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MCLB Barstow wind turbine a Marine Corps first

3/27/2009 By Keith Hayes, Marine Corps Logistics Base Barstow

MARINE CORPS LOGISTICS BASE BARSTOW, Calif. — A new wind turbine was officially commissioned here March 27, making it the first turbine aboard any Marine Corps installation in the world.

More than 60 local, state and federal dignitaries attended the function, including Col. Kenneth D. Enzor, commanding officer, MCLB Barstow, Maj.Gen. Michael R. Lehnert, commanding general, Marine Corps Installations West, and Navy Capt. Joseph Campbell, commanding officer, Officer In Charge of Construction, Marine Corps Installations West.

Each of the three commanders spoke at the commissioning, praising the benefits of equipment that will reduce the annual electricity costs to the base by approximately \$493,000 each year and provide 30 percent of the power needs of the Nebo side of MCLB Barstow.

During his remarks, Enzor noted that the Mojave Desert climate is ideal for the storing and pre-positioning of supplies and equipment, which is the base's role. "The same high desert climate also provides another opportunity," he said. "The Mojave high desert has immense potential for one of the best renewable energy areas in the world; combining wind, solar and geothermal sources."

Lehnert, who has regional authority of all the Marine bases in the western half of the U.S., said, "The Marines get how terribly reliant this nation is on energy. Many of our decisions have been driven by reliance on fossil fuels over the past century. The Marine Corps gets it. They get it in building and investing time and money in things like this renewable energy facility, because what we stand for is leadership in renewable energy and environmental design," he added.

At the conclusion of the remarks, Lehnert and Enzor symbolically cut the ribbon on the project. Lehnert then called up Rebecca Enzor, the Barstow commander's wife, to walk into the central shaft of the pylon and press the button to start the blades spinning, as the audience applauded.

David Gagnon, president of AAER Wind Energy Inc., based in Bromont, Quebec, Canada, said the company built the nacelle the blades are attached to, which actually generates the energy. The three blades are each 100 feet long and span more than 200 feet from tip-to-tip. The central pylon itself is more than 230 feet tall. The entire structure stands more than 300 feet tall. The blade and hub assembly automatically rotates atop the central shaft to face the wind and the blades themselves can be "feathered" individually to slow down or speed up the turbine when needed.

The wind turbine was constructed by Brownco Construction of Orange County, Calif., and AACO Engineered Systems of Glendale, Calif. Construction began July 10, 2008, when General James T. Conway, Commandant of the Marine Corps, joined Lehnert and Enzor in a groundbreaking ceremony. The project was completed during March 2009.

At peak capacity, the turbine generates 1.5 megawatts of energy, enough to power 500 homes. It cost \$6.1 million, but the price was reduced to \$4.6 million when a \$1.5 million alternative energy rebate was applied from the California Public Utilities Commission.

Working in partnership with Southern California Edison, the electricity generated by the turbine is added directly to the power grid from its site atop Radio Hill, overlooking the Nebo portion of the base.

Campbell, who has overall construction authority for the Navy in the region, applauded the effort of the Marine Corps to improve the environment through projects, such as the wind turbine. "We're going to pass on a planet that is better than when we got it," he said, "because we build things like this renewable energy project and energy efficient buildings."