

16 November 2021

Hegins Township Zoning Hearing Board / Hegins Township Supervisors
Linus Fenicle, Hegins Zoning Hearing Board Solicitor
Hegins Township Municipal Building
421 S. Gap Street
Valley View, PA 17983

Re: Joint Comments on Anthracite Ridge, LLC / Clean Air Generation, LLC Wind Energy Project

Dear Mr. Fenicle,

On behalf of American Bird Conservancy, Hawk Mountain Sanctuary Association, Hawk Migration Association of North America, Juanita Valley Audubon Society, Lehigh Valley Audubon Society, Pennsylvania Audubon Council, and Save Our Allegheny Ridges, we submit these comments to express our concerns about the Anthracite Ridge Wind proposal and provide input to inform review of this proposed project.

We fully support environmentally responsible wind and other renewable energy development as an important component of a broader strategy to combat climate change. Environmentally responsible wind energy development starts with appropriate siting in a location where impacts to wildlife can be effectively minimized. Based on available information and our extensive collective expertise, we have evaluated the Anthracite Ridge Wind project proposal in this context.

We find that the proposed location of the Anthracite Ridge Wind project has high biodiversity value, and that development and operation of a wind facility at the site poses significant risks of negative impacts to state and federally listed species and other species of conservation concern. Any further consideration of this project should require additional field studies prior to approval to evaluate likely environmental impacts. These studies may show that it is not possible to reduce impacts to an acceptable level. As such, we suggest that wind energy development may not be appropriate at this site.

We urge you to reject the Anthracite Ridge Wind project proposal and delay further review until additional field studies are conducted and a full, informed evaluation of likely wildlife and other environmental impacts can be completed as part of a new application.

Specifically, we recommend that the Township require the applicant to:

- Conduct two years of winter eagle surveys at the project site, following protocols provided by the U.S. Fish and Wildlife Service;
- Conduct two years of full-season fall and spring eagle / raptor and songbird migration surveys at the project site, using qualified observers and appropriate protocols, or make these studies available for public review if already conducted;
- Obtain a permit for incidental take of eagles to ensure compliance with the Federal Bald and Golden Eagle Protection Act;

- Conduct additional surveys for Federally-listed Indiana bats and northern long-eared bats in migration and summer, and follow recommendations from federal and state agencies for avoiding impacts to these species;
- Obtain a permit for incidental take of Federally-listed bat species, if needed, through preparation of a Habitat Conservation Plan, in coordination with agencies.
- Confirm with all relevant Federal and State natural resource management agencies that surveys conducted for species / species groups of concern are adequate in both timing and methods, and that likely impacts are effectively avoided, minimized and/or mitigated.

Biodiversity Value of the Proposed Site and Vicinity

The proposed location of the Anthracite Ridge Wind project is in close proximity to Kittatinny Ridge, the biodiversity value of which is well-established. Kittatinny Ridge is designated a Conservation Landscape by Pennsylvania Department of Conservation & Natural Resources, and a Global Important Bird Area by National Audubon Society, among other distinctions. The ridge hosts tens of thousands of hawks, eagles, and other raptors during migration each year, as documented at Hawk Mountain Sanctuary and several other nearby raptor count sites within the Hawk Migration Association of North America network.

Ridges north of the Kittatinny also host migrating raptors. These document regionally large numbers of eagles, particularly in spring, and some record higher numbers than are seen along much of the Kittatinny Ridge.

Many of the raptors documented at hawk watch sites in the area fly low over the ridges using wind currents and updrafts to save energy. The Appalachians also serve as a corridor for migrating songbirds. Hawk Mountain records more than 30,000 songbirds on average each fall flying along the Kittatinny Ridge (L. Goodrich, pers. comm.). Records eBird, a citizen scientist database hosted by Cornell Lab of Ornithology, suggests nearby ridges also host substantial numbers of migrating songbirds (eBird.org Weiser State Forest “hotspot”).

The proposed site for Anthracite Ridge Wind project also supports a host of other wildlife, including some species of conservation concern. The western portion of the proposed location is within Bear Mountain Natural Area, which supports State-Threatened Allegheny woodrat and Pennsylvania Rare-designated minniebush.¹ The site is also within the Stony Mountain Woodrat Complex Important Mammal Area.²

A search of the Pennsylvania Wildlife Action Plan Conservation Opportunity Area Tool indicates that 16 Pennsylvania Species of Greatest Conservation Need are found in the approximate project area. This includes the Allegheny woodrat as well as a variety of bird species.

Eagles

As discussed in the preceding section, the proposed location of the Anthracite Ridge Wind project is within an area of enormous importance for eagles and other raptors. The proposed project location is 8

¹ The Nature Conservancy. 2003. A natural areas inventory of Schuylkill County, Pennsylvania. https://www.naturalheritage.state.pa.us/CNAI_PDFs/Schuylkill%20County%20NAI%202003.pdf

² Pennsylvania Mammal Atlas. 2021. Important Mammal Areas. Site accessed 3 November 2021. <https://www.pamammalatlantlas.com/mammals/important-mammal-areas>

miles north of a hawk watch site that records an average of 75 migratory Golden Eagles each year.³ Tracking data for ~100 Golden Eagles (approximately 2% of the eastern population) indicate that the proposed project site was used by this species for spring migration and extensively during winter; fall migrants have also been recorded in the immediate vicinity. Additionally, Bald Eagles have been documented using the project area and are seen wintering nearby.⁴

The harmful impacts of wind turbines on Golden Eagles are well-documented. At one wind energy facility in California, researchers concluded that Golden Eagle populations at the site were only maintained by “continental scale migration,”⁵ i.e., mortality caused by collisions with wind turbines was only offset by new birds moving into the area at a massive scale. A more recent study found that Golden Eagles are at risk of population-level declines specifically as a result of wind energy development.⁶

Unlike the open spaces preferred by western birds, migratory and wintering eastern Golden Eagles primarily occupy large swaths of forest. Ridgetops are an important component of habitat for these birds throughout the year, and in winter hillsides and cliffs are important as well.⁷

Eastern Golden Eagles “are found in greatest numbers during winter in the north-central Appalachian Mountains of Pennsylvania, West Virginia, and Virginia,” according to experts.⁸ This makes Pennsylvania a disproportionately important place for this bird’s annual life cycle and conservation. This is significant because this population is relatively small at an estimated 5,000 birds.⁹

A study of eight eastern Golden Eagles fitted with global positioning system tags found that migrating birds flew at higher elevations than birds engaged in “local” movements.¹⁰ This study also found that birds flying over areas of high topographic relief (e.g., ridgetops and steep slopes) flew at lower altitudes. Local movements occurred an average of 109m above the ground, and ~65m above the ground when specifically over ridgetops / summits. This is well within the average 28 to 153m range of elevations in which wind turbine blades turn.¹¹ Migratory flights averaged 284m above the ground, and ~135 over ridgetops and summits.

Both eagle species are protected under the Federal Bald and Golden Eagle Protection Act, which makes killing an individual of either species illegal, regardless of whether this is intentional or unintentional.

³ Second Mountain Hawk Watch, www.hawkcount.org.

⁴ Tricia Miller, Conservation Science Global. 2021. Personal communication, and Miller et al. 2014. Assessing risk to birds of industrial scale wind development via paired resource selection models. *Conservation Biology* 1-11.

⁵ Katzner et al. 2017. Golden Eagle fatalities and the continental-scale consequences of local wind-energy generation. *Conservation Biology* 31: 406-415.

⁶ Diffendorfer et al. 2021. Demographic and potential biological removal models identify raptor species sensitive to current and future wind energy. *Ecosphere* 12: e03531.

⁷ Miller et al. 2017. Summer and winter space use and home range characteristics of Golden Eagles (*Aquila Chrysaetos*) in eastern North America. *The Condor* 119: 697-719.

⁸ Katzner et al. 2012. Status, biology, and conservation priorities for North America’s eastern golden eagle (*Aquila chrysaetos*) population. *The Auk* 129: 168-176.

⁹ U.S. Fish and Wildlife Service. 2016. Bald and Golden Eagles: Population demographics and estimation of sustainable take in the United States, 2016 update. Division of Migratory Bird Management, Washington D.C., USA.

¹⁰ Katzner et al. 2012. Topography drives migratory flight altitude of golden eagles: implications for on-shore wind energy development. *Journal of Applied Ecology* 49: 1178-1186.

¹¹ U.S. Department of Energy Office of Energy Efficiency & Renewable Energy. 2021. Wind turbines: the bigger, the better. <https://www.energy.gov/eere/articles/wind-turbines-bigger-better>. Accessed 28 September 2021.

Industrial activities that are likely to kill eagles, such as wind facility operation, can obtain a permit from the USFWS to provide protection from prosecution should an eagle mortality occur. Golden Eagles are also a Pennsylvania Species of Greatest Conservation Need¹² and activities harmful to this species should be avoided. They are designated because most of the eastern population of Golden Eagles concentrate on Appalachian ridges in spring and fall. Loss of forest cover from wind energy development on these ridges and fatal collisions with turbines are threats listed in the Pennsylvania Wildlife Action Plan.

Other Birds

The Pennsylvania Wildlife Action Plan Conservation Opportunity Area Tool indicates that several State of North America's Birds Watch List species are found within the proposed project site, including Cerulean Warbler, Eastern Whip-poor-will, and Wood Thrush. Other raptors listed as Species of Conservation Need may also use the site as a migration corridor, including Northern Goshawk and Sharp-shinned Hawk. The Northern Goshawk is listed as a State Endangered species.

Bats

In a July 11, 2019 letter, the U.S. Fish and Wildlife Service (USFWS) indicated that the proposed Anthracite Ridge Wind project location was within the range of the Federally Endangered Indiana bat and the Federally Threatened northern long-eared bat.

USFWS indicated that Indiana bat mortality is a concern at wind facilities, and recommended summer surveys and winter hibernacula surveys be conducted for this species. They indicated that wind turbine curtailment is recommended at night in the late summer and fall migratory period, when collision fatalities are most prevalent. They further indicated that discovery of presence of this species in summer or winter would require further coordination to identify measures to avoid impacts. Tracking of tagged Indiana bats shows flights over and along ridges within 8 miles of the site.¹³

USFWS also indicated that eight northern long-eared bat hibernacula occur in the proposed Anthracite Ridge Wind project area (encompassing portions of the site within and beyond Hegins Township), and listed conditions under which measures are required to avoid impacts to this species. They requested details of the site and construction plan to inform further consideration of potential impacts.

A subsequent letter from USFWS dated October 27, 2021 indicated that upon receiving further information regarding bat surveys at the proposed Anthracite Ridge Wind project, the agency had outstanding concerns about Federally listed bat mortality, and that insufficient associated information had been provided by project proponents. For example, 151 abandoned mine portals had been identified within the project area, but data provided only showed surveys for 43 of these.

The October 2021 letter also indicated that USFWS had recommended that the applicant obtain an incidental take permit for Indiana and northern long-eared bats if impacts to these species could not be avoided, and that this recommendation has not changed.

¹² Pennsylvania Game Commission and Pennsylvania Fish & Boat Commission. 2015. Pennsylvania wildlife action plan 2015 – 2025.

¹³ Birds Canada / Motus Wildlife Tracking System. 2021.

<https://motus.org/data/tracksMap?t=19217&t=19221&t=19222&t=25980&t=25982&t=19214&t=19228&t=19989&t=19990&t=25978&t=19884&t=19885&t=19886&t=19887&t=26582&t=19219&t=19224&t=19226&t=25976&t=25983&t=25981&e=2013-01-01&l=2021-12-31&p=134>. Website visited 9 November 2021.

Biodiversity in Context of Anthracite Ridge Wind Proposal

The preceding sections show that a variety of field surveys would be needed to ensure that the proposed Anthracite Ridge Wind project would not cause unacceptable impacts to wildlife, including listed species and other species of conservation concern. These include:

- Golden Eagle (migration and winter)
- Bald Eagle (breeding, migration and winter)
- Migratory songbirds (breeding and migration)
- Indiana bat (year-round)
- Northern long-eared bat (year-round)
- Allegheny woodrat (year-round)
- Minniebush (year-round)

The project application indicates that the following surveys have been or are being conducted:

- Baseline avian surveys
- Raptor migration surveys
- Breeding bird surveys
- Eagle and other raptor nest surveys
- Large bird use surveys (focal species not specified)
- Bat acoustic sampling
- Bat hibernacula and roost assessments
- Bat mist-netting
- Allegheny woodrat surveys
- Timber rattlesnake surveys
- Bog turtle surveys
- Minniebush surveys

The application states that correspondence with the U.S. Fish and Wildlife Service indicates that bird surveys at the site are sufficient. The timing of this correspondence is not indicated, nor is it or the data collected provided for public review.

The application also states that the Pennsylvania Department of Conservation & Natural Resources indicated in 2020 that no further action is needed regarding surveys or consideration of impacts to minniebush.

For the majority of surveys listed in the application, the timing and methodologies are unclear. We urge the Township to confirm with all relevant agencies, including PA Department of Conservation & Natural Resources, PA Game Commission, PA Fish & Boat Commission, and US Fish and Wildlife Service, that surveys conducted are adequate in both regards, and sufficiently recent to provide reliable data.

Outstanding Concerns

We find that there are clear deficiencies in surveys conducted to date that must be addressed before the project application can be considered further. In addition, there appear be likely deficiencies regarding permitting for impacts to Federally regulated species.

Eagle Surveys and Incidental Take Permitting

The Golden Eagle and Bald Eagle tracking data discussed previously demonstrate that both species are likely to use the proposed Anthracite Ridge Wind project site, creating risk of collision fatalities if the project is constructed. Further, data showing that the relatively uncommon eastern Golden Eagle is present in the project area in winter shows that surveys conducted to inform project planning are inadequate for this species. This is particularly important in light of the study demonstrating that day-to-day movements occur at lower altitudes than migratory flights and their status as Pennsylvania Species of Greatest Conservation Need.

We strongly recommend that the Township require that eagle surveys conducted to date be augmented with surveys in the winter months. This should follow USFWS protocols provided in guidance specifically for mitigating turbine-caused eagle mortality at wind energy facilities.¹⁴ These recommend 2 years of preconstruction surveys for wind facilities.

Further, given the likelihood that construction of a wind facility at the proposed location would result in collision mortality for Golden Eagles and/or Bald Eagles, we strongly recommend that the Township require that the applicant obtain an incidental take permit from the USFWS to ensure compliance with the Bald and Golden Eagle Protection Act.

Federally-Listed Bat Species and Incidental Take Permitting

Correspondence from USFWS show that construction of the proposed Anthracite Ridge Wind project would pose risks of fatal collisions of Federally listed Indiana bats and northern long-eared bats with wind turbines. This correspondence also shows that survey work conducted to date, and coordination with the agency regarding these species is substantially inadequate.

We strongly recommend that the Township require additional surveys for Federally-listed bats, as outlined by USFWS. Further, we recommend that the Township require the applicant to satisfy the agency's requests for information about project plans and comply with any further recommendations before they consider the project proposal further.

We also strongly recommend that the Township require the applicant to obtain an incidental take permit for Indiana bats and northern long-eared bats if impacts to these species cannot be avoided, as recommended by the USFWS.

Conclusion

While we fully support environmentally responsible wind energy development as an important component of a broader strategy to combat climate change, we find that the proposed location of the

¹⁴ U.S. Fish and Wildlife Service Division of Migratory Bird Management. 2013. Eagle conservation plan guidance, module 1 – land-based wind energy, version 2.

Anthracite Ridge Wind project has high biodiversity value, and that development and operation of a wind facility at the site poses significant risks of negative impacts to state and federally listed species and other species of conservation concern.

We urge you to reject the Anthracite Ridge Wind project proposal and delay further review until additional field studies are conducted and a full, informed evaluation of likely wildlife and other environmental impacts can be completed as part of a new application.

Sincerely,

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