

## Beacon Power Installs First Flywheels at Pennsylvania Energy Storage Plant

# Officials cite benefits for improved grid stability and renewable energy expansion at commencement ceremony

Tyngsboro, MA and Hazle Township, PA – June 21, 2013 – Beacon Power, LLC, the world's leading manufacturer of grid-scale <u>flywheel energy storage systems</u>, was joined today by federal, state and local officials at a ceremony in Hazle Township, PA, signaling the start of flywheel installations and full-scale construction for the company's 20-megawatt (MW) flywheel energy storage plant at the site.

Attendees and speakers at the event included U.S. Congressman Lou Barletta – Pennsylvania 11<sup>th</sup> District; Dr. Imre Gyuk – Program Manager for Energy Storage at the U.S. Department of Energy; William Goldsworthy – Deputy Director, Pennsylvania Governor Thomas Corbett's Northeast Regional Office; State Senator John Yudichak; State Representatives Tarah Toohil and Mike Carroll, and Commissioner Wayne Gardner – Pennsylvania Public Utilities Commission.

"Flywheel systems promise to be an efficient and cost-effective way to provide frequency regulation," said Imre Gyuk, head of energy storage for the U.S. Department of Energy. "DOE is proud to have taken part in the development of this technology from the very beginning. Flywheels will become an important tool in assuring the resiliency and stability of the grid."

"Pennsylvania has an impressive array of abundant energy resources, matched by our commitment to use these resources both smartly and efficiently," said Governor Tom Corbett. "Today's event is an exciting and important step, helping to enhance our electric grid's security and reliability in a manner that helps lower costs to consumers."

Attendees at the commencement ceremony witnessed installation of the first of the plant's 200 flywheel modules. The first 4 megawatts (MW) of energy storage are scheduled to enter commercial operation in the PJM Interconnection grid system in September, with the full 20 MW plant operational during the 2<sup>nd</sup> quarter of 2014.

"PJM continues to welcome new technologies that provide diversity to the asset mix in PJM, as well as an opportunity to provide frequency regulation service," said Terry Boston, CEO and president of PJM Interconnection. "This will be the first flywheel technology placed into our regulation market."

## Flywheel Energy Storage and Frequency Regulation

<u>Frequency regulation</u> is an essential grid reliability service that is performed to correct short-term unpredictable imbalances in electricity supply and demand. On the power grid, supply of electricity must match demand to maintain frequency at 60Hz. Beacon's 20 MW flywheel plant provides frequency regulation services by absorbing electricity from the grid when there is too much, and storing it as kinetic energy. When there is not enough power to meet demand, the flywheels inject energy back into the grid. These cycles can occur multiple times in time periods as short as one minute.

The Beacon flywheel facility provides a fast, accurate and reliable response to grid changes that system operators need to increase system efficiency and power quality. Furthermore, flywheels offer a long asset life with no degradation of performance, as well as the ability to move energy in and out of the grid many more times than other technologies, which contributes to low life-cycle cost and high-quality service. To date, Beacon's flywheels have accumulated more than 3.5 million operating hours.

Barry Brits, Beacon president and CEO, said, "We are excited to be moving forward with another commercial installation that showcases the performance and durability of our flywheel energy storage systems in providing frequency regulation service. Customers in Pennsylvania and other electricity users in the PJM Interconnection will benefit from greater overall system efficiency and lower costs. In addition, since flywheels recycle surplus electricity to maintain power quality and stability on the grid without burning fuel or producing greenhouse gases, the Hazle facility also contributes to a cleaner environment."

## **About Beacon Power, LLC**

Beacon Power provides flywheel-based energy storage solutions for large-scale grid-connected facilities and smaller micro-grid and distributed off-grid applications. Services include frequency regulation, voltage support and integrating renewable energy resources. The company has the largest composite flywheel in commercial operation at 25 kWh, and the largest operational grid-tied flywheel energy storage facility at 20 MW (located in Stephentown, NY). Beacon's headquarters and manufacturing facility are in Tyngsboro, Massachusetts. For more information visit <a href="https://www.beaconpower.com">www.beaconpower.com</a>.

## **About Rockland Capital**

Rockland Capital, a private equity firm founded in 2003, is focused on the acquisition, optimization and development of companies and projects in the North American power sector. The firm manages Rockland Power Partners and Rockland Capital Energy Investments and has offices in Houston and New York. For further information visit <a href="https://www.rocklandcapital.com">www.rocklandcapital.com</a>.

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Note: Photos and illustrations available upon request.