is released

Office of Science Early Career Research Program

- University and National labs eligible:
 - Eligibility:** Within 12* years of receiving a Ph.D. (likely reverting to 10 years in future), either untenured academic assistant or associate professors on the tenure track or full-time DOE national lab employees
- No co-PIs.
- A PI can submit one proposal per competition.
- A PI cannot participate more than three times.
- 5-Yr Awards: University grants \$175,000/yr, National lab awards \$550,000/yr min (typical requests)

<https://science.osti.gov/early-career>

BES ECRP Awards by Year



Proposal submission encouraged or not encouraged after internal **review of pre-applications:**

- Conducted by individual PMs or by 3 PMs chosen for their topical knowledge and diversity of perspective (program dependent);
- Comparative reviews compare pre-applications within a topical field with priority given to scientifically innovative and forward-looking basic research with the highest likelihood of success as a full application

Additional BES FOAs in FY24

- **FAIR FOA:** Funding for Accelerated, Inclusive Research on topics that cross the Office of Science, supports capacity building research at non-R1 minority serving institutions (MSI) and emerging research institutions (ERI), including partnering with DOE National Laboratories and facilities and R1 MSI/ERI.
- **RENEW FOA:** The SC-wide Reaching a New Energy Science Workforce initiative leverages SC's world-unique National Laboratories and user facilities to provide internships for students at academic institutions currently under-represented in the research portfolio.
- **EPSCoR FOA:** Funding for U.S. states and territories that do not have large federally-supported academic research programs.
- **Energy Frontier Research Centers (EFRCs):** Fundamental team science. Supports larger teams (\$2-4M/yr, 4-yr).





THANK YOU

*Feel free to ask for anything you
need to help you effectively
consider how to move forward
with grant writing*