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## **DOE Selects Projects for up to \$50 Million of Federal Funding to Modernize the Nation's Electricity Grid**

*Demonstration Projects Aim at 15 Percent Reduction of U.S. Peak Load Electricity Demand*

**Washington, DC**— U.S. Department of Energy (DOE) Assistant Secretary for Electricity Delivery and Energy Reliability Kevin Kolevar today announced the Department's plans to invest up to \$50 million over five years (Fiscal Years 2008 - 2012), subject to appropriations from Congress, in nine demonstration projects competitively selected to increase efficiency in the nation's electricity grid. The Renewable and Distributed Systems Integration (RDSI) technologies demonstrated in these projects aim to reduce peak load electricity demand by at least 15 percent at distribution feeders—the power lines delivering electricity to consumers—and are part of the Bush Administration's ongoing efforts to enhance the efficiency and reliability of our nation's energy infrastructure to ensure a reliable supply of energy to all Americans.

"Cutting-edge technologies that enhance the efficiency and dependability of the nation's electricity grid are critical to the Bush Administration's overarching goal of ensuring an affordable and reliable supply of electricity to the American people," Assistant Secretary Kolevar said. "These proposals will help to increase reliability in our electricity grid by defraying both the cost and effort associated with upgrading distribution lines or adding new generation capacity to meet peak electrical load, furthering our ongoing efforts to increase national economic and energy security."

The projects were selected in response to DOE's Office of Electricity Delivery and Energy Reliability (OE) April 2007 Funding Opportunity Announcement seeking applications for research and development activities to improve the security of controls systems for energy delivery and increase the use of distributed generation during peak load periods. Negotiations between selected applicants and OE will begin immediately to determine final project plans and funding levels. Selected projects include:

**Allegheny Power** will develop the "West Virginia Super Circuit" in conjunction with West Virginia University (WVU) Research Park, WVU Advanced Power and Electricity Research Center, North Carolina State University, Research and Development Solutions, Augusta Systems, Inc., and Tollgrade Communications. They will improve distribution system performance, reliability, and security of electric supply through the integration of distributed resources and advanced technologies. (Duration: 5 years; Cost: \$5.4 million federal/4 million non-federal)

**ATK Launch Systems**, along with partners Rocky Mountain Power and P&E AUTOMATION, will demonstrate load reduction through an integrated network of diverse renewable generation technologies and intelligent automation. The project will integrate renewable generation and energy storage resources, including a novel compressed-air generation technology, wind-turbines, heat recovery systems, solar trough booster technology, a steam turbine, and hydro-turbine resources. (Duration: 5 years; Cost: \$1.6 million federal/\$2 million non-federal)

**Chevron Energy Solutions** will collaborate with Alameda County, PG&E, VRB Power Systems, SatCon Technology Corporation, the University of Wisconsin, the National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory, and Energy and Environmental Economics to significantly reduce peak load and measurably improve power reliability at the Santa Rita Jail. The project will integrate solar energy, fuel cell, energy storage and control systems. (Duration: 3 years; Cost: \$7 million federal/\$7 million non-federal)

**The City of Fort Collins**, in cooperation with Larimer County, Colorado State University, InteGrid Lab, Community Foundation of Northern Colorado, the Governor's Energy Office, Advanced Energy, Woodward, Spirae, and Eaton, will research, develop, and demonstrate a 3.5 megawatt coordinated and integrated system of Mixed Distributed Resources in Fort Collins to Achieve a 20-30 percent peak load reduction on multiple distribution feeders. (Duration: 3 years; Cost: \$6.3 million federal/\$4.9 million non-federal)

**Consolidated Edison Co.** of New York, Inc., along with Verizon, Innovative Power, Infotility, and Enernex, will develop and demonstrate methodologies to achieve true interoperability between a delivery company and end-use retail electric customers, enhancing the reliability of the distribution grid and the efficiency of its operations. (Duration: 3 years; Cost: \$6.8 million federal/6.2 million non-federal)

**The Illinois Institute of Technology (IIT)** will collaborate with Exelon/ComEd, Galvin Electricity Initiative, S&C Electric, and others to develop and demonstrate a system that will achieve "perfect power" at the main campus of IIT through the implementation of distributed resources, advanced sensing, switching, feeder reconfiguration, and controls. This effort will be replicable at any municipality-sized system. (Duration: 5 years; Cost: \$7 million federal/\$5.2 million non-federal)

**San Diego Gas and Electric** will develop a dispatchable distribution feeder for peak load reduction and wind-farming in conjunction with: Horizon Energy Group, Advanced Control Systems, Pacific Northwest National Laboratory, the University of San Diego, Motorola, and Lockheed Martin. The project aims to prove the effectiveness of integrating multiple distributed energy resources with advanced controls and communication systems to improve stability and reduce peak loads on feeders/substations. (Duration: 3 years; Cost \$6.9 million federal/\$4 million non-federal)

**The University of Hawaii**, in cooperation with General Electric, Hawaiian Electric Company, Inc., Maui Electric Company, Columbus Electric Cooperative, New Mexico Institute of Mining and Technology, Sentech, and UPC Wind, will explore the management of distribution system resources for improved service quality and reliability, transmission congestion relief, and grid support functions. (Duration: 3 years; Cost: \$7 million federal/\$8 million non-federal)

**The University of Nevada** will collaborate with homebuilder Pulte Homes, Nevada Power Company, and GE Ecomagination to address the construction of energy efficient homes that overcome electricity grid integration, control, and communications issues by building integrated photovoltaic systems, battery energy storage, and consumer products linked to advanced meters that enable and facilitate an efficient response to consumer energy demands. (Duration: 5 years: Cost: \$6.9 million federal/\$13.9 million non-federal)

RDSI focuses on integrating renewable energy, distributed generation, energy storage, thermally activated technologies, and demand response into the electric distribution and transmission system. This integration is aimed toward managing peak loads, offering new value-added services such as differentiated power quality to meet individual user needs, and enhancing asset use.

For more information on the Bush Administration's ongoing efforts to modernize the electric grid; enhance security and reliability of the energy infrastructure; and facilitate recovery from disruptions to energy supply, visit: [www.oe.energy.gov](http://www.oe.energy.gov).

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