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## DOE selects NW for \$178M smart grid demo

Richland, Wash. – The Department of Energy has selected a Northwest team to conduct a regional smart grid demonstration project designed to expand existing electric infrastructure and test new smart grid technology with up to 60,000 customers in five states.

The \$178 million Pacific Northwest Smart Grid Demonstration Project was one of 16 regional smart grid demonstrations announced by DOE today. The project team combines energy providers, utilities, vendors and research organizations and will be managed by Battelle.

“We’re thankful to Secretary Chu, the Department of Energy and to our project team members for the opportunity to bring transformational smart grid science and technology to life in a way that will benefit our nation for many generations to come,” said Mike Kluse, a senior vice president at Battelle and director of Pacific Northwest National Laboratory, which Battelle operates for DOE.

The Northwest study will involve more than 60,000 metered customers in Idaho, Montana, Oregon, Washington and Wyoming. The study will test new combinations of devices, software and advanced analytical tools that enhance the power grid’s reliability and performance. At its peak, the project could create about 1,500 jobs in manufacturing, installation and operation of smart grid equipment, telecommunications networks, software and controls.

“The Northwest team will put new smart grid technology to work in a five-state region while also testing the value and benefits of these systems for the entire nation,” said Mike Davis, vice president at Battelle and associate laboratory director for Energy and Environment at PNNL.

“Regional demonstrations like ours will help spur a vibrant new smart grid industry and a more cost-effective, reliable and diverse electricity supply,” Davis said.

The smart grid is a system of intelligent, two-way communication technologies designed to improve power delivery and reliability and increase efficiency. A smart grid can enable the use of more renewable sources of power and help the U.S. electrify its transportation sector.

Battelle’s Ron Melton will serve as project director for the demonstration team, which includes a dozen utilities and the Bonneville Power Administration. The participating utilities range from investor-owned utilities to municipals, rural electric cooperatives and public utility districts. Each project team member will conduct different kinds of projects tailored to its customers so that the overall demonstration can meet a variety of needs in the five-state region. In addition to leading the project, Battelle will use the Electricity Infrastructure Operations Center at PNNL to analyze field data collected during the project.

DOE will provide half the funding through the American Recovery and Reinvestment Act. The project’s participants, primarily utilities and technology companies, will provide the remaining funds.

Several technology companies and vendors also will support the project including: 3TIER Inc., AREVA USA, IBM, Netezza Corp., and a team of QualityLogic, Inc. and the Drummond Group, Inc.

The project team will install equipment and technology in 2010 and 2011. Then, for the next two to three years, project

leaders will gather data on smart grid performance from 15 test sites that represent the region's diverse terrain, weather and demographics. The test sites range from Fox Island in Washington State's Puget Sound, to the Teton Mountains in western Wyoming, and include the campuses at the University of Washington and Washington State University.

The project will involve more than 112 megawatts of power, enough to serve 86,000 households.

In 2006, Washington and Oregon participated in the DOE-funded Pacific Northwest GridWise® Demonstration Project on the Olympic Peninsula. The project was designed to test and speed adoption of new smart grid technologies. The study showed that advanced technologies enabled customers to be active participants in improving power grid efficiency and reliability. The new project builds on that study, expanding the scale of the effort and introducing additional technologies.

Smart grid technology includes everything from interactive appliances in homes to substation automation and sensors on transmission lines. It is a system that uses various technologies to improve power delivery and use through intelligent, two-way communication. Generators of electricity, suppliers and users are all part of the equation. With increased communication and information, smart grid technology enables real-time monitoring of electric energy consumption, exchange of data about supply and demand, and adjustments of power consumption when the grid is under stress to ensure consistent delivery of electricity.

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### **Pacific Northwest Smart Grid Demonstration Project Test Site Locations and Corresponding Utilities**

#### **Idaho**

Idaho Falls (Idaho Falls Power)

#### **Montana**

Northwest Montana (Flathead Electric Cooperative, Inc.)  
Southwest Montana (NorthWestern Energy)

#### **Oregon**

Milton-Freewater (City of Milton-Freewater)  
Portland (Bonneville Power Administration)  
Salem (Portland General Electric)

#### **Washington**

Airway Heights (Inland Power & Light Co.)  
Ellensburg (City of Ellensburg)  
Fox Island (Peninsula Light Co.)  
Kennewick (Benton PUD)  
Pullman (Avista Utilities)  
University of Washington (Seattle City Light)

#### **Wyoming**

Western Wyoming (Lower Valley Energy)

### **Technology and Vendor Team Members**

3TIER, Inc.  
AREVA USA  
IBM  
Netezza Corp.  
QualityLogic, Inc. and Drummond Group, Inc.

Additionally, there are several companies that will be collaborating with one or more of the project's utilities.

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