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 strategic priorities of energy security,
nuclear security, scientific discovery and environmental responsibility.

■ INL Technologies Cited as Among World's Best

INL was notified early this month that its researchers had earned three prestigious R&D 100 awards for their technological achievements as part of the 2010 international competition hosted by R&D Magazine. "This is a very special year for INL," said David Hill, INL deputy director for Science & Technology. "Our talented researchers completed a repeat performance, earning three R&D 100 awards from four nominated technologies just as they did in 2009. We are very proud of them." The first two awards are for a revolutionary gun sight technology called MicroSight and a green energy system called Supercritical/Solid Catalyst that converts sewer sludge and related wastes to high-quality biodiesel. The third award was for a multi-agency collaborative effort that resulted in osgBullet, a software package that creates 3-D, real-time computer simulations that can help engineers design complex systems ranging from next-generation power plants to highly efficient cars.

■ Research Looks into Power Line Cooling

INL engineers are working on a joint project with Idaho Power, Boise State University and the Western Electricity Coordinating Council's renewable energy integration research group that seeks to take advantage of natural concurrent cooling of transmission lines to potentially increase and integrate more capacity from renewable sources. The same wind that spins the enormous blades that create turbine-generated electricity also cools the grid's high-capacity transmission wires and allows the additional flow of electrons to the grid. The harder the wind blows, the more the cooling effect increases the lines' transmission capacity. This collaborative research effort could identify where high-capacity wire upgrades are required on select portions of the regional transmission system and demonstrate lower costs associated with wind generation interconnection.

■ Specialized Summer School Held in Idaho

Nuclear engineering students and professionals from around the world spent much of late July in Idaho Falls taking part in the Modeling, Experimentation and Validation Summer School. During the 10-day school, participants learned about the latest developments in nuclear systems and safety analysis from some of the top researchers in the field. The summer program's goal is to increase awareness and understanding of the use of modeling and simulation in advancing the ability of researchers to safely and effectively predict the behaviors of future nuclear reactors. Other institutions co-hosting the school included the Center for Advanced Energy Studies, Idaho State University, Argonne National Laboratory and Oak Ridge National Laboratory.

■ Lab Hosts Nation's Top Physics Teachers

More than three dozen high school teachers from across the nation attended the INL Physics Teacher Workshop July 11-16 in Idaho Falls. The teachers toured INL and heard presentations from key lab leaders. They also worked on nuclear-related experiments and were given laboratory equipment to take back to their classrooms and share with their students to augment science, technology, engineering and mathematics education efforts.

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