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Lubbock utility adds 1-MW battery for peak load-shifting, research

By [Eric Wolff](#)

A Lubbock, Texas, utility has added a 1-MW, 60-minute battery for load-shifting and research, thanks to funding from the stimulus act and the Center for the Commercialization of Energy Technologies

While pumped hydro has been serving storage needs for some utilities for decades, many utilities remain leery of battery technology, and they are looking for more data on how storage will integrate with their systems. The Lubbock battery system — built by a partnership between [Xtreme Power](#) and Samsung SDI Co. Ltd. — is part of a \$27 million smart grid project overseen by the CCET, with half the money coming from the American Recovery and Reinvestment Act and half from CCET's partners. Xtreme Power [announced](#) the commissioning of the project on Oct. 21. The project will be owned and operated by [South Plains Electric Coop Inc.](#) and will provide load-shifting and voltage support while giving researchers a chance to analyze how batteries interact with wind turbines, according to Milton Holloway, president and COO of the CCET.

"The battery project will be operated to demonstrate the value of the battery for shaving the peak load during the day and using the power output during other hours," Holloway said. "You get a more stable output from wind machines and batteries."

The battery will be located near a series of heavily instrumented wind turbines set up to let scientists from Texas Tech University and other research centers track wind production in conjunction with battery performance. The battery will also be tasked with frequency regulation in response to signals from ERCOT, Holloway said.

South Plains Electric will use the battery to buy power at night, when it is cheap, and then drain the battery when power is expensive during peaks.

"Clip the peak and belly the valley," said Zachary Taylor, manager of engineering for South Plains Electric. He later added, "Supplementally, one of the things we will use it for is to do some voltage support or some power factor correction back to our substation."

The system is the first roll-out of a collaboration between Samsung SDI and Xtreme Power on storage technology, according to a [February press release](#). Samsung SDI, an affiliate of Samsung Group, provided a lithium manganese oxide battery that will be controlled by Xtreme Power's technology.

Formed in 2005, the CCET aims to facilitate electric industry, technology company and university collaboration. Its governing participants are AEP Texas, [Austin Energy](#), IBM, [CenterPoint Energy Inc.](#), [Oncor Electric Delivery Co. LLC](#) and [TXU Energy](#). Xtreme Power and Samsung SDI are both listed as affiliated participants.