

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 Investigates “Roasted” Biomass

A new collaborative study involving Idaho National Laboratory and Pacific Northwest National Laboratory is investigating whether roasting biomass – materials like wood, straw, switchgrass and corn stover – can create a more valuable product for the biofuels industry. With research funding from the U.S. Department of Energy's Office of the Biomass Program, INL researchers are now torrefying biomass to further study physical characteristics of the resulting product, its production cost and how much energy it could generate. Torrefaction is a heating and drying process conducted in an oxygen-free environment. Initial tests show that driving moisture and volatile compounds from biomass makes it more stable, compactable and energy dense. “This could cut a lot of costs by providing a less expensive and higher-value product,” said INL biofuels researcher Christopher Wright. “This technology has the ability to overcome biomass's moisture, mass and energy density problems, which make up a huge proportion of the cost barriers.”

■ Lab Supports Student Workstation Study

INL is working with the Mayo Clinic and Hope Lutheran School in Idaho Falls to examine how vertical workstations influence student activity, attentiveness and weight. The newly launched study will follow sixth-grade students at the school who are using new vertical workstation desks, similar to the ergonomic workstations used in many corporate workplaces. INL will use data from class observations, regular weigh-ins and pedometers to answer questions about the workstations' impact on student attentiveness, body weight, daily activity and fatigue or discomfort.

■ Regional Conference Considers Border, Sustainability Issues

INL was among several U.S. and Canadian organizations participating in a symposium held during the Winter Olympics in Vancouver, British Columbia. Sponsored by the Pacific Northwest Economic Region, the event's goal was to develop a 2020 vision for the U.S.-Canada border. Building on comments made by Premier Campbell of British Columbia and Premier Wall of Saskatchewan concerning transnational energy interests, INL's Mike Hagood noted the important role Canadian resources play in U.S. energy security, ensuring long-term energy supplies and stimulating greater regional economic development. Hagood was joined at the symposium by Erin Searcy, INL biofuels technical and economic analyst.

■ Scholastic Tournament Enters 20th Year

Nearly 800 high school students representing 73 Idaho high schools are competing this month in the 20th annual INL Scholastic Tournament. The competition is set up similar to sporting events with round-robin and consolation format tournaments. The fast-paced question-and-answer event awards points to teams quickest to “buzz in” and answer the most science, math and general knowledge questions correctly. Teams from Idaho's three winning schools travel back to Washington, D.C., for the National Science Bowl in late April.

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