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BPA, Oregon BEST launch academic prize program for energy innovation

University students and faculty team up with industry experts to explore energy solutions

Portland, Ore. – The Bonneville Power Administration has partnered with Oregon BEST in a new academic prize program that engages teams of the region’s most promising university students in collaborative, real-world, applied study projects that support the development of innovative solutions to the challenges faced by the Northwest’s electric grid.

The program, known as the Northwest Energy Experience or NW Energy XP, pairs select teams of university students and faculty advisers with BPA subject matter experts in addressing technical electric power industry challenges. Oregon BEST kicked off the “NW Energy XP” activities at a luncheon April 11 in Portland, Ore.

BPA Administrator Elliot Mainzer says the goal of the prize program is to build regional expertise in the electric power industry and attract more top talent to careers in energy.

“We’re creating a Northwest energy innovation lab that equips students with the skills and mindset essential to contributing to our energy future,” Mainzer says.

The program provides teams of faculty and students an opportunity to explore topics of interest to the utility industry, especially those that might lead to the integration of new, clean technologies. At the April 11 kickoff event, the prizewinners from the initial participating schools – Oregon State University, Oregon Institute of Technology, Portland State University and Washington State University, Vancouver – formed three inter-university teams and picked a study topic to work on.

A team of students from Oregon Tech and WSU, Vancouver will study distributed generation modeling. A second team comprised of students from OSU and PSU will work on the optimization of hybrid electrical systems with consideration to climate modeling. And a third team from OSU and PSU will study synchrophasor data. (Synchrophasors or phasor measurement units are shoe-box-sized devices that transmit precise current, frequency and voltage readings, giving operators a wide-area view of the power system.)

At the kickoff event, a pilot group of students gave presentations on projects conducted in the 2013-14 academic year. Those teams, composed of power engineering and computer science students, produced remarkable results that may have immediate application to BPA.

Oregon BEST is the portal for the academic prize program, which includes workshops for defining the study topics, supporting student research activities and planning an annual conference where scholars, faculty advisers and subject matter experts present their research from the preceding year and select topics for the next year's cohort. Each participating university's foundation has been given \$50,000 to award to its institution's winning students in the form of tuition credits as well as a project stipend. The program is sponsored by BPA's [Technology Innovation Office](#).

"We're pleased to be partnering with BPA on the NW Energy XP to support student-faculty research projects that are helping to generate clean energy solutions needed in the rapidly evolving power industry," said David Kenney, president and executive director of Oregon BEST. "And at the same time, we're helping industry attract standout student innovators to their workforce."

Another unique aspect of the program is that it requires each team to include members from at least two universities. "Building strong relationships between universities and between disciplines is an important part of developing professional networks for our future industry leaders," says Johanna Brickman, Oregon BEST's director of collaborative innovation.

BPA and Oregon BEST are looking for other Northwest universities and industry partners to join in sponsoring this prize. Interested parties should contact [Johanna Brickman](#). The next round of awards is intended to be made in October.

"This is a unique opportunity for others in the industry to get involved in shaping our future workforce," Mainzer adds. "And it's a valuable step toward developing a center of excellence for energy and environment in the Northwest."

The "XP" in "NW Energy XP" draws on the gaming acronym for experience points. Visit the [NW Energy Experience](#) website to learn more.

About BPA

BPA is a not-for-profit federal agency that markets renewable hydropower from federal Columbia River dams, operates three-quarters of high-voltage transmission lines in the Northwest and funds one of the largest wildlife protection and restoration programs in the world. BPA and its partners pursue cost-effective energy savings in all sectors of the economy and together they have saved enough electricity through energy efficiency projects to power four large American cities. Through its community and education program, BPA sponsors a variety of activities and projects that support science, technology, engineering and math education, energy literacy and environmental stewardship. bpa.gov

About Oregon BEST

Oregon BEST is the nexus for clean technology innovation, building capability, convening collaborations, and accelerating solutions to environmental challenges that deliver prosperity in all corners of Oregon. Oregon BEST brings together Oregon's significant R&D strengths in clean technology to support the commercialization of new products and services. Since establishment in 2007, its 225-plus member faculty have generated more than \$100 million in research revenue from federal, industry and

foundation sources to Oregon. Oregon BEST has established a network of seven shared-user research labs at its four partner universities: Oregon Institute of Technology, Oregon State University, Portland State University and the University of Oregon. [Oregon BEST Commercialization Funding](#) is awarded to collaborations between entrepreneurs and Oregon BEST member faculty at partner universities. oregonbest.org

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