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## Funding Opportunities

[Applications from Universities and Other Research Institutions to the Annual Open Solicitation](#)

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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](mailto: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

## Additional Funding Opportunity Announcements

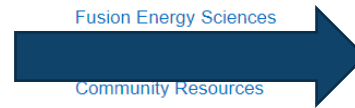
Reminder: Submit letters of intent, preapplications, and applications well ahead of stated deadlines.

**Note:** Department of Energy National Laboratories and other Federal Agencies should read Funding Opportunity Announcements carefully to see if they are eligible to apply to a particular solicitation. DOE National Laboratories may wish to respond to the program announcements listed under Open National Laboratory Announcements.

Click on Funding Opportunities in the top left menu



Link to slides in the details



# Informational Webinar: FES New Funding Opportunities

Fusion Innovation Research Engine (FIRE) Collaboratives: [DE-FOA-0003361](#)

&

Microelectronics Science Research Center Projects for Energy Efficiency and Extreme Environments: [LAB 24-3320](#)

May 23, 2024

Dr. Jean Paul Allain | Dr. John Mandrekas | Dr. Kramer Akli | Dr. John Echols

Dr. Michael Halfmoon | Dr. Colleen Nehl | Dr. Nirmol Podder | Dr. Guinevere Shaw

**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.*



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

# FES Mission and Strategic Priorities

## MISSION

The mission of the Fusion Energy Sciences (FES) program is to expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundations needed to develop a fusion energy source. This is accomplished by the study of the plasma state and its interactions with its surroundings.

The Energy Act of 2020 **expanded the scientific mission of FES** to support **“the development of a competitive fusion power industry in the U.S.”**

## FES PROGRAM PRIORITIES

1. Accelerate fusion development as a carbon-free energy source via public-private partnerships (“bold decadal vision”)
2. Support R&D Fusion Centers (“FIRE” centers) to establish S&T basis of a Fusion Pilot Plant (FPP)
3. U.S. participation in ITER to leverage engineering and study burning plasma science technology at power plant scale while expanding Inertial Fusion Energy (IFE) program
4. Support discovery plasma science and technology
5. Broaden participation in fusion and DEIA activities to enable the program

# Vision for the DOE FES: Key Elements

- **Workforce Development and Sustainment:** ensuring we establish sustainable and resilient pathways for diverse and exceptional talent
- **Bridging Gaps:** Creating innovation engines with national laboratories, universities, and industry to resolve R&D gaps and support domestic supply chains for fusion energy
- **Transformational Science:** Nurturing plasma science and technology discovery translating to innovation impact

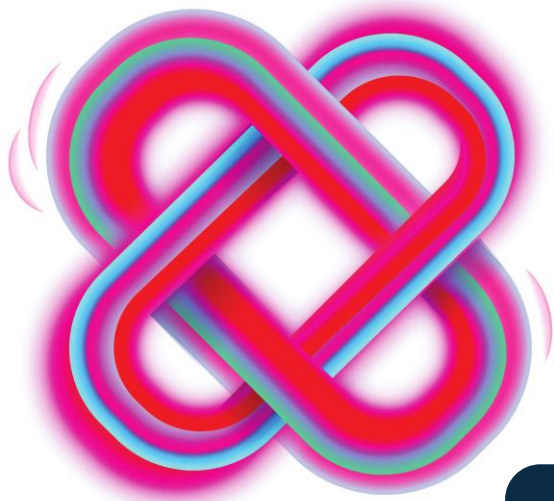


Foundational Science will always play a role in a vibrant *private fusion industry*

# Vision for a balanced and bold FES program

A Report of the Fusion Energy Sciences Advisory Committee

Powering the Future  
Fusion & Plasmas



A long-range plan to deliver fusion energy and to advance plasma science

2020 FESAC  
Long-Range Plan (LRP)

*"Fulfilling the [fusion] energy mission demands a shift in the balance of research toward FM&T (Fusion Materials and Technology), which connects the three science drivers: Sustain a Burning Plasma, Engineer for Extreme Conditions, and Harness Fusion Energy." pg. 6 FESAC-LRP*

- Fusion Science and Technology (S&T) Roadmap
- **Focus:** critical science and technology gaps
- Support public-private partnerships (PPPs)
- Leverage international collaborations



Sustain a Burning  
Plasma

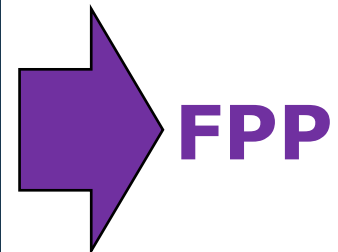


Engineer for Extreme  
Conditions



Harness Fusion Energy

LRP Science Drivers



# Fusion Innovation Research Engine (FIRE) Collaboratives

## Funding Opportunity Announcement DOE-FOA-0003361

FOA Issue Date	May 22, 2024
Submission Deadline for Pre-Applications	July 9, 2024, at 5:00 PM Eastern Time A Pre-Proposal is required
Pre-Application Response Date	July 19, 2024, at 11:59 PM Eastern Time
Submission Deadline Full Proposals	August 27, 2024, at 11:59 PM Eastern Time

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



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# From FESAC Long Range Plan to the Fusion Innovation Research Engine Collaboratives



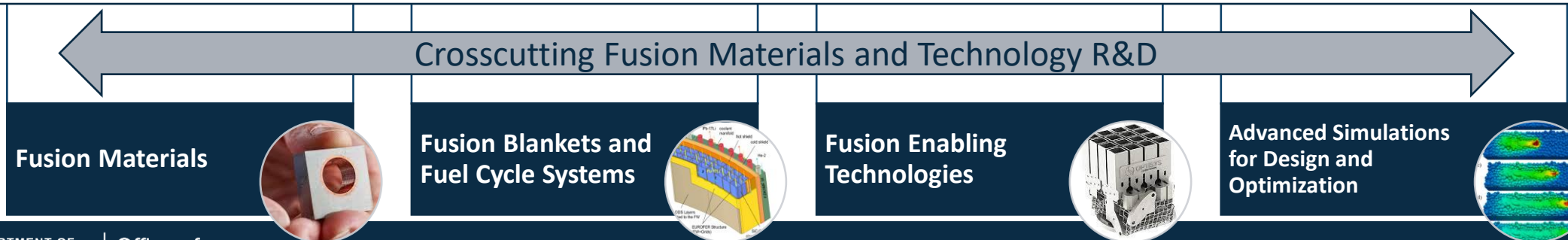
*...“Rapidly expand the R&D efforts in fusion materials and technology (FM&T)”*

## Fusion Innovation Research Engine Collaborative

**Vision:** The FIRE Collaborative will help establish a fusion ecosystem that brings together foundational science, innovation, and translational research in partnership with multiple public and private partners

**Mission:** Fulfilling the fusion energy mission focused on the Long-Range Plan (LRP) FM&T gaps, which connects the three science drivers: Sustain a Burning Plasma, Engineer for Extreme Conditions, and Harness Fusion Energy.

**Focus:** Priority R&D areas that relate the FM&T gaps to the FIRE Collaborative are listed below. The FIRE Collaboratives are expected to address gaps that exist in or across these R&D areas and will also be the bridge between the FES foundational research programs and enabling science and technology for fusion energy.



# Fusion Innovation Research Engine (FIRE) Collaboratives: Ecosystem

FES envisions FIRE Collaboratives as a collection of virtual, centrally managed teams with the following attributes:

- ✓ Accelerated and agile **results-driven teams** focused on de-risking FS&T gaps
- ✓ Research strategy that is inclusive of insights from end-users, **end-use inspired**
- ✓ **Workforce needs** to de-risk FS&T gaps by transitioning, retooling, reskilling existing workforce and or leveraging non-fusion related workforce
- ✓ Preparing data for public use - **FIRE Data Repository**
- ✓ Dynamic hubs of innovation, driving advancements in fusion energy research in collaboration with both public and private entities - **be the bridge!**

The term 'fusion ecosystem' refers to the network of collaborative relationships, resources, and initiatives (public and private) aimed at advancing fusion energy

## Fusion Ecosystem





# Teaming Arrangements

- **Prime-sub model**
  - Demonstrate that the lead institution (Prime) has the capabilities and experience to lead such a team (Subs), including a management plan
- **Who is an eligible applicant?**
  - All types of domestic applicants
- **Who can be a Prime?**
  - Universities, Non-profits, Non-government organizations, private companies
    - Cooperative Agreement - Statement of Substantial Involvement
  - DOE/NNSA National Laboratories
    - FWP
- **Who can be a Sub?**
  - Universities, Non-profits, Non-government organizations, private companies
  - DOE/NNSA National Laboratories
  - Non-DOE/NNSA FFRDCs
  - Other Federal Agencies
- **Post Award?**
  - FIRE Collaborative Management Review at year one (1)
  - FES-FIRE Coordination Conference
  - Quarterly updates to FES
  - Share data with FIRE Data Repository

# Proposal and Award Information

- **Type of Proposal:** DOE will accept only new applications under this FOA.
- **Estimated Funding:** DOE anticipates that, subject to the availability of future year appropriations, funding not to exceed \$180 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 four years.
- **Maximum/minimum Award Size:** DOE anticipates that award sizes will range from \$2M per year to \$5M per year.
- **Expected Number of Awards:** The exact number of awards will depend on the number of meritorious applications and the availability of appropriated funds.

# Limitations on Submissions

- Lead Institution - **No more** than **four (4)** pre-applications or applications
- Lead PI - **No more** than **one (1)** pre-application or applications
- Lead PI - **May not** be listed as a senior or key personnel on any other application's proposed subaward.
- Senior or key personnel - May also be listed as a senior or key personnel, including in any role on a proposed subaward on any number of separate submissions if their total time commitment does not exceed eighty percent (80%) of a full-time equivalent (FTE) appointment as demonstrated on their current and pending support documents.

# Pre-application

- **Due:** July 9, 2024
- Submitted by Prime only
- **Page Limit:** Four (4) pages
- Attach a listing of senior/key personnel and a listing of individuals who should not serve as merit reviewers - **does not count toward page limit**
- Attach Estimated Management Budget Table - **does not count toward page limit**
- Attach Estimated Research Project Budget Table - **does not count toward page limit**

Program Managers may evaluate all or some portion of pre-applications to determine their competitiveness within a scientific topic. Any review will be based on the following criteria:

- Responsiveness to the objectives of the FOA as stated in Section I.
- Appropriateness of the management plan
- Appropriateness of the proposed research
- Alignment with FESAC LRP FS&T science drivers and FM&T gaps
- Appropriateness of estimated budget

# Important Dates

## Fusion Innovation Research Engine Collaboratives DE-FOA-0003361

<b>FOA Issue Date:</b>	May 22, 2024
<b>Submission Deadline for Pre-Applications:</b>	July 9, 2024, at 5:00 pm Eastern Time A Pre-Application is required. Pre-Applications must be submitted by an authorized institutional representative
<b>Pre-Application Response Date:</b>	July 19, 2024, at 11:59 pm Eastern Time
<b>Submission Deadline for Proposals:</b>	August 27, 2024, at 11:59 pm Eastern Time
<b>Direct all inquiries to:</b>	<a href="mailto:fes.fire@science.doe.gov">fes.fire@science.doe.gov</a>

## Microelectronics Science Research Center Projects for Energy Efficiency and Extreme Environments LAB 24-3320

<b>Call Issue Date:</b>	May 8, 2024
<b>Submission Deadline for Pre-proposals</b>	May 30, 2024, at 5:00 pm Eastern Time
<b>Pre-proposal Response Date:</b>	June 20, 2024, at 5:00 pm Eastern Time
<b>Submission Deadline for Proposals:</b>	July 25, 2024, at 5:00 pm Eastern Time
<b>Direct all inquiries to:</b>	<a href="mailto:microelectronics@science.doe.gov">microelectronics@science.doe.gov</a>