

# INL Intelligence

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**A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Laboratory**  
Work at the lab advances the Department's mission to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

## ■ Novel Space Power System Discussed by INL Engineer

At this month's national meeting of the American Chemical Society, INL engineer James Werner delivered a presentation on a potential new approach to providing power for future missions to the moon or Mars. Werner said that innovative fission technology for surface power applications is far different from the familiar terrestrial nuclear power stations, which require several acres of land and have large support structures like cooling towers. "People would never recognize fission power systems as a nuclear power reactor," said Werner. "The reactor itself may be about 1 ½ feet wide by 2 ½ feet high, about the size of a carry-on suitcase." A technology demonstration unit is scheduled to be built next year as part of a cooperative project between NASA and the U.S. Department of Energy. Werner leads DOE's INL involvement in this effort, which entails participation in reactor design and modeling teams, fuel development, and design and fabrication of a small electrical pump for the liquid metal cooled system.

## ■ More Details Provided on Major New Research Facility

As soon as next spring, work should begin on a new 148,000-square-foot research and education laboratory in Idaho Falls. The \$50 million facility will be built by Idaho-based Ormond Builders, Inc. and could add more than 300 jobs to the local economy during construction. The three-floor, state-of-the-art, energy efficient facility will feature dozens of offices and multiple laboratories used for conducting experiments and performing energy security research. It will also include space for conducting laboratory conferences, employee meetings and community outreach activities. Since 2005, INL has opened 13 modern research, development or support facilities totaling over 430,000 square feet.

## ■ New Nuclear Technician Program Launched

INL has helped start a nuclear operations technician program at Idaho State University's Energy Systems Technology and Education Center (ESTEC). The two-year program opened this fall and will train reactor operators for jobs available at INL and in the nuclear industry. "INL will be facing the same workforce shortages as everyone else in the nuclear energy industry," said Richard Holman, manager of INL's Energy Workforce Initiatives. "This program allows us to grow our own highly skilled workforce. Idahoans like to stay in Idaho and that is good for the lab and the state."

## ■ Lab Interns Awarded Scholarships

The Center for Advanced Energy Studies has awarded \$10,000 in scholarships to university students who interned at CAES and INL this summer. Seven students received \$1,000 scholarships; one student received a \$3,000 award. Recipients were selected based on the work they completed during their internships and on a brief essay describing their career interests and the energy challenges the nation and world face. Students representing each of Idaho's research universities were among the winners.

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