

REAL PROTECTION OR NOT FOR MARYLAND BIRDS?

By Dan Boone, Conservation Chair, Sierra Club, Maryland Chapter

Editor's note: Last month the Voice reported on a decision by a Maryland regulatory agency to require a wind farm developer to shut down the giant turbines during periods when the whirling blades could kill large numbers of migratory birds. In this story, Dan Boone provides a critique of that decision. In addition, he offers some thoughts about bird mortality and related issues that may help spur our thinking on wind power.

The maximum curtailment of windmills at this proposed Maryland facility will not exceed 3600 turbine-hours per year - which means that even if catastrophic bird mortality levels occur involving all 67 windmills proposed for this windfarm, the only remedy available would be closure of the entire facility for a maximum of 2 ¼ days that year. If only one turbine was the culprit, then the maximum remedy would be to shut it down for no more than one half year. In addition, the “trigger” in terms of the possible shutdown due to bird mortality is not defined and would require actions by both the Maryland DNR and the Maryland Public Service Commission (which could be delayed by appeal of the windfarm operator). A shutdown of the turbine or turbines causing bird mortality may make it sound like a substantial penalty that protects birds - but sadly this is more a symbolic act than a meaningful strategy to reduce avian mortality. The reason is that - whether the blades are spinning or not- these huge structures (up to 460-ft tall in Maryland) would be sited atop the highest ridge in the State and would pose a collision-hazard for nocturnal migrant songbirds - especially given their FAA-required lighting, which can attract and disorient birds at night - leading to fatal collisions.

The solid “tubular” structure and lack of guywires of newer windmills may be good designs for protecting hawks and songbirds migrants during daytime. But these “improvements” do not provide much meaningful protection to nocturnal songbirds since these species are known to collide with tall buildings, cooling towers, smokestacks, and other very tall “solid and unguyed” structures that are in their flight paths. Note that the incidence of songbird mortality at communication towers out west is only a very small fraction of that found at eastern towers, so the lack of songbird mortality at western windfarms is not a good indicator of the risk to birds from the recent deployment of windfarms in the east. There are very few studies of bird mortality at eastern windfarms, and the few sites that have some research either have big flaws in their study designs (e.g., did not compensate for dead birds eaten by scavengers) or did not occur on prominent ridges (where songbird migrants are likely much more numerous).

Incidentally, the purported improvement of “slower rotating blades” in the new generation of windmills is not relevant in terms of bird mortality since the “blade tip speed” can be over 160 MPH (due to the huge diameter of the rotor at 18-20 rpm). And it is the visual blurring effect of their fast “tip speed” that creates the illusion of no-obstacle - leading to daytime bird flight into the path of the rotor. Lots of eagles are still being killed at Altamont by newer, bigger windmills with blades moving at slower RPMs (because they still have very fast tip-speeds).

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Unlike the concerns about bird mortality from windfarms out west, the windpower projects atop Appalachian ridges pose mainly a risk to songbirds - not hawks, eagles and other birds that are active only during the day (and may likely avoid turbines during their migration along the ridges). However, a much greater number of birds would be "at-risk" from the relatively new generation of very tall windmills that are now being proposed and deployed throughout the Appalachians - neotropical migrant songbirds. Populations of many of these birds are already rapidly declining. The vast majority of migrating birds in the Appalachians do so at night (e.g., warblers, vireos, flycatchers, etc.). Because the higher ridges are known to concentrate birds during migration, the potential is great that substantial die-offs could occur - especially during inclement weather.

I have involvement or info about 7-8 windfarm projects on Appalachian ridges in the east; not one has performed adequate surveys that could determine their potential impacts to birds. I believe that off-shore windfarms likewise are being proposed without good assessments of bird use in project area. The current proliferation of windfarms on Appalachian ridges do not even require a NEPA assessment of the cumulative impacts - since no federal permit or review is required. In addition, the Bush Administration has now limited enforcement of the Migratory Bird Treat Act to within 3 miles of shore - so the several thousand windmills now proposed by Winergy would be essentially exempt from this law should their actions harm migratory birds.

The potential cumulative mortality to many species of songbirds resulting from the rush to site and build windfarms on the ridgetops of the Appalachians is likely to accelerate the declines in already dwindling populations. Some say this is inevitable - and would likely occur anyway if we don't slow global warming and air pollution. I guess it may be comforting to those boosters of windpower to consider that the birds would be dying for a good cause - collateral damage, so to speak. But I believe a realistic evaluation of the potential of windpower in the eastern states to reduce the growth in burning coal or lessen global warming rests on a wish and not a reality.

Also, the headlong rush to pass RPS legislation in states throughout the east is likely to create a much greater demand for these inadequately evaluated and/or inappropriately sited windfarms. I would like to see the data that suggests that RPS legislation in the eastern states will substantially reduce the use of coal or halt the rise in global temperatures. I've looked - and it appears that the growth in demand for electricity will "swallow" any realistic contribution from renewables - especially so for wind. Until we get serious and "tap" the motherload of windpower in this country - which is located in the Great Plains, it is difficult to see our reliance on coal will be reduced - especially by the renewable demand created in the eastern states. It seems from my investigation that windpower in the east will mainly impact the cleanest burning, albeit most costly form of fossil fuel - natural gas.

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Windfarms are already subsidized through tax-credits, and it seems to me that by artificially creating a market demand for renewable energy through RPS legislation will create even more conflicts over the siting of this industrial energy source. It appears as though wind energy may be far ahead of other renewables in its ability to readily capitalize on future increases in demand for “green energy.” I would be interested in hearing of studies or even ball-park estimates as to what proportion of the future renewable energy supply would be provided by windpower in order to service the demand created by RPS in the eastern states - say by 2010 and by 2020? Are we likely to “saturate” the east with windpower even though it will only make a minor contribution towards reducing the use of coal or only minimally impact rising global temperatures?