

Wind Turbine Upgrades/Absence of Impact on Wildlife Mortality: USGS Analysis



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04/08/2021

A USGS-led article addressing wind turbine upgrades and wildlife mortality has been published titled:

Relative Energy Production Determines Effect of Repowering on Wildlife Mortality at Wind Energy Facilities ("Article")

The *Article* was published in the Journal of Applied Ecology and its co-authors include:

- Manuela Huso
- Tara Conkling
- Daniel Dalthorp
- Melanie Davis
- Heath Smith
- Amy Fesnock
- Todd Katzner

The *Article* addresses wildlife mortality rates in the context of repowering wind energy facilities.

"Repowering" refers to the placement of smaller, lower capacity, closely spaced turbines with larger, high capacity turbines that are more widely spaced. The authors undertook a study of this issue in an area near Palm Springs, California. In conducting the study, the authors stated that they controlled for:

- Effects of weather and habitat
- Turbine-caused wildlife mortality rates over a range of turbine sizes and spacing (all within the same period)
- Habitat and local weather conditions
- Differences in turbine operation by standardizing mortality rate per unit energy produced

The *Article* found that avian and bat mortality rate was constant per unit of energy produced, across all size and spacings of turbines.

The *Article* concludes that in the context of repowering a wind facility:

. . . the relative amount of energy produced, rather than simply the size, spacing or nameplate capacity of the replacement turbines, determines the relative rate of mortality prior to and after repowering.

They also suggest that in a given location:

. . . newer turbines would be expected to be less harmful to wildlife only if they produced less energy than the older models they replace.

A link to the news release can be found [here](#) and the *Article* [here](#).