



FOR IMMEDIATE RELEASE

Beacon Power and Chugach Electric Association to Deploy Hybrid Flywheel and Battery Energy Storage Project in Alaska

Tyngsboro, Mass. and Anchorage, Alaska – May 26, 2015 – Beacon Power, the world's leading manufacturer of grid-scale flywheel energy storage systems, announced that it has entered into an agreement with Chugach Electric Association to supply flywheels for an innovative hybrid energy storage project in Anchorage, Alaska.

The project will combine proven and durable high-power flywheel energy storage technology from Beacon Power, with an existing lower duty-cycle conventional electrochemical battery for use during periods when additional energy is needed. This advanced hybrid energy storage resource combines the benefits of fast-responding flywheels with longer-duration batteries to help manage and stabilize variable output from renewable energy sources. The systems will be installed at a substation next to Chugach headquarters and are expected to go into operation later in 2015.

Beacon and Chugach will test the 320 kW system to determine if the new storage solution can be scaled up in the future to enable increasing amounts of renewables to interconnect with remote system utilities along the Alaska Railbelt. Alaska's Railbelt region, named for areas reached by rail, stretches north from the Kenai Peninsula more than 500 miles to Fairbanks and is home to 70 percent of Alaska's population.

Chugach looking to strengthen and stabilize Alaska's power system infrastructure

Paul Risse, Chugach's Senior VP for Power Supply, said, "We're very pleased to be moving forward with Beacon on this important project to help improve Alaska's grid and enable more efficient utilization of renewables. Beacon's flywheel systems have a solid reputation in terms of operating performance, cyclic durability and demanding environments. This hybrid flywheel/battery project is an opportunity to bring proven next-generation technologies that have strong track records elsewhere to our state – and combine them in an innovative way."

"The project will also demonstrate a hybrid control system that will allow Chugach to maximize future multi-stage energy storage system performance and minimize life cycle costs," explains Dustin Highers, Director of Power Supply Technical Services at Chugach and the system's project manager.

Chugach has received funding support for this new project from the Alaska Energy Authority's Emerging Energy Technology Fund.

Beacon Power's modular 160 kW flywheel system

This will be the third utility installation of Beacon's modular 160 kW flywheel energy storage system, which is the next generation of the 100 kW flywheels in commercial operation at 20 MW plants in New York (NYISO market) and Pennsylvania (PJM market). The new system is a stand-alone configuration of a flywheel with the integrated power electronics and flywheel controls in a single, separate enclosure and is fully scalable from one flywheel to hundreds.

"Our new modular system is ideal for hybrid energy storage opportunities, enabling our flywheels to work together with different storage technologies to realize the widest range of power system benefits," said Barry Brits, Beacon Power President and CEO. "Feedback from our plant operations and customers has informed our product development efforts, resulting in a flexible power control module for ease of system integration and reduction of capital and operating costs."

Beacon's flywheel energy storage system provides very rapid first-stage response to any grid instabilities, e.g., frequency and ramp rate control. The battery system delivers a second-stage response if more energy is needed over a longer duration, which helps reduce resource curtailment and improve predictability of output. Combining the two technologies has the added benefit of significantly increasing battery life by reducing their charge-discharge duty, while high-cycle flywheels handle the majority of the workload and manage rapid-response cycling.

Beacon is also collaborating on this project with Spira LLC of Fort Collins, Colorado, which is providing the overall control system to manage output of both flywheels and batteries, as well as manage each system's state-of-charge. Spira will utilize their proven Wave™ control architecture and hardware developed for demanding microgrid applications.

About Chugach Electric Association, Inc.

Chugach is the largest electric utility in Alaska and is engaged in the generation, transmission and distribution of electricity to directly serve retail customers in the Anchorage and upper Kenai Peninsula. Through an interconnected regional electric system, Chugach's power flows throughout Alaska's Railbelt, a 400-mile-long area stretching from the coastline of the southern Kenai Peninsula areas to the interior of the state including Alaska's largest cities, Anchorage and Fairbanks. With headquarters in Anchorage, Chugach was organized as an Alaska electric cooperative in 1948 and is regulated by the Regulatory Commission of Alaska (RCA). For more information, visit: www.chugachelectric.com.

About Beacon Power, LLC

Beacon Power is a pioneer and global leader in the design, development and commercial deployment of flywheel-based energy storage systems. Beacon offers proven solutions at the utility-scale for power grid efficiency, frequency regulation, grid security, renewable power integration and other ancillary services. Beacon Power has been providing electric power grid stability services in the US since 2008 and the cumulative fleet experience of over 40 installed MW now totals over 9 million flywheel operating hours and more than 330 GWh of grid energy injected and absorbed. Our goal is to improve the efficiency of the world's electricity infrastructure. Beacon's headquarters and manufacturing facility are

based in Tyngsboro, Massachusetts, north of Boston. For more information, visit www.beaconpower.com.

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