

Sponsor/Title: Department of Energy (DOE) -- Energy Frontier Research Centers (EFRCs)

External Link: <https://www.grants.gov/search-results-detail/361309>

Funding Opportunity Number: DE-FOA-0003614

Submission Limitation per Institution: Three (3) pre-applications or applications as the lead institution.

Notre Dame Limited Submissions Listing:

<https://research.nd.edu/our-services/funding-opportunities/faculty/limited-submissions-program/>

Internal Expression of Interest Deadline: 2026-03-02

Sponsor Pre-Application (Required) Deadline: 2026-04-01

Pre-Application Response Date: 2026-05-06

Sponsor Application Deadline: 2026-07-01

Purpose: The DOE SC program in Basic Energy Sciences (BES) announces a re-competition of the Energy Frontier Research Center (EFRC) program. The purpose of this program is to bring together world-class teams of scientists from universities, DOE national laboratories, and other institutions to perform energy-relevant basic research with a scope and complexity beyond what is possible in single-investigator or small-group awards. These multi-investigator, multi-disciplinary centers accelerate transformative scientific advances for the most challenging topics in materials sciences, chemical sciences, geosciences, and biosciences. EFRCs integrate experiments, theory, computation, and AI/ML; develop innovative experimental and theoretical tools that illuminate fundamental processes in unprecedented detail; and create an enthusiastic, interdisciplinary, workforce of energy-focused scientists.

Scientific Topics: Basic Energy Sciences (BES) is soliciting applications in two general categories: BES Report Topics and Special Topics. Applications may respond to topics in both categories. Topic areas are open to both new and renewal applications, unless noted below.

BES REPORTS TOPICS: In the BES Reports Topics, applicants must address priority research directions and opportunities identified in one or more of the following reports:

- [Foundational Science to Accelerate Nuclear Energy Innovation](#) – New and renewal applications may respond to all priority research opportunities.
- [Controlling Subsurface Fractures and Fluid Flow: A Basic Research Agenda](#) – New and renewal applications may respond to all priority research directions. Subsurface topics related to critical minerals and materials, hydrocarbons, and/or enhanced geothermal are emphasized.
- [Basic Research Needs for Next Generation Electrical Energy Storage](#) – Renewal applications may respond to all priority research directions. New applications may respond only to PRD 2: Link complex electronic, electrochemical, and physical phenomena across time and space and/or PRD 3: Control and exploit the complex interphase region formed at dynamic interfaces.
- [Basic Research Needs for Transformative Manufacturing](#) – New and renewal applications may respond only to PRD 1: Achieve precise, scalable synthesis and processing of atomic-scale building blocks for components and systems, and/or PRD 5: Co-design materials, processes, and products to revolutionize manufacturing.
- [Basic Research Needs for Microelectronics](#) – New and renewal applications may respond to all priority research directions.
- [BES Roundtable on Opportunities for Quantum Computing in Chemical and Materials Sciences](#) – New and renewal applications may respond to all priority research opportunities. Applications that do not provide a clear path to overcome scaling and noise limitations of quantum hardware are unresponsive.
- [BES Roundtable on Opportunities for Basic Research for Next-Generation Quantum Systems](#) – New and renewal applications may respond only to PRO 2: Enhance creation and control of coherence in quantum systems and/or PRO 3: Discover novel approaches for quantum-to-quantum transduction. Proposals whose primary aim is the discovery, synthesis, or

characterization of new quantum materials, without a direct and measurable transformative impact for quantum information science, are unresponsive.

SPECIAL TOPICS: In the Special Topics, applicants must address one or more of the following topics:

- Controlling Quantum Phenomena to Enable Unconventional Computing Paradigms
- Development and Workflow Integration of AI/ML Models for Materials and Chemistry Discovery Science
- Emergent Phenomena of Complex Chemical Systems
- Fundamental Science for Critical Minerals and Materials (CMM)

Internal Application Requirements: Upload the following information to the Google Form at <https://forms.gle/ax4fhKFMSWo1Roo1A> by the internal deadline:

- Name of the Principal Investigator (PI)
- Project Title
- Select which BES Reports Topics and Special Topics are applicable to your proposal.
- All ND Collaborators:
 - For each ND Collaborator listed, include name, department or unit, and specific role for this project in three sentences (maximum).
- Project Summary: Four (4) pages (maximum) addressing the following Application Review Information as outlined in item B. Review Criteria on pages 50-51 of the NOFO.
 - Scientific and/or Technical Merit of the Project
 - Appropriateness of the Proposed Method or Approach
 - Strength of the EFRC Management Plan

Questions: Contact Notre Dame Research Limited Submissions at limited@nd.edu.

Unless otherwise noted, all internal applications are due by 11:59 PM Eastern Time on the internal expression of interest deadline.

Applications submitted after the deadline will not be accepted.