**Report from National Wind Coordinating Committee Conference**
**Onshore Wildlife Interactions with Wind Developments**
**November 3-4, 2004, Landsdowne, Virginia**

**Background:** The purpose of the conference was to provide an update on research investigating the impacts of wind power facilities on wildlife, and to discuss state-of-the-art methods of assessing impacts. The conference focused on land-based facilities, and did not address wildlife interactions at marine-based wind facilities.

**Summary of most important points:**
The losses of birds and bats experienced at new-generation wind facilities in the West pale by comparison with those in the East. Bird kills were estimated at 4 to 5 per turbine per year on Appalachian ridge top facilities. This is three to five times higher than in than in the West.

The wind industry has discovered that they have a very serious problem with bat mortality at Appalachian ridge top wind facilities. In late summer 2004, research showed that as many as 4,000 bats were killed in six weeks at the 44-turbine Mountaineer wind energy plant in West Virginia. Nearly 300 bats were killed in the same period at the 20-turbine Meyersdale, PA facility. Because bats have a much lower reproductive rate than birds, they cannot compensate for increased mortality as quickly as bird populations.

New research at Altamont showed that proper placement of turbine towers is still the single most important factor in avoiding bird mortality. Tubular towers were not shown to be safer than lattice towers, slow turbines not safer than fast ones (remember, however, that "slow" at Altamont is still much faster than most new-generation turbines).

There is serious concern about impacts of energy infrastructure on habitat for prairie grouse (i.e. sage and sharp-tailed grouse, greater and lesser prairie chickens). Habitat may be made unsuitable by introducing high structures on the landscape. No wind turbine towers have been installed in prairie grouse habitat yet, but experience with other tall structures suggests impacts will be high. USFWS guidelines recommend 5-mile buffers around all sage grouse leks. Some biologists at the conference said it should be 10 miles, to accommodate recovery efforts. The USFWS guidelines are voluntary. The public comment period is still open on the FWS guidelines. So far USFWS has received only four comment letters.

Contrary to previous conventional wisdom, it turns out that migrant songbirds are very vulnerable to turbines. Coastal radar studies overestimated the altitudes at which birds migrate. Over land, birds migrate at much lower altitudes than when over the Gulf of Mexico, bringing them into the elevation bands intersected by the rotor-swept areas. Resident birds become habituated to turbines—migrants don't. Non-passerine migrants may abandon traditional staging habitat if turbines are present. Ridges parallel to migration direction and perpendicular to wind direction are the most dangerous for raptors.

There was resistance from consultants and wind industry representatives to assessing cumulative effects. Members of academia, however, insisted that we can't afford not to deal with cumulative effects issues. We need to invest in learning more about where birds/bats are flying at the regional scale. So far all research has been done at the site-specific scale. We can't address cumulative effects without this vital regional-scale information. We must also find ways of quantifying risk, and of identifying areas where the risks to wildlife are unacceptably high.

**Other issues and points of discussion:**
No effects on birds were detected for the kinds of lights used on turbine towers. There was no difference in mortality at lighted vs. unlighted towers, and no difference between red and white strobes. In the West, lighted turbines are killing <1 bird/turbine/year. The brighter and more steady-burning lights attract the most birds. Only songbirds are attracted to steady-burning lights (i.e. no shorebirds, waterfowl, wading birds, etc.).

Curiously, there was an inverse correlation between wind speed and bat mortality. More bats were killed on nights with light wind. Nobody could explain this.

New data suggest that removing cattle grazing from around the turbines at Altamont may reduce bird mortality (lower prey availability due to high grass, less cow dung means less prey).

How much mortality is too much? We don't know enough to answer this question. But metrics have been developed in Europe to answer the question of how much risk is too much.

Regarding the question of how many years of pre-construction sampling are needed to obtain an accurate assessment of risks to birds and bats: Members of academia insisted that one year is not enough. Some suggested as many as three years.

At current rates of growth in energy use in the U.S., a one-megawatt turbine would have to be brought on line every 30 minutes just to keep pace with demand. Wind is the fastest growing sector of the energy business.

USFWS and state agency people from around the country are alarmed by Washington DFW's wind power guidelines. They feel a bad precedent has been set by institutionalizing guidelines that are too weak. Ten state F&W agencies (TX, MD, NY, WI, ID, NJ, VT, Il, PA, WV) were represented at the conference and two (TX, WI) at the WWG meeting (see below).

We need to find ways of rewarding conscientious developers and penalizing the bad ones. Level the playing field.

Audubon was advised that conservationists need to be talking to the investors—to urge them to encourage the developers to do this right.

**Wildlife Work Group (WWG) Meeting**
On Friday morning following the conference, the NWCC's Wildlife Work Group met at the RESOLVE office in D.C. The following is a summary of the information presented at that meeting:

FWS Guidelines: The U.S. Fish and Wildlife Service (FWS) is planning to have 2-day regional workshops on how to apply their wind power guidelines. We need to make sure that some seats in these workshops are available to members of the environmental community.

Although the FWS guidelines are "voluntary," it was made clear that developers put themselves at a higher risk of prosecution if they fail to follow the guidelines and end up killing unacceptable numbers of birds. Developers can reduce their risk of enforcement actions (e.g. fines) if they follow the guidelines. Some industry representatives actually suggested that the guidelines should be mandatory—to level the playing field and prevent the "race to the lowest common denominator" by less scrupulous developers.

There will be less money available in the FY 06 federal budget for FWS field biologists to assist developers in implementing the guidelines. FWS encouraged us to lobby Congress for more funding to put more biologists on the ground. There is a danger that overextended field biologists will merely rubberstamp standardized guidelines rather than tailor management recommendations to each site. This is a no-win situation for all stakeholders.

Research Fund: The Wildlife Work Group discussed the possibility of establishing a public/private fund that would make available conditional grants for *additional* field studies when initial pre-construction bird/bat inventories are inconclusive. This would create an incentive for developers to conduct the necessary studies without exposing themselves to increased financial risk. To qualify, the studies would have to be peer-reviewed and made available to the public. Ann Georges gave Audubon's commitment to seek federal appropriations to help establish the fund. The fund could be administered by the National Renewable Energy Laboratory. The response was generally favorable. Many questions were unanswered, but the WWG established a subcommittee to continue the discussion.

Peer Review: There was a wide-ranging discussion of peer review, when it should apply, and how it could be done. Due to time constraints there was no closure to the discussion. I noted that this is the single most important thing the industry can do to win the trust of the environmentalists. Transparency is the key to gaining public confidence that wind energy development is based on credible science.