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37 GWs of CA Wind Farms are Ideal for short Vertical Axis Wind Turbines

Wind Harvest International has identified more than 3700 MWs of California's wind farms that have wind speeds over 6.5m/s (14.5 mph) at 15 meters above the ground, making them ideal as locations for shorter vertical axis wind turbines (VAWTs). One MW of WHI's VAWTs can produce from 3000 to more than 4000 gigawatt hours (GWhs) of energy per year in all of these wind farms. By comparison, a solar farm in the Mojave Desert, one of the world's sunniest locations, produces a little less than 2000 GWhs per MW annually.

For a spreadsheet of the wind farms, visit <https://windharvest.com/library/general-calif-wind-resources/>

Additional submitted attachment is included below.

3.7 GWs of CA Wind Farms are Ideal for short Vertical Axis Wind Turbines

Wind Harvest International Inc., 19 September 2019

Company Announcement No. 6/2019

California's wind farms are an excellent but limited source of renewable energy. Good locations for establishing new ones are scarce, leading the wind-power industry to consider floating, offshore wind parks to produce more wind energy. That approach would be a more expensive solution than could be realized by harvesting the winds that blow near the ground in the state's already existing 5000-plus megawatts (MW) of wind farms that now exclusively use tall, widely spread out, traditional horizontal axis wind turbines (HAWTs).

California's wind power generation is concentrated in windy passes between cooler and hotter regions in Alameda, Kern, San Diego, Solano and Riverside counties, where there is little to no more land zoned to add more HAWTs. As evidence of this, over the past five years, wind energy output in the state has basically remained the same.

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WHI's estimates for the near-ground wind speeds are based on [CEC and other publicly](#) available wind resource reports, [NREL's Wind Prospector](#), and its own collected data. Adjustments to wind shears and speeds that were made to better reflect the near-ground acceleration occurring in the state's Wind Resource Areas were validated with the help of [UL's Windnavigator](#) reports.

"The CEC and the wind industry should collaborate in updating the state's 1985 Wind Atlas's initial evaluation of near-ground wind speeds across the state," urged WHI's CEO Kevin Wolf at a 2018 CEC wind forum, chaired by Prof. Case van Dam of UC Davis. "Being able to harvest 15-20 mph winds underneath existing wind turbines in on-shore wind farms would benefit the state's ratepayers."

Information, including a spreadsheet with wind farms and near ground wind speeds can be found at WHI's Library <https://windharvest.com/library/general-calif-wind-resources/>

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