

Demonstration of "CrystEna" energy storage system

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Hitachi America, Ltd., a wholly owned subsidiary of Hitachi, Ltd. and Demansys Energy, Inc. ("Demansys"), a smart grid technology company with offices in Connecticut and Troy, New York, announced today that they have completed construction and commissioning of a 1 MW Lithium Ion energy storage facility utilizing Hitachi's "CrystEna" compact container-type energy storage system and have started a demonstration project in Somerdale, New Jersey.

Energy storage is an emerging disruptive technology in the power grid management space because it enables integration of larger quantities of intermittent renewable generation sources like wind and solar, real time stabilization of the grid at a lower cost than using traditional generators, and it can shift loads to avoid peak demand on strained transmission and distribution facilities deferring costly utility investment.

Demansys and Hitachi had an agreement to perform a demonstration project utilizing Hitachi's CrystEna in the market for frequency regulation and capacity services last year. Demansys managed this demonstration project which involves the installation of a Hitachi CrystEna system in New Jersey, not far from Philadelphia. To verify the system's effectiveness for grid stabilization, the demonstration will collect data over a two year period, including a capacity pilot project with PJM Interconnection and frequency regulation operation in PJM, the USA's largest independent grid operator. The demonstration has started to further evaluate [energy storage](#) systems and to verify system reliability and effectiveness with the aim to engage in a large deployment in the US ancillary services market.

Hitachi supplied the energy storage system, which is the first North American deployment of its CrystEna compact container-type energy storage system and includes the lithium ion batteries, power conditioning system, battery management system, and cooling and fire suppression systems all in one 45 foot shipping container. Hitachi is using this installation to prove its product in the PJM market in the US and to collect data which will be used to further improve the offering.

"CrystEna has been formed from collaboration throughout the whole Hitachi Group, which can help to maintain the grid balance and is essential for stable use of renewable energy." says Mr. Atsushi Honzawa, Project Manager of Hitachi. "Through the expansion of projects relating to grid stabilization such as CrystEna business, we hope to contribute to the adoption of clean energy."

Demansys developed the facility including managing the interconnection process with the Regional Transmission Operator, PJM Interconnection, engineering the facility, procuring the balance of plant equipment, and supplying all of the SCADA and control systems necessary to remotely operate the system. Demansys also represents the system in the PJM energy market, bidding the facility on an hourly basis and connecting the PJM grid control system to the battery enabling it to respond to real time control signals from the grid. "The Hitachi team was a pleasure to work with" says Adam Todorski, CTO and co-founder of Demansys. "This facility was an exciting project to engineer and build, and further expands Demansys' portfolio of cutting edge power control offerings." Demansys announced last year that it is managing 75MW of variable loads in New York, at the time the largest such deployment in the state.

Provided by Hitachi

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