



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Atlanta, Georgia 30345

In Reply Refer To:
FWS/R4/ES

MAY 11 2006

Ms. Aida Belen Rivera-Ruiz
State Historic Preservation Officer
State Historic Preservation Office
P.O. Box 9066581
San Juan, Puerto Rico 00906-6581

Dear Ms. Ruiz:

The purpose of this letter is to continue consultation under Section 106 of the National Historic Preservation Act (NHPA) for the planned Windmar Habitat Conservation Plan (HCP) following our meeting at your office on September 27, 2005, and our subsequent field visit to the project area on September 28, 2005. We have included a copy of the Environmental Assessment (EA) for the proposed project to provide additional information on the overall scope, location, and nature of the project. The references to figures all correspond to information in the EA.

The applicant (Windmar RE) is seeking an incidental take permit (ITP) from the Fish and Wildlife Service (Service) pursuant to a section 10(a)(1)(B) of the Endangered Species Act of 1973. A HCP details the steps an applicant will take to minimize and mitigate the effects of a planned action on federally listed species. In this case, the permit would authorize the incidental take of the endangered brown pelican, the threatened roseate tern, and the endangered Puerto Rican nightjar.

Description of the Planned Project and Definition of the Area of Potential Effect

The project consists of the construction and operation of a commercial wind energy project located on a 290 ha (725 acre) coastal property in Guayanilla, Puerto Rico (Figure 1). The project proposes the installation and operation of 25, 1.65 megawatt wind turbines on Punta Verraco, Cerro Toro, and Punta Ventana, on the southwest coast of Puerto Rico. The project could impact up to 12.2 ha (30.5 acres) of suitable Puerto Rican nightjar habitat by the widening of 8.7 km (5.4 miles) of existing roads; the construction of 1.4 km (0.87 miles) of new roads; and the construction of 5.0 ha (12.5 acres) of structural foundations for the wind turbines.

A construction staging area and substation will be positioned in a 3.1 ha (7.8 acre) abandoned limestone quarry on Punta Verraco to support turbine construction. The ground surface and at least a meter of the subsurface area have been removed by limestone quarrying; none of its natural surface or environment remains intact.



The HCP includes several land management strategies intended to minimize the effect of the project on the brown pelican, roseate tern, and Puerto Rican nightjar. These actions include the restoration of at least 2.5 ha (6.2 acres) of land on the abandoned quarry, and the restoration of a 10 ha (24 acre) mangrove area through improvement of the existing drainage. Most significantly, the plan requires the establishment of a permanent conservation easement of 245 ha (613 acres) of the project. This represents protection for 85 percent of the entire property. The long term goal is to essentially integrate the property into the adjacent Guanica State Forest.

The project area is currently zoned R-0, which would permit construction of 360 single-family dwellings on two-acre lots. The high cost of urban land and the demand for coastal property are a source of significant pressure on open space to meet housing needs. It is likely that alternative development of the property could have a much greater effect to cultural resources than the project covered under this HCP.

Given these factors, we believe that the Area of Potential Effect (APE) for the project will be the 12.2 ha (30.5 acres) of disturbance associated with the construction of the Windmar turbines: the construction of the wind turbine foundations; the widening of the existing roads; and the construction of new roads.

Known Cultural Resources

The project area was partially surveyed for archeological resources in 1984 (Maiz 1984). This survey covered part of the Windmar project area, and located a total of six archeological sites within the project. Figure II shows these sites in relation to the roads, planned turbine locations, and other major features of this project. The Maiz report apparently does not include individual site plans.

Our site visit confirmed that there are no standing historic or non-historic buildings or structures of any type located within the boundary of the 290 ha (725 acres) project area.

Eligibility and Effects for the Known Archeological Sites

The Maiz survey does not state that any of the inventoried sites are eligible for the National Register of Historic Places (NRHP) in 'formal' terms, but the author does state that all of the sites have research potential and should be protected (Maiz 1984).

We propose that site GY-14 be considered potentially eligible for the NRHP, under criteria "d" of 36 CFR 60.4. Our site visit confirmed Maiz' observation that petroglyphs are present on the cave walls. It is also possible that intact archeological features and deposits are present in the cave floor as well. Intact cave sites are recognized as important archeological sites in both old and new world archeology for their potential to yield information, and possibly for their symbolic association with religious ideas or practices.

Similarly, we recommend that the rock shelter sites GY 19 and GY 13 be considered potentially eligible for the NRHP, also based on criteria "d" of 36 CFR 60.4. Based on Maiz' description, it is likely that these two sites contain intact archeological deposits; they may also contain unrecorded petroglyphs.

All three of these sites are located in the planned conservation zone, and will not be affected by the planned project.

In contrast, we believe that archeological sites GY 16, GY 17, and GY 18 should not be considered eligible for the National Register of Historic Places. The description in the Maiz report indicates that these archeological sites are essentially surface scatters on shallow soils over limestone bedrock; although additional cultural material may be gathered from these sites, the lack of soil depth and the minimal amount of material in the case of sites GY 17 and GY 18 indicates that no additional significant cultural information will be gained by additional investigations beyond the survey and inventory level.

We have no site descriptions of sites GY 21 and 20, but figure 2 of the Maiz report shows these two sites to be well to the north and west of the project area, respectively. The planned project will therefore not affect either one of these two archeological sites.

Evaluation of the Maiz Report for the Windmar Project

The Maiz report was completed over 20 years ago, and does not cover the entire scope of the APE for the Windmar project. Given these factors, the FWS recommends that the foundation and construction impact zones for the 25 turbines be surveyed for archeological sites, including any new construction access roads that may be needed during construction. This survey should be done as soon as possible in the project area, well in advance of actual construction. This survey should follow the technical requirements and recommendation of your office guidelines for cultural resources surveys, and should locate and evaluate any cultural resources according to the general requirements of 36 CFR 800. This survey will prevent possible costly and unanticipated delays during construction, and fill in the 'gaps' of the Maiz survey for the APE defined in this project.

Visual Effects of the Planned Project

The draft environmental assessment includes an extensive analysis of the potential visual effects of the wind turbines on the surrounding landscapes and communities. We believe that this analysis applies to the evaluation of the project for 36 CFR 800, and a summary of the analysis is presented here.

The industrialized western side of the Puerto de Guayanilla includes LNG storage tanks, an existing power plant, along with numerous petroleum storage tanks and dock facilities. The only area where the project will be clearly visible is the public square in Playa de Guayanilla. The square is 2.4 km (1.5 miles) from the project, but the overall view shed also includes existing

industrial elements. The wind turbines will be less visible from the residential section of Playa de Guayanilla and the communities of El Faro and Barrio Indo due to existing vegetation and modern homes and buildings.

Likewise, the project will be difficult to see from the adjacent Guanica State Forest due to the thickness of the natural forest cover. The wind turbines will be almost 8.0 km (5 miles) from the majority of Route 2, and will be less visible than the existing industrial and commercial development.

Given the existing industrial, residential, and commercial development in the project vicinity; the degree of vegetative cover, and the relative isolation of the planned wind turbines, the Windmar project will not have a visual effect on the setting of any cultural resource that may be listed or eligible for the National Register of Historic Places.

Summary

We have evaluated the planned WindMar wind turbine project under the general provisions of section 106 of the NHPA. We seek your concurrence on the following issues:

1) We define the APE as those aspects of the project that will actually be affected by ground disturbing actions; this includes turbine construction, road widening and construction and smaller scale related actions such as buried cable installation for a total of approximately 12.2 ha (30 acres). The establishment of the conservation easement for 85 percent of the Windmar property, the restoration of dry forest, and restoration of a 10 acre mangrove area will not affect cultural resources due to the scope and conservation orientation of actions themselves.

2) Archeological sites GY 16, GY 17, and GY 18 should not be considered eligible for the NRHP. In contrast, archeological sites GY 12 and GY 13 should be considered potentially eligible for the NRHP. Both sites have the potential to contain buried cultural deposits, as has been shown in many small similar rock shelter sites. Site GY 14 contains petroglyphs on its walls, and may contain undisturbed cultural deposits; this property should be considered eligible for the National Register of Historic Places.

The planned Windmar project will have no effect on these resources due to their distance from any construction or maintenance activity. In addition, the project will limit overall public access to these sites as part of the management of the proposed generation project.

3) An archeological survey should be conducted for the aspects of the project that will be affected by ground disturbing actions; this includes turbine construction, road widening and construction and smaller scale related actions such as buried cable installation. This survey should be conducted well in advance of actual construction, to allow for the greatest options for planning for any significant archeological resources that might be found.

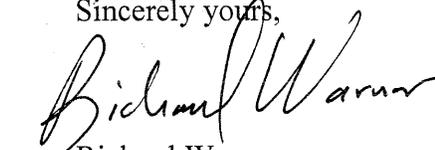
4) There will be no effects to historic structural resources, either directly or from visual impacts.

Ms. Rivera-Ruiz

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Please do not hesitate to contact me at 404-679-7110 or at richard_warner@fws.gov if you have any questions.

Sincerely yours,



Richard Warner
Staff Archeologist

Enclosures
Copy of the project EA