DWEA Briefing Paper: Birds / Avian Mortality

It's a Good and Common Question

Due to the abundance of press coverage of bird and bat kills by utility scale wind turbines, many people new to wind power have concerns about small wind turbines and birds. Some are surprised to learn that the National Audubon Society actually supports wind development, as articulated on their web site: "…Audubon strongly supports wind power as a clean alternative energy source that reduces the threat of global warming."

When addressing avian and other environmental impact issues, it is important to make distinctions between utility scale and small or community scale wind systems. Utility scale wind turbines are 3 to 5 times taller than their distributed wind counter parts, and their rotor diameters are 100 to 500 times larger. Some early utility-scale wind farms were constructed in avian migratory corridors resulting in serious avian impact issues (e.g., Altamont Pass, CA). However, it is well documented that small and community scale wind has little or no avian or bat impact (see DCNR TREC study below).

The Evidence Clears Small and Community Wind

Tens of thousands of small and community scale wind turbines have been installed in the U.S. over the last 30 years, providing broad experience with turbines in a variety of environments. Small wind systems are installed in city, state and national parks, national wildlife refuges, conservation districts, back yards of bird watchers, ornithological study areas with daily monitoring and in Audubon Society nature preserves. There is no evidence that small or community scale wind systems present a danger to birds or bats.

To the contrary, existing evidence exonerates small wind. A rigorous two-year scientific study[i] by the Pennsylvania DCNR of a 10 kW turbine on a 120 ft tower at the Tom Ridge Environmental Center at Presque Isle State Park in Erie, PA (see photo) resulted in only one grackle carcass in the vicinity of the turbine. The grackle had no external injuries, hence no evidence that it was actually harmed by the wind turbine. The DCNR report states, "Evidence from this study suggests that the probability of bird and bat mortalities being caused by collisions with small monopod wind turbines is low... At the TREC site a diversity of songbirds are using the area daily without turbine related casualties, and the same is apparent with bats that are active nightly during their seasonal occurrence."

Worry about Windows and Cats, not Small Wind

Human existence is far more hazardous to birds than wind turbines. According to Dr. Daniel Klem of Muhlenberg College, 100 – 900 million birds are killed each year in collisions with windows. The National Audubon Society estimates that 100 million bird deaths per year are attributable to house cats. Limiting small wind development based on concerns about avian impacts cannot be justified. This is true for all types of towers, including those with lattice structures and/or guy wires, in any color, and at any height. ***DWEA recommends that anyone asserting otherwise should be challenged to submit credible evidence.*** Additionally, any small or community scale wind turbine providers claiming to have "bird friendly" technology are engaging in sales hype; there is no evidence that small and/or community wind turbines, in any configuration, are in any way responsible for bird mortality.

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[i] "A Study of the Potential Effects of a Small Wind Turbine on Bird and Bat Mortality at the Tom Ridge Environmental Center, Erie, Pennsylvania," Dr. Kenneth W. Anderson, Gannon University, 12 December 2008.