

DOE program to bolster nuclear renaissance

INL Communications

The United States is on the verge of a nuclear renaissance, and the Center for Advanced Energy Studies is helping bolster the country's nuclear research and development and the number of students entering the high-demand field.

CAES, a partnership between Idaho National Laboratory and the state's three public research universities, is now administering the Nuclear Energy University Program (NEUP) for the U.S. Department of Energy's Office of Nuclear Energy.

Shane Johnson, DOE's acting assistant secretary for nuclear energy, said the Energy Department asked CAES to run the program because of its strong track record of partnering with universities.

"We want this organization representing the Department of Energy to the rest of the nation's university systems," Johnson told the crowd at CAES' Feb. 20 building dedication.

NEUP funds nuclear energy research at U.S. universities and provides scholarships and

fellowships to nuclear science students. It also pays for equipment and infrastructure upgrades at colleges and universities to improve their ability to conduct cutting-edge research and development.

NEUP is making approximately \$34 million available this fiscal year.

Pre-applications for the R&D arm of the program were due Jan. 20. The call focuses on research needs and priorities for these programs: Advanced Fuel Cycle Initiative (AFCI), Next Generation Nuclear Plant (NGNP), Nuclear Hydrogen Initiative (NHI) and Light Water Reactor Sustainability (LWRS).

As the nuclear renaissance has accelerated the call to train more nuclear scientists, engineers and reactor operators, NEUP seeks to align the nuclear energy research and development being conducted at U.S. universities with DOE's mission and to increase the number of students studying nuclear science and engineering.

According to the Nuclear Energy Institute, about half of the nuclear industry's work force will be eligible to retire during the next 10 years.

"The gap is on both ends of the life cycle," CAES Deputy Director Oren Hester said. "There aren't as many nuclear science and engineering students out there and a lot of the workers are baby boomers getting ready to retire."

CAES is part of the agency's response to the recent interest in nuclear energy. After years on the sidelines, nuclear energy has re-emerged as a viable path to America's energy independence. In 2008 alone, the



Nuclear Regulatory Commission received 12 license applications for new nuclear power plants in the U.S. In 2007, it got five. CAES will play a central role in stimulating research and revitalizing the nuclear work force through NEUP.

Upcoming events

CAES and the Idaho Office of Energy Resources are sponsoring the first Energy Policy Institute Summit March 12-13 at Boise State University's Stueckle Sky Center overlooking Bronco Stadium.

Purpose is to identify research projects that would help policymakers and energy leaders formulate and decide on effective policies needed by the state and region.

On the first day, leading energy experts will discuss challenges and opportunities facing the region.

During the second day, researchers from CAES and its partner institutions – Idaho National Laboratory, Boise State University, Idaho State University and University of Idaho – will identify specific teams to develop research ideas that may be eligible for proposal development funding.

The public is invited to attend the first day. Researchers wishing to participate on a project team should attend both days.

Travel reimbursement is available to 40 registrants from CAES institutions. After registering, you will be notified if you are selected for travel reimbursement.

Admission is free, but space is limited so please register online ASAP at: <http://www.boisestate.edu/energy-policyinstitute> and click on EVENTS.

For more information, please contact Lisa Wennstrom at (208)283-1834 or LisaWennstrom@boisestate.edu.





In CAES you didn't know...

Exactly two years after Idaho's congressional delegation and INL, state, local and university officials broke ground on the Center for Advanced Energy Studies, they gathered here with us to celebrate its completion.

Hundreds of people attended the CAES building dedication ceremony on Feb. 20, 2009. It was a wonderful event that marked a new phase for CAES, its university and industrial partners and the state. Now that the building is up and running, we can focus our energy and attention on expanding our research efforts.

Already, researchers at CAES' partner institutions, INL, Boise State University, Idaho State University and University of Idaho, are conducting important research that could aid small bioethanol operations in the state – and potentially the country. Others are hard at work researching new carbon management methods.

We fully expect to build on those projects and continue to delve into relevant energy issues that will benefit not only the region and Idaho, but also the nation.

The community and state have high expectations for CAES just as we do for ourselves. We plan to not just meet those expectations in 2009, but to exceed them.

Harold Blackman
CAES Director

Did you know?

The 55,000-square-foot Center for Advanced Energy Studies is registered for LEED certification and plans to certify at the Gold level.

To get that designation, CAES has to meet standards set by the U.S. Green Building Council in six environmental categories and then is awarded points based on how many of those criteria it met.

LEED is a third-party certification system to measure a project's green features and has verified that a building is operating according to those standards. There are four levels of certification – certified, silver, gold and platinum.

CAES names new Nuclear Energy University Program relationship manager

By Kortny Rolston



The Center for Advanced Energy Studies has tapped a veteran Idaho National Laboratory scientist, to manage a national research program it is administering for the U.S. Department of Energy's Office of Nuclear Energy.

As CAES Nuclear Energy University Program relationship manager, Dr. Marsha Lambregts will oversee NEUP's day-to-day operations and manage the relationship between DOE and national labs.

The goal of the \$34 million program is to align universities' nuclear energy research with DOE's mission and boost enrollment in nuclear science and engineering.

Before moving to CAES, Lambregts managed the Nuclear Materials Characterization Department at the INL Materials and Fuels Complex, which included running the Analytical Laboratory. She joined Idaho National Laboratory in 1997 as an analytical chemist.

Lambregts sought the new position, in part, to broaden her knowledge of nuclear research, a major focus of NEUP.

"I'd see bits and pieces of various research projects because they would come through our lab," she said. "But there are so many more areas that I want to learn about."

She also is eager to work on NEUP's education component. The program funds more than \$1 million in scholarships and fellowships for students and post-doctoral researchers studying nuclear science and engineering.

Dr. Lambregts earned her Ph.D. in chemistry while working at MFC and believes others should have the same opportunity.

"I valued that opportunity so much that I want to help people do the same," she said. "There's just not enough people entering the field and (NEUP) is a way to encourage them."

CAES Director Harold Blackman said Lambregts' science background and management experience make her uniquely qualified for the job.

"Marsha brings several strengths to CAES," he said. "She understands the importance of aligning university research with the NE mission, especially now with the renewed interest in nuclear energy."

CAES received more than 400 proposals from colleges and universities in the pre-application stage, which closed in January. The NEUP request for proposal is expected to be issued in February.

To submit story ideas, calendar items or other information for upcoming CAES newsletters, please send an e-mail to Kortny.Rolston@inl.gov.