

Bats and Wind Energy Cooperative Scientists Release 2004 Final Report

After reviewing data collected during a groundbreaking research effort, the Bats and Wind Energy Cooperative (BWEC), a government-conservation-industry partnership, reported today substantial bat kills at two wind farms in the mid-Atlantic region between August 1 and September 13 of 2004.

The report summarizes the first year's research on potential causes and solutions. The research included the most detailed studies ever performed on bat fatality at wind sites and provides a foundation for further efforts aimed at better understanding why bats are being killed and how to minimize future fatalities.

"This is state-of-the-art research that could not have been carried out without the BWEC partnership and the support of all parties involved," said Merlin Tuttle, President of Bat Conservation International (BCI) of Austin, Texas. "Working together, we've advanced the state of knowledge to the point where we have a much better understanding of causes and potential solutions. However, we still face numerous challenges for solving these complex problems and we need the full support and cooperation of all players, especially industry, to maintain this as a credible cooperative. The science required to test and develop solution(s) requires money, time, and commitment."

Key findings of the report include:

- Remains of 765 bats were found by searchers at the two sites (one in West Virginia and one about 60 miles away in Pennsylvania) over a six-week period from August 1 through September 13. After correcting for bats removed by scavengers or missed by searchers, the average number of fatalities at the two locations is estimated between 1,764 and 2,900 for the six-week period. BWEC scientists believe that high kills had begun at least by mid-July and that they continued at least through September. Unmeasured mortality also would have occurred in spring and summer and through early November.**
- Species of bats killed included the hoary bat, eastern red bat, eastern pipistrelle, silver-haired bat, little brown bat, big brown bat, and northern long-eared bat. No listed species were found.**
- Timing of fatalities at the two sites was positively correlated, suggesting region-wide similarities in conditions which contribute to bat risks at wind turbines.**

- **Several weather and turbine variables were associated with bat mortality. At both locations, the majority of bats were killed on nights when average wind speeds and power production were low, but while turbine blades were still moving at relatively high speeds. One wind turbine at one site was non-operational during the research period. This turbine was the only one where no bat kills were detected, indicating that bats are not colliding with stationary objects.**

Based on 2004 findings, BWEC scientists recommend comparisons of feathered versus normally operated turbines during periods of low wind, the condition under which most bat mortality occurred. The goal is to measure exactly how much mortality can be prevented and at what cost to industry. To date, the BWEC has not been able to identify a project owner willing to host such experiments.

The BWEC was formed in late 2003 after bat kills were discovered during post-construction monitoring at the West Virginia site.

The BWEC is also planning long-term projects to test the reliability of acoustic detectors to assess relative risk at proposed wind facility locations, comparing pre- and post-construction bat detection in relation to post-construction fatality. They also will evaluate the potential for use of alerting/detering devices at turbines to reduce risks, experimentally testing under controlled conditions in laboratory settings and at locations of concentrated bat use to evaluate bat responses. Finally, the BWEC is very desirous of surveying existing wind power sites in other regions of the country where there appear to be patterns of impacts. However, to date, BWEC has not obtained access to any such site.

“Over the past year, we’ve drawn on the knowledge of some of the world’s foremost bat experts, and have not only quantified bat mortality at wind sites, but have improved research methods and opened promising leads toward solutions,” commented Robert Thresher, director of the wind program at the U.S. Department of Energy’s National Renewable Energy Laboratory. “This work has laid the foundation that is essential for understanding this problem and finding ways for wind energy and bats to co-exist.”

The Bats and Wind Energy Cooperative was founded by the American Wind Energy Association, Bat Conservation International, the National Renewable Energy Laboratory (U.S. Department of Energy) and the U.S. Fish and Wildlife Service.