



U.S. DEPARTMENT OF
ENERGY

Office of
Science

Webinar for FOA: Isotope R&D and Production – Research Development and Training in Isotope Production

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Office of Science Statement of Commitment

The DOE Office of Science (SC) microsite on Diversity, Equity & Inclusion is posted on the SC website.

The entirety of the statement can be found at:

<https://science.osti.gov/sc-2/research-and-conduct-policies/diversity-equity-and-inclusion/>

“The DOE Office of Science (SC) is fully committed to fostering safe, diverse, equitable, and inclusive work, research, and funding environments that value mutual respect and personal integrity. Effective stewardship and promotion of diverse and inclusive workplaces that value and celebrate a diversity of people, ideas, cultures, and educational backgrounds is foundational to delivering on the SC mission. The scientific community engaged in SC-sponsored activities is expected to be respectful, ethical, and professional.

The DOE SC does not tolerate discrimination or harassment of any kind, including sexual or non-sexual harassment, bullying, intimidation, violence, threats of violence, retaliation, or other disruptive behavior in the federal workplace, including DOE field site offices, or at national laboratories, scientific user facilities, academic institutions, other institutions that we fund, or other locations where activities that we support are carried out...”

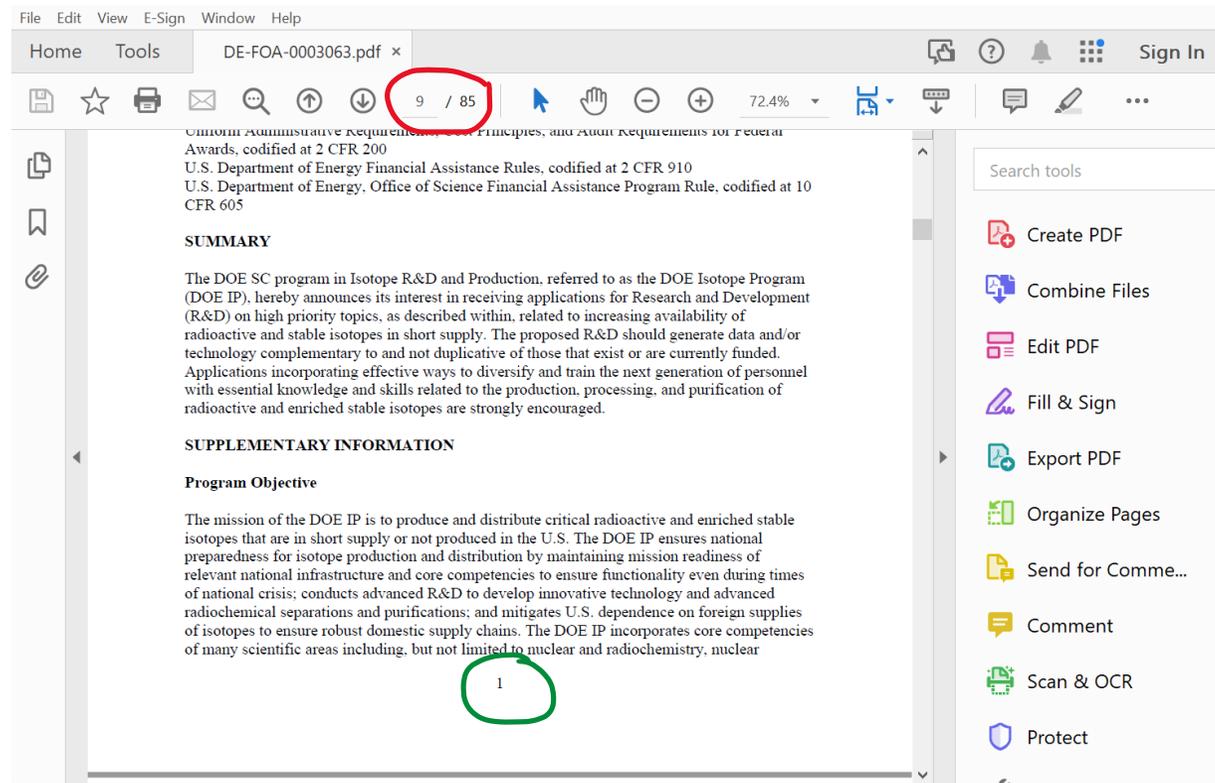
- Specifics of the DOE Isotope Program R&D FOA
- Q&A / open discussion

Commitment, Encouragement, and Transparency

- DOE IP is committed to supporting the cutting-edge R&D necessary to maintain the U.S. presence a global leader the field and to foster the development of the next generation workforce.
- There are many scientific disciplines that are integral components to the field of isotope science. Just because an institution doesn't currently have a production capability should not eliminate them from participating in competitive R&D and engaging in workforce development.
- While regulations prohibit discussions that might be perceived as providing a competitive advantage, the DOE IP is happy to answer questions regarding nuanced language or intent in the FOA, as well as general responsiveness of an idea to the solicitation. Other questions will be considered and answered to the fullest extent possible.

Getting Started

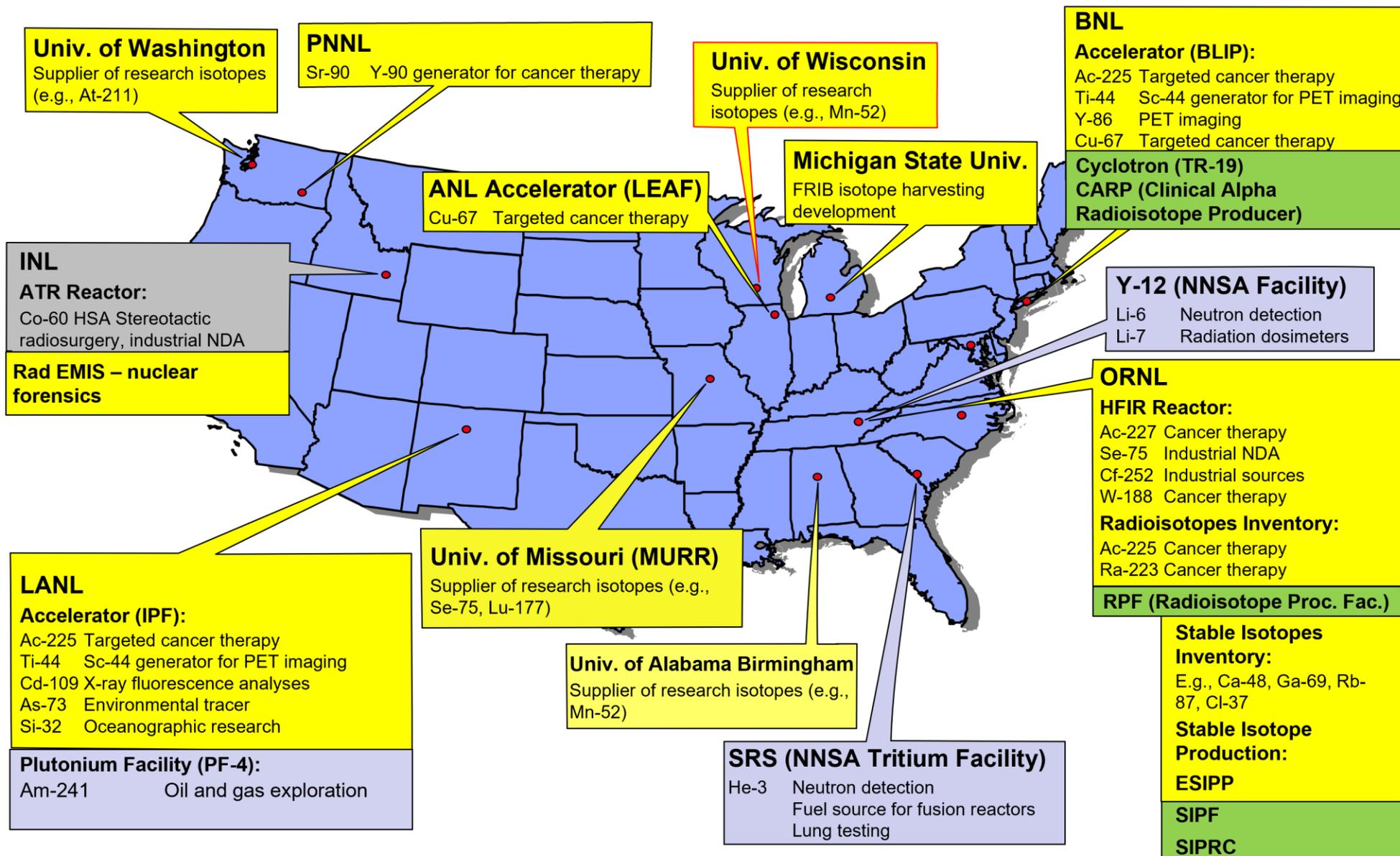
- The current R&D FOA was released on May 5th.
 - Please ensure you are looking at FOA 3063 which has the title, “*Research, Development, and Training in Isotope Production.*”
- When looking at the FOA, I’ll be referring to page numbers.



Eligibility and Teaming

- All colleges and universities, Non-Profit Research Institutions and DOE/NNSA National Laboratories
 - Private industry is ineligible to participate either as an applicant or a sub-award recipient.
 - 2-year awards
 - Multi-institutional teams, whether applied for as a prime applicant with subawards or as a collaboration, are limited to requests of no more than \$750,000 per year for the entire effort **not per institution.**
 - A single-institution proposal is limited to a request of no more than \$750,000 per year.
 - Budget limits are indicative of total funds (direct costs + indirect costs)
- **MSIs are always encouraged to apply**
 - Who can be a subaward recipient?
- Question: *What is the difference between a “prime and subaward proposal” and a “collaborative proposal”?*

DOE IP Production Sites



Accelerator Facilities

Brookhaven National Laboratory Brookhaven Linac Isotope Producer (BLIP)

- BLIP beam line directs 200 MeV protons with up to 160 μA intensity to targets; parasitic operation with nuclear physics programs for more cost-effective isotope production.



Los Alamos National Laboratory Isotope Production Facility (IPF)

- Diversion of 100 MeV protons with up to 380 μA intensity to target station.
- Irradiates targets while LANSCE operates for NNSA.



Argonne National Laboratory Low Energy Accelerator Leaf Facility (LEAF)

- 50 MeV/25 kW electron linear accelerator
- Newest addition to program
- Responsive to NSAC recommendation



Reactor Facilities



Idaho National Laboratory Advanced Test Reactor (ATR)

- Office of Nuclear Energy is steward
- High Specific Activity Co-60 for medical applications
- Developing Ir-192 for industrial radiography



Oak Ridge National Laboratory High Flux Isotope Reactor (HFIR)

- Office of Basic Energy Science is steward
- Radiochemical Engineering Development Center (REDC) – extensive processing capabilities

Other Isotope Program Sites

Y-12 National Security Complex

- Li-6 (neutron detection)
- Li-7 (dosimeters)



Pacific Northwest National Laboratory

- Radiochemical Processing Laboratory
- Process Automation

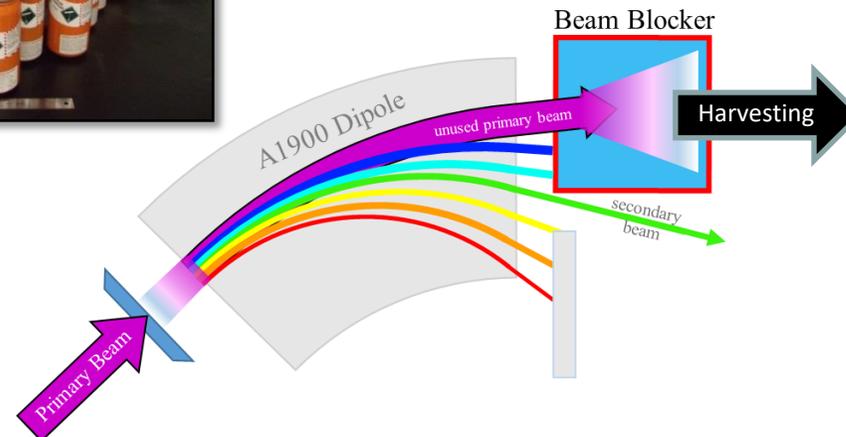
Savannah River Site (SRS)

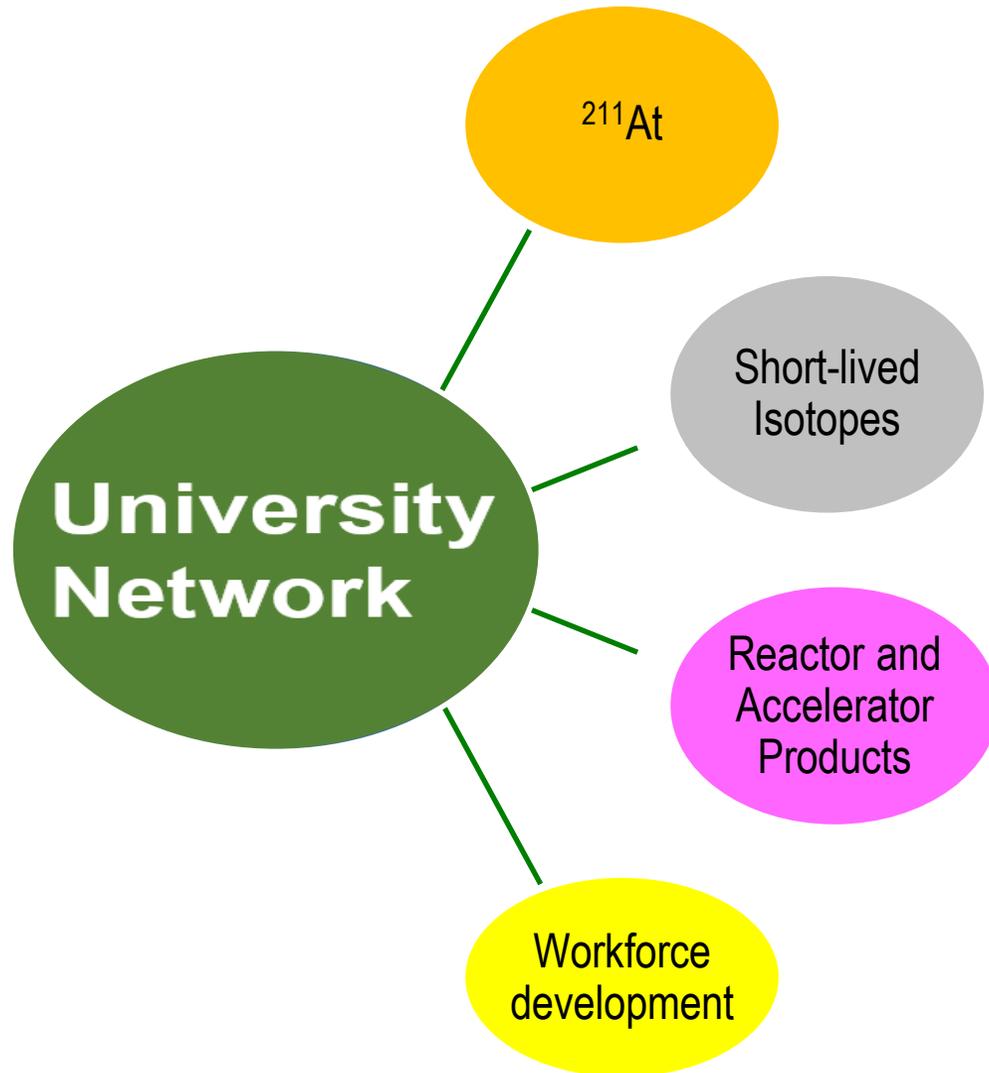
- He-3 extraction from NNSA tritium
- Developing new sources of He-3



Facility for Rare Isotope Beams (FRIB)

- New accelerator for the study of nuclear structure and astrophysics
- Implementing isotope harvesting capabilities





- Unique capabilities and expertise
- Cost-effective
- R&D on isotope production
- Boutique isotope production
- Workforce development
- Regional networks
 - Example: At-211
 - 7.2-hour half-life
 - Therapeutic α -emitting isotope
 - 250 university, hospital and research facility cyclotrons in the U.S. are capable of isotope production
 - Only 5 with potential to produce At-211 and all are academic sites

UIN Members

- **Univ. of Alabama, Univ. of Missouri, Univ. of Washington and Univ. of Wisconsin currently produce isotopes for the DOE Isotope Program**

Points of Contact and Institutional Definitions

- *Question: Where can we find a list of DOE IP Points of Contact at DOE/NNSA National Laboratories and UIN sites?*
 - <https://science.osti.gov/-/media/Isotope-Research-Development-and-Production/pdf/DOE-IP-Isotope-Production-Site-Contact-List.pdf>
- “MSIs are understood broadly to include, but not be limited to, Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), Tribally Controlled Colleges and Universities (TCCUs), Asian American Native American and Pacific Islander Serving Institutions (AANAPISIs), and Alaska Native and Native Hawaiian Serving Institutions. The US Department of Education maintains records of institutions eligible for recognition as MSIs at: <https://www2.ed.gov/about/offices/list/ope/ides/eligibility.html>. For the purposes of this FOA, institutions marked in the most recent eligibility matrix as either being eligible to receive funding or as receiving funding will be considered an MSI. These resources are not an exhaustive list. ”

Understanding the FOA

- Read pages 1-10 for a general overview of what the solicitation is seeking
 - *Question: The FOA mentions that responsive submissions will address one of the bullets listed on pages two and three of the FOA. Does DOE IP expect to only receive proposals to these topics?*
 - Answer: Carefully read that section there is an or clause written.
 - *Question: Is our application less competitive if we utilize the or clause?*
 - Answer: Not necessarily. However, the highest priority topics to the program are listed.
 - *Question: I have a pending submission where the scope of proposed work will be substantially similar to or duplicative of the scope of work I am intending to propose to this FOA. Is this allowable?*
 - Answer: You may submit the same scope of work to multiple solicitations as long as it is acknowledged in the current and pending support section of the submission. However, duplication of funding is not allowed. If a decision to fund both submissions occurs the cognizant Program Manager will then either negotiate work scope to ensure lack of duplicated effort or ask you to pick which award you would like to receive.

Understanding the FOA (continued)

- Pages 1-10 also describe specifics regarding allowable costs/categories for budget items and more detail is provided in a specific budget section on pages 6 and 7.
 - **If an item is not listed, please contact me, type your question, or ask in the Q&A session.**
- Work scope should be based on a model where the R&D proposed can be completed within the established performance period of 24 calendar months.
- *Question: On page 56 the FOA states that funds are not presently available for this award, but previously in the FOA it states that awards will be made in FY23 and FY24 subject to availability of funds. So how do we interpret this?*
 - Answer: This is nuanced language. DOE IP currently has funding to support awards out of its FY 2023 budget. While we do intend to make a second batch of awards in FY 2024, we do not yet have a budget for FY 2024; so the potential for a second batch of awards exists, but is subject to availability of funds.
- *Question: Why is there such a dramatic difference in this FOA from the last R&D FOA?*
 - Answer: The current FOA is indicative of the growth and development experienced by the Program over the better part of the last decade.

Specifics of the FOA

- Pre-applications and or Letters of Intent are NOT required
- Proposals are due no later than 11:59pm (Eastern) on July 5th, 2023
 - **Note: submissions have a time deadline as well as a date deadline**
- The table of contents is hyperlinked & a convenient way to navigate the document
- Pages *i-iii* contain updates and reminders – these pages are not filler *please read*
- Pages 14-21 discuss the sections, their formatting and the appendices **MUST** be included in the application (including, but not limited to, the narrative section, PIER Plans, Data Management Plans, and Senior/Key Personnel Profiles).
 - **Pay careful attention to page limits**
 - **Have your Sponsored Research Officer read these pages too!**
- Pages 24-26 discuss the review process, merit review criteria, and program policy factors.

Promoting Inclusive and Equitable Research (PIER) Plans

*Beginning in FY 2023, Office of Science solicitations requires that applicants submit a plan for **Promoting Inclusive and Equitable Research, or PIER Plan**, along with their research proposals.*

- *This is a requirement for proposals submitted to all Office of Science solicitations, as well as invited proposals from the DOE national laboratories.*

PIER Plans are limited to 3 pages and should describe the activities and strategies that investigators and research personnel will incorporate to promote diversity, equity, inclusion, and accessibility in their research projects.

- *The complexity and detail of a PIER Plan is expected to increase with the size of the research team and the number of personnel to be supported.*
- *The PIER Plans are to be evaluated under a new merit review criterion as part of the peer review process.*

Additional information and FAQs: <https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans>