

Duke Energy, LG Chem, Greensmith to build fast-response energy storage system in Ohio



New Duke Energy logo

CHARLOTTE, N.C., May 26, 2015 /PRNewswire/ -- Duke Energy, LG Chem and Greensmith will team up to build a battery-based energy storage system in Ohio, designed to enhance reliability and increase stability on the electric power grid, the companies announced today. Duke Energy, the nation's largest electric utility, currently owns nearly 15 percent of the grid-connected, battery-based energy storage capacity in the U.S., according to independent research firm IHS Energy.

The new 2-megawatt (MW) storage project will assist in regulating electric grid frequency for PJM, the transmission organization that powers much of the eastern U.S.

The system will be built at Duke Energy's retired W.C. Beckjord coal-fired power plant in New Richmond, Ohio, and is expected to be operational by late 2015. It continues Duke Energy's exploration of energy storage solutions and their potential for broad adoption.

"Fast-responding energy storage is recognized for the tremendous benefits it provides to grid operations, because it can instantaneously absorb excess energy from the grid or release energy," said Phil Grigsby, Duke Energy's vice president of commercial transmission. "Delivering that power in seconds, as opposed to a power plant that could take 10 minutes or more to ramp up, is the unique value the battery system provides to grid operators.

"This accurate and rapid response will help improve the overall reliability and economic efficiency of the grid. It also demonstrates the capabilities of new technologies and the potential for future applications, such as large-scale integration of renewable energy onto the grid," Grigsby added.

The Ohio project adds to Duke Energy's installed base of commercially operating energy storage systems. With the addition of the new project, the company will operate a total of 4 MW of energy storage at Beckjord, where a separate 2-MW storage system already exists. Duke Energy also operates one of the nation's largest battery-based energy storage and power management systems – [a 36-MW unit](#) completed in 2012 in partnership with the U.S. Department of Energy – at the utility's Notrees Windpower Project in Texas.

LG Chem will deliver the Ohio project's integrated operating system, comprised of advanced lithium-ion batteries.

Greensmith will provide intelligent energy storage control and analytics software, and system integration services.

Parker Hannifin will provide a 2-MW power conversion inverter.

"We're delighted to have been selected by Duke Energy for the Beckjord project," said Sunghoon Jang, senior vice president of LG Chem's Energy Storage Solutions business unit. "This will be our second project with Greensmith in PJM for fast-responding frequency regulation services."

"The combination of Greensmith's software with LG Chem's battery technology will provide Duke Energy with a system that exemplifies how utilities can leverage grid-scale energy storage to improve operations and increase profitability," said John Jung, Greensmith CEO.

About Duke Energy

Duke Energy is the largest electric power holding company in the United States with approximately \$121 billion in total assets. Its regulated utility operations serve approximately 7.3 million electric customers located in six states in the Southeast and Midwest. Its commercial power and international energy business segments own and operate diverse power generation assets in North America and Latin America, including a growing portfolio of renewable energy assets in the United States.

Headquartered in Charlotte, N.C., Duke Energy is a Fortune 250 company traded on the New York Stock Exchange under the symbol DUK. More information about the company is available at duke-energy.com.

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About LG Chem

LG Chem Ltd. is one of the world's largest lithium-ion battery manufacturers with significant market share in consumer, automotive and stationary applications. LG Chem, Ltd. is a globally diversified chemical company which operates three main business units: Petrochemicals, IT & Electronic Materials, and Energy Solution. The company manufactures a wide range of products, from petrochemical goods to high-value added plastics, and extends its chemical expertise into high-tech areas such as electronic materials and rechargeable batteries.

About Greensmith Energy Management Systems

Greensmith's mission is to make energy storage a fundamental component of a cleaner, more advanced energy infrastructure. Its intelligent and flexible GEMS software platform optimizes the performance of a grid-scale energy storage system's batteries, inverters and other hardware, lowering costs and improving the system's return on investment.

Greensmith delivered one-third of the energy storage capacity installed in the United States in 2014. Its GEMS energy storage software platform is currently used by 19 customers for multiple applications at over 40 different sites, including the single largest battery-based power system deployed globally in 2014, which provides 24x7 frequency regulation services. Learn more at www.greensmith.com.

About Parker Hannifin

With annual sales exceeding \$13 billion in fiscal year 2014, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of mobile, industrial and aerospace markets. The company employs approximately 57,500 people in 50 countries around the world. Parker has increased its annual dividends paid to shareholders for 58 consecutive fiscal years, among the top five longest-running dividend-increase records in the S&P 500 index. For more information, visit the company's website at www.parker.com or its investor information website at www.phstock.com.

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