

New York State Department of Environmental Conservation

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September 2, 2005

City of Lackawanna Planning and Development Board
Room 311, City Hall
714 Ridge Road
Lackawanna, NY 14218
Attn: Joseph G. Geyer

**Re: Steel Winds Wind Farm
Route 5, Former Bethlehem Steels works
Lackawanna, NY**

Dear Mr. Geyer;

The New York State Department of Environmental Conservation (DEC) staff have performed an initial review of the information and material provided with the City of Lackawanna's SEQR Notice of Coordinated Review and Declaration of Intent to Act as Lead agency. These materials include the Application for Site Plan Approval and Certain Area variances to Authorize Construction and Operation of a Wind Energy Facility on a Portion of the Former Bethlehem Steel Works Site in Lackawanna, New York (the Application), and the Analysis of Environmental Impacts pursuant to SEQR (The EA). Please be advised the DEC does not object to the City of Lackawanna assuming the role of lead agency, but the DEC does reserve the right to comment on this action if a positive determination is made. As indicated in the following text of this letter, DEC staff have concerns for the potential impacts of certain aspects of this project. Our comments and concerns are listed below under the appropriate topic.

Existing Environmental Contamination

- 1) Although the proposed locations of the ten wind turbines are not located in Solid Waste Management Units (SWMUs), there is a concern that waste materials may be encountered during excavation of the foundation or underground utilities. A contingency plan should be developed that will adequately characterize any waste found and should address disposal options.
- 2) There have been prior studies to find a beneficial use for steel making slag on this site. If a beneficial use is found, the construction of the proposed wind farm may preclude or reduce the amount of slag that can be reclaimed in the future within zones 3, 4, and 5.

- 3) Page 4, 2nd paragraph of the Application and on page 11, 19 and 20 of the EA the applicant states that “It is important that the placement of the turbines does not impede ongoing investigative and remedial activities. BQ Energy consulted with DEC which recommended that the turbines be placed north of Smokes Creek in order to avoid areas of concern with respect to possible future remedial activities.”

DEC staff advise that although the proposed location of the 10 turbines does not appear to be in an area that contains waste, future remedial activities will likely include groundwater treatment and/or containment. Site-wide remedial activities have not been developed and in all likelihood, it will be at least two years before major corrective action is implemented at the site. The proposed turbine locations avoid SWMUs and therefore should not impede any remedial activities associated with source/waste removal.

However, it is premature to state that the locations selected “avoid areas of concern with respect to possible future remedial activities”, because remedial activities have not been proposed or selected and can include groundwater pump and treat, slurry walls, and other technologies where the turbine foundations could possibly be of a concern. The statement made regarding the avoidance of future remedial activities was concerned with the fact that it is currently known that Zone 2 (south of Smokes Creek) will require extensive remedial activities and re-grading. Consequently, at this time, that area would not be a good location for windmills.

- 4) The last paragraph on page 11 of the Application and page 1 of the EA indicates the Project will require discretionary approval and/or authorization from the NYSDEC (Brownfield Cleanup Program. However, DEC staff believe this project/portion of the property is not eligible for the Brownfield Cleanup Program because it is currently under a Federal consent order. Additional information on eligibility can be found at the DEC website in the Brownfield Cleanup program Guide at the following address:
http://www.dec.state.ny.us/website/der/bcp/bcp_eligibility.pdf
- Pursuant to ECL Section 27-1405.2, Section 2.4 (1)(E) of the guide indicates that sites that are subject to any other on-going State or Federal environmental enforcement action relating to the contamination which is at or emanating from the proposed site are ineligible regardless of whether the site otherwise meets the definition of brownfield site.
- 5) On page 12 of the Application, Site Plan Approval Section, it is unclear how a windmill farm will assure long-term access to the waterfront, or it will protect and enhance the ecological quality of the shoreline. Further explanation is warranted.
- 6) Appendix A, Figure 1 of the Application shows the location of the 13.8 Kv power out line. This line may need to be moved to the north in the vicinity of SWMU S-24 to avoid the material in SWMU S-24 and or possible remedial activities associated with SWMU S-24.
- 7) Appendix 2 (Full Environmental Assessment Form), page 2 of 21 of the EA states “The long-term remediation programs to be implemented by the site owner, Mittal Steel, are not impacted by this action.” As indicated earlier in our comments, the remediation programs to be implemented by the owner has not been determined, so it is premature to make this statement.

Birds and Bats

Bats

- 1) It is not evident that any studies or data on bats, including any specific populations or use of the project area during migration has been conducted or provided to DEC. Department staff have concerns that bats using or traveling through the project area during spring and fall migrations may be adversely affected by the project due to the project's proximity to the lakeshore. Studies should be conducted to determine the potential for this site to be used as a spring and/or fall migration route by bats. If bats are found to be present and will be adversely impacted by the project, appropriate mitigation strategies will need to be evaluated.

Birds

- 1) The Department recognizes that, in general, bird migration occurs over a broad front with bird flight densities varying slightly due to such factors as weather, the timing of migration, species composition and geographic features of the state. The largest such influence in our state is undoubtedly the vast waters of lakes Ontario and Erie. At the east end of Lake Erie and Lake Ontario, hawk watches have observed large numbers of migrating raptors that migrate exclusively during the day. Most of the songbirds, however, migrate during the evening. However, without the use of special sampling equipment the true magnitude of evening migration is not realized, especially in areas where land forms tend to concentrate these movements. The use of marine radar equipment has been shown to be quite effective at assessing these nocturnal migrations.

The average migration passage rates measured adjacent to the Lake Erie shoreline at Westfield were 400% larger than passage rates recently measured at sites in New York that are not associated with similar funneling mechanisms such as the Great Lakes. Furthermore, the passage rates at Westfield were reported to even be greater when you looked closer to the lakefront when compared to the project area that is set back more than a mile from the shore. We are very concerned that night migrating birds, shown to be concentrated as they pass along the eastern shore of Lake Erie and Lake Ontario, may be subject to impacts due to blade strikes at windpower projects that are along the lakefronts.

- 2) The fact that the proposed Steel Wind Project site is an industrial setting with poor habitat to attract migrating birds does not diminish the recognition that this area gets as a regional area considered to be an important migratory pathway. The contention that only a small percentage of migratory birds are expected to be regularly flying lower than the maximum turbine height at Steel Wind has not been validated by sufficient study. Typical altitudes expressed in the literature are usually site specific and are attributed to the behavior of all types of birds that are likely to pass over a given point during their migration. The mean altitude of migrating birds, as sited by Steel Wind in Appendix 3, are from historic radar ornithology studies that were conducted from approximately 10:00pm through 2:00am. Recent studies in New York State conducted from sunset

through sunrise, which captures bird behaviors throughout the nighttime migration period have shown that flight altitudes depend on the time of night. Birds are susceptible to turbine blade strikes as they ascend and descend at dusk and dawn. As darkness falls the birds take flight from stopover areas and at dawn they descend back to the ground.

It has been shown that when migrating birds encounter large lakes such as Lake Erie, they may choose stopover areas that are not necessarily prime habitat, just to avoid having to fly over the lake as dawn is approaching. In the very near vicinity of the Steel Wind site there are numerous areas such as Tiff Nature Preserve, Times Beach and Woodlawn Beach that possess very suitable habitat for birds to rest and/or refuel as they forage during the daytime. These known stopover areas have attracted unusually high numbers of migrating songbirds and may draw birds through the proposed windfarm area as they descend from higher altitudes. The potential mortality rate due to blade strikes may be greater than what has been historically estimated and observed at other wind projects that have been previously studied.

- 3) The height of what has been considered a tall wind turbine structure in the United States is approximately 400' to the tip of the rotating blades. The maximum height of the structure proposed to the tip of the rotor sweep is 458 feet. Out of the 287 structures greater than 200 feet above the ground in Western New York that are registered with the FAA, only 19 structures will be taller than the proposed turbines (see Table C-1 in Appendix 3); none of which have rotating blades. The proposed wind project would increase the number of structures taller than 450 feet by 50 percent and would be concentrated along a narrow strip of lakefront.
- 4) DEC is concerned that typical migration flight altitudes may be influenced by the proximity of metropolitan Buffalo to the turbines. The statistics provided by Steel Wind on page 27 help to illustrate our concerns. The National Wind Coordinating Council reports that nationally, 98-980 million birds collide with buildings and their windows each year. Birds typically migrate at altitudes that are much higher than buildings, however they are drawn to lower flying heights by the attraction of the light from the buildings. This very important influence of bird migration behavior has been overlooked by Steel Wind. It is very likely that birds are drawn to lower flight altitudes as they approach the southtowns of Buffalo. Since these birds may be highly concentrated along the lakefront for reasons already discussed, the likelihood of blade strikes may be higher at this site than is thought to be typical of wind projects that have been studied to date.
- 5) Section 4.4.3 of the EA (Birds and Bats) summarizes the Avian Risk Assessment (ARA) as provided with the document as Appendix 3. For the reasons stated above, this text is misleading and does not properly characterize the potential impact to migrating birds. It states:

“Although the site is within a regional area considered to be an increased migratory pathway, the industrial setting and poor habitat at the Site do not attract migrating birds. Given the typical altitude ranges of bird migration, only a small percentage of migratory birds are expected to be regularly flying lower than the maximum turbine height. Although bird collisions with Steel Winds turbines are

expected to occur below industry averages for the majority of birds, it is anticipated that the collision rates at Steel Wind will be greater than the national average for resident gulls.”

- 6) Department staff believe that the project may pose an adverse environmental impact to the migratory avian/bat resources that pass through this regional lakefront area considered to be an important migratory pathway. We strongly urge that additional studies be submitted in support of the proposed project’s permit request. The studies should include the results of a radar ornithology study conducted at the project site to determine at a minimum the passage rate and flight altitudes of those birds/bats that migrate through the project area. This study should be designed to address the two migratory seasons for all birds passing through western New York in the project vicinity. Department staff are willing to provide assistance to the Lead Agency and project sponsor to develop the appropriate study parameters that will provide sufficient information to evaluate the impacts of this project.

In conclusion, DEC staff appreciates the opportunity to comment on the project at this early stage and looks forward to working with the City of Lackawanna throughout the remainder of the SEQR and permit review process. If you have any questions, please contact me at (518) 402-9161.

Sincerely,

/s/

Kevin Kispert
Environmental Analyst II

cc: A. Walters, Phillips Lytle LLP
D. May, NYSDPS
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