

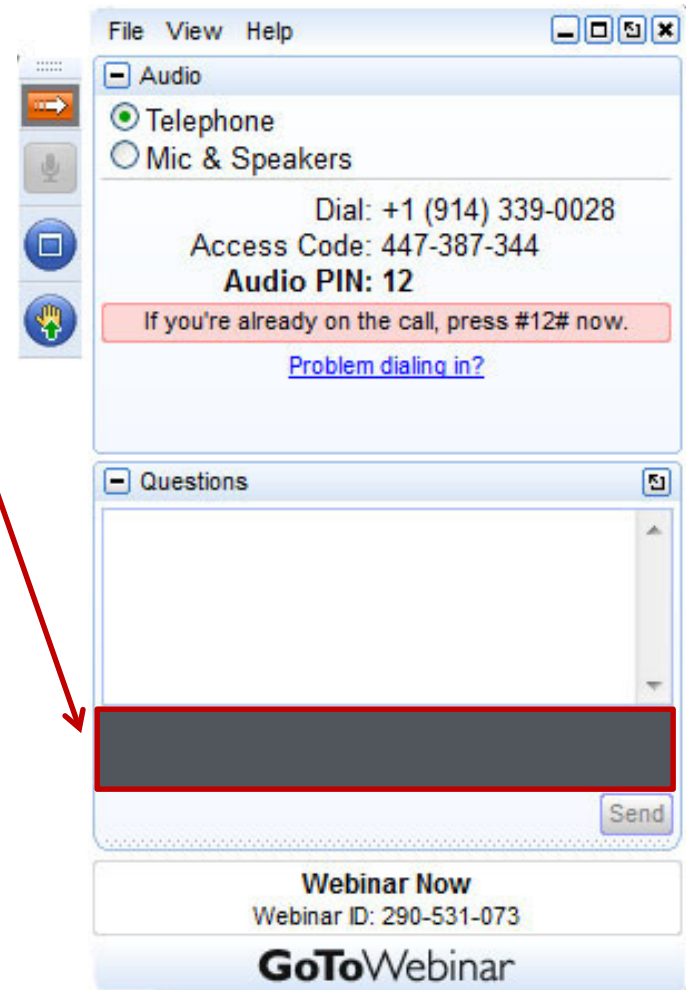


FY 2019 CINR FOA
DE-FOA-0001913

Informational Webinar
August 7 - 9, 2018

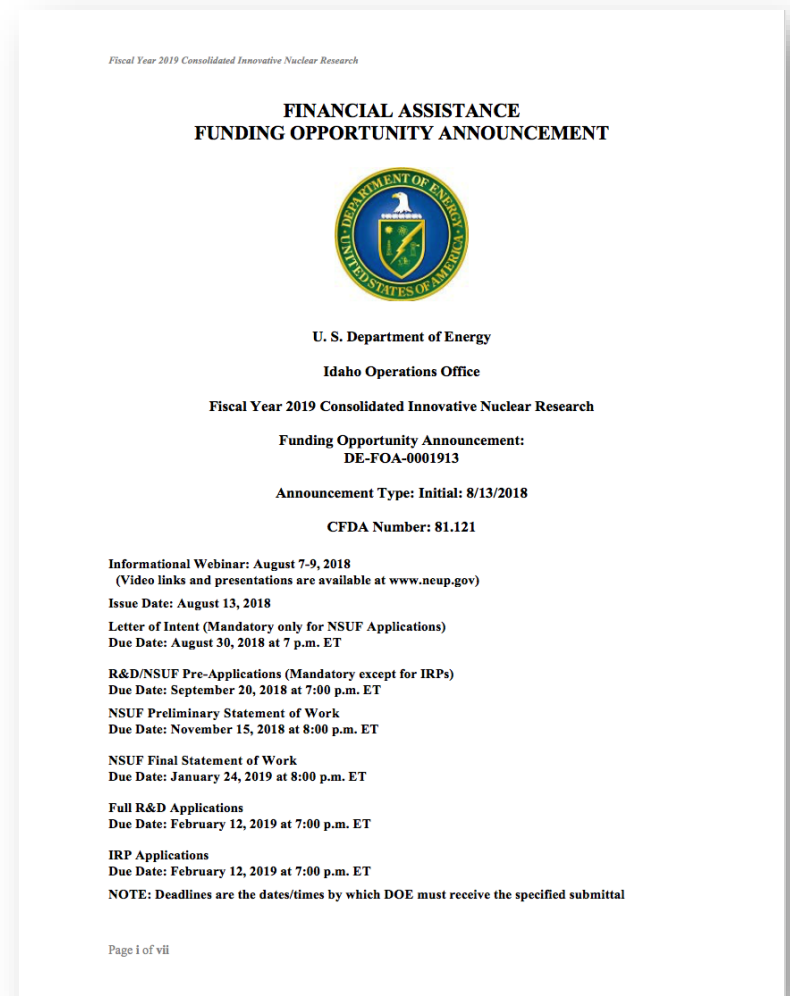
How to Ask Questions During This Webinar

- ❑ Submit questions using the GoToWebinar software by typing in the Webinar ID field.
- ❑ Questions that do not get answered during the allotted time will be answered and posted on www.NEUP.gov.
- ❑ Specific questions on individual eligibility or workscope detail should be addressed offline.



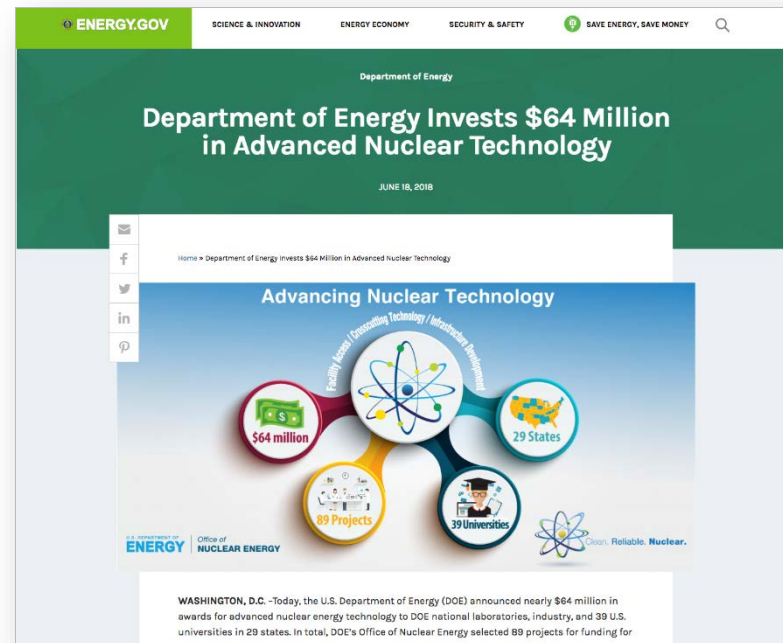
Outline

- **FY 2018 Outcomes**
- FOA Overview
- Policy Updates and Reminders
- Review Process, Tools, and Submissions



FY 2018 Summary Outcome

❑ In FY 2018, DOE invested \$64 million in nuclear energy research, facility access, crosscutting technology development, and infrastructure awards in 29 states. In total, 89 projects were selected to receive funding that will help advance innovative nuclear technologies.

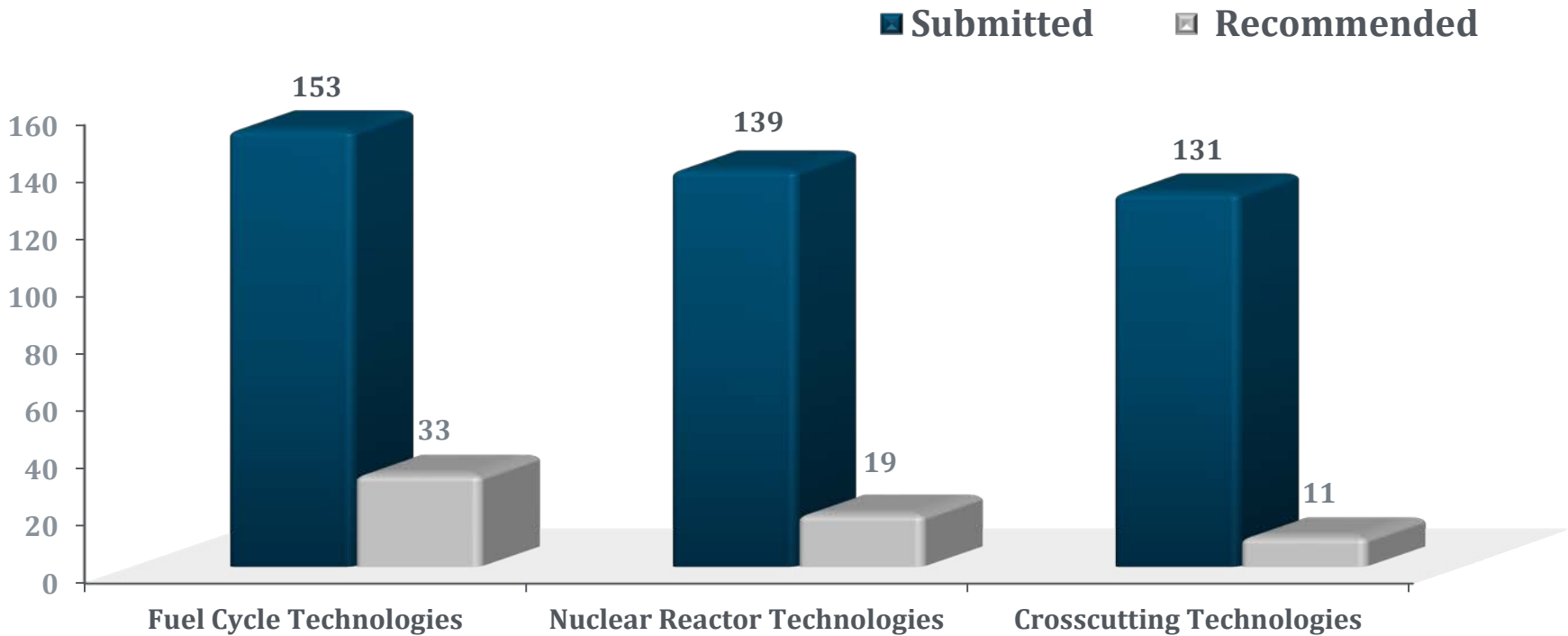


❑ These awards provide funding for nuclear energy-related research through the Nuclear Energy University Program, Nuclear Science User Facilities, and Nuclear Energy Enabling Technology programs. A number of nuclear technology developers will receive access to unique research capabilities and other assistance consistent with the goals and objectives of the Gateway for Accelerated Innovation in Nuclear (GAIN) initiative.

NEUP Outcomes

423 full applications received
12 were dismissed

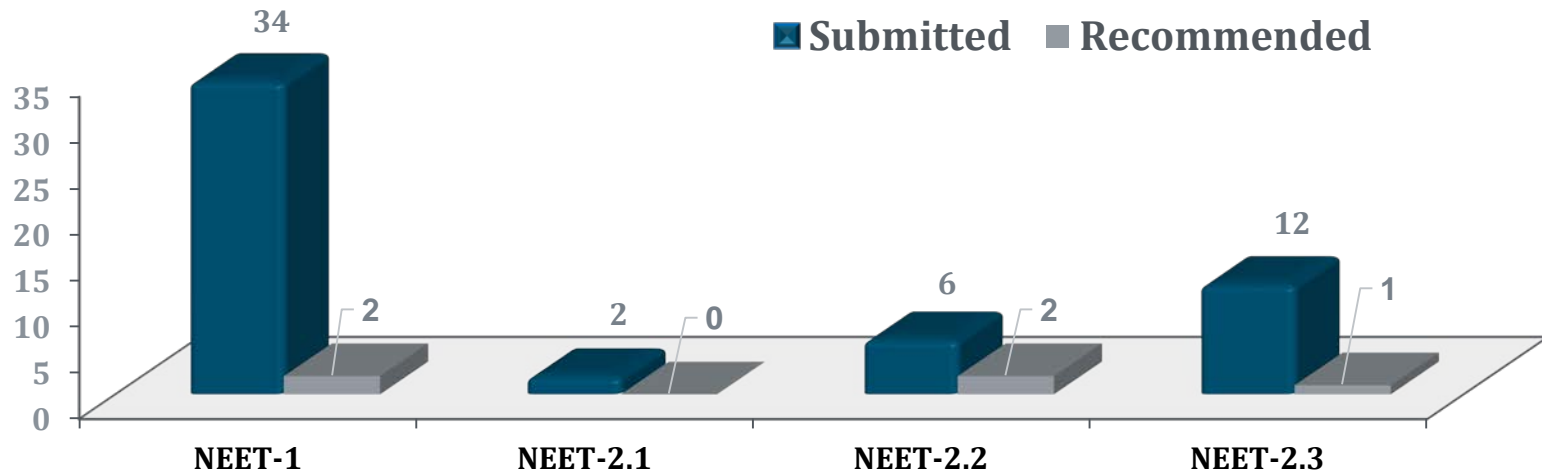
63 applications recommended



NEET Outcomes

54 full applications received

5 recommended applications



NEET-1: Advanced Methods For Manufacturing

NEET-2: Advanced Digital Monitoring and Control Technology

NEET-2.1: State of the Art Control Technologies

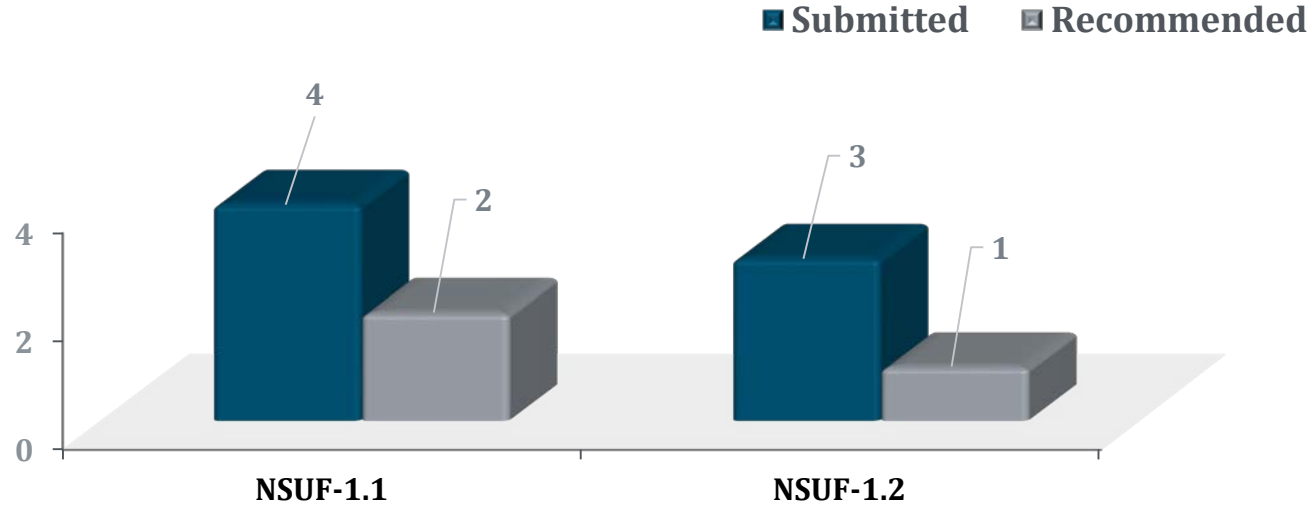
NEET-2.2: Big Data Analytics and Applications to Improve Plant Operation and Control

NEET-2.3: Sensors and Instrumentation for Data Generation

NSUF-1 Outcomes

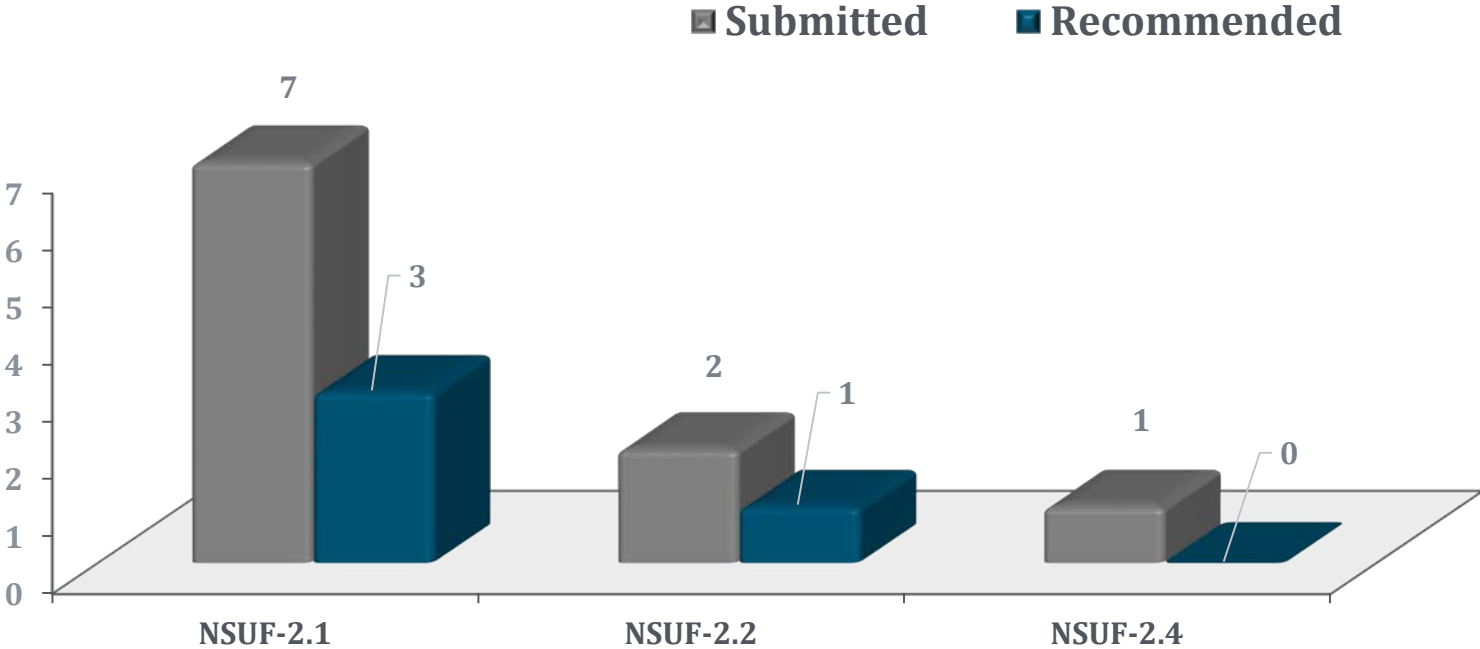
7 full applications received

3 recommended applications



NSUF-2 Outcomes

10 full applications received 4 recommended applications



FY 2019 CINR FOA Objectives and Priorities

- ❑ DOE NE mission is to advance U.S. nuclear power in order to meet the nation's energy needs by:
 - 1) Enhancing the long-term viability and competitiveness of the existing U.S. reactor fleet;
 - 2) Developing an advanced reactor pipeline, and,
 - 3) Implementing and maintaining the national strategic fuel cycle and supply chain infrastructure.

- ❑ All applications submitted under this FOA will need to demonstrate a strong tie to at least one of these three priorities.

- ❑ NE conducts crosscutting nuclear energy research and development (R&D) and associated infrastructure support activities to develop innovative technologies that offer the promise of dramatically improved performance for its mission needs as stated above, while maximizing the impact of DOE resources.

FOA Highlights

❑ Funding Mechanism

- Universities: Cooperative Agreements issued by DOE
- National laboratories: Work Authorizations managed by DOE
- Industry: Cooperative Agreements issued by DOE
- Nuclear Science User Facilities (NSUF) Access: NSUF User Agreement

❑ Collaborative Opportunity

- NSUF (requires signed user agreement)
 - applications for CINR R&D support and NSUF access
 - applications for NSUF access only

❑ Eligibility Requirements

- ensure R&D is delivered in necessary timelines to support programmatic missions
- encourage diverse participation
- based on performance (no-cost extensions) and project load

❑ Official FOA (DE-FOA-0001913) at <http://www.grants.gov>

❑ Apply through <http://www.NEUP.gov>

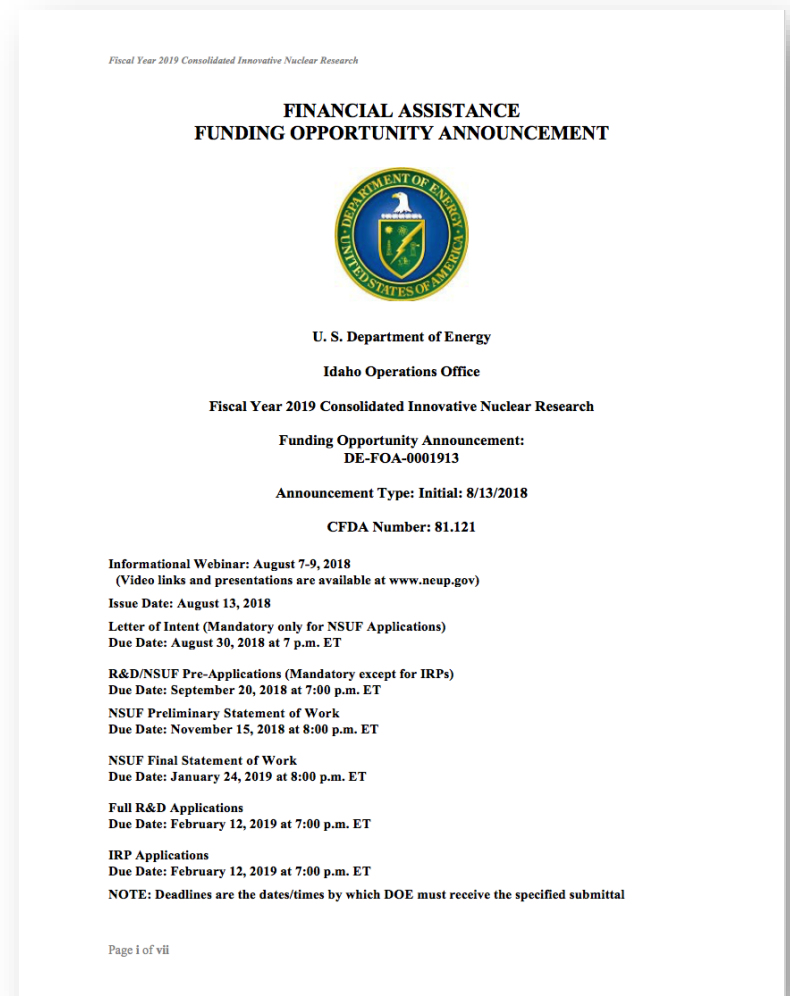
FY18 Important Due Dates

- ❑ FOA release (pending): August 2018
- ❑ NSUF LOI's: Aug 30, 2018
- ❑ R&D/NSUF pre-applications: Sept 20, 2018 (IRPs excluded)
- ❑ NSUF preliminary SOW: Nov. 15, 2018
- ❑ Full application invitations: Dec 2018
- ❑ NSUF final SOW: Jan 24, 2019
- ❑ Full IRP applications: Feb 12, 2019
- ❑ Full R&D applications: Feb 12, 2019



Outline

- FY 2018 Outcomes
- FOA Overview
- Policy Updates and Reminders
- Review Process, Tools, and Submissions



FOA Organization

University-led R&D (NEUP and NSUF worksopes):

- Appendix A
 - Program Supporting
 - Mission Supporting

University-, National Laboratory-, or Industry-led R&D (NEET, NSUF worksopes):

- Appendix B
 - Program Supporting
 - Industry may only lead on applications submitted to NSUF worksopes.
 - National laboratories and universities are not eligible to lead NSUF-2 worksopes.

University-led, Integrated Research Projects:

- Appendix C
 - Program Directed

Research Elements

❑ Program Supporting

- supports NE programs
- defined by, and focused on, the statement of objectives developed by responsible programs



❑ Mission Supporting

- must support NE mission
- includes research in fields or disciplines of nuclear science and engineering that are relevant to NE's mission but may not fully align with the specific initiatives and programs as described in Program Supporting objectives



❑ Program Directed

- directed by NE programs
- significant projects within specific research areas
- intended to develop a capability to address specific needs, problems, or capability gaps identified and defined by DOE



University-led R&D: Appendix A

❑ Award Size

- Program Supporting: up to \$800,000
- Mission Supporting: up to \$400,000

❑ Period of Performance

- up to three years; up to seven if irradiation and PIE are proposed in NSUF worksopes

❑ Eligibility

- only universities are eligible to lead
- universities, national laboratories, and industry are eligible to collaborate

❑ Estimated Funding Level

- approximately \$45 million, totaling approximately 56 awards

University-, National Laboratory-, or Industry-led: Appendix B

❑ Award Size

- Program Supporting NEET: up to \$1,000,000
- NSUF worksopes: \$500,000 for R&D request, up to \$4 M for irradiation/PIE, \$1.5 M for irradiation, or \$750,000 for beamline or PIE access request

❑ Period of Performance

- up to 3 yrs; up to 7 if irradiation and PIE are proposed in NSUF worksopes

❑ Eligibility

- NSUF-1 applications are open to universities, national laboratories, and industry to lead or collaborate.
- NSUF-2 applications are open to industry lead only

❑ Estimated number of awards

- approximately \$10 million, totaling approximately 15 awards

University-led IRP: Appendix C

□ Award Size and Period of Performance

- IRP-NE-1: International Challenge Problem for Nuclear Energy. \$3 M, three years
 - Requires Japanese researcher collaboration
- IRP-NEAMS-1: Extend NEAMS Tools to Support the Development of the Versatile Test Reactor (VTR) Experimental Program. \$4 M, five years
- IRP-FC-1: Used Nuclear Fuel Disposition: Storage & Transportation. \$5M, three years

□ Eligibility

- Only universities are eligible to lead.
- Universities, national laboratories, and industry are eligible to collaborate.
- International collaborations are encouraged.



Lead Institution Participation Summary

□ **Appendix A: U.S. Universities Only**

- applications may request R&D support
- in specific worksopes, applicants may request CINR sponsored R&D with NSUF sponsored access

□ **Appendix B: U.S. Universities, National Laboratories, Industry**

- applications may request R&D support
- applications may request CINR sponsored R&D with NSUF sponsored access
- OR -
- industry applicants may request NSUF access only

□ **Appendix C: U.S. Universities Only**

- applications may request R&D support

Technical Narrative Application Page Limits

□ Appendix A and B

- two page Letter of Intent (LOI) for applications requesting NSUF access
- up to three page pre-application
- up to 10-page full application for applications requesting R&D support
- up to 15-page full application for applications requesting R&D support and NSUF access

□ Appendix C

- up to 50 page application for IRPs
 - IRP-NE-1: International Challenge Problem for Nuclear Energy
 - IRP-NEAMS-1: Extend NEAMS Tools to Support Design and Analysis of the Versatile Test Reactor (VTR) Experimental Program
 - IRP-FC-1: Used Nuclear Fuel Disposition: Storage & Transportation

Collaboration Opportunities

- ❑ Collaborations with universities, industry, national laboratories, and foreign institutions are strongly encouraged.
- ❑ Collaborations with the Engineering and Physical Sciences Research Council (EPSRC) in the UK are strongly encouraged in select Appendix A worksopes as UK funding is available for UK institutions.
 - **FC-1.2:** Materials Recovery
 - **RC-1:** Down-Innovative New Nickel Alloys for Molten Salt Reactor Structural Applications
 - **RC-3:** Liquid Metal-Cooled Fast Reactor Technology Development and Demonstration to Support Development
 - **RC-5:** Experimental Validation of High Temperature Gas Reactor (HTGR)
 - **MS-RC-1:** Special Purpose Reactors R&D
- ❑ Collaboration with a Japanese research institution is required for IRP-NE-1: International Challenge Problem for Nuclear Energy

Collaboration Guidance

- ❑ To enhance and diversify DOE's research portfolio, additional consideration is given for collaborations with minority-serving institutions (MSIs), underrepresented groups (URGs), industry, and foreign institutions.
- ❑ For university-led applications (except for worksopes under Appendix B), non-university collaborators in composite can account for no more than 20% of the total funds provided by the government.
- ❑ Applications with international collaborators should be developed such that they stand on their own, and do not require the collaboration for execution or success.
- ❑ Funding is for U.S. institutions only
 - International organizations are encouraged to collaborate as long as they are neither a denied party nor a party requiring an export license.
 - U.S. funding will not be provided to international collaborators.

MSI, URG, and Diverse Partnerships: Criteria and Contribution

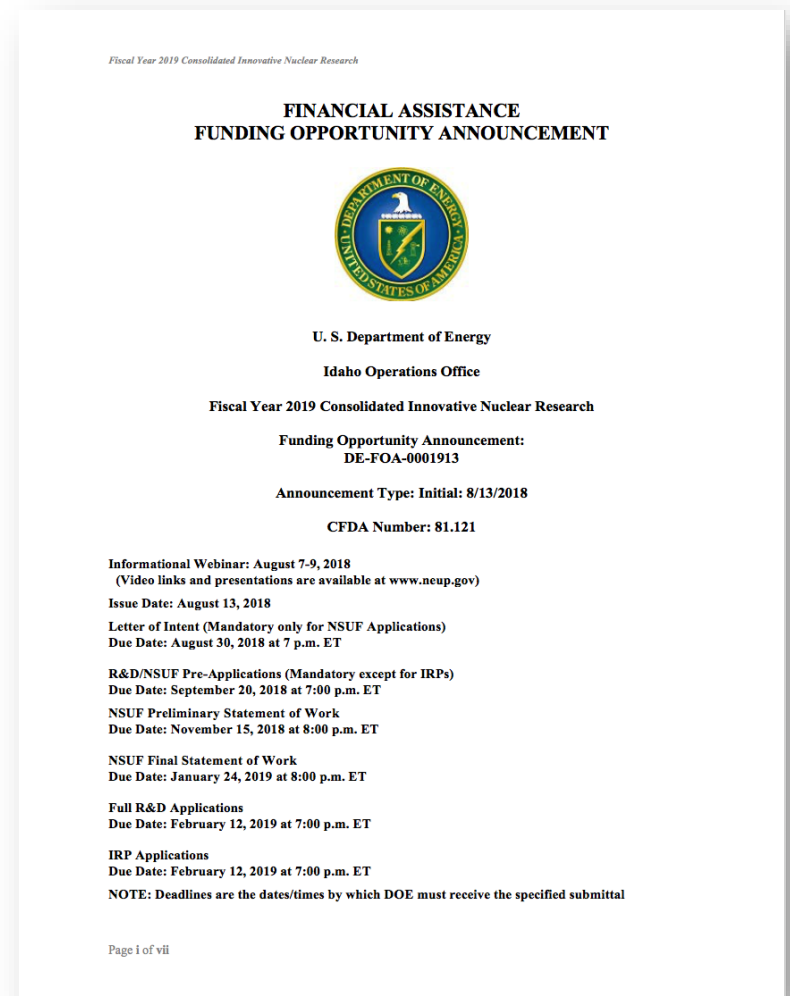
- ❑ The degree to which MSIs, international and/or industry partners, and/or URGs, if any, contribute to the applicant's ability to support the relevant program element or overall NE mission
 - MSI is attributed at the institution level and valued by a listing maintained by the Department of Education.
 - URG is attributed at the individual level and based on voluntary self-identification.
 - National laboratories are not considered for the purposes of diverse partnerships.

- ❑ Collaborations are evaluated as part of relevancy.

- ❑ Collaborations are not required to achieve the highest relevancy score.

Outline

- FY 2018 Outcomes
- FOA Overview
- Policy Updates and Reminders
- Review Process, Tools, and Submissions



Policy Updates and Reminders

- ❑ CINR reviews are no longer performed in a semi-blind format.
- ❑ **All CINR** applications must include a list of publications resulting from previous CINR supported projects.
- ❑ NSUF-2 applications may only be led by industry applicants.
- ❑ Applicants are required to obtain a DUNS number (<http://fedgov.dnb.com/webform>), and register with the SAM website (<http://www.sam.gov/>).
- ❑ NSUF applicants are required to affirm their ability to accept the NSUF User Agreement on submission of LOI, pre-app, and full app.
- ❑ For NSUF pre-applications a separate section describing readiness is required.
- ❑ NSUF SOW's are now uploaded to NEUP.gov.

Policy Updates and Reminders Continued

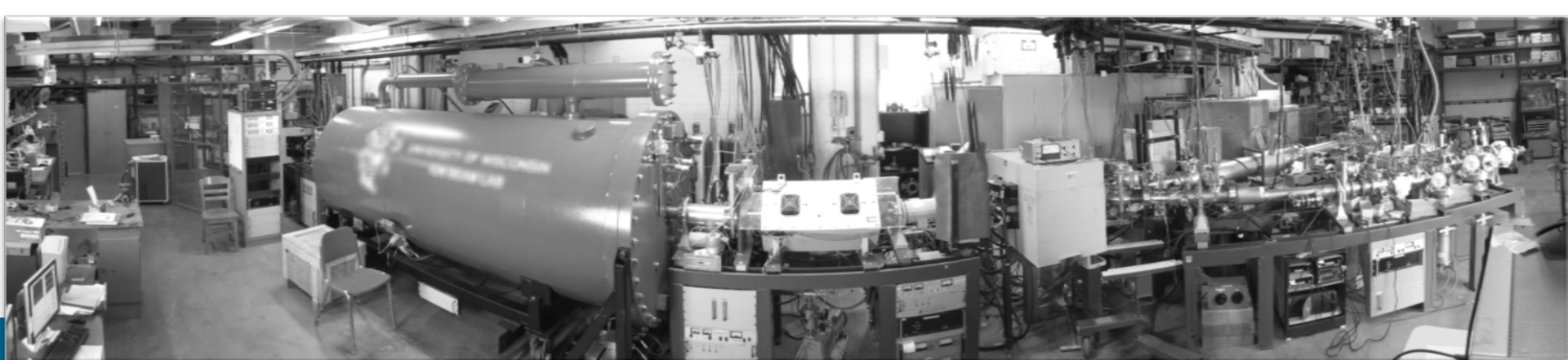
- ❑ PIs and collaborators are considered final when the pre-application is submitted (extenuating circumstances will be addressed as needed).
 - A collaborator is an individual who makes a defined, material contribution that is critical to the success of the project. **Individuals not meeting these criteria should not be listed as collaborators.**
- ❑ The PI is responsible for selection of appropriate workscope.
 - Full applications must be competed in the workscope to which the pre-applications were submitted.
 - Applications may only be competed in a single workscope area.
- ❑ For review purposes, conflict of interest restrictions, if necessary, will be attributed to the individual, not the institution.
- ❑ Applicants are responsible for not exceeding submission limits.

Policy Updates and Reminders Continued

- ❑ Materials required by the FOA must be submitted by the published deadlines. Any material received after these dates may not be considered.
- ❑ Uninvited applications may be submitted as full applications per the stipulations of the FOA.
- ❑ Uninvited applications associated with NSUF submissions may not be submitted as full applications due to the expense associated with feasibility assessments.
- ❑ U.S. funding may not be provided to international institutions.
- ❑ For university-led applications (except for worksopes under Appendix B), non-university collaborators in composite can have no more than 20% of the total funds provided by the government.

Policy Updates and Reminders Continued

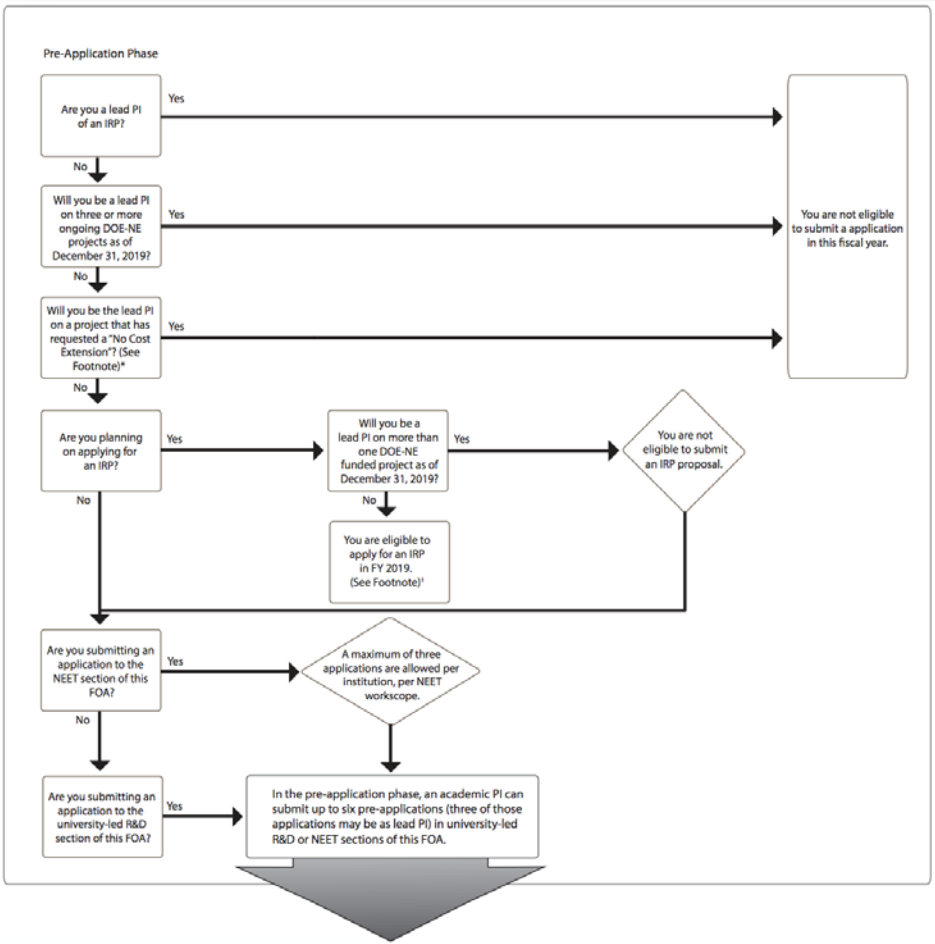
- ❑ **Pre-Award Costs:** Recipients may charge allowable costs to an award 90 days immediately preceding the effective award date. Recipients must obtain the prior approval of the DOE Contracting Officer for any pre-award costs greater than 90 days. Recipients are responsible for pre-award costs if award negotiations are not successful.
- ❑ ***DO NOT LOCK CELLS IN BUDGET SPREADSHEETS.*** Applications with locked cells may be disregarded without further review.



Project or PI Transfer

- ❑ Applications submitted to this FOA will be awarded to the applicant institution listed and will not be transferred pre-award to another if a lead PI changes institutions.
- ❑ PIs that are moving from one institution to another during and/or after the CINR review process are subject to the DOE's PI Move/Change Policy which is explained at www.NEUP.gov.
- ❑ Awards in this FOA are made to the applying institution and will remain at that institution for the entirety of the project.
- ❑ Any additional changes to partners/collaborators must to be approved by the DOE contracting officer.

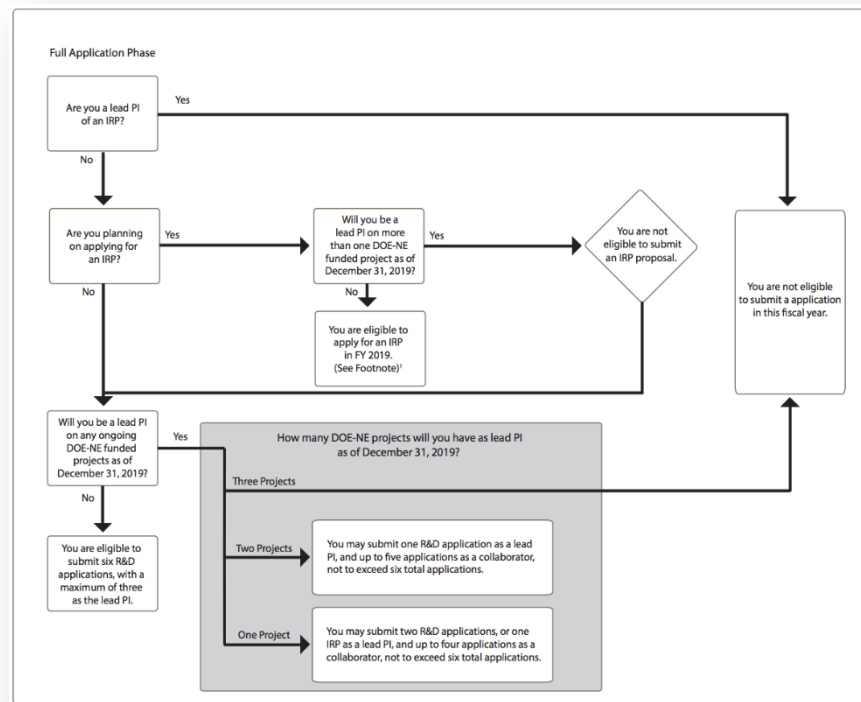
Submittal Guidelines & Eligibility



- ❑ **Ineligible to submit to this FOA as a PI:**
 - Lead PIs on an active IRP
 - University PIs with three or more R&D projects that will be active after December 31, 2019
 - PIs with a No Cost Extension (NCE) on any DOE-NE funded project that will be active beyond December 31, 2019
- ❑ **Pre-application submittal limits:** University PIs can be included on no more than six pre-applications total, with no more than three of those submissions as the PI.

Submittal Guidelines & Eligibility Continued

- ❑ Full application submittal limit: A university PI may have no more than one IRP, or 3 active R&D projects at any time and may not submit more full applications than allowed should the applications be selected for funding. *NSUF access only applications are excluded, other NSUF applications are evaluated case by case.*
- ❑ Appendix B applicants are limited to 3 applications per institution per workscope area.
- ❑ Existing NCE's that will end before December 31, 2019 are not subject to this restriction. NCE requests for projects ending in FY 2018 must be submitted by April 15, 2019.



Submittal Guidelines & Eligibility Cont

❑ **NEET-CTD funded research:**

- Universities, National Laboratories, and industry are limited to three pre-applications per institution per workscope area.
- For university PIs, these submissions count toward the pre-application limits.

❑ **IRP applications:**

- Applicants are ineligible to submit as the PI if they are designated as PI for more than one currently funded DOE-NE research project that will still be active beyond December 31, 2019.
- PIs may not submit a R&D application and an IRP application in the same year.

❑ **NSUF projects that request R&D support will be evaluated on a case-by-case basis.**

❑ **NSUF access only applications are exempt from eligibility restrictions.**

Uninvited Pre-Applications

- ❑ With the exception of NSUF applications, pre-applications that are not invited may still be submitted as full applications

- ❑ Uninvited pre-applications that are received as full applications must meet the following criteria in a re-review to be considered for a full technical review.
 - Relevancy: average score of at least High Relevance
 - Program Priority: average score of at least Moderate Program Priority

Weighting of Scores

- ❑ Technical merit and relevancy are weighted according to program involvement:
 - Mission Supporting 80% Technical; 20% Relevancy
 - Program Supporting 65% Technical; 35% Relevancy
 - Program Directed 50% Technical; 50% Relevancy
 - NSUF Access Only: 65% Technical; 35% Relevancy

- ❑ The FOA details criteria for all sections and application types.

- ❑ Additional relevancy consideration is given for effective partnerships including MSI, URG, industry, and foreign collaborations.

- ❑ Program priority is a separate criteria that is scored by relevancy reviewers.

Semi Blind Reviews

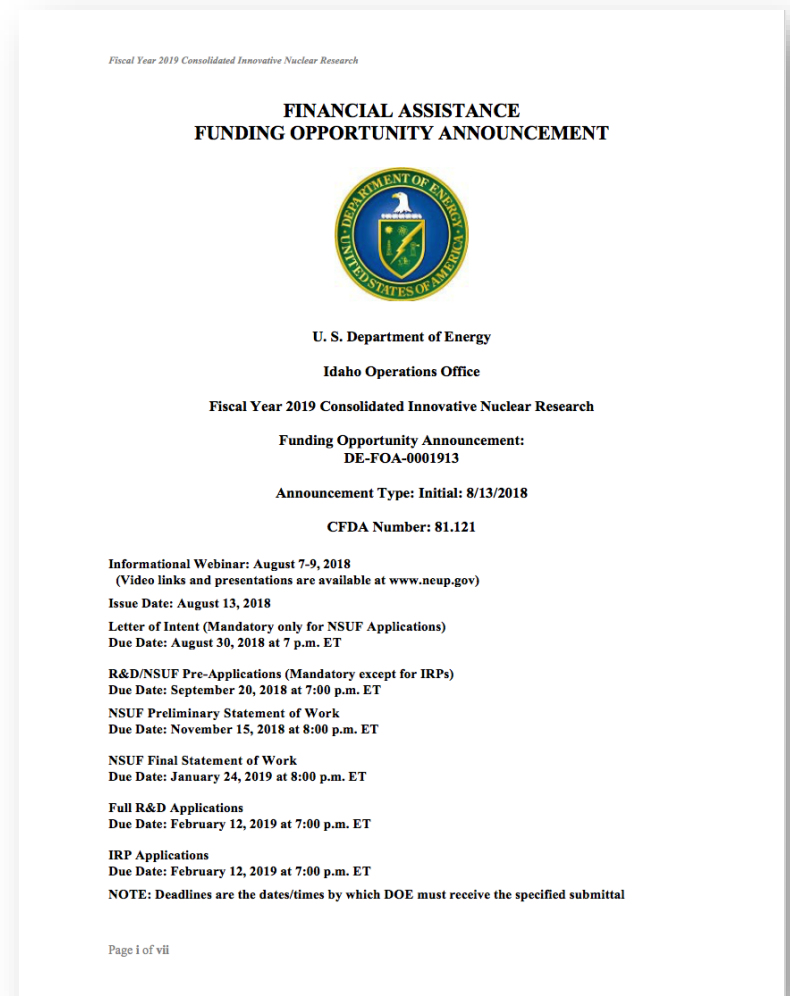
- ❑ CINR policy is to review proposals and MS applications in a semi blind process. Technical narrative is evaluated without the knowledge of individuals or organizations to assess the merit of the proposal. **Do not include the following information in the narrative:**
 - Cost and pricing information.
 - Identification, by individual name or name of institution, of any teaming partner or lead institution (examples of acceptable ways of referring to partners are posted on the NE website).
 - Official name or title of facilities used to execute scope. Do not describe the facility by function and/or technical attributes such as "accelerator, a test reactor, etc."
- ❑ **Note:** For applications requesting NSUF access to the NSUF facilities may be named.

Cost Sharing

- ❑ For applications led by universities, cost sharing is permitted but not required.
- ❑ For applications led by entities other than universities or FFRDCs, a cost share of at least 20% of total allowable costs is required.
 - The sum of the government share, including FFRDC contractor costs (if applicable), and the recipient share of allowable costs equals the total allowable costs of the project. These must come from non-federal sources unless otherwise allowed by law.
- ❑ Cost sharing requirements do not apply to the value of NSUF access.
- ❑ ***Cost sharing is not an evaluated criteria.***

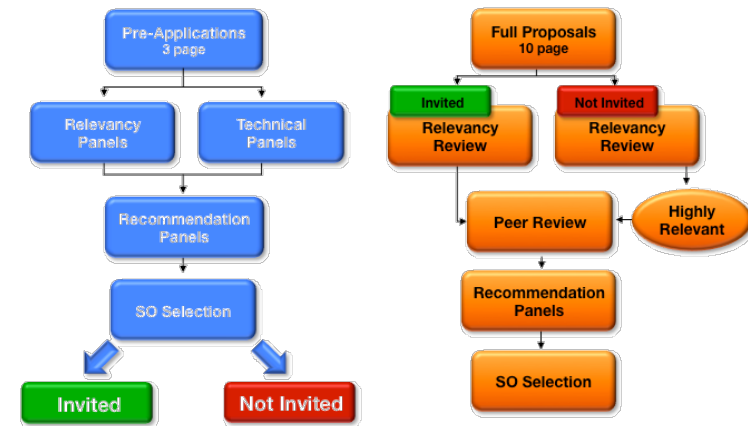
Outline

- FY 2018 Outcomes
- FOA Overview
- Policy Updates and Reminders
- Review Process, Tools, and Submissions



Review Processes and Criteria

- Review criteria and processes used for PS, MS, and PD evaluation is consistent with traditional peer review.
 - PS and MS applications are reviewed in a process that includes pre-applications.
 - pre-applications: two relevancy, one peer
 - results in Invited and Not Invited status
 - full applications: typically two relevancy, three peer
 - PD applications are reviewed individually by a common set of reviewers who are then convened into a panel for final scoring.
 - *typically two relevancy, three peer*



FOA At-A-Glance

		Applicable Workscope Appendix	Estimated Available Budget	Maximum Award Size	Project Duration	Cost Share	Collaboration
University-led NEUP Projects	Program Supporting	Appendix A	\$45,000,000	\$800,000	Up to 3 years	Permitted but not required*	University, National Laboratory, industry, and foreign collaborations are encouraged but no U.S. funding can go to entities that are not incorporated in the U.S
	Mission Supporting			\$400,000			
University-, National Laboratory-, or Industry- led NEET CTD Projects	Program Supporting	Appendix B	\$7,000,000	\$1,000,000	Up to 3 years		
NSUF Projects	Program Supporting	Appendix A & B	R&D: \$3,000,000 NSUF: \$10,000,000	Refer to maximum award size of the project funding and NSUF funding.	Up to 7 years for Irradiation and PIE. Up to 3 years for PIE only or Irradiation Only		
University-led Integrated Research Projects – NEUP	Program Directed	Appendix C	\$8,000,000	\$5,000,000	Up to 5 years		

* NSUF Projects that are led by industry are required to cost share based on guidance in Part CIII, Section H

Required Documents & Forms

Document	Format	Required From
Conflict-of-Interest	Checkbox	Affirmed by lead applicant for all participants
SF-424 R&R	Form	Lead applicant
Research and Related Other Project Information	Form	Lead applicant
Project Summary / Abstract	PDF	Lead applicant
Project Narrative	PDF	Lead applicant
Vitae – Technical Expertise and Qualifications (2 pages)	PDF	All leads and collaborators
Benefits of Collaboration (4 pages)	PDF	Lead applicant
Capabilities (2 pages)	PDF	Lead applicant
Letters of Support (PD IRP's Only)	PDF	Lead Applicant
SF-424 Research and Related Lead Budget (total Fed + Non-Fed)	Form	Lead applicant (except NSUF-2)
SF-424 Subaward Budget (total Fed + Non-Fed), if applicable	Form	University / Industry Collaborators (except NSUF-2)
Budget for DOE National Lab Contractor or FFRDC, if applicable	PDF	National Lab Leads and Collaborators (except NSUF-2)
Budget Justification	PDF	University & Industry Leads and Coll. (except NSUF-2)
Current and Pending Support	PDF	All University and Industrial Applicants
Coordination and Management Plan	PDF	Lead Applicant
Authorization for DOE/NNSA FFRDC's	PDF	National Laboratories (include non funded collaborators)
Project/Performance Site Location	PDF	Submitted for all sites performing work
SF-LLL Lobbying Activities	Form	Submitted for all sites performing work
Environmental Checklist	Form	Submitted for all sites performing work
Certifications and Assurances	Form	University & Industry Leads (except NSUF-2)

Tools for Understanding the FOA

❑ Eligibility Workflow

- Detailed eligibility restrictions can be found at https://neup.inl.gov/SiteAssets/FY19_%20Documents/FY19_CINR_FOA_Eligibility_Flowchart.pdf

❑ R&D Federal/Technical Points of Contact

- https://neup.inl.gov/SitePages/FY19_RD_Technical_Program_Contacts.aspx

❑ IRP Federal/Technical Points of Contact

- https://neup.inl.gov/SitePages/FY19_IRP_Technical_Program_Contacts.aspx

Contact Information



- ❑ Federal/Technical Points of Contact – Technical Questions
 - List of TPOCs found at www.NEUP.gov

- ❑ DOE-ID – Procurement Questions
 - Brandon Stike
 - stikebm@id.doe.gov

- ❑ NE Integration Office – General Application Submittal Questions
 - (208) 526-1602 / (208) 526-8178
 - neup@inl.gov

FY18 Important Dates

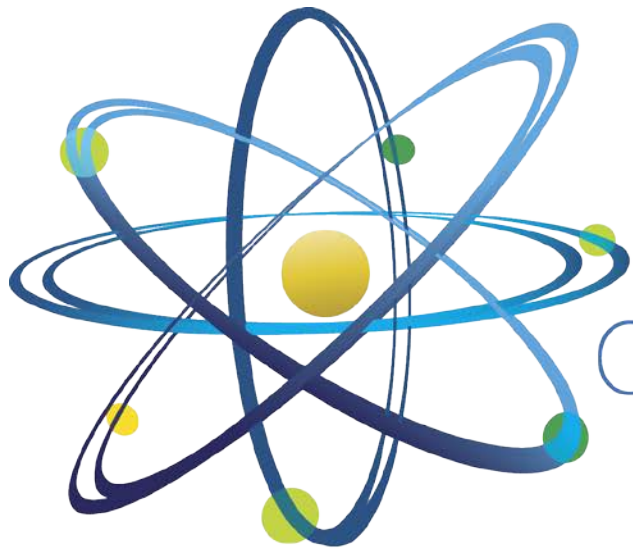
- ❑ FOA release (pending): August 2018
- ❑ NSUF LOI's: Aug 30, 2018
- ❑ R&D/NSUF pre-applications: Sept 20, 2018 (IRPs excluded)
- ❑ NSUF preliminary SOW: Nov. 15, 2018
- ❑ Full application invitations: Dec 2018
- ❑ NSUF final SOW: Jan 24, 2019
- ❑ Full IRP applications: Feb 12, 2019
- ❑ Full R&D applications: Feb 12, 2019



www.neup.gov



Questions?



Clean. **Reliable. Nuclear.**