

P R E S S R E L E A S E

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W H I S U B M I T S G R A N T P R O P O S A L T O C E C ' S E P I C P R O G R A M

Wind Harvest International (WHI) submitted a \$1.25 million proposal to the California Energy Commission's EPIC Program to study how its G168 and similar straight-bladed, vertical axis wind turbines (VAWTs) create synergistic benefits when installed among horizontal axis wind turbines (HAWTs), and how they can be safely placed in areas with endangered species.

Entitled "Researching and developing VAWTs potential to double the capacities of California's wind farms while preventing harm to birds," the grant, if awarded, would research how integrating shorter VAWTs with taller traditional wind turbines could lead to increasing the energy capacity of existing wind farms without requiring costly new infrastructure.

WHI's proposed R&D project would take place adjacent to the Solano Wind Resource Area, where only turbines less than 100 feet in height are allowed, owing to aviation concerns of nearby Travis Air Force Base. At 66 feet tall, WHI's G168 VAWTs could open up more than 100 square miles to wind projects in one of the windiest resource areas in the country.

WHI's proposal documents how VAWTs can provide solutions to key challenges to increasing wind energy's share in the electricity mix – limited windy land, expensive infrastructure, and concerns about perceived threats to birds, aviation navigation, and neighborhood views. The proposal also references why existing wind farms can't add more HAWTs without causing damage to the ones that are already there.

"More than for opening great wind resources around airports, VAWTs like ours can be placed in existing wind farms in ways that cause stronger wind speeds to blow through the rotors of the tall turbines," stated WHI's Chief Operating Officer, Kevin Wolf. "Our CEC-funded research would provide the data and modeling needed to prove this, along with supplying evidence on how birds react to VAWTs that are closely placed together in arrays."

Before wind farm owners will allow the large-scale deployment of VAWTs near HAWTs, field research must demonstrate that wakes produced by VAWTs have neutral or positive effects on the energy production and maintenance of nearby HAWTs. Before permits can be obtained, research must document that these new types of turbines do not negatively impact bird populations.

WHI recruited a team of California-based scientists to collaborate on this proposal. They include: Dr. Sanjiva Lele, Stanford University, CFD Large Eddy Simulation Modeling; Drs. Craig Clements and Neil Lareau, San Jose State University, LiDAR; Joe Drennan and Eric Jepsen, Garcia and Associates, bird research; and Kevin Wolf, WHI's Chief Operating Officer and project manager.

For more information on the proposed research and to read the grant application, see the Technology – Research section at www.windharvest.com.