



Office of Nuclear Energy FY 2010 University Program Workshop

John Gilligan
CAES – NEUP Director
***NEUP Engagement
and Collaboration
Models***

*Salt Lake City Hilton Center
Salt Lake City, UT
August 13-14, 2009*





Nuclear Energy University Program

Goals – *Integrate Leading Edge R&D, Increase High Quality Workforce*

Purpose – *Provide peer-reviewed funding to Universities for R&D contracts, and grants for Infrastructure, Fellowships and Scholarships*

Proposed 2010 Time Scale - R&D example

R&D RPA– September 2009

Pre-proposals due – October 2009

Full Proposals due – December 2009

Reviews due – March 2010

Awards announced, reviews returned – April 2010



“The next generation of nuclear power plants – with the highest standards of safety, efficiency and environmental protection – will require the latest advancements in nuclear science and technology. These research and development university awards will ensure that the United States continues to lead the world in the nuclear field for years to come.”



Secretary Chu₃



Structural Overview

- ◆ **DOE-NE R&D Program will allocate up to 20% of their appropriated funding to universities through NEUP**
- ◆ **Center for Advanced Energy Studies (CAES) administers the NEUP**
 - INL administrative staff will be used to avoid conflicts of interest
 - The CAES-NEUP Director will be a university representative
- ◆ **Annual solicitations (earlier in following FY's):**
 - Research & Development (R&D)
 - Capabilities, Infrastructure & Equipment
 - Scholarships & Fellowships
- ◆ **Contracts will replace Grants and Cooperative Agreements for R&D**
 - University work assignments through the NE R&D Program structure
- ◆ **Grants and Cooperative Agreements through DOE-ID for Capabilities, Infrastructure & Equipment and Fellowships and Scholarships**



CAES - NEUP Staff

- ◆ **Director: Dr. John Gilligan (1/2 time), NCSU, Professor, Former Vice Chancellor**
- ◆ **Relationship Manager/Program Manager: Dr. Marsha Lambregts**
- ◆ **Communications/Outreach Coordinator: Ms. Kortny Rolston**
- **Review Coordinator:**
Ms. Cindie Jensen
- **Support Team:**
 - Dr. Ray Grosshans
 - Mr. Bryon Curnutt
 - Dr. Andrew Klein
 - Ms. Jamie Hansen
 - Mr. Oren Hester
 - Dr. Harold Blackman





Key Reports related to Nuclear University Programs

- ◆ **NEAC Report, November 2008**
- ◆ **DOE, Facilities for the Future of Nuclear Energy Research, November 2008**
- ◆ **NAS, Review of DOE Nuclear Energy Research and Development Program, 2008**
- ◆ **Battelle, Nuclear Energy for the Future, July 2008**
- ◆ **APS, Readiness of the US Nuclear Workforce for the 21st Century Challenges, June 2008**
- ◆ **ANS, Nuclear's Human Element, Feb. 2007**



Key Recommendations from Studies

- ◆ **Peer reviewed based R&D selection**
- ◆ **Increased funding**
- ◆ **Program relevant research, tied to national needs, coverage of areas**
- ◆ **Need investigator initiated funding**
- ◆ **Workforce development and infrastructure important**
- ◆ **Stable and consistent program needed**



2009 Funding Breakdown

- ◆ **Total Funding \$64.7M**
 - NERI Mortgages: \$19.9M
 - R&D Subcontracts: \$39.9M
 - AFCI: \$14.9M
 - GEN IV: \$25M
 - Infrastructure Grants: ~\$6M
 - Scholarships and Fellowships: \$2-3M
 - 70 \$5000 1 year Scholarships
 - 16 \$150,000 3 year Fellowships



NEUP Program and Process

- ◆ **Program – Integration of R&D results into DOE-NE mission projects**
- ◆ **Process - solicitation, review, selection, implementation, communication, feedback**
 - R&D
 - Scholarships/Fellowships
 - Infrastructure



R&D Proposal Success Rates(2009)

- ◆ **Overall – Awards/Submissions – 33%**
- ◆ **NUC-Idaho Universities – 38%**
- ◆ **Top 8 Universities(non NUC-Idaho) – 41%**
- ◆ **Universities with Nucl Engr – 35%**
- ◆ **Of 54 submitting lead Universities, 31 received funding**
- ◆ **Junior Faculty PIs – 52%**



Continuous Improvement

- ◆ **Feedback from survey**
- ◆ **Effective outreach/workshops**
- ◆ **NEUP Advisory Group (in formation)**
- ◆ **Meetings with NEAC, NEDHO, TRTR, others**
- ◆ **Integration with Labs, other agencies, industry**
- ◆ **Congressional and public advocacy**



New NEUP R&D collaboration models- (tips for you)

- ◆ **R&D based on deliverables, applied programs (like 6.2, 6.3 at DOD)**
- ◆ **Frequent contact required – PIs and Lab**
- ◆ **Visits, white papers to key program leaders**
- ◆ **Joint faculty positions: INL, ORNL, PNNL...**
- ◆ **Interns, temporary appointments**
- ◆ **Joint proposals, publications**
- ◆ **Look where Lab Directed Research and Development \$ are going**