U.S. DEPARTMENT OF ENERGY | Office of NUCLEAR ENERGY

# Overview of DOE Office of Nuclear Energy's University Program

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# DOE Office of Nuclear Energy Mission

The Office of Nuclear Energy (NE) mission is to advance nuclear energy science and technology to meet U.S. energy, environmental, and economic needs. NE has identified the following goals to address challenges in the nuclear energy sector, help realize the potential of advanced technology, and leverage the unique role of the government in spurring innovation:

- Keep existing U.S. nuclear reactor operating
- Deploy new nuclear reactors
- Secure and sustain our nuclear fuel cycle
- Expand international nuclear energy cooperation

Collectively, all NE-sponsored activities support the Department's priorities to combat the climate crisis, create clean energy jobs with the free and fair chance to join a union and bargain collectively, and promote equity and environmental justice by delivering innovative clean energy technologies for nuclear energy systems.

# NEUP and UNLP Programs




**The U.S. Department of Energy's Office of Nuclear Energy created Nuclear Energy University Program (NEUP) and University Nuclear Leadership Program in 2009 to consolidate its university support under one program. The program funds nuclear energy research and equipment upgrades at U.S. colleges and universities and provides student educational support.**




**The UNLP Program attracts the brightest students to the nuclear professions by providing undergraduate level scholarships and graduate level fellowships to students pursuing a nuclear energy-related degrees.**

# Funding Opportunities

## Research and Development

- **Consolidated Innovative Nuclear Research FOA**
  - **Research Experiences for Undergraduates**
- **Distinguished Early Career Program**
- **Phase II Continuation CINR FOA**

## Student Support

- **UNLP Scholarships and Fellowships**
- **Innovations in Nuclear Research and Development Student Competition**

## Infrastructure

- **Scientific Infrastructure FOA**
- **University Reactor Sharing and Outreach FOA**
- **Infrastructure Revitalization FOA**

# Consolidated Innovative Nuclear Research (CINR)

Provides competitive R&D opportunities to U.S. universities, national laboratories, and industry to conduct nuclear energy-related research to help meet the objectives of the major NE funded research areas.

- **Nuclear Energy University Program (NEUP) R&D**
  Projects focused on the needs and priorities of NE's mission in areas including the nuclear fuel cycle, reactor concepts, and strategic blue-sky research.
- **NEUP Integrated Research Projects (IRPs)**
  Projects that address specific needs, problems, or capability gaps identified by NE and require multidisciplinary and multi-institutional partners.
- **Nuclear Science User Facilities (NSUF)**
  Provides access to material test reactors, beam lines, and post-irradiation examination facilities to researchers from U.S. universities, industry, and national laboratories.






# Distinguished Early Career Program (DECP)

- NE's most prestigious award for faculty members beginning their independent careers.
- DECP invests in the innovative research and education programs of early career university faculty poised to pave new lines of inquiry and advance mission critical research directions in nuclear energy.

# Phase II Continuation CINR

- Focused on continuing promising research pathways by soliciting applications that directly complement and extend research that has previously been awarded through NEUP.
- Shorter in duration and smaller in scope than original CINR projects.
- Projects are selected through a competitive application and review process.





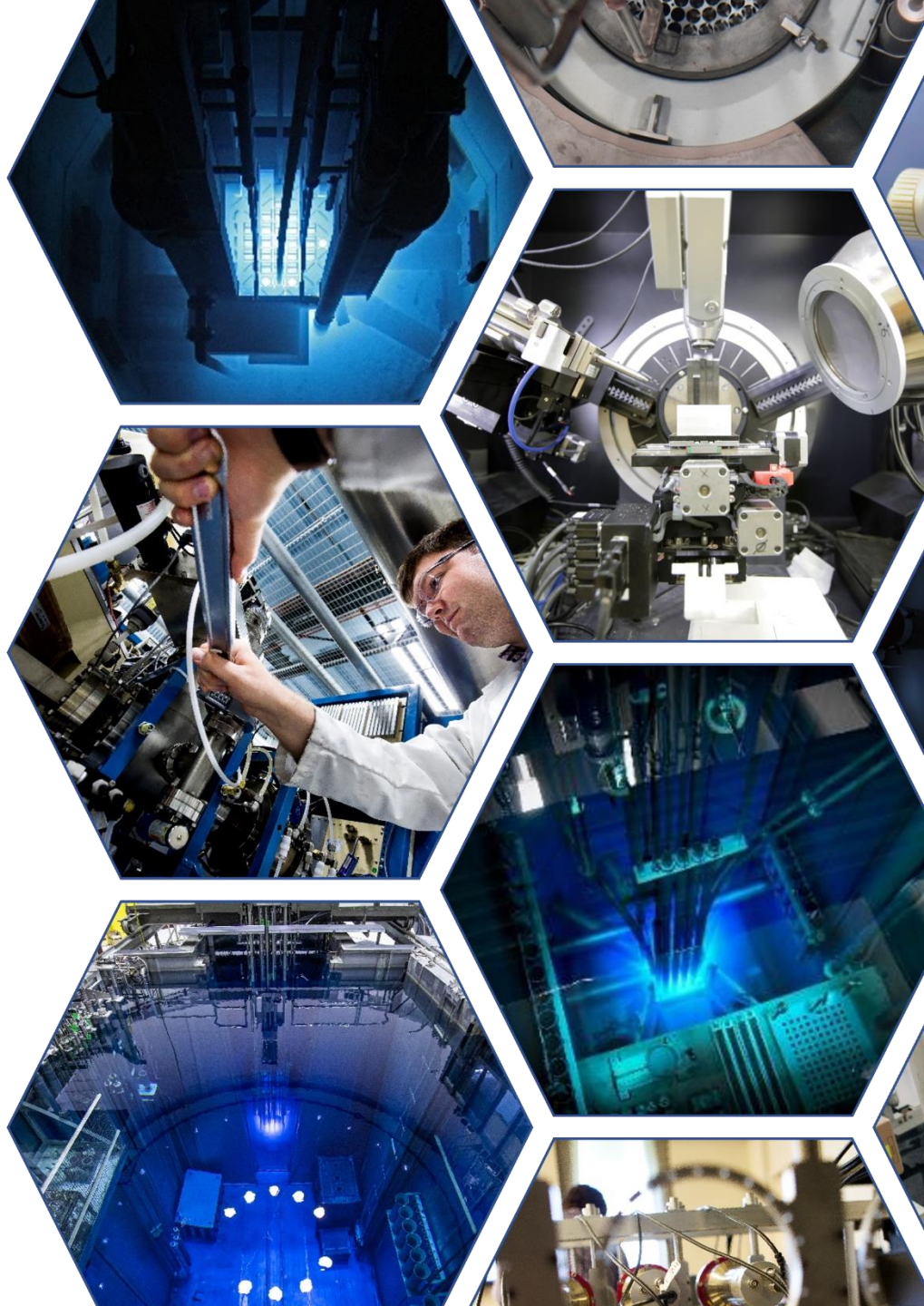
# Scientific Infrastructure in Support of CINR

- Provides funding support for U.S. university nuclear research and training reactor and non-reactor improvements
  - Reactor Upgrades – related to the safety, performance, control, or operational reliability of the research reactor, including security and/or safety enhancements
  - General Scientific Infrastructure – purchase of equipment and instrumentation or activities supporting nuclear energy-related R&D and education



# University Nuclear Research Infrastructure Revitalization

- Supports competitively awarded, consortium-led efforts to establish and/or enhance nuclear research capabilities at U.S. universities
- Emphasizes consortia or other partnerships to enhance regional or national impact of the investments and to foster inclusion of disadvantaged communities



# University Reactor Sharing and Outreach

- Purpose is to encourage universities and colleges with nuclear research reactor facilities to share resources and capabilities with non-reactor educational institutions with an emphasis on supporting MSIs
  - Strengthen nuclear science and engineering (NS&E) programs at nonreactor owning colleges and universities
  - Increase research opportunities and application of nuclear analytical techniques for faculty and students
  - Improve public outreach with respect to nuclear sciences, engineering, and technology
  - Engage with underrepresented communities to promote nuclear science, engineering, and technology




Oregon State TRIGA Reactor

UNLP

University Nuclear Leadership Program



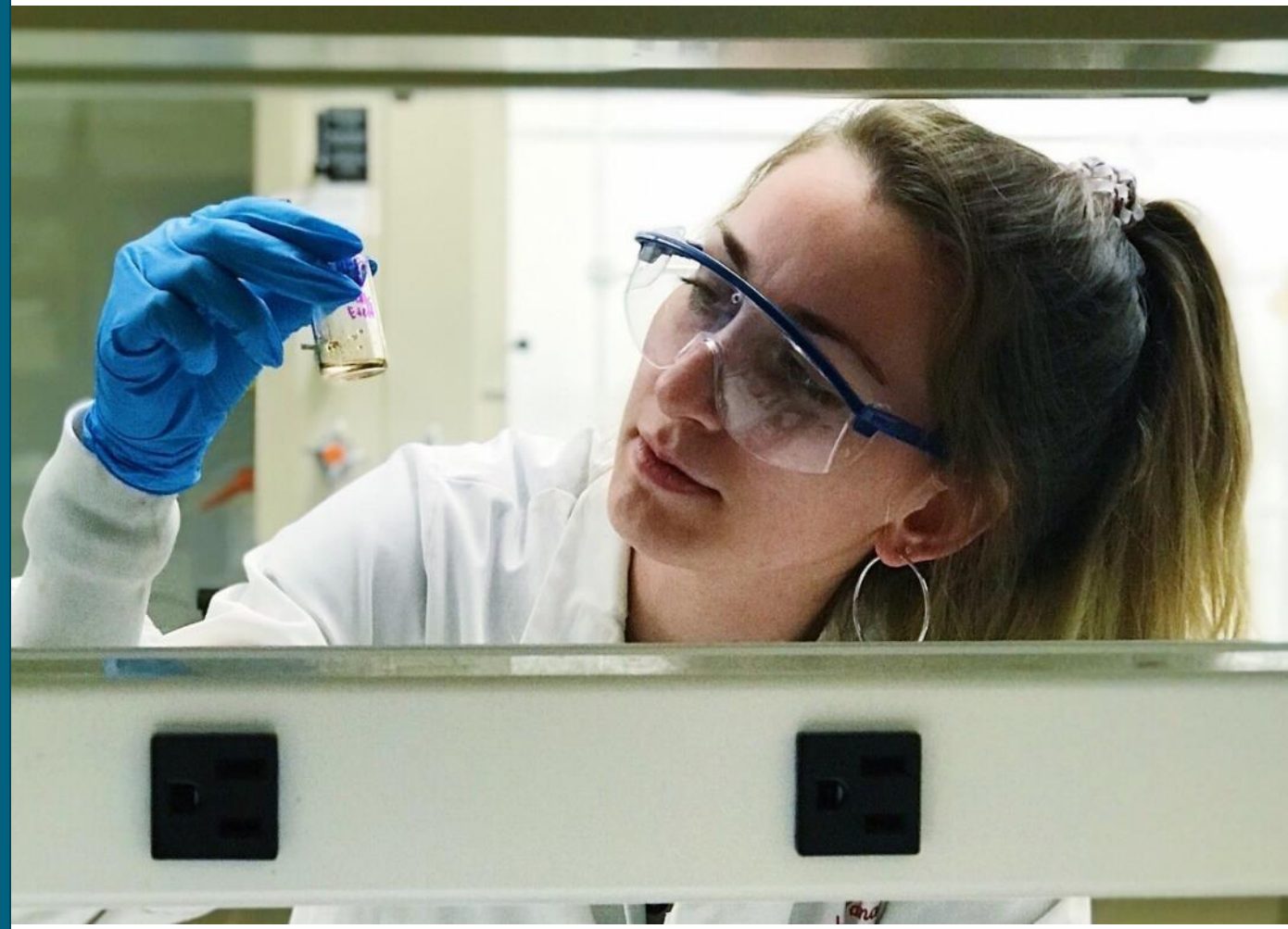




- Supports the next generation nuclear workforce by providing undergraduate scholarships and graduate fellowships to students pursuing nuclear energy-related degrees.
- Joint effort NE has with the Nuclear Regulatory Commission (NRC) and the National Nuclear Security Administration (NNSA).
- Request for Applications opens in August 2024. Applications are due January 2025.

# Innovations in Nuclear Energy R&D Student Competition

- Recognizes and awards published graduate and undergraduate students for innovative nuclear energy research
- Continuation of the “Innovations in Nuclear Technology R&D Awards Program” supported since 2010 by the Office of Nuclear Fuel Cycle and Supply Chain and administered by the University Research Alliance

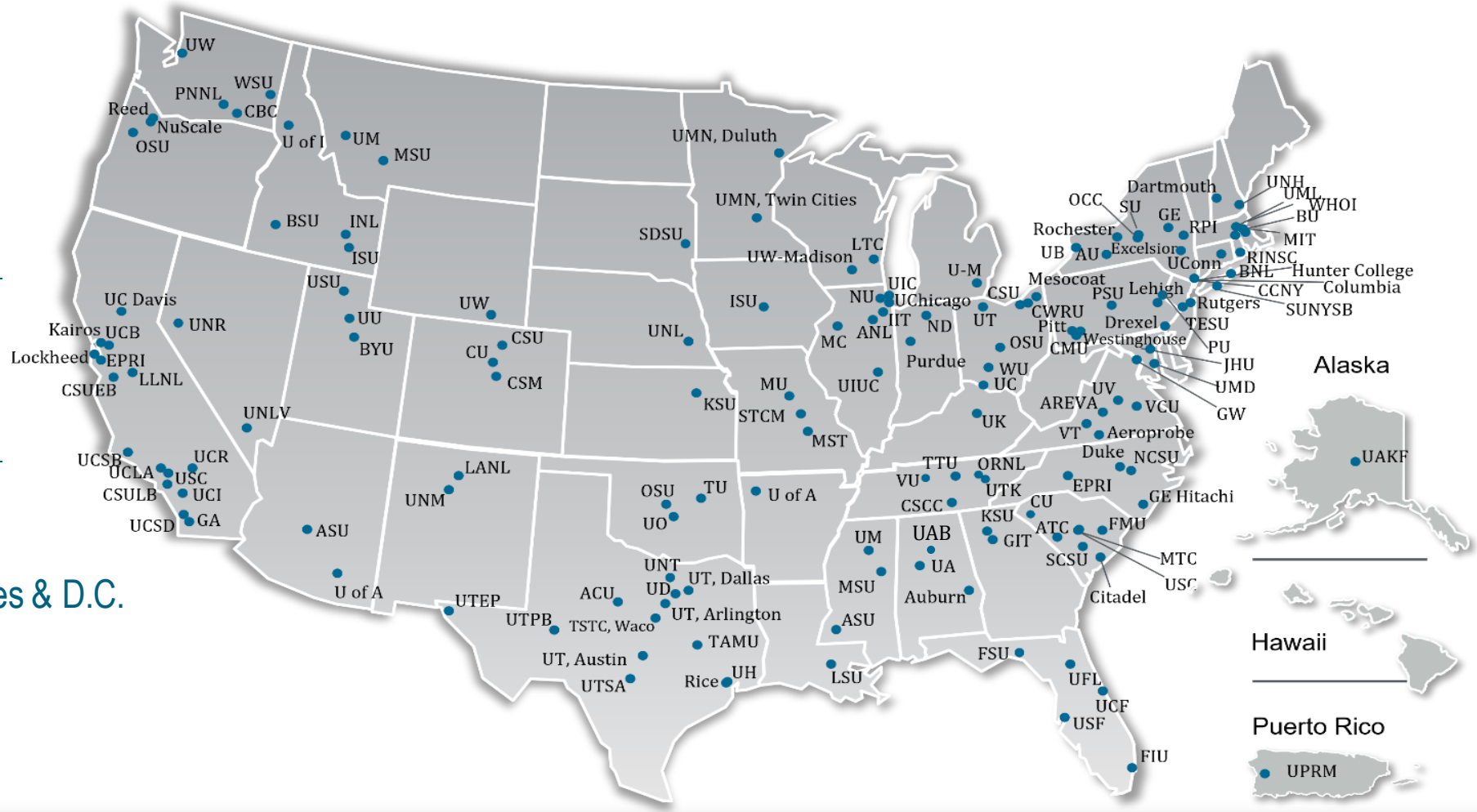


# CINR & University Nuclear Leadership Program

**$1.07B**
Total Funding
FY09 – FY24

**2,632**
Awards Issued

**45+1+1**
States, Territories & D.C.

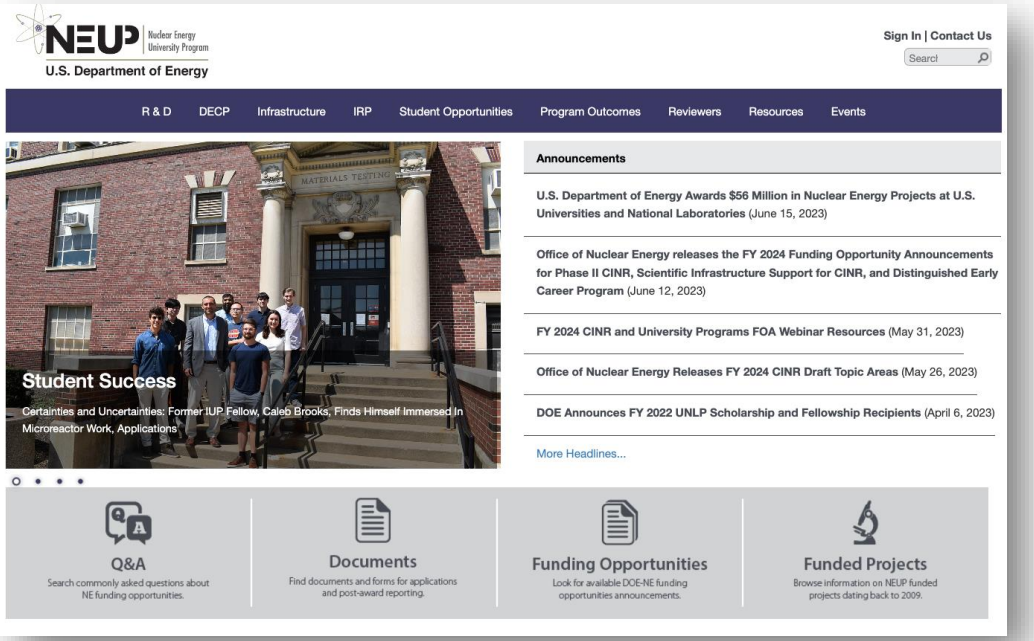



**7**
National Laboratories

**13**
Industry/Utilities

**139**
U.S. Universities & Colleges

# Program Information




## Detailed information is available at:

## NEUP.gov

- **General Questions**
  - neup@inl.gov
- **Student Resources**
  - https://neup.inl.gov/SitePages/SandFResources.aspx
- **Application Support**
  - https://neup.inl.gov/SitePages/ApplicantResources.aspx

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# Questions?

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