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Webinar 12/14/2023

A. Lumsdaine & E. Gilson

Q&A for FY2024 Call

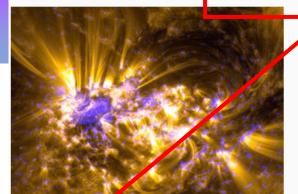
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Innovation Network



nar for FY2024 RFA

will be held on December 14, noon-

ST) to describe the FY2024 RFA.

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December 8, 2023

OAK RIDGE
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Innovation Network for Fusion Energy

The INFUSE program will accelerate fusion energy development in the private sector by reducing impediments to collaboration involving the expertise and unique resources available at DOE laboratories and universities. This will ensure the nation's energy, environmental and security needs by resolving technical, cost, and safety issues for industry.

Awards

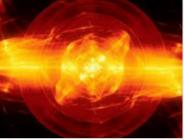
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WANDA Meeting

Published: December 8, 2023

The next Workshop for Applied Nuclear Data Activities (WANDA2024) will be held on December 12, 1:00-2:00pm (ET).

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Milestone Program Awards

Published: November 7, 2023

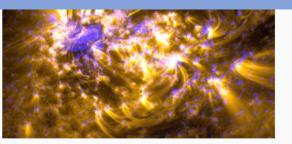
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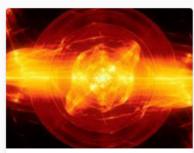
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INFUSE Overview

The mission of INFUSE is to provide private-sector fusion companies access to the expertise and facilities of DOE's national laboratories and (since FY2022) U.S. academic institutions to overcome critical scientific and technological hurdles in pursuing development of fusion energy.

AWARDS

- **90** projects funded since 2019 with a total value of **\$19.3M**
- Awards were made to 28 private companies partnering with **10** DOE labs and 11 U.S. Universities.
- Detailed list: https://infuse.ornl.gov/wpcontent/uploads/2023/11/Cumulative Aw ardList wAbstracts thru2023.pdf



PARTICIPATING LABORATORIES















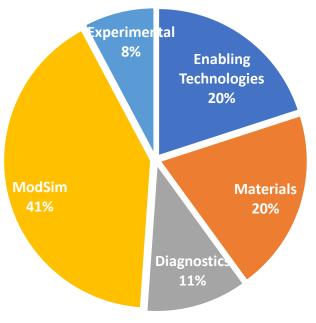








Awarded Topical Areas



TOPICAL AREAS

- **Enabling Technologies**
- **Materials Science**
- Plasma Diagnostics
- Modeling and Simulation
- **Unique Fusion Experimental** Capabilities
- Paths to Commercialization

The U.S. Department of Energy's Office of Nuclear Energy established the GAIN initiative to provide the nuclear community with access to the technical, regulatory, and financial support necessary to move innovative technologies toward commercialization.

The NE Voucher Program is one way to provide industry with access to the unique research capabilities and expertise at DOE's national labs.









NE Voucher funding cycles now offered each year





Amount of voucher funding awarded through GAIN since FY16

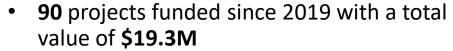


Maximum length of project





Vouchers completed



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TOPICAL AREAS

- **Enabling Technologies**
- **Materials Science**
- Plasma Diagnostics
- Modeling and Simulation
- **Unique Fusion Experimental** Capabilities
- Paths to Commercialization



What is Changing for FY2024?

- 1. Increase in ceiling of award request
- 2. Update to Conflict of Interest statement
- 3. PIER plan update
- 4. Appendix 3 Project distinction from other DOE support (optional)
- 5. First round will be the primary (perhaps only) round for applications in 2024
- 6. Reminders
 - Universities are valid partners
 - New topical area (as of 2023) "Activities to support eventual fusion commercialization,"
 abbreviated as "Paths to commercialization" on web site



Eligibility Requirements

- Eligible Applicants: Private companies incorporated in the United States (can be a foreign owned subsidiary PI and all cost-share must come from US subsidiary).
- Eligible Partner Institutions: Any DOE national laboratory or institution of higher education with unique capability that is not available in the private sector. Partners must agree to work (record of discussion).
- Award size: \$100K to \$500k with a 20% cost share requirement, 12 months in duration. Requests of higher amounts and up to 24 months will be considered for work deemed to be of critical value to the company.
- Number of Allowable Applications: 5 per company per RFA call.
- Company Certifications: (1) Cost-share certification; (2) IP Certification (CRADA or IP Management Plan); (3) Conflict of Interest certification ("button push" on submission site).

For further details, consult the RFA Call:

https://infuse.ornl.gov/wp-content/uploads/2023/12/FY2024-INFUSE-RFA_FINAL.pdf

For eligibility requirements:

https://infuse.ornl.gov/rfa-requirements/

To request access to the submission site:



https://infuse.ornl.gov/rfa-announcement-and-submission/

INFUSE Process

Preparation Phase

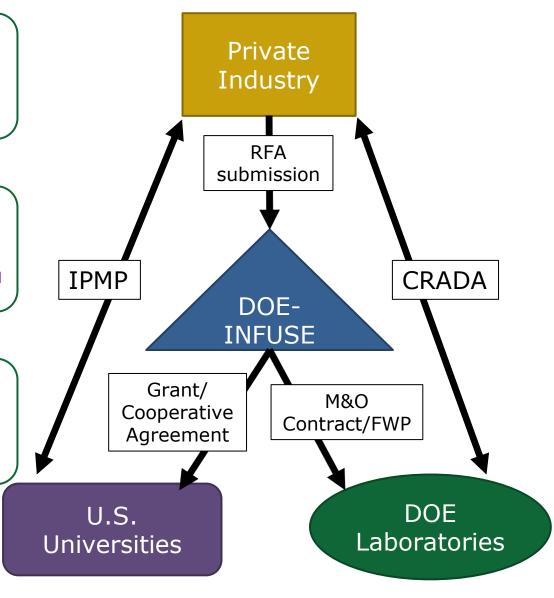
- •Identify priority R&D
- Identify partner institution
- •Agree upon work scope (Record of Discussion)

Application Phase

- •Technical narrative
- Budget and cost-share
- Supporting Documents
- •Lab Only: CRADA certification (does not need to be executed for application)
- •University Only: Establish Intellectual Property Management Plan (IPMP) and IPMP certification

Award Phase

- Award notification
- •Lab Only: Lab submits Field Work Proposal (FWP) and receives funding
- Lab Only: Establish standardized CRADA
- •University Only: University submits proposal to SC Open Notice
- •University Only: DOE awards funding via grant/cooperative agreement
- Begin work





Inclusion of Universities

Intellectual Property Management Plan (IPMP)

- The IPMP is required as a part of the submission package for university partners.
- This is an agreement between the company and the institute of higher education.
- INFUSE has no template for the plan or requirement on its format.

The INFUSE "Library" page has a University Contact List

- https://infuse.ornl.gov/infuse-contacts/
- This will be updated as we continue to identify possible partners for relevant work.
- The University Fusion Association could be a resource in identifying universities that have faculty performing research in this area:
 - https://sites.google.com/site/universityfusionassociation/home?authuser=0



INFUSE Web Site – Library



Home

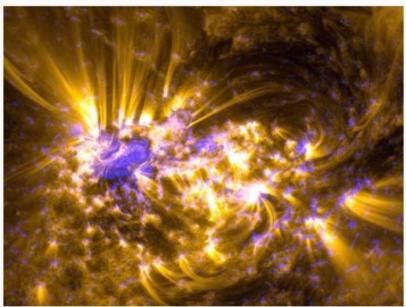
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National Lab Capabilities

University Contacts

DOE and Fusion Community Reports

INFUSE Project Final reports

Previous RFA Information



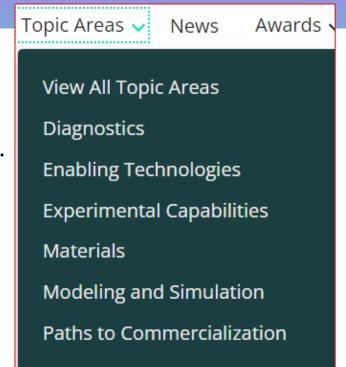




The Library has been organized better into coherent informational areas.

Topic Area Modification (from 2023)

- Activities to support eventual fusion commercialization ("Paths to Commercialization")
 - This topic was added in view of the maturation of the private fusion industry.
 - This would include but not be limited to:
 - Accident and safety analysis in support of eventual licensing
 - Public engagement, including energy and environmental justice
 - Fuel supplies
 - Advanced manufacturing
 - Waste disposition and recycling
- Expansion of "Modeling and Simulation"
 - This would include but not be limited to:
 - Physics, engineering and/or materials modeling/simulation
 - Plant costing (e.g., models focused on cost to build a fusion plant and cost drivers for a fusion plant or essential subcomponents/systems, such as tritium processing)
 - Technoeconomic modeling focused on cost-of-electricity or other products (e.g., process heat) for fusion plants





Update to Conflict of Interest certification

- Applicants must be aware of and disclose of real or potential COIs resulting from an applicant's employee(s) or owner(s) having a direct relationship with the proposed partnering research institution.
- COIs may be financial or organizational.
 - A financial conflict of interest means a situation in which an Investigator or the Investigator's spouse or dependent children has a significant financial interest or financial relationship that could directly and significantly affect the design, conduct, reporting or funding of a project.
 - An organizational conflict of interest means a situation where because of relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.
- Applicants must confirm in the application submission that there is no COI in collaborating with the partnering institution and partnering institution PI.
- If there is a real or potential COI with the partnering institution or PI, the company should include
 a statement in the Technical Narrative of the application disclosing the real or potential COI and a
 justification and/or mitigation plan as to how this COI will be managed.

PIER Plan Update

Review of PIER Plan

- A fifth review criteria was been added to the original four in FY23.
- The addition was made following a requirement of the Office of Science.
- Applicants will add this in Appendix 1 of the application (not within 10 page limit).
- Go to https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans/Information-about-PIER-Plans for more information.

Notes on the PIER Plan evaluation

- The language of the review criteria is provided by the Office of Science.
- Both INFUSE partners, both the private company and the lab / university should include PIER plans. It is
 understood to be the view of the organization, not the individual PI.
- The size of the project, and the size and maturity of the company will be taken into account in the review.
- It is acceptable to include items in the budget that will support the activities detailed in the PIER plan in keeping with the cost principles in <u>2 CFR 200</u>.
- The PIER Plan is expected to be a <u>plan</u>, not a census.



Appendix 3 – Project distinction from other DOE support

- The application can have three appendices which are not included as a part of the 10-page limit:
 - 1. Promoting Inclusive and Equitable Research (PIER) plan (3 pages) Mandatory.
 - 2. Images and Tables (2 pages) Optional.
 - 3. Project Distinction from Other DOE Support (1 page) Optional.
- Appendix 3 details
 - Applicants with ongoing DOE funded projects, such as the Milestone-Based Fusion Development program, may apply for INFUSE awards.
 - Additional justification may be included in the application to explain how the proposed INFUSE project is distinct from other ongoing funded awards.
 - This should be no more than 1 page.



FY 2024 Schedule (Dates are CY 2024 unless noted)

➤ Nov. 9, 2023 Virtual mini-workshop

➤ Dec. 11, 2023 RFA posted

➤ Dec. 14, 2023 Webinar

➤ Jan. 3 Web site open for submissions

Feb. 16 (noon EST) RFA closes – this is a firm deadline

Feb. 27-28 In-person workshop at PPPL (tentative)

Mid-June
Award Announcement

➤ Sep. 1 Work Start Date



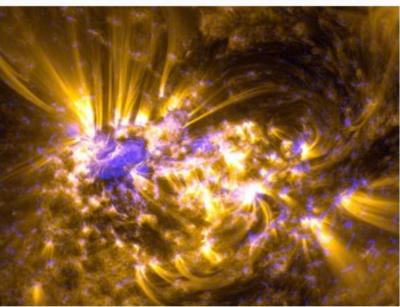
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Read more



RFA Announcement and Submissions

RFA Requirements

Previous RFA Information

RFA Submission Information and Templates

Frequently Asked Questions







The Submission menu has all of the information related to what is needed to submit an application.

INFUSE Web Site – Awards



Innovation Network for Fusion Energy

Awards

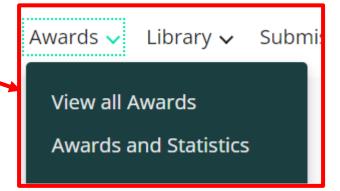
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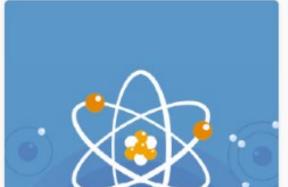
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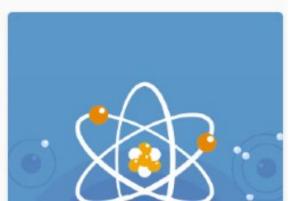


Award information can be listed by:

- Company
- Institution (University)
- National Lab
- Topical Area







FY 2023 Submission Tips

A few tips on proposal submission:

- You will need to go through the vetting process to get access to the submission site (see following slides). The application cannot be started until January 3, but vetting can begin now.
- Make sure to give sufficient detail outlining the cost share split between private / national lab partners.
- Also see "Tips on writing a successful proposal" document under "RFA Submission Information and Templates" on submission page
 (http://infuse.ornl.gov/wp-content/uploads/2020/02/INFUSEhints.pdf)
 or the "Frequently Asked Questions" page under the "Submission" tab.



Submission Process – go to "submission" on menu

RFA Announcement and Submissions

The 2024 RFA submissions are expected to open on January 3, 2024. FY2024 INFUSE RFA Call

Downloadable Resources

View and download templates

Access to Submission Site (Open)

ORNL has a security procedure for guest access. If you are planning on submitting an RFA, please fill in your information below. You will be contacted with further instructions. Even if you have a vetted account and password from a previous cycle, you will still need to fill out this form to gain access to the submission site for this round. (NOTE: If you have been vetted before and you enter a different email below, then you will need to be vetted again). Anyone needing access to the site should complete this form, whether a company Point of Contact or company Principal Investigator. Once your receive confirmation, you may log into the protected SharePoint site here to begin your submission.

* Required

1. Name *

Enter your answer

2. Primary Email *

Enter your answer

https://infuse.ornl.gov/rfa-announcement-andsubmission/

- You may begin the process now.
- This is the first step of the "vetting" process to gain access to the RFA application site.

INFUSE questions: infuse@ornl.gov

Arnie: <u>lumsdainea@ornl.gov</u>

Erik: egilson@pppl.gov

Submission – Vetting Process for Guest Access

To request guest access for submitting an RFA Application, please visit https://infuse.ornl.gov/rfa-announcement-and-submission/ and fill out the form under "Access to Submission Site" at the bottom of the page.

An automated process will check if you have already been vetted and your email is in our system.

If you have been vetted in the last 6 months, you will receive an invitation to the RFA Application site along with log in instructions. **Note that if you have changed software (i.e. reinstalled Authenticator) or hardware (i.e. new cell phone) you will need to email infuse@ornl.gov in order to reset your MFA.**

If you have not been vetted in the last 6 months, you will receive the email below:

Greetings,

Please use this link to schedule a time when you are available to be vetted for guest access to ORNL's SharePoint sites.

You will need the following:

- 1. Access to a web camera
- 2. Driver's license or Passport
- 3. A system with Google Chrome (for the Teams web version) or the Teams client installed.

The link will take you to a bookings page https://outlook.office365.com/owa/calendar/ExternalGuestScheduling@ornl.onmicrosoft.com/bookings/ which will allow you to select the date/time when you can join a Teams meeting.

When the external user selects the date/time they can meet, a Teams meeting gets created for both them and with one of our team members.

At the Teams meeting, both you and our team member will turn on their cameras. You will verify your identity by showing our team member your driver's license or passport. No information or images are recorded.

They will also walk you through any additional steps that may be needed.

Once you have been vetted, you will receive an email invitation to the RFA Application site along with log in instructions.

Submission Notes

A few notes on proposal submission:

- You may make any changes to your application while it is in "Draft".
- When you change to "Submit" and press save:
 - You will be notified if any required fields are not completed.
 - You will be sent a confirmation email including a PDF or your submission.
- You can continue to modify your application until Feb. 16 at noon (EST)

You may submit once required fields are completed. *



() Submit

Important! Submitted applications can continue to be modified until the application close date. No applications are reviewed until that time. After submitting, you will receive a PDF copy of the form for additional review (allow 5 minutes).

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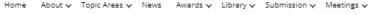


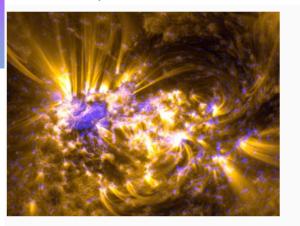


Discussion

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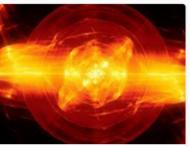
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