U.S. DEPARTMENT OF ENERGY | Office of Science

Informational Webinar:

Basic Energy Sciences – Reaching a New Energy Sciences Workforce (BES-RENEW)

Funding Opportunity Announcement (FOA): DE-FOA-0002763

FOA Issue Date	05/25/2022
Submission Deadline for Letters of Intent	08/2/2022 at 5:00PM Eastern Time A Letter of Intent is required
Submission Deadline for Applications	08/23/2022 at 11:59PM Eastern Time

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Office of Basic Energy Sciences
June 13, 2022

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

The Office of Science (SC) RENEW Program Goals

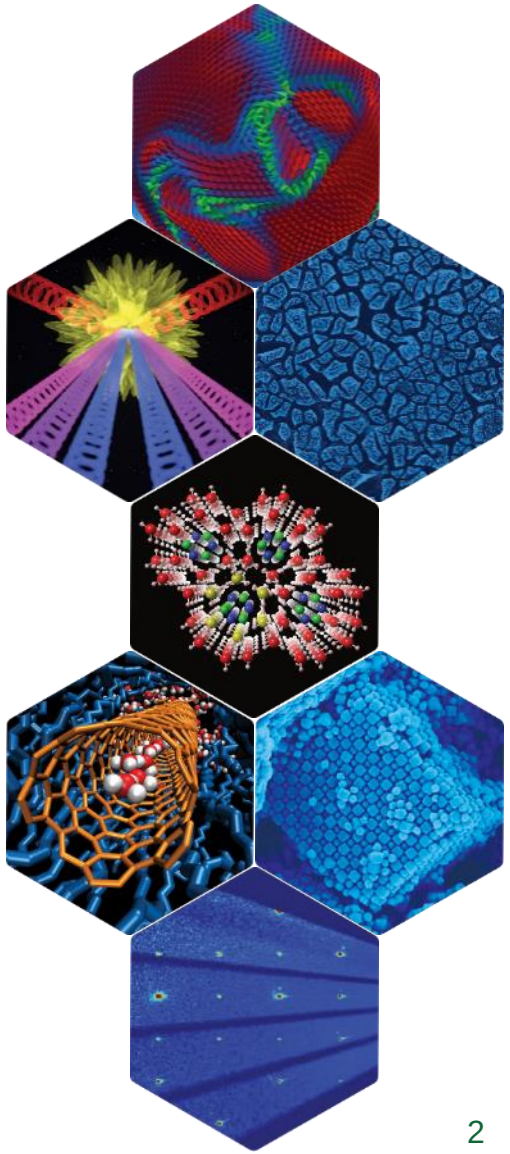
- To build foundations for SC research and training at institutions historically underrepresented in the SC research portfolio.
- To provide training opportunities for undergraduate and graduate students, postdoctoral researchers, and faculty at academic institutions not currently well represented in the U.S. science and technology (S&T) ecosystem by leveraging SC's unique national laboratories, user facilities, and other research infrastructures.
- To open new career avenues for participants, forming a nucleus for a future pool of talented young scientists, engineers, and technicians with the critical skills and expertise needed for the full breadth of SC research activities.

Basic Energy Sciences (BES) Mission

To understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels.

BES fulfills its mission through:

- Supporting **basic research** to discover new materials and design new chemical processes that underpin a broad range of energy technologies,
- Operating **world-class** scientific national laboratories and user facilities in x-ray, neutron, and electron beam scattering as well as in nanoscale research,
- Managing construction and upgrade projects to maintain **world-leading** scientific user facilities.

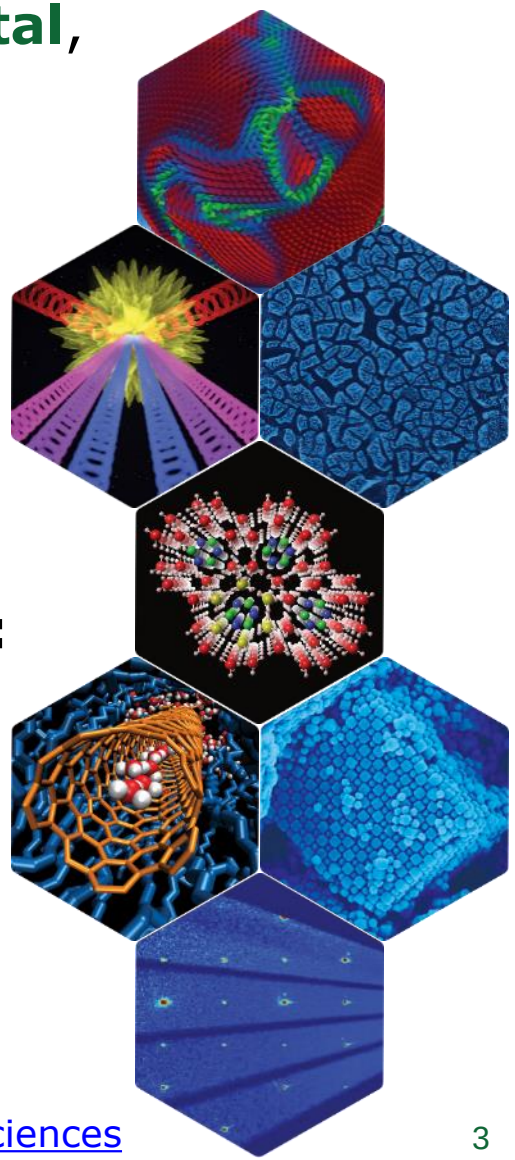


BES Research Program Areas

BES supports a wide range of activities including **experimental**, **theoretical**, and **computational research**.

BES Program Areas:

- **Materials Sciences and Engineering (MSE):**
  - Materials Discovery Design and Synthesis
  - Scattering and Instrumentation Sciences
  - Condensed Matter and Materials Physics
- **Chemical Sciences, Geosciences, and Biosciences (CSGB):**
  - Fundamental Interactions
  - Chemical Transformations
  - Photochemistry and Biochemistry



BES RENEW Goals

- Increase participation of **underrepresented groups** in **BES's clean energy research portfolio**,
- Advance a **diverse**, **equitable**, and **inclusive research community**, which is key to providing the scientific and technical expertise for U.S. scientific leadership,
- Leverage partnerships with **BES's world-class national laboratories** and **user facilities,**
- Provide training (i.e., internships) and research opportunities for students, postdoctoral researchers, and faculty from **non-R1 minority serving institutions (MSIs)**, including **Historically Black Colleges and Universities (HBCUs)**, currently underrepresented in the BES portfolio.

BES RENEW Science Focus Area (see Section I of FOA)

BES-RENEW focuses on training opportunities as part of **basic** and **fundamental chemical** and **materials sciences research that**

- **Enables Clean Energy**:

  Research to provide understanding and scientific foundations for clean energy, including:

  - direct air capture of CO_2
  - H_2 production, storage, and use
  - solar energy conversion to electricity and fuels
  - electrical and thermal energy storage

- **Transforms Low-Carbon Manufacturing**:

  Research to understand fundamental chemical and materials processes:

  - for low-carbon, circular, clean, and scalable manufacturing, synthesis, and processing
  - to advance transformational operando characterization and multiscale models and tools related to these areas
  - to co-design materials, processes, and products for functionality and use

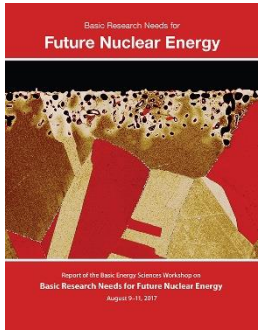
BES RENEW Science Focus Area (see Section I of FOA)

Applications must identify at least one **Priority Research Direction (PRD)** or **Priority Research Opportunity (PRO)** in one or more of the **workshop** and **roundtable reports** for **Clean Energy** or **Low-Carbon Manufacturing**:

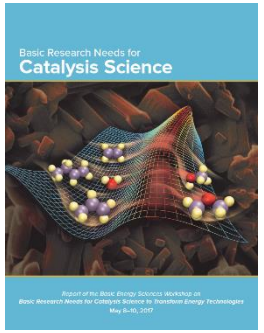
All areas have equal priority: https://science.osti.gov/bes/Community-Resources/Reports

Hydrogen

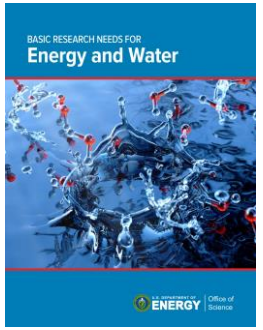
Nuclear Energy



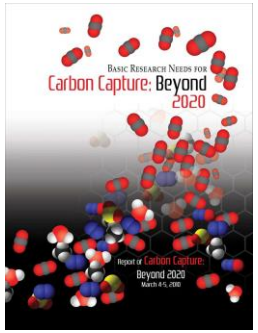
Catalysis



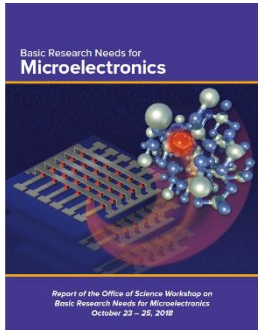
Energy & Water



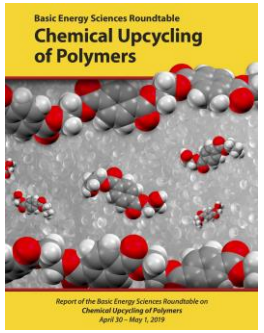
Carbon Capture



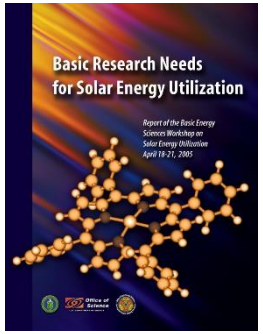
Microelectronics

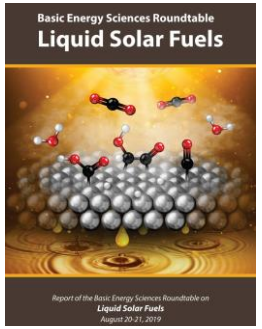


Polymer Upcycling

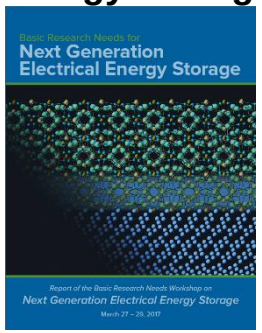


Solar Energy and Fuels

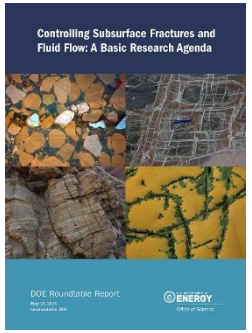




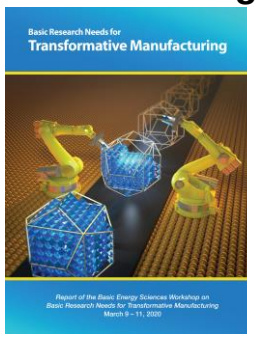
Energy Storage



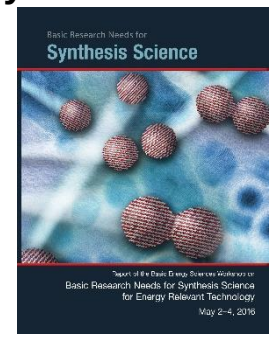
Subsurface



Manufacturing



Synthesis Science



BES RENEW Eligibility (see Section III of FOA)

- For this FOA eligibility is restricted to domestic applicants classified as a **Minority Serving Institution (MSI)** and **NOT listed as a R1 Research Institution.**
- This FOA uses the **Department of Education 2021 eligibility determination** of an institution's MSI status:

  https://www2.ed.gov/about/offices/list/ope/idues/2021eligibilitymatrix.xlsx

  Any institution that either receives funding through a Department of Education MSI funding program (coded 6 on the matrix) or that is eligible to receive such funding (coded 5 on the matrix) will be considered an MSI for this FOA.
- This FOA uses the **R1 Carnegie Classification of Institutions of Higher Education**:

  https://carnegieclassifications.acenet.edu/lookup/srp.php?clq=%7B%22basic2005_ids%22%3A%2215%22%7D

BES RENEW Teaming (see Section I of FOA)

Teaming Arrangements:

- Teams must consist of **one** or **more non-R1 MSIs** in partnership with a **single DOE national laboratory**.
- One **non-R1 MSI** must be identified as the **lead institution**.
- The **lead PI** must be affiliated with the **lead institution**.
- The **lead institution** must receive the **largest fraction** of the **proposed budget**.
- **15-25%** of the **proposed budget** must be allocated to the **lab partner** to ensure active participation and mentorship.
- Multi-institutional teams must submit one application from a designated lead institution with all other team members proposed as subrecipients.

Partnership Exploration:

- Non-R1 MSI institutions should contact the National Laboratory Points of Contact (POCs) with a **short description** of the **proposed research** and **potential lab PI(s)**, if known.
- National Laboratory POCs: https://science.osti.gov/bes/Funding-Opportunities

BES RENEW Budget & Costs (see Section I of FOA) – Page 1

- All costs requested in a budget must adhere to standard requirements for all Federal awards.

Allowable costs include:

- **"Buying out" faculty time** dedicated to teaching or administrative responsibilities,
- Support for **administrative personnel** dedicated to the proposed activity,
- Support for **professional development, training, mentoring** of students and junior researchers,
- **Travel** related to collaborator meetings, internships at DOE lab, conferences/workshops,
- **Fringe benefits**, which must be paid in accordance with an institution's negotiated rates agreement, institutional policies, and the individual's appointment,
- **Temporary dependent-care costs** incurred during travel,
- **Membership costs** in relevant **professional societies**, including both scientific societies and those dedicated to research administration,

BES RENEW Budget & Costs (see Section I of FOA) – Page 2

Allowable costs include (continued):

- **Instrumentation** required to conduct proposed research,
- **Equipment** (items with a useful life of more than 12 months and a per-item acquisition cost of more than $5,000) required to conduct proposed research,
- **Stipends and benefits** for students and post-doctoral researchers, recognizing their dual nature as both trainees and employees,
- **Salary support** to cover time to participate in outreach for recruitment, internships, and training events, science team meetings, partnership development, or information gathering,
- **Other direct costs**, e.g., materials and supplies such as office supplies, desktop or laptop computer, and/or software licenses that are directly necessary to enable the proposed activities.

All requested costs must also conform to institutional policies: A cost cannot be charged to a Federal award if the institution's policies would prohibit paying for the cost. All requested costs must be directly related to the work being proposed.

BES RENEW Award Information (see Section II of FOA)

- The FOA solicits **new applications** only.
- **Estimated funding:** Subject to availability of funds, a total of up to $15 million in current and future fiscal year funds will be used to support awards under this FOA.
- **Period of performance:** DOE anticipates making awards with a project period of 3 years, with an option to renew for 3 additional years, subject to the availability of future funds.
- **Minimum/maximum award size:**
  - **Floor:** $500,000 per year
  - **Ceiling:** $750,000 per year
- **Expected number of awards and award size:** The exact number of awards will depend on the number of meritorious applications and the availability of appropriated funds.
- **Limitations on submission:** Applicant institutions are limited to no more than one Letter or Intent (LOI) or application. Institutions maybe be listed as a sub-recipient on other LOIs or applications without limitation.
- Individuals are limited to be lead-PI on one LOI or application. The PI on a LOI, or application, may also be listed as a senior or key personnel on separate submissions without limitation.

BES RENEW Letter of Intent (LOI) (see Section IV of FOA)

- A **LOI is required** and must be submitted by the date indicated on the cover of this FOA (8/2/2022).
- It must include a **clear** and **concise description** of the **objectives** and **technical approach** of the proposed research, including a paragraph about **recruitment** and **inclusion plans** for these research internships.
- LOI is used to help in **planning the review** and the **selection of potential reviewers**.
- LOI should include a listing of individuals who should not serve as merit reviewers of a subsequent application (see section VIII.A.10 of the FOA). A collaborator template is available on the Funding Opportunities webpage: https://science.osti.gov/bes/Funding-Opportunities

BES RENEW Merit Review (see Section V of FOA)

Applications are subject to **scientific merit review** (peer review) and will be evaluated by Merit Review Panels against the following **five criteria** which are of **equal importance**:

- Scientific and/or Technical Merit of the Project,
- Appropriateness of the Proposed Method or Approach,
- Quality and Efficacy of the Recruitment and Inclusion Plan,
- Competency of Applicant's Personnel and Adequacy of Proposed Resources, and
- Reasonableness and Appropriateness of the Proposed Budget.

More detailed questions to each criteria are provided in the FOA and will serve as prompts to the merit reviewers.

BES RENEW FOA: Key Dates

- **LOI due date:** 08/2/2022, by 5:00PM Eastern Time
  - Letters of Intent must be submitted via the DOE Portfolio Analysis and Management System (PAMS) at https://pamspublic.science.energy.gov
- **Application due date:** 08/23/2022, by 11:59PM Eastern Time
  - Applications must be submitted via www.grants.gov
- DOE anticipates that **award selection** will be completed by the 1st quarter of Fiscal Year 2023 (Oct – Dec, 2022) and that awards will be made in Fiscal Year 2023.

Checklist for avoiding common errors: LOIs
(not a comprehensive list of all FOA requirements)

- **Scope**: No applied research or technology development.
- **Tables**: FOA requires a table listing "individuals who should not serve as reviewers" be submitted in Excel format by email to BES-RENEW.FOA@science.doe.gov
  - A template called "Collaborator Template" is provided.
  - More info on List of Individuals Who Should Not Serve as Reviewers in FOA Sec. VIII.A.10.
- **Signature**: Cover page must include the signature of an official of the lead institution
  - Official who signs should be someone with authority over research activities for the entire institution
  - Signatures will be used to confirm which LOI the institution supports (one LOI per lead institution)
- Individuals are limited to be **lead PI** on 1 LOI.
  - The PI on a LOI may be listed as a senior/key personnel on other submissions without limitation.
- Submit LOIs **via PAMS** at https://pamspublic.science.energy.gov, not via www.grants.gov (due August 2, 5pm ET)
- **Late submissions** of LOIs are rarely accepted (see Sec. IV.F.4 of the FOA)

Checklist for avoiding common errors: Applications
(not a comprehensive list of all FOA requirements)

- **Tables**: FOA requires a table of collaborators and conflicts of interest with the application, submitted in Excel format by email to BES-RENEW.FOA@science.doe.gov
  - A template is provided.
  - List of Individuals Who Should Not Serve as Reviewers (Section VIII.A.10 in FOA).
- **Budget**: For multi-institutional projects, the lead institution must request a larger percentage of the budget than each of the other institutional partners. 15-25% of the proposed budget must be allocated to the lab partner.
- **Biographical sketch** and list of **current/pending support**
  - Required for each senior/key personnel; follow instructions in FOA, including the use of the NSF format.
  - Ensure complete list of activities regardless of source of funding.
  - Do not attach a list of individuals who should not be used as merit reviewers as part of the bio sketch.
- **DOE National Lab Letter of Commitment is required**
  - Must be signed by official at the Associate Laboratory Director level or above; Attached to Appendix 8
- Submit application via www.grants.gov, not PAMS (due Aug 23 by 11:59pm ET)
- **Late submissions** of applications are rarely accepted (see Sec. IV.F.4 of the FOA)

Where to find more information

- **FOA:** https://science.osti.gov/bes/Funding-Opportunities
- **Basic Energy Sciences (BES):** https://science.osti.gov/bes
  - **Materials Sciences and Engineering (MSE) PI Meetings:** https://science.osti.gov/bes/mse/Principal-Investigators-Meetings
  - **Chemical Sciences, Geosciences, and Biosciences (CSGB) PI Meetings:** https://science.osti.gov/bes/csgb/Principal-Investigators-Meetings
- **This webinar is being recorded**; slides and the recording will be posted on the FOA page listed above
- **Questions about the FOA**: Please send an email with your question(s) to BES-RENEW.FOA@science.doe.gov

Questions & Answers

Please submit questions using Zoom Q&A window, which should be accessible at the bottom of your zoom window.

If your question is not answered today, or you have additional questions about the presentation, please submit to:
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