

**DOCKETED**

<b>Docket Number:</b>	19-ERDD-01
<b>Project Title:</b>	Research Idea Exchange
<b>TN #:</b>	235905
<b>Document Title:</b>	Kevin Wolf Comments - Report Identifies a New Wind Energy Resource for One Million Northern Californians
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Kevin Wolf
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	12/10/2020 8:47:56 AM
<b>Docketed Date:</b>	12/10/2020

*Comment Received From: Kevin Wolf*  
*Submitted On: 12/10/2020*  
*Docket Number: 19-ERDD-01*

## **Report Identifies a New Wind Energy Resource for One Million Northern Californians**

Using data from Underwriters Laboratories'™ Windnavigator, Wind Harvest produced the first report (see <https://windharvest.com/solano>) on the Solano Wind Resource Area's™ near-ground wind resources. Here, compact Wind Harvester-type turbines could profitably generate over 4,000 megawatts of renewable electricity. This previously unavailable resource could produce enough energy for the annual power consumption of close to one million homes in the region.

Until this report, publicly available information on the near-ground resource in the region has not been reliable or available. Previous studies of near-ground wind in the region have been limited to the 1985 Wind Atlas produced by the California Energy Commission and a 2005 report by SMUD. The 1985 Wind Atlas gave evidence that the near-ground wind resource was good in the Montezuma Hills of southern Solano County. The 2005 SMUD report showed that near-ground wind shear was very low in the area, translating into better than expected near-ground wind speeds. The hundreds of UL data points included in the report provide a reasonably reliable evaluation of the resource.

This new source of near-ground wind energy presently cannot be used by large propeller-type turbines. Currently, the 1000 MW's of taller turbines installed in the zone seems to have reached its maximum capacity. The only option for additional energy from propeller-type turbines is to replace older turbines with newer, taller turbines. In addition, there is a windy area outside of the zone not currently being used, but flight concerns from nearby Travis Air Force Base and conservation easements prevent more turbines taller than 100 feet from being installed on properties north of Hwy 12.

“The state's wind resource areas are rare and small but very near millions of people,” says Kevin Wolf, President and co-founder of Wind Harvest. “These wind-rich zones, like the one in Solano County, need near-ground wind turbines like ours so that they can be massively and rapidly built out over the next decade and help California reverse global warming.”

Mapping the UL data indicates that 27% of the land is exceptionally windy and would produce between 2750 and 3000 MWh of energy annually for each 1 MW of near-ground wind turbines installed. The remaining 73% of the land would produce between 2500 and 2750 MWh per installed MW. In comparison, the best tracking solar in the region can produce around 2100 MWh per MW, with all of that produced during daytime hours.

The wind in the Solano Wind Resource Area continues to blow well into the night, especially during the summer, making the energy from wind especially valuable for meeting California's goal of 100% renewable energy.

Additional benefits of using near-ground wind resources in Solano County include:

- Unlike with solar projects, cattle grazing can continue under and around the short turbines.

- Once proven that near-ground wind turbines won't harm birds, permits for these short turbines should be easier and faster to secure.

- 4000 MWs of near-ground wind turbines could result in \$8-10 billion new projects and \$80-100 million in new county property taxes.

- The tens of thousands of near-ground wind turbines needed for a full build out could be manufactured locally.