Mammal Technical Committee

7 May 2010

Dear Pennsylvania Game Commission,

Industrial-scale wind farms have been proliferating at a rapid rate in Pennsylvania and adjacent states, and the Governors' Wind Energy Coalition recently issued a call for increasing the role that wind energy plays in our nation's energy future. The Mammal Technical Committee of the Pennsylvania Biological Survey is very concerned about the impact these wind facilities will have on Pennsylvania's wildlife and especially upon our state's bats.

Following the recent expansion of industrial-scale wind farms in Pennsylvania and other states, biologists have noted large-scale mortality of bats at these facilities. This mortality is greatest for hoary bats, eastern red bats, silver-haired bats, and eastern pipistrelles, and the majority of mortality occurs during the late summer and early fall migration period. Even the most conservative estimates suggest that tens of thousands of bats are being killed at wind farms each year.

Because bats are long-lived animals with low reproductive rates, they are particularly vulnerable to new sources of mortality. Biologists believe that the year-after-year mortality of bats at wind power facilities is likely to have a severe and unsustainable impact on bat populations. The inevitable result will be a decline in bat populations and the threat of extinction for what were formerly common species. Because bats play an important role in insect control and in the proper functioning of Pennsylvania's ecosystems, drastic declines in their populations is cause for great concern.

Recent research by Erin Baerwald and colleagues in Alberta, Canada, and by Ed Arnett and colleagues in Pennsylvania, has demonstrated that it is possible to greatly mitigate bat mortality at wind farms with minimal impact on power production. This is accomplished through curtailment of turbine blades during periods of low wind speeds at those times of the year when mortality is greatest. These studies have shown that by increasing the cut-in speed of turbines, or by angling the blades during periods of low wind speeds, mortality can be reduced by 50-70% with minimal impact (possibly less than 1% reduction) on annual power output.

The members of the Mammal Technical Committee therefore recommend that the Pennsylvania Game Commission advocate for required mitigation at all industrial wind

power facilities in Pennsylvania to protect our state's wildlife. This mitigation could be restricted to evening hours and to times of year when mortality is greatest. It could also be restricted to times when wind speeds are low (< 5 meters/second) and power generation is therefore minimal. It is our professional opinion that in the absence of such mitigation, Pennsylvania's bat populations are in great jeopardy from wind development.

As indicated in the memorandum of understanding between the Pennsylvania Game Commission and the Pennsylvania Biological Survey, the Mammal Technical Committee of the Pennsylvania Biological Survey stands ready to assist with the development of a mitigation protocol that would allow further development of wind energy in Pennsylvania while also protecting our state's wildlife resources for future generations.

Sincerely,

Michael R. Gannon, Ph.D., and Howard P. Whidden, Ph.D.
Co-chairs, Mammal Technical Committee