Corvus Energy Introduces World's Most Powerful Industrial Lithium Ion Battery for Marine, Transportation and Energy Storage Applications

Lithium-Ion battery technology, scalable to megawatt sizes, provides elusive energy-storage solution for renewable energy sources and grids, and enables hybrid alternatives for reducing CO2 emissions and fuel consumption

Port Orchard, WA (PRWEB) September 15, 2010

Corvus Energy is transforming the marine, transportation and energy industries with its release of an advanced lithium-ion battery technology that is able to store and distribute energy in megawatt sizes, and has the capacity to output sustained power comparable to diesel engines in hybrid and full-electric vessels and vehicles.

Current hybrid designs, being installed with Corvus batteries in the marine industry, will cut CO2 emissions and fuel consumption in heavy-polluting workboats by 75 percent.

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Corvus' proprietary lithium-ion battery packs have four times the power and energy storage of lead-acid batteries in half the volume and a quarter of the weight. Each battery pack delivers at least 22 percent more power and energy density than the most powerful Lithium-ion phosphate batteries used in electric vehicles and consumer products.

The battery design is built around a new NMC-based Dow Kokam cell and patent-pending Corvus battery management system that exponentially enhances battery efficiency and performance with energy storage capacity from 6.2kWh to unlimited sizes.

"We've made the theoretical possible," said Brent Perry, Corvus' chief executive officer. "This is the first time that truly effective portable and remote energy storage has been created for the marine, transportation and heavy-power industries. Our battery's cells are 99 percent efficient, a full 10 to 30 percent better than any other brand. It's available today and it's revolutionizing the energy sector."

Company founders George Roddan, a ground-breaking naval architect, and Neil Simmonds, who holds more than 70 patents in battery management systems, joined forces with Perry in 2009 to create a battery pack that could provide diesel-engine-scale power and solve the marine and transportation industries' energy problems.

Corvus invested more than $5 million to create a safe, modular battery pack tough enough to withstand the world's harshest ocean and port environments, as well as fully function between -4 degrees and 140 degrees Fahrenheit. In addition, each pack enjoys an average life of twenty years. Lead-acid batteries last just seven years.

"Corvus is enabling engineers, who design wind farms and grid systems to cruise ships and tug boats, to rethink how they can store energy and use power," said Perry. "It changes the entire landscape. Energy can be stored in regions that previously didn't have consistent power and ports can clean up their act with workboats and equipment that no longer require diesel engines."

Marine Applications:
Tugboats idle up to 90 percent of the time and operate at full power the remaining 10 percent. With Corvus, a 3,000-horsepower harbor tug in hybrid form will save 122,000 gallons of fuel and will reduce its emissions by 900 tons of carbon, 21 tons of nitrogen oxide and 8.62 tons of particulate matter each year. Tugboats can draw extra energy from the battery packs during full-power surges, fully rely on the pack during idle periods and power critical navigational instruments for hours. The packs are the most efficient in the industry and recharge in 30 minutes. It's a maintenance-free technology that comes with a lifetime warranty.

Transportation Applications:
Corvus' affect on the trucking industry is just as far reaching. Long-haul trucks idle an average of 2,000 hours per year, consuming one gallon of fuel per hour. Auxiliary power units with Corvus batteries allow trucks to reduce fuel consumption by 2,000 gallons annually and eliminates on a per vehicle basis: 19 metric tons of carbon dioxide, 705 pounds of nitrogen oxide, 143 pounds of reactive organic gas and 9.5 pounds of particulate matter.

About Corvus Energy:
Richmond, B.C.-based Corvus Energy is a 100-percent carbon neutral company that provides industrial-sized power in a compact, modular lithium-ion battery system to the commercial marine industry, ports machinery, remote community, off grid and grid energy markets. Its revolutionary battery packs have the capacity to output sustained power comparable to diesel engines in hybrid and full-electric vessels and vehicles. For more information on Corvus Energy, please visit www.corvus-energy.com or call (604) 227-2080.

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Attachments

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