

WEST COAST SOLUTIONS ANNOUNCES AVAILABILITY OF NEW BATTERY TECHNOLOGY

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/EINPresswire.com/ -- West Coast Solutions (WCS) has successfully completed the design and qualification testing of their Hybrid Battery Supercapacitor ([HBS](#)) product. This new energy storage technology will provide advanced capabilities for high-power applications that require a size, weight, and power (SWAP) optimized solution.

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*Dr. Carl Kirkconnell, WCS
President*

The HBS technology enables a new generation of high-power applications by providing over 700 W of sustained power from a single 1U (1000 cc) hybrid battery module while maintaining high energy density. The modules are combinable to support even higher power applications. Targeted markets include satellite applications such as advanced propulsion technologies, lasercom, high data rate downlink transmitters, large array infrared sensors, and directed energy. The technology is also applicable to underwater applications such as Unmanned Underwater Vehicles (UUVs) and submersibles, as well as airborne

applications such as Unmanned Aerial Vehicles (UAVs), airplanes, and high-altitude balloons. In particular, HBS is an attractive option for systems that currently employ supercapacitors to achieve high-power operation because HBS also provides superior energy density. Similarly, HBS technology is an excellent solution for expeditionary power systems that require high-power levels for sustained durations.

Recent testing has elevated the HBS technical maturity to Technology Readiness Level (TRL) 6. The testing included random vibration per the NASA General Environmental Verification Standard (GEVS) spectrum in all three axes to an amplitude of 14.1 Grms. The unit also successfully passed thermal vacuum cycle testing over a wide range of temperatures, from -20 degC to +45 degC, with the HBS unit fully operational. Cold temperatures tend to significantly reduce battery power output capability; however, the HBS unit survived low temperature/high-power operation with no detectable performance degradation. This includes operating at ~420 W of output power continuously with an interface temperature of -20 degC, while HBS was also shown to be capable of delivering 700 W of continuous output power as cold as 0 degC. In addition, the HBS unit passed CE101/102 and CS116 EMI testing, indicating that it will not

interfere with other electronics and is robust against injected noise from other systems. The unit was exposed in all three axes to the ALTAIR shock qualification level and showed no signs of performance loss or structural damage after testing.

WCS is seeking application partners for the commercialization of this technology. "We are extremely proud of the HBS, and with these qualification tests now behind us, we are ready to bring this technology to market. We are actively looking for payload collaborators, and excited to see what new technologies and conops are enabled by the HBS," says Dr. Carl Kirkconnell, WCS President. "With the implementation of the Space Hardware Manufacturing Laboratory on our Huntington Beach campus, we are ready to commence manufacture of the HBS now."



HBS Module

WCS is a multidisciplinary team of experienced aerospace and defense professionals committed to solving technical problems concerning cryogenics, space electronics, and space and tactical power. Their extensive body of work includes many successful Department of Defense, space, civil research, and commercial programs. The company is 9 years old and serves its customers from its recently expanded facility in Huntington Beach, CA.

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