Office of Science Statement of Commitment & other Guidance

- **SC Statement of Commitment** – SC is fully and unconditionally committed to fostering safe, diverse, equitable, inclusive, and accessible work, research, and funding environments that value mutual respect and personal integrity. https://science.osti.gov/SW-DEI/SC-Statement-of-Commitment

- **Expectations for Professional Behaviors** –SC's expectations of all participants to positively contribute to a professional, inclusive meeting that fosters a safe and welcoming environment for conducting scientific business, as well as outlines behaviors that are unacceptable and potential ramifications for unprofessional behavior. https://science.osti.gov/SW-DEI/DOE-Diversity-Equity-and-Inclusion-Policies/Harassment

- **How to Address or Report Behaviors of Concern**– Process on how and who to report issues, including the distinction between reporting on unprofessional, disrespectful, or disruptive behaviors, and behaviors that constitute a violation of Federal civil rights statutes. https://science.osti.gov/SW-DEI/DOE-Diversity-Equity-and-Inclusion-Policies/How-to-Report-a-Complaint

- **Implicit Bias** – Be aware of implicit bias, understand its nature – everyone has them - and implicit bias if not mitigated can negatively impact the quality and inclusiveness of scientific discussions that contribute to a successful meeting. https://kirwaninstitute.osu.edu/article/understanding-implicit-bias

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Office of Science
Office Hours
Office of Accelerator R&D and Production "ARDAP"

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7/10/2024

Outline

- March 13, 2024: Introduction to Accelerator Science and ARDAP

- April 10, 2024: Funding Opportunity Announcements (FOAs) and Facilities for Accelerator R&D

- May 8, 2024: Writing a strong proposal and managing an award

- June 12, 2024: ARDAP Merit Review Process

- July 10, 2024: How ARDAP identifies priority research directions to support

- **August 14, 2024: Avoiding common mistakes: How to prepare key parts of an ARDAP proposal**

  - **Pre-proposals – what's important, common mistakes**

  - **Proposals – what's important, common mistakes**

  - **Guides for completing specific parts of a proposal**

Pre-proposals:

What's important & common mistakes

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Pre-proposals: What's Important

- The <u>purpose</u> of a pre-proposal is:
  - For You to test a particular proposal idea for responsiveness to the FOA
  - For DOE to gauge the interest of SC, DOE, and other federal programs
  - For DOE to identify merit reviewers
    - If you omit the COI List*, you are interfering with the merit review process

- The <u>audience</u> for the pre-proposal is:
  - Federal program managers with PhDs or MDs
    - We know the field and the state-of-the-art
    - We are mission-driven and strategic
    - We see many more good proposals than we have funding to support
    - You help us the most by answering the questions in the FOA concisely and informatively

*Referred to in the FOA as the "listing of individuals who should not serve as merit reviewers"

Pre-proposal problems, by the numbers

In the last 5 years (2019-2024),
- **365** pre-proposals have been submitted
- **59%** were encouraged to submit a full proposal

- **41%** were discouraged for the following reasons:

% of total	Problem	Solution
20%	Had low or no interagency interest	Find out what the agencies need by reading their reports.
11%	Were not responsive to either the aims or the specific topic areas listed in the FOA	Read the FOA carefully.
6%	Had no "List of Individuals who Should not Serve as Merit Reviews" (a.k.a., the "COI List")	Include the required COI List.
1.4%	Duplicated current or prior work	Research the current state-of-the-art and "competition" carefully.
1%	Preapplication did not follow instructions for format	Follow the FOA instructions.
1%	Lacked sufficient content to support a meaningful review	Follow the FOA instructions.
<1%	Other issues (duplicate pre-app, etc.)	[Depends on the specific issue]

Every row in red is an automatic discourage.

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Pre-proposals: Common mistakes

- Pre-proposals are 2 pages, total. Use the space efficiently!

  ◦ **Don't** spend lots of space on:
    - Background information and motivation*
    - History of performance of you, your team, or your institution
    - Presenting an academic defense of your idea*

  ◦ **Do** focus on:

Value Proposition
    - What need you will address
    - Your approach to addressing the need, and how it is new
    - What will be the result, and what applications will benefit

Implementation
    - What work scope will be in your proposal
    - Who will do the work, and how it will be managed
    - What it will cost

Tip! Federal Program Managers typically read many thousands of pages of pre-proposals and proposals each year. We tend to scan the text for answers to specific questions. The FOA instructions *lists those questions.*
Write your pre-proposal with this mode of reading and these questions in mind!

Unless your idea is truly outside the mainstream

Proposals:

What's important & common mistakes

Proposal problems, by the numbers

In the last 5 years (2019-2024),
- **242** proposals have been submitted
- **36%** were awarded

- **64%** were declined for the following reasons:

% of total	Problem	Solution
53%	Lower merit, lower interagency rank, or inconsistency with Program Policy Factors	Read the merit reviews, consult agency reports, review FOA section V.B.2.
3.3%	No pre-application (most, but not all, of these are machine-generated proposals)	Submit the required pre-app.
3.3%	Duplicate proposals	We review the last version submitted.
1.7%	Wrong proposal format	Follow the FOA instructions.
1.2%	No Data Management Plan and/or no PIER Plan	Follow the FOA instructions.
0.8%	Other required appendices missing (CVs, C&Ps)	Follow the FOA instructions.
0.4%	No COI List submitted with either the pre-proposal or proposal	Follow the FOA instructions.

Every row in red is an automatic decline without review.

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Proposals: Common mistakes

- **The most common "hard failure" modes are:**
  - Failure to include required appendices
    - Possibly due to problems generating the PDF
    - Do NOT create a "PDF Portfolio" and attach it
  - Failure to follow FOA instructions
    - Too many pages in the narrative
      - This limit is <u>strictly enforced</u>
    - No COI List included in either the pre-proposal or proposal
      - Note this is attached to the grants.gov application in a different location
    - No pre-proposal
      - If you miss the pre-proposal deadline, wait for next year

- Hard failures result in an automatic decline without review

- **The most common "soft failure" modes are:**
  - PIER plan is a copy of your institution's plan
    - PIER plans should be specific to your proposed work
  - Subawards incorrectly accounted for on budget worksheets
    - In most cases*, the lead institution budget should include everything
    - Subaward budget forms and budget explanations should be included
  - Federally-sourced items are offered as cost sharing/cost commitment
    - Only items paid for with non-federal funds qualify
  - Failure to include topic-specific attachments
    - Production cost estimates, partnering/IP agreements,…

- Soft failures can result in automatic declines, but more often result in lowered merit scores
  - If a proposal lacks sufficient information to support the merit review, it will be declined without review

IV.D.9. Summary of Required Forms/Files

Your application must include the following items:

Name of Document	Format	Attach to
SF 424 (R&R)	Form	N/A
RESEARCH AND RELATED Other Project Information	Form	N/A
Project Summary/Abstract	PDF	Field 7
Project Narrative, including required appendices	PDF	Field 8
Identification of Merit Review Conflicts	File	Field 12
RESEARCH & RELATED Senior/Key Person Profile (Expanded)	Form	N/A
RESEARCH & RELATED BUDGET	Form	N/A
Budget Justification	PDF	Field L
R&R SUBAWARD BUDGET ATTACHMENT(S) FORM (if applicable)	Form	N/A
Subaward Budget Justification (if applicable)	PDF	Field L of the subaward budget
PROJECT/PERFORMANCE SITE LOCATION(S)	Form	N/A
SF-LLL Disclosure of Lobbying Activities, if applicable	Form	N/A

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* The exception being "Collaborative Applications", for which the budgets should be kept separate in all cases.

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Tips for avoiding common errors

- Use the "Checklist for Avoiding Common Errors" found at the front of the FOA
  - More about this on the next slide
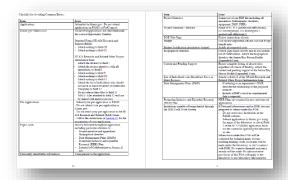
- Use the general How-To Guides in Section VIII

- Read the FOA instructions carefully
  - Even if you've applied before, requirements change significantly year-to-year

- Review the specific FAQs

How-to guides include:
- Choosing when to submit a "renewal" application
- Handling budgets when a DOE Lab is a collaborator
- How to submit the pre-proposal
- How to register in PAMS
- How to register in SAM
- How to use the Grants.gov application package to prepare your proposal
- How to prepare biosketches
- How to prepare a COI List
- How to prepare a DMP
- How to prepare the budget

Checklist for Avoiding Common Errors

Found in the front matter of SC Funding Opportunity Announcements

Checklist for Avoiding Common Errors:

Item	Issue
Applications	Submitted in Grants.gov. Do not submit applications in PAMS or FedConnect.
Grants.gov Submission	Ensure that applications are submitted under the correct Opportunity Number. Standard Form (SF)-424 Research and Related (R&R): - Attach nothing to field 20 - Attach nothing to field 21 SF-424 Research and Related Other Project Information form: - Attach the abstract to field 7 - Attach the project narrative, with all appendices, to field 8 - Attach nothing to field 9 - Attach nothing to field 10 - Attach nothing to field 11 - Attach the list of individuals who should not serve as merit reviewers (Collaborator Template) to field 12 - Do not attach other files to field 12 - NOTE: Files attached to field 12 will not be shared with merit reviewers.
Pre-Applications	- Submit your pre-application in PAMS. - Do not submit your pre-application in Grants.gov. - Do not attach your pre-application to the SF-424 Research and Related (R&R) form. - Follow the instructions in Section IV for the preparation of a pre-application.
Page Limits	Strictly followed throughout application, including particular attention to: - Project narrative and appendices - Biographical sketches - Data Management Plans (DMPs) - Promoting Inclusive and Equitable Research (PIER) Plan - Letter(s) of Collaboration or Access, if any
Personally Identifiable Information	None present in the application

Item	Issue
Project Narrative	Composed of one PDF file including all appendices (bibliography, facilities, equipment, DMP, PIER)
Project Summary / Abstract	Name of PI, PI's institutional affiliation(s), Co-Investigator(s), Co-Investigator's institutional affiliation(s)
DOE Title Page	Follow instructions closely
Budget	Use current negotiated indirect cost and fringe benefit rates
Budget Justification (attached to budget)	Justify all requested costs
Biographical Sketches	Follow page limits strictly and do not include list of collaborators. Attach the biographical sketch to the Senior/Key Person Profile (Expanded) Form.
Current and Pending Support	Ensure complete listing of all activities, regardless of source of funding. Attach the current and pending support to the Senior/Key Person Profile (Expanded) Form.
List of Individuals who Should not Serve as Merit Reviews	Attach to field 12 of the SF-424 Research and Related Other Project Information form.
Data Management Plans (DMP)	- If referring to an experiment's DMP, describe the relationship to the proposed research. - Include a DMP even if no experimental data is expected.
Promoting Inclusive and Equitable Research (PIER) Plan	PIER Plans are required for new and renewal applications.
Institutions capable of being funded through the DOE Field Work System	If National Laboratories and/or DOE sites are permitted to submit under this FOA: - Do not create new institutions in the PAMS website. - Submit applications in Grants.gov using the name of the laboratory or site in Field 5 of the SF-424(R&R) application form, not the contractor operating the laboratory or site. Submissions under this FOA will be evaluated for technical merit, but any resulting funding, work, or awards will be made under the laboratory or site's contract with DOE. No separate financial assistance awards will be made. No administrative provisions of this FOA will apply to the laboratory or any laboratory subcontractor.

iv

v

How do I prepare a **Biographical sketch** and a **Current & Pending Support** list**?**

- **Good news:** DOE has adopted the NSF/NIH standard "SciENcv" format

- The PI, Co-PIs, and Senior/Key Persons should each complete biographical sketches
  - Create an account at https://www.ncbi.nlm.nih.gov/sciencv/
  - Develop and maintain your biosketches and Current and Pending (C&P) lists using the NIH tools
  - The resultant biosketches and C&P lists will be in the right format for NSF, NIH, and DOE.
  - Simply "Download PDF" from SciENcv and include with your application

- **Tip!** We suggest getting a persistent identifier from (e.g.) ORCiD* and curating your publication list there. Then you can import your publications to the SciENcv with just a few clicks!

* ORCiD is one of several providers of persistent identification services. Others include: ResearcherID (Web of Science), and Author Identifier (Elsevier).

How do I prepare a COI List?

- Please use the template
  - https://science.osti.gov/-/media/grants/excel/Collaborator_Template.xlsx
  - Please do not delete columns or rows from the template
  - Please upload the Excel file (not a PDF)

- Do read the guidance in the instructions on who to include
  - Restrict the list to people with whom you have had <u>substantive interactions</u>
    - Examples of whom to include:
      - Your thesis advisor and your students
      - Your immediate collaborators, with whom you work on at least a monthly basis
      - Persons at private companies with whom you have <u>more than</u> a vendor-customer relationship
    - Examples of who to exclude:
      - Everyone at your institution (they are already deemed as having a COI, no need to explicitly list)
      - Distant co-authors on a paper with >>10 authors. Only list those with whom you worked closely.
      - Distant collaborators on an experiment with >>10 people. Only list those you work with closely.

- Update this list every year
  - <u>Add</u> new collaborators, co-authors, students, business partners
  - <u>Remove</u> co-authors from ≥4 years ago

How do I prepare a Data Management Plan?

- Please review the guidance at
  - https://science.osti.gov/Funding-Opportunities/Digital-Data-Management
  - See also section VIII.A.12 of the FOA

- DMPs describe how:
  - Data will be shared and preserved
  - Data will be made publicly available
  - Data will be provided (e.g., what services, such as osti.gov, will be used)
  - Data will be protected (e.g., PII, confidential or proprietary information)

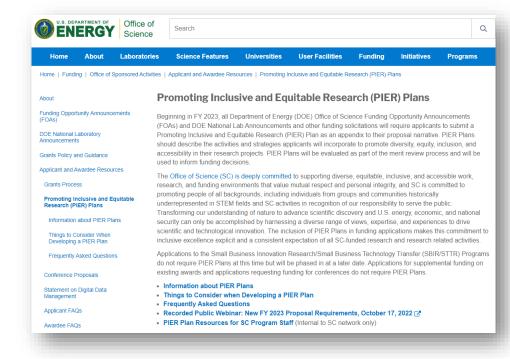- Institutional DMPs may be used if no tailoring is needed

How do I prepare a PIER plan?

- Please review the guidance, webinar, and FAQs on PIER plans:
  - https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans

- PIER plans must be integral to and tailored to the research project
  - It's ok to incorporate your institution's PIER plan, but you need to explain how you specifically will implement the plan in the context of your research project
  - The complexity of the PIER plan depends on the size of the research team, amount of funding, and types of institutions participating
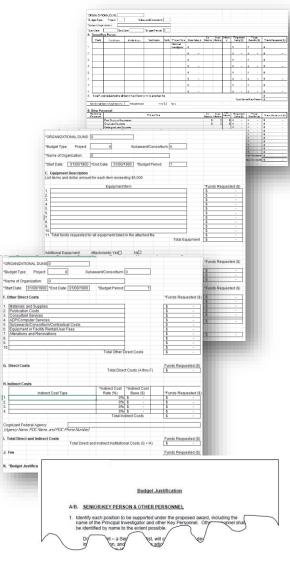
- **Tip!**
  - We frequently see PIER plans that focus mostly on **PI's past DE&I activities** and **recruitment** and these don't score well under merit review
  - Complete PIER plans also discuss retention, cultivating a respectful work environment, intentional mentorship, and equitable distribution of opportunities during the research

How do I prepare a budget?

- **Tip!** Speak with your Sponsored Research Office or Business Office (SRO/BO) long before you submit a proposal
  - They may require you to use a template budget form
  - They may have specific instructions you will need to follow
  - They may require you to submit materials a week (or more) before the FOA deadline

- Please review the instructions found in the FOA
  - Section IV.D.4 Research And Related Budget
  - Section VIII.A.13 How to Prepare a Research and Related Budget and Justification
  - If your SRO/BO does not have a template, we provide an Excel template:
    - https://science.osti.gov/-/media/grants/excel/SF-424_RR-Budget3Year.xlsx

- **Bonus Tip!** We frequently see subaward budgets handled incorrectly.
  - For <u>most</u> proposals:
    - The lead institution's:
      - Budget forms should include **everything** (typically subawards are included in Section F under "Consultant Services" or "Subawards/Consortium/Contractual Costs"
      - Budget explanation should explain in detail the lead institution's costs and summarize subaward costs at a high level
    - Each subaward institution:
      - Should include its own budget forms and budget explanation
        - Budget forms should only include the subawardee's costs
        - Budget explanations should discuss the subawardee's work scope and costs in detail
  - Less commonly, for Collaborative Applications:
    - Each institution submits a budget and budget explanation covering **only** its own costs and activities.

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"What is the most overlooked part of a proposal that proposers should consider giving more attention to?"

<u>*Subjective*</u> answer:

1) Discussion and analysis of competing ideas/technologies/products
   - This is the foundation for arguing your proposed work will advance the field

2) A clear, well-elaborated work scope
   - A clear break down of the proposed work into ordered steps is always appreciated
   - We especially appreciate if work scope tasks/steps can be readily seen in the budget

3) An appropriately detailed Budget Explanation
   - This section can be used to explain details that would bog down the proposal narrative!
     - "Subawardee A will focus on X in year 1, completing parts 1 and 3"
     - "The postdoc will perform TEM, ECCI, and MOI analysis of samples in years 2 and 3…"
     - "A second Er:Cr:YSGG crystal is purchased in Year 3 for the second-stage amplifier…"
     - "Company ABC will machine the structure and waveguide components using OFE copper supplied by the Lab, with brazing to be done at Company EFG…"

Further help resources

- Problems with **Grants.gov** and its forms:
  - Support center: https://grants.gov/support
  - 24 hours a day 7 days a week, excluding <u>federal holidays.</u>
    1-800-518-4726 (U.S.), 1-606-545-5035 (International), or support@grants.gov

- Problems with **PAMS**:
  - 9 am to 5:30 pm, Monday through Friday
  - 855-818-1846 (toll-free), 301-903-9610, or sc.pams-helpdesk@science.doe.gov.

- Questions about the **FOA**:
  - Eric.Colby@science.doe.gov
  - Camille.Ginsburg@science.doe.gov

Recordings and Slides from past Office Hours

- **Please complete the exit survey!**
  - **Tell us what you'd like to discuss at future office hours!**

- **Past and future Office Hours**
  - Wednesday, March 13 at 3pm ET – Introduction to Accelerator Science and ARDAP
  - Wednesday, April 10 at 3pm ET – FOAs and Facilities for Accelerator Science
  - Wednesday, May 8 at 3pm ET – Writing a strong proposal and managing an award
  - Wednesday, June 12 at 3pm ET – ARDAP Merit Review Process
  - Wednesday, July 10 at 3pm ET – How ARDAP identifies priority research directions to support
  - **Wednesday, August 14 at 3pm ET: "Avoiding common mistakes: How to prepare key parts of an ARDAP proposal"**

- **Reach out!**
  - Eric.Colby@science.doe.gov
  - Camille.Ginsburg@science.doe.gov

FOAs = Funding Opportunity Announcements ('DOE-speak' for "solicitations for proposals")

Additional Slides

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