Amber Kinetics and Hawaiian Electric begin installation and testing of innovative flywheel energy-storage system

(Union City, CA & Honolulu, HI), Nov. 30, 2017 – Amber Kinetics, Inc. and Hawaiian Electric Company today began installation of the world’s first commercially available, four-hour flywheel energy storage system at the utility’s Campbell Industrial Park generating station on O’ahu. The pilot project is jointly funded by Hawaiian Electric and Elemental Excelerator.

The Amber Kinetics flywheel system is expected to be in operation beginning in January 2018. A flywheel is a rotating mechanical device able to store and release electrical energy. Amber’s innovative 8-kilowatt, 32-kilowatt hour system is capable of charging and discharging electricity for multiple duty cycles per day with no loss of capacity over a 20-year-plus service life.

As of January 2017, Hawaii was getting more than 26 percent of its electricity from renewable energy, the majority of which is distributed solar and wind. “Energy storage is essential to reach our 100-percent renewable energy goals by taking advantage of Hawaii’s abundant but variable solar and wind energy,” said Colton Ching, Hawaiian Electric senior vice president for planning and technology. “We are very enthusiastic to work with Amber Kinetics to evaluate this very promising flywheel energy storage system.”

Amber Kinetics’ flywheel energy storage systems offer substantial benefits for a wide range of utility and commercial applications. The firm’s breakthrough technology extends the duration and efficiency of flywheels from minutes to hours, resulting in safe, economical and reliable energy storage for a variety of utility-scale applications, including load shifting, peak shaving, frequency regulation, renewable firming and spinning reserve. The system is scalable and designed to allow for increased size through the addition of multiple flywheels.

Amber Kinetics’ flywheels are designed to perform with no performance degradation and minimal operations and maintenance. The flywheels are 98 percent steel by weight, which is recyclable at project end. The flywheels and related equipment have no emissions and require no storage or disposal of hazardous chemicals.

Seeing the growth of intermittent renewable energy and the need for energy storage, Elemental Excelerator selected Amber Kinetics to its portfolio in fall 2013. Elemental Excelerator looks for

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companies with innovative technologies that can solve challenges in Hawaii and the Asia Pacific and are ready to scale commercially. The organization funds each company up to $1 million for a demonstration project and provides additional resources to help them grow.

“Hawaii is an ideal market for Amber Kinetics. The state has high levels of grid-integrated renewable energy and policy incentives to adopt clean energy solutions,” says Ed Chiao, CEO of Amber Kinetics. “We are thrilled to be working with Hawaiian Electric and Elemental Excelerator to deploy a cost-effective, sustainable energy storage solution for Hawaii’s electrical grid.”

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About Hawaiian Electric
For 125 years, Hawaiian Electric Company has provided the energy that has fueled the islands’ development from a Hawaiian kingdom to a modern American state. Hawaiian Electric Company and its subsidiaries Maui Electric Company and Hawaiʻi Electric Light Company serve 95 percent of the state’s 1.4 million residents on the islands of O’ahu, Maui, Hawaiʻi Island, Lānaʻi and Molokaʻi. For more information, visit hawaiianelectric.com.

About Amber Kinetics
Winner of pv magazine’s Array Changing Technology Award 2017, Amber Kinetics began shipping pre-commercial flywheels in September 2016 and commercial units in 2017. To date, the company’s fleet of demonstration units has accumulated 27,000 hours of run time domestically and abroad. The firm is headquartered in Union City, Calif. For information, visit amberkinetics.com.

About Elemental Excelerator
Elemental Excelerator helps startups change the world, one community at a time. Each year, the organization selects a cohort of 12-15 companies that best fit its mission and funds each company up to $1 million to improve systems that impact people’s lives: energy, transportation, water, agriculture, and beyond. To date, Elemental Excelerator has awarded over $22 million to 63 companies. For more information, visit elementalexcelerator.com.

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