

**Berkshire Regional Planning Commission
Clearinghouse Review Report**

Final Comments, December 14, 2009

SUBJECT: HOOSAC WIND PROJECT
EOEA #: #13143
LOCATION: FLORIDA & MONROE
ESTIMATED COST: \$160,000,000
REVIEW TYPE: NOTICE OF PROJECT CHANGE (NPC)
PROPONENT: IBERDROLA RENEWABLES
COMMENTS DUE: DECEMBER 14, 2009

DESCRIPTION:

Iberdrola Renewables proposes to erect a 20-wind turbine facility on two sites in Florida and Monroe. The company has purchased the project from the original proponent, enXco. Eleven turbines will be located on the Bakke Mountain ridgeline in Florida, and nine turbines will be located on the Crum Hill ridgeline straddling the Florida/Monroe border. The turbines will be 340 feet tall to the tip of the rotor blades. In addition to the wind turbines, the project will also include: a 4,000-sf maintenance building (expanded from the original 1,000-sf design), two meteorological towers, and a 18,300 sf electrical substation facility in the village of Monroe Bridge. The project will also include approximately 5 miles of new gravel access roads, 3 miles of buried electrical collection lines and 8 miles of overhead electrical lines. Some of the electric lines will run through the public road system through the Monroe State Forest.

Many of the roads will temporarily be 35 feet wide during the construction phase of the project, but the permanent road width after construction will be 16 feet. Approximately 48 acres of forest will be cleared during the construction of the facility; of that, 38 acres will be revegetated. The proposed facility is widely spread out within the project area.

At peak power the project will be capable of producing 30 megawatts (MW) of electric power, which is estimated to provide electricity for approximately 9,000 homes. The proponent estimates that the facility will displace 378 tons of sulfur dioxide (a component of acid rain), 231 tons of nitrogen oxides (a major component of smog), and 71,902 tons of carbon dioxide (a major greenhouse gas) that would be produced each year by a conventional fossil-fueled power plant producing the same electricity.

MEPA ENF thresholds being exceeded include land (>25 acres of disturbance), energy (>25 MW), rare species (a taking), and wetlands (>1/2 acres riverfront). There will be approximately 8,000 sf of clearing along the roadway through Monroe State Forest, so an Article 97 Disposition will be required by the legislature. The project will require an access permit from MADOT. The proponent believes that the changes to the project are insignificant and that no further MEPA review should be required after this NPC process.

CONSIDERATIONS AND POTENTIAL ISSUES:

Land Disturbance

The NPC states that the total land disturbance for the project is 72.7 acres, an increase of almost 25 acres. However, the proponent claims that the permanent land disturbance impacts have increased insignificantly, from 10 acres to 14.6. The proponent claims that the majority of the clearing that constitutes land disturbance will only be temporary, as large tracks of land will be allowed to naturally revegetate.

We do not agree with the proponent's definition of temporary and thus we do not agree with the temporary calculations given in the NPC. As the proponent acknowledges, vegetation along the ridgeline, along the sides of the roads and around the turbines will be allowed to occur only as long as its height does not interfere with the operation of the turbines. Thus, much of the revegetation will be actively maintained as shrubs and low trees. We consider such maintenance to be permanent impacts, as the forest will permanently be prevented from returning to a mature forest canopied state. We have requested a calculation of land that will be maintained as shrub/low trees, but as of Dec. 10th have not received this data. We believe the land disturbance increase from 48 acres (as cited in the ENF) to 72.7 acres (as cited in the NPC) is significant and is a major reason for requiring the filing of an EIR for this project.

We believe that the square footage of the road surface should be considered as impervious surface, due to the degree of compaction required to accommodate the oversized heavy equipment. The five miles of 16-foot-wide gravel road would equate to approximately 9.7 acres of compacted land. This, combined with the project's other impervious areas, would push the project above the EIR impervious surface threshold of 10 acres.

At this time we must note our concern about the issue of segmentation. The land disturbance for the two large commercial wind projects that we have previously reviewed, those being the Hoosac Wind Project and the Berkshire Wind Project, have increased substantially since their first ENF filings with MEPA. We understand that as projects reach a more mature engineering phase that some land disturbance calculations may be refined. However, we are seeing the footprints of these projects doubling in size, exceeding the EIR threshold, without receiving an environmental impact and mitigation analyses that are of a level of detail equal to an EIR. In short, we believe the full impacts of the projects are not being realized in the initial ENF stage of review, and the later increased impacts are escaping the level of MEPA review that is warranted.

Wetlands Resources

The NPC notes that an additional 35,310 sf of Riverfront will be impacted when the distribution lines is extended along the ROW in the town of Monroe. The Monroe Order of Conditions notes that 32,407 sf of the riverfront will be replaced, but we have no details on the replacement being proposed. An additional 1,607 sf of BVW will also be impacted and is proposed to be replaced.

The NPC provided some documentation of the wetlands adjudicatory process, but it does not summarize in a clear and concise manner what the results of the proceedings have yielded. At this point we understand that the wetlands case is now at the Supreme Judicial Court.

During the review of the project's ENF, BRPC was concerned with the design of the stormwater management systems being proposed to control runoff from road and construction activities. We were concerned with the sizing of the systems and their locations adjacent to wetland resource areas. The NPC does not discuss these issues, but we expect that wetland resources will be adequately protected through the local and state permitting processes, especially given the supposed redesign of some aspects of the project and the high level of public scrutiny that this aspect of the project been given.

Wildlife and Rare Species

There have been significant wildlife and rare species studies conducted for this project, including a Phase I Avian Risk Assessment (2002), a Breeding Bird Study (2003), a Raptor Study (2004), and a Bat Activity Study (initiated in 2004). In addition, an extensive study of the area was conducted in 2007 to identify the density and extent of the range of a rare plant species. We commend the proponent for working with federal and state wildlife agencies to develop and conduct the studies, as the results of these studies will certainly expand the base of knowledge that we have regarding wind development impacts to bird and bat populations of our region. The proponent seems committed to conducting post-construction studies to quantify,

understand and mitigate mortality rates once the project is in operation. Some local naturalists have questioned the methodology and results of the bat study, noting that no data was collected above 39 meters, which means that little data has been taken within the range of the turning blades. Thus the data collected to date may not have properly documented bat flights and possible risk where the bats would be most vulnerable in flight. To clarify the studies' adequacy, it would be helpful to provide documentation that the studies were deemed sufficient by bat experts at state and federal wildlife agencies. It has been cited that local bat populations have been drastically reduced in the Berkshires by white nose syndrome, and that some bat hibernacula have experienced a 95-100% mortality rate. Thus, it is critically important to understand the impacts to bats at this and other wind facilities in the region to reduce the possible cumulative impacts of the disease and the facilities.

It has been determined that the project will result in a "taking" of a rare plant. To mitigate the impacts, the proponent has transplanted 572 individual plants, and expects to conduct more transplanting in 2010. Seeds collected during the transplanting efforts are being stored at the New England Wildflower Society. In addition, and as part of the NHESP Conservation and Management Permit, the proponent is placing \$67,500 in an escrow account for the purpose of funding land conservation, field studies or habitat management of the rare plant.

Iberdrola Renewables, the new owners of the project, has a corporate policy to develop an Avian and Bat Protection Plan for each of its projects. We commend the proponent for adopting this policy and encourage them to develop and implement such a plan in close coordination with federal and state wildlife agencies. We also commend the company for developing Section 4 of the plan, Mortality Reduction, Mitigation, Research, and Other Initiatives. In this section, the company acknowledges that, despite all the pre-construction wildlife studies and the developer's best efforts, unexpectedly high mortality rates could occur at a project. The company outlines in its plan steps to mitigate the mortality impacts, going so far as to state that curtailment or relocation of turbines may be considered, albeit as a last resort action. We encourage other wind energy developers to enact similar policies.

Transportation

The transportation route of the large turbine components and the potential impacts associated with route modification was never fully discussed in the ENF, and this NPC does not rectify this omission. To date we do not know the chosen routes nor the proposed alterations for the route. For example, it is our understanding that there are two bridges on Route 2 east of the project that are not capable of handling the loads. The proponent's consultant has supplied some basic information regarding the upgrades to these bridges, but they have not provided information in great detail. Also, there are several areas along Route 2, east and west of the project site, where the turning radii is not large enough to handle the long loads without some modification. Lastly, there may be areas along the route where culverts may need to be reinforced or replaced to handle the heavy load of the turbines. If modifications must be conducted, these should be quantified and added to the total acreage of land disturbance. The lack of complete information on the transportation routes is another example of project segmentation which are appearing consistently in commercial wind project MEPA filings across the Berkshires.

Alternatives

The alternatives analysis that was offered in the ENF was insufficient. However, the proponent apparently provided supplemental information in this area to MEPA prior to the issuance of the Secretary's Certificate. A summary of that information is provided in the NPC and the level of analysis seemed appropriate for the time. However, since that time the trend in commercial wind development has been to erect larger turbines that can generate more electricity. Thus, a project could generate the same megawatts of electricity with fewer turbines, possibly lessening the overall footprint of the project and reducing the amount of clearing. The NPC does not clearly state why the turbine numbers and sizes have remained the same.

High Voltage Transmission Lines

The NPC states that route for the transmission lines will travel through Monroe State Forest and tie into a substation in Monroe Bridge Village. The NPC does not discuss the possible human health impacts of the high voltage lines to residents within the village or other residents along the high voltage transmission line routes.

Consistency with local and regional plans

In 2004 the Berkshire Regional Planning Commission adopted a policy that outlined the conditions under which wind energy facilities should be developed in the region. This project meets most but not all of the conditions listed.

The development of a wind energy facility is consistent with local planning efforts that seek to diversify and increase the Town of Florida's commercial/industrial tax base. Local residents have reaffirmed this effort by voting in favor of investigating wind farm development through a local referendum and by voicing the support for the proposed project at a special permit public hearing held in 2003.

Financial Assistance

The original proponent of the project was pursuing \$17 million in guarantee pricing from the Massachusetts Renewable Energy Trust for the "green energy certificates." According to the NPC, the new project owners are declining this funding assistance, and without this state-funded assistance the project is subject to a limited scope MEPA review process. However, the project has accepted \$250,000 from the Massachusetts EOEEA to support the extensive environmental research that has been conducted at the site. We believe that this constitutes state funding and so a broad scoped MEPA review process should continue for the project.

RECOMMENDATIONS:

The proponent claims that the Hoosac Wind Project has undergone an extensive and thorough pre-construction environmental review process, and that the information presented through the ENF and NPC sufficiently describes the project's impacts and mitigation strategies. BRPC agrees that the NPC has provided a substantial amount of information regarding the wildlife studies, but it is lacking in several other areas. The BRPC Wind Facility Siting Policy of 2004 recommends that wind facility projects file MEPA documentation of a level of at least an EENF. BRPC does not agree that the project changes are insignificant and we do not believe that the NPC provides us with a level of detail of an EENF. We therefore recommend that the Secretary require an EIR for this project, and respectfully request that these items be listed in the scoping of the EIR:

- Clearly quantify the temporary and permanent land alteration impacts of the project. As stated previously, BRPC believes that all areas cleared and maintained as shrub/low tree condition constitutes a permanent land alteration. Land alterations proposed along all transportation routes and transmissions lines should be included in the calculations.
- Calculate impervious surface area, including gravel roads that will require heavy compaction.
- Clearly map out the route and document that the roads capacity and alignment can accommodate the large turbine components that will be transported. Also document that the bridges and culverts along the route are capable of the heavy load.
- Document land alteration along the transportation route.
- Document that there will be no human health impacts to residents living near the high voltage transmission lines.

- Quantify the wetland alterations and mitigations proposed for the entire project. Please include a description of the stormwater management system. Also, include a summary of the findings of the last court case involving the wetland adjudicatory process.
- Include the past wildlife studies and discuss ongoing and future studies.
- Include any state and/or federal wildlife agency findings or correspondence regarding the studies conducted. Most helpful would be documentation that the agencies accept the methodologies and results of the studies.
- Clearly illustrate the visual impacts of the projects and explain the lighting system. The NPC notes that the lights proposed for the project are to be medium intensity red obstruction lights, but the USF&WS recommend white strobe lights. Please document exactly how many turbines will be lit and why the red lights were chosen.

Since the Secretary's decision on the Hoosac Wind Project, the proponent has moved forward on the project, conducting extensive field surveys for rare plants, bats and bird species. We commend the proponent for forging ahead with such work, despite the delay of the adjudicatory court process. We urge the Secretary to require pre- and post-construction wildlife surveys of a similar level of detail for all forthcoming commercial wind facility projects in the Commonwealth. We also commend the proponent's predecessor, enXco, for the transparency and public communication efforts conducted as part of the project. These efforts are in stark contrast to the lack of transparency in the Brodie Mountain Wind Project as it progressed through local and MEPA review, and we urge the Secretary to require a more open and consistent public communication process for all forthcoming commercial wind facility projects.

The BRPC encourages the EOEEA to collect and make available the results of the avian and bat studies that have been conducted as part of this and other wind energy development projects in the Commonwealth to aid wildlife biologists and the wind energy community in understanding and further mitigating impacts to wildlife. This is especially important given the devastating decline of the region's bat populations. Perhaps the EOEEA could arrange to host these studies on its website.

BRPC takes seriously its responsibility to participate in the MEPA public review process for projects that have the potential to significantly impact the Berkshire landscape and environment. However, the Commission wishes to make it clear that providing comments on the Hoosac, Berkshire and Savoy Minuteman projects should not be taken to imply endorsement for these large commercially-sized wind projects being proposed in the Berkshires.

These comments were approved by the Berkshire Regional Planning Commission on December 10, 2009.