FY 2026 Research Opportunities in Accelerator Stewardship and Accelerator Development DE-FOA-0003620

NOFO Issue Date:	March 12, 2026
Submission Deadline for Pre-Applications: (Applies to all Tracks)	April 9, 2026 at 5 PM Eastern Time A Pre-Application is required.
Pre-Application Response Date:	April 23. 2026
Submission Deadline for Applications:	May 21, 2026 at 11:59 PM Eastern Time
Submission Deadline for Letters of Intent: (Applies to FY2027 CARTs only)	June 4, 2026 at 11:59 PM Eastern Time

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

Acknowledgement: This year's NOFO was prepared with significant contributions from AAAS STP Fellow Dr. La'Nese Lovings.

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OFFICE OF SCIENCE BY THE NUMBERS

Delivering scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States

FY25

6 CORE SCIENCE PROGRAMS

- Advanced Scientific Computing Research
- Basic Energy Sciences
- Biological and Environmental Research
- Fusion Energy Sciences
- High Energy Physics
- Nuclear Physics

2 ENGINEERING AND TECHNOLOGY OFFICES

- Isotope Research and Development and Production
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)

5 NATIONAL QUANTUM INFORMATION SCIENCE RESEARCH CENTERS

ACROSS ITS 10 NATIONAL LABS, OFFICE OF SCIENCE MAINTAINS APPROXIMATELY

24 MILLION
SQUARE FEET OF SPACE

1,600 BUILDINGS

38,000 ACRES OF LAND OWNED

SUPPORTS RESEARCH SPANNING

17
DOE NATIONAL LABS

50
STATES, PUERTO RICO, AND WASHINGTON, D.C.

>300
UNIVERSITIES AND HIGHER-LEARNING INSTITUTIONS

STEWARDS 10 DOE NATIONAL LABORATORIES

3 World-Leading Supercomputers

ESTIMATED RESEARCHERS SUPPORTED

- 10,100 Permanent PhDs
- 3,100 Postdoctoral Associates
- 4,800 Graduate Students
- 9,900 Other Scientific Personnel

NEARLY 43,000 USERS AT 28 OFFICE OF SCIENCE FACILITIES

10
SITE OFFICES

1
CONSOLIDATED SERVICE CENTER

OVER 120 NOBEL PRIZES

$8.2 BILLION
OVERALL OFFICE OF SCIENCE BUDGET

$991 MILLION
USER FACILITY CONSTRUCTION

$261 MILLION
SCIENCE LABORATORIES INFRASTRUCTURE

DOE SC Scientific User Facilities

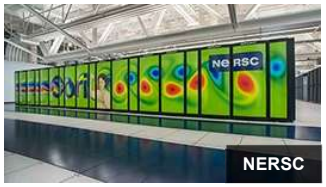
Delivering scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States

FY25

28 scientific user facilities
~43,000 users

OLCF

ALCF



NERSC


ESnet


EMSL


ARM


JGI


SNS


HFIR


ALS


APS


LCLS


NSLS-II


SSRL


CFN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CNMS


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DIII-D


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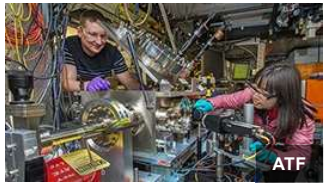
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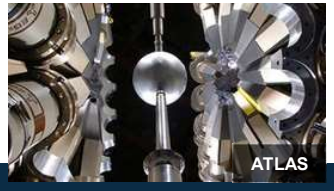
Fermilab AC


CEBAF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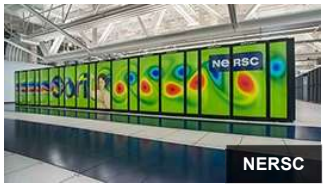
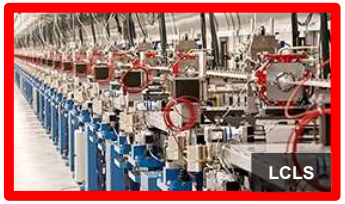
DOE SC Scientific User Facilities

Delivering scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States

FY25

15 accelerator-based facilities
~17,600 users (41%)





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Accelerator Stewardship and Accelerator Development

FY 2026 Research Opportunities in Accelerator Stewardship and Accelerator Development (DE-FOA-0003620)

$15M in funding for new and renewal awards in two main areas:

Accelerator Stewardship

- **Track 1: Use-Inspired Basic R&D** – aimed at transitioning accelerator technology into research, medical, security, and industrial applications
- **Track 2: Cross-cutting Basic Accelerator R&D** – aimed at developing the foundations and new concepts of next-generation accelerator technology.
  → Changing significantly in 2027 ←
- Track 3: superseded by beamNetUS (accelerating beam-based research) www.BeamNetUS.org

TRL≤4

Accelerator Development

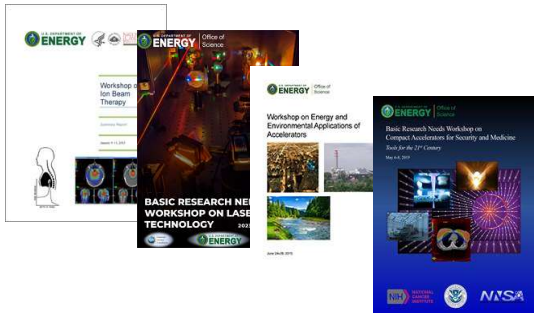
- Track 4a: Accelerator Technology Sector Business Plans – call ended.
- **Track 4b: Accelerator Technology Partnerships** – public-private partnerships to strengthen domestic suppliers of accelerator technology

TRL≤6, MRL≤7

Track 1: Use-Inspired R&D

- Develop accelerator prototypes (up to TRL 4) in response to a specific technical challenge
  - Design studies in specific topics are also funded
- Technical challenges and priority research directions are identified by **Basic Research Needs workshops**
  - ***Particle Beam Therapy Delivery Improvements***
    - *No longer accepting new applications.*
  - ***Ultrashort Pulse Laser Technology R&D***
    - *https://science.osti.gov/-/media/ardap/pdf/2024/Laser-Technology-Workshop-Report_20240105_final.pdf*
  - ***High Power Electron Accelerators***
    - *https://science.osti.gov/-/media/hep/pdf/accelerator-rd-stewardship/Energy_Environment_Report_Final.pdf*
  - ***Compact Accelerators***
    - *https://science.osti.gov/-/media/hep/pdf/Reports/2020/CASM_WorkshopReport.pdf*
    - *No longer accepting applications for "expert" accelerator systems – please apply to the Genesis Mission instead: (https://genesis.energy.gov/)*

Updated!



- Teaming: strongly encouraged
  - Accelerator Technology Expert + Accelerator Application Expert +Commercialization Company
- Evidence of institutional commitment: strongly encouraged
- Eligibility: domestic organizations
- Duration & Funding: Research awards are 1-, 2-, or 3-years and up to ~$3M; design studies are 1-year and up to $200k.
- Proposal format: technology development plan (or design study, as appropriate).

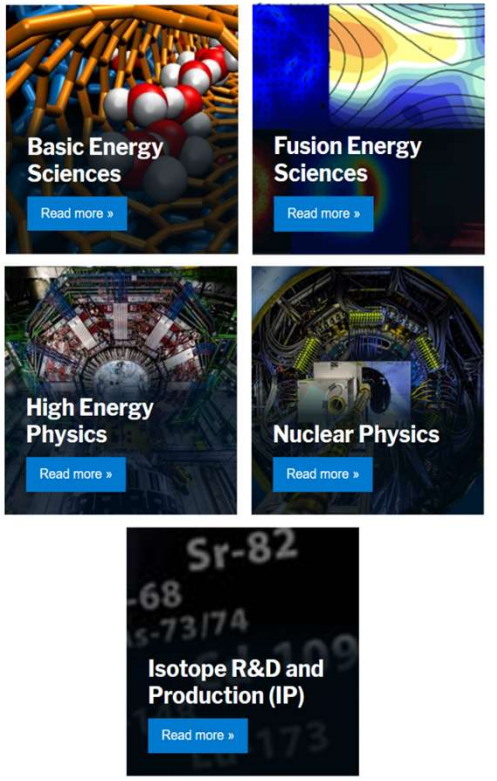
Track 2: Cross-cutting Basic Accelerator R&D

- Long-term basic R&D that broadly impacts many accelerator applications
  - Impact multiple SC programs and other applications
  - Improve the theory, computational tools, and fundamental physical and technical understanding of accelerator science needed for future SC accelerator facilities
  - Incorporate student education and training, providing students with the full breadth of skills and experience needed to succeed in a wide range of AS&T careers

Transitioning to a multi-investigator/multi-institutional model in 2027

  - "Collaborative Accelerator Research Teams" (CARTs) of domestic universities to tackle complex, cross-cutting problems and support workforce development
  - Teaming: Mandatory, with ≥3 institutions and ≥3 principal investigators per CART
  - Duration and funding: Awards are 5-years and up to 3.75M$ to 7.5M$ awards, renewable
  - One CART award in each of 5 topic areas (next slide)

- Why the change?
  - SC needs stronger, interdisciplinary multi-institutional collaborations to solve **higher complexity** problems, and an accelerator workforce prepared with **broader skillsets**

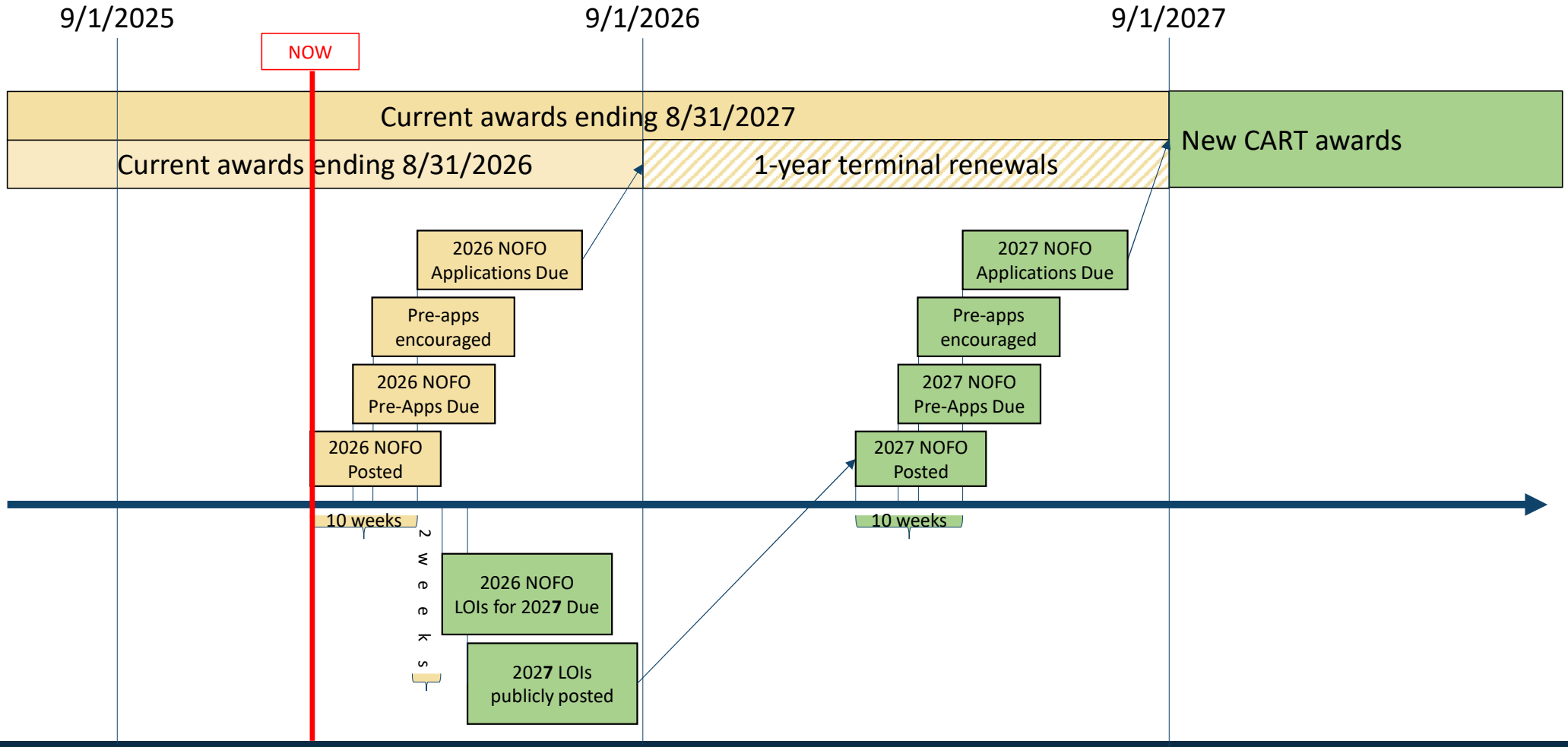


Track 2: 5 CART Topic Areas

One award anticipated in each topic area

- **2.1 Advanced Beam Dynamics and Accelerator Control Systems** – theory, applied mathematics, and numerical simulations generally applicable to accelerator science and technology; innovations in control systems and integration of AI/ML techniques
- **2.2 Instrumentation and Control** – no dedicated CART in this area. Instead, consider which of the 5 CARTs is the best match to your interests and team up
- **2.3 Emerging Accelerator and Radiation Concepts and Fundamental Physics** – advanced structure-based acceleration and radiation generation concepts; broadly applicable techniques for achieving greater performance and/or lower cost
- **2.4 Advanced Particle Sources** – fundamental material science and innovative concepts for cathodes, targets, and beam windows; new concepts for higher brightness primary- and secondary-beam production
- **2.5 Superconducting Magnets** – fundamental material science for superconducting wire and cable; new concepts and innovative designs for high field magnets and associated cryogenic systems
- **2.6 Superconducting RF** – material science leading to higher performance and lower cost; advances in theory providing greater predictive power for new and existing superconductor performance; advanced techniques for cavity fabrication and cryogenic cooling

Track 2: Transition Timeline



Track 2: NOTICE

No current Track 2 awards will be renewed beyond 8/31/2027

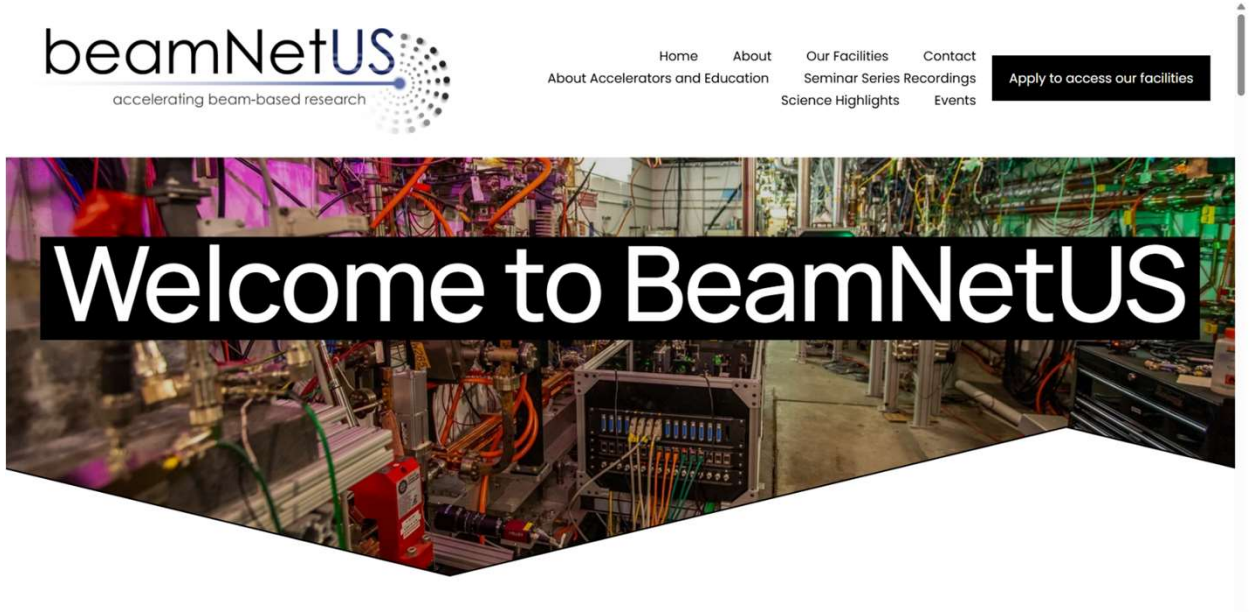
Only multi-PI/multi-institution Track 2 efforts will be awarded beyond 9/1/2027

Track 1 and Track 4b do not change and will continue to accept renewal proposals.

Track 3: Accelerator Test Facility Program

- Has been superseded by the BeamNetUS program
  - 13 beam facilities currently in the BeamNetUS network
  - Streamlined, central portal to apply for beamtime
  - Flexible facility matching process

- *See https://www.BeamNetUS.org/*



Acknowledgement: Dr. Christine Clarke worked extensively with the community to develop the BeamNetUS model, drawing on best practices from FES's LaserNetUS.

Track 4a: Accelerator Technology Sector Business Plans

- No further business sector plans are sought.

Track 4b: Accelerator Technology Partnerships

- Supporting research collaborations to **strengthen domestic suppliers of accelerator technology** needed for DOE facilities
  - Technology priorities have been **updated** since the 2024 solicitation:
    - **Industrial manufacturing** of:
      - REBCO, Bi-2212, or Nb_3Sn wire, cable, and high-field magnets;
      - High-efficiency, high-average-power RF power sources and power-handling devices; materials for efficient RF transmission;
      - High damage threshold ultrafast laser optics and sources, high-precision x-ray optics;
      - High-intensity electron sources;
      - Superconducting RF cavities;
    - **Industrial capability to develop and manufacture**:
      - Cryogenic systems for accelerator applications below 20K.
- Teaming: strongly encouraged (Industry (lead)+DOE Lab)
- Eligibility: domestic companies
- Duration and funding: Up to $2M per 2-year award, renewable.
- Proposal format: research partnership proposal

Track 4b: Considerations for Applications

- Successful applications will strengthen domestic suppliers by leveraging the complementary strengths of industry, national laboratories, and/or academia
  - The proposal must document the current state of domestic suppliers and clearly explain why the proposed work would *increase* domestic market competitiveness

- Activities of the partnership should be tailored to the specific needs of the technology and current state of the industry, and can include (but not limited to):
  - Joint technology development
  - Formation of a "center"
  - Design for Manufacturing activities
  - Industry use of DOE Lab facilities
  - Vendor qualification activities
  - Government furnished equipment
  - Procurement of strategic reserves of materials, components, or subsystems

- Proposals will be declined without review if they:
  - Are for purely academic R&D
  - Are a partnership in name only
  - Would *reduce* domestic market competitiveness (e.g., by "picking a winner")

Applying for Funding

Funding Opportunities: General Advice

Please read the NOFO carefully!

- Omitting required information will cause your application to be declined without review
- Common omissions:
  - The **Data Management Plan** is required
  - **CVs** and **Current and Pending Support** is required
  - A **List of Individuals who Should not Serve as Merit Reviewers** is required (please use the template)
  - A Checklist for Avoiding Common Errors is included in the NOFO, starting on page 75

Proposal lacking any of these elements will be declined without review.

- A Frequently Asked Questions document is posted online
  - https://science.osti.gov/-/media/grants/pdf/foas-resources/2026/DE-FOA-0003620-FAQ.pdf
  - It includes advice on questions about the desired attributes of Teams, Partnerships, how to properly include funding for a subcontract to a DOE Lab, and more.
- Section V "Application Review Information" describes how merit reviewers will read and score your proposal, and Program Policy Factors DOE will take into consideration

Funding Opportunities: Proposal Review Process

A proposal's Project Narrative should enable reviewers to evaluate the merit review criteria:

- Scientific and/or Technical Merit of the Project
- Appropriateness of the Proposed Method or Approach
- Competency of Applicant's Personnel and Adequacy of Proposed Resources
- Reasonableness and Appropriateness of the Proposed Budget
- Quality of the Accelerator Stewardship or Accelerator Development Opportunity

The proposal should also enable other federal agencies to understand the impact and relevance of your proposed work

- Program Managers across DOE and at DOD, NIH, NSF, and DHS are asked for input on the relevance of the proposed work to their agencies' missions

Funding Opportunities: FAQs

How much support can I get?

- NOFO includes "ceiling/floor" amounts for funding individual projects
- Peer review will assess requested budget versus research needs
- Descoping may occur if an award is made (i.e., reduced funding awarded for reduced work scope)

How long will it take for me to find out if my project is funded?

- Reviews typically take 5 – 7 months to complete
- Proposals can be held up to one year for consideration

I want to support my research group with multiple federal grants – what are the requirements?

- Each research proposal to each Agency must be able to "stand alone" with respect to work scope and research outcomes
- The work scope funded by each agency must be clearly delineated
- You may submit substantially similar proposals to other agencies, but these must be listed under your Current and Pending Support.

May I include Letters of Support?

- No. However, you may include Letters of Commitment stating what effort or facilities will be made available to the PI.

Funding Opportunities: FAQs

Where can I learn about SC's accelerator technology needs?

- Each SC program maintains reports on its research needs and long-range plans on the DOE webpages:
  - Basic Energy Sciences: https://science.osti.gov/bes/Community-Resources/Reports
  - Fusion Energy Science: https://science.osti.gov/fes/Community-Resources/Workshop-Reports
  - High Energy Physics: https://science.osti.gov/hep/Community-Resources/Reports
  - Nuclear Physics: https://science.osti.gov/np/Community-Resources/Reports
  - Accelerator Stewardship & Development: https://science.osti.gov/hep/Research/Accelerator-Stewardship/Workshop-Reports
  - Isotope Program: https://science.osti.gov/Isotope-Research-Development-and-Production/Resources/Reports

What are you looking for in a Track 1 or Track 4 "team"?

- Teaming is strongly encouraged and peer reviewers are asked to assess the strengths of the team
- Each member of the team must substantially contribute to the work scope
- The team should include experts in the accelerator technology, experts in the end use application, and a domestic company

What are you looking for in a Track 2 CART (team)?

- Specific teaming requirement apply -- please see slide 8 above and NOFO page 24

How can we find potential collaborators?

- For R&D partners of all types, search for authors of recent papers in your proposed topic area
- For DOE Lab partners specifically, there is the Lab Partnering Service https://www.energy.gov/technologytransitions/lab-partnering-service

- To form Track 2 CARTs for the FY 2027 call, submit a Letter of Intent in 2026 to publicize your interest.

New Institutions, New Investigators, New Directions

R&D applications are always encouraged from new institutions and new principal investigators

- No prior Accelerator Stewardship award is necessary
- No prior DOE award is necessary
- All domestic organizations[1] may apply to the NOFO through at least one of the Tracks

We are available to discuss research concepts, opportunities to submit proposals, or opportunities to form new collaborations

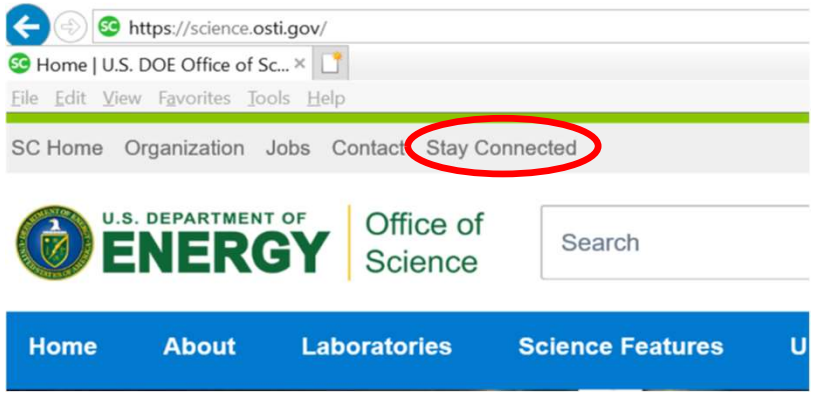
- Note that certain questions cannot be answered when a NOFO is open[2]
  - "Do you like my idea?" "Would a proposal on ABC be successful?"
  - PMs are restricted to clarifying the instructions and intent of the NOFO
  - When there is no open NOFO, a broader discussion can occur
- When there is no active NOFO, we will be vague about the next NOFO
  - "When is the next NOFO?" Typical answer: "Usually it posts early in the calendar year"
  - "Will the next NOFO have the same topics?" Typical answer: "Often the answer is yes, but topics and priorities evolve. Please read the NOFO carefully."

[1] Except nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
[2] A NOFO is "open" from the posting date of the NOFO until the public announcement of the NOFO's awards. Typically, this is about 6-7 months.

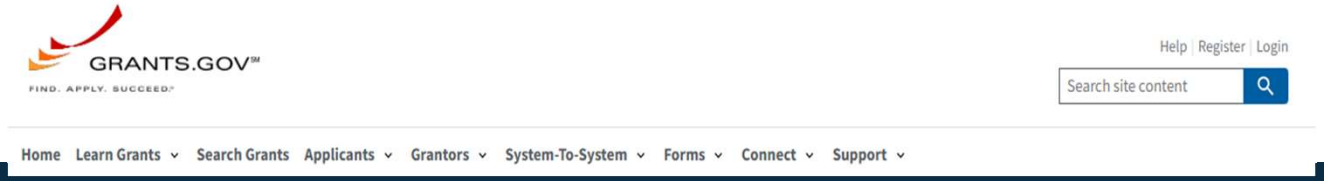
Stay Connected

Want an automatic email the next time a NOFO is posted?

- **Office of Science** can send automated emails based on topics that interest you!
  - Sign up for topics of interest
    - NOFOs
    - Press releases
    - Meetings
    - Scientific topics
    - Program office news
  - https://science.osti.gov



- **Grants.gov** can send automated emails when new solicitations are posted!
  - Register and set up a keyword filter
  - https://grants.gov/



Additional Funding Opportunities to Consider

AI/ML Research

- **Genesis Mission** – accelerating science through AI
  - https://genesis.energy.gov/ Genesis Mission and sign up at https://www.techwerx.org/join techwerx
  - Just Posted: https://simpler.grants.gov/opportunity/0228b895-9cb3-4160-8acc-58709e75c3c7
  - Multi-Office particle Accelerator Team (MOAT) – a collaboration of all seven DOE SC accelerator Labs
    - https://atap.lbl.gov/news/harnessing-ai-for-particle-accelerator-innovation-ataps-role-in-the-does-ai-genesis-mission

New Research Capability Development

- **EPSCoR** – enhancing R&D capabilities of institutions in designated states
  - https://science.osti.gov/bes/epscor

Career Development

- **Early Career Research Program** – for high-potential candidates ≤10 yrs post-PhD
  - https://science.osti.gov/early-career
- **SC-GSR** – one year of graduate support at a DOE lab
  - https://science.osti.gov/wdts/scgsr
- **SULI** – summer undergraduate DOE laboratory internships
  - https://science.osti.gov/wdts/suli

Technology Transfer

- **SBIR/STTR** – 1+2 years of funding to launch a new product
  - https://science.osti.gov/sbir/Funding-Opportunities

A Few Final Thoughts

- **A great way to learn how to write successful proposals is to become a reviewer**
  - Reviewer identity is confidential
  - See how others describe their work
  - Need reviewers in physics, engineering, business, commercialization, and workforce development
- **The ARDAP NOFO is very competitive, typically awarding $1 for every $7 requested**
  - We discouraging uncompetitive pre-applications to save everyone time
  - Pre-application discourage rates routinely exceed 50%
- **Don't have your proposal administratively declined!**
  - Please follow the NOFO instructions carefully
  - Make sure to submit all required forms and documents
- **Contact us!**
  - We will be happy to discuss the program and application process with you
    - Eric.Colby@science.doe.gov

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The Office of Science Research Portfolio

Advanced Scientific Computing Research	• Delivering world leading computational and networking capabilities to extend the frontiers of science and technology
Basic Energy Sciences	• Understanding, predicting, and ultimately controlling matter and energy flow at the electronic, atomic, and molecular levels
Biological and Environmental Research	• Understanding complex biological, earth, and environmental systems
Fusion Energy Sciences	• Supporting the development of a fusion energy source and supporting research in plasma science
High Energy Physics	• Understanding how the universe works at its most fundamental level • *Accelerator Stewardship and Accelerator Development programs*
Nuclear Physics	• Discovering, exploring, and understanding all forms of nuclear matter
Isotope R&D and Production	• Supporting isotope research, development, production, processing and distribution to meet the needs of the Nation

Working with the Office of Science

Issues With Submissions

Applications cannot be changed after a NOFO deadline

- Applications may be withdrawn before they are released to reviewers
- Applications may be withdrawn by written request after they are released to reviewers
- SC has no policy limiting the number of resubmissions before a NOFO deadline
  - We will use the last version submitted for review

Budget Justifications

- All costs on a budget need to be justified
  - "Based on prior experience with similar projects" is acceptable
  - Indicate estimates vs. quotes
- Use the negotiated fringe benefit rates and explain deviations
  - Explain the choice of using off-campus F&A rates

Working with the Office of Science
Checklist

- Review the Updates, Reminders, and Checklist at the beginning of each NOFO
- Use one PDF file for the research narrative and all appendices
  - do **not** use a "PDF binder"
- Verify math in the budget
  - New Grants.gov forms will auto-calculate
  - Ensure use of the correct indirect cost rate
  - Ensure use of negotiated fringe rate
- For renewals and supplements, make sure the application is from the same institutional profile that currently holds the award
  - We cannot renew or supplement an award to a different institution

Track 2: Collaborative Accelerator Research Teams (CARTs)

Each CART should

- Address complex, high-risk high-reward AS&T* research of value to *current and future accelerator-based facilities*
- Provide high quality education and training opportunities
- Serve as a recognized authority and aim to attract other funding
- Awards are 5 years, up to 3.75M$ to 7.5M$ awards, and renewable. One CART award per topic area – work together!

R&D Mission

- Cross-cutting basic research, benefitting *most or all* SC Programs, and complementary to currently funded efforts
- Pursue one of the 5 defined topic areas
- Aimed at having a transformative and broad impact
- Integrate the use of AI/ML tools and connect with the Genesis Mission

Workforce Development

- Train graduates to succeed in a wide range of AS&T careers
- Integrate AI/ML in training and research
- Share educational resources across the team to give a broader experience to students

Team Composition

- ≥3 institutions and ≥3 PIs
- Lead and tier-1 subs must be universities
- Lead institution must be the intellectual and administrative lead of the CART
- Interdisciplinary and broad