PMC-EF2a

(2.06.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Texas Comptroller of Public Accounts **STATE:** TX

PROJECT TITLE : ARRA SEP Sinton Independent School District Wind Energy Project– Phase II

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0000116	GFO-0000116-021	0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

Project Description – The Sinton Independent School District (ISD), San Patricio County, Texas proposes to install a 100-kw wind turbine (Northern Power 100) on the campus of their high school to reduce operations costs, increase energy efficiency, reduce reliance on imported energy, improve reliability, and reduce environmental impacts of energy production. The turbine would be installed on a 121-foot-tall tubular steel tower, have a rotor diameter of 69 feet, and a total height of about 156 feet.

Potential Environmental Impacts:
Land Use – Installation of the turbine would not conflict with the existing use of the school property and would prohibit future uses on only a small area surrounding the turbine. No "areas having a special designation" (per 10 CFR 1021, subpart D, App B) or prime farmland would be affected.

Protected Species –Nine federally protected species may occur in San Patricio County, including five marine turtles and one marine mammal (manatee) that would not be affected and two terrestrial mammals (jaguarondi and ocelot). No habitat for those wild cats would be disturbed and they would not be affected. One federally listed bird, the whooping crane, may migrate through the vicinity to coastal wintering habitat located 30 to 35 miles to the east. The whooping crane overwinters primarily in the Aransas National Wildlife Refuge and to a lesser extent at Matagorda Island State Park. After evaluation of the project, review of the International Recovery Plan for whooping cranes and other information about this species, and discussions with the U.S. Fish and Wildlife Service (FWS), DOE has determined that the possibility of whooping cranes being killed, injured, or otherwise affected by installation or operation of the wind turbines is discountable, and the project therefore is not likely to adversely affect whooping cranes. DOE has based that determination on the following.

- The wind turbine would be installed the on grounds of the Sinton High School on a mown field and habitat for migrating whooping cranes would not be disturbed.
- Because the turbine would be located in a developed urban area, it is extremely unlikely that migrating whooping cranes would attempt to land near the operating turbine or otherwise be flying at a low enough elevation to be harmed.

- Electrical connections would be via underground cables to the adjacent facilities.
- Any lighting on the turbines would be in accordance with USFWS guidance.
- 100-kw turbines are small relative to the commercial-sized turbines (generally 1 to 3 megawatts with a rotor diameter of 180 to 330 feet and a total height of 300 to 450 feet) that are known to cause mortalities of migrating birds.

DOE has consulted with the FWS and has received a letter from that agency (dated March 11, 2011) stating that impacts are likely to be negligible and that FWS concurs with "may effect, not likely to adversely affect" for the

whooping crane for this project. However, the FWS recommended that if the project start date falls within the migratory timeframe (from late March to early May and late October to mid-November) that 1) aerial hazards above 15 feet associated with construction equipment be marked and lowered at night, and 2) to minimize noise disturbance associated with work activity.

There are three State-listed amphibians and 12 birds (raptors, water birds, and shore birds) that may occur in San Patricio County. Installation and operation of the turbine would have little or no adverse effect on those species, as the project site is a fully developed school campus and surrounded by residential and commercial developments. It is possible that a small number of State-protected birds may be killed or injured during operation of the turbine, but population level impacts would be very small because there is no suitable habitat for these species in the area and the number of individuals of each species that may be killed would be very low.

Other Biological Resources – The turbine would be located in a mowed field. Installation of the turbine would not affect biological resources. Operation of the turbine would result in a small number of mortalities of birds and bats. The most likely birds to be killed are common species in this urban environment.

Cultural Resources – The Sinton ISD has received concurrence from the Texas SHPO that the project would not affect historic properties (concurrence dated 10/19/10).

Wetlands – The project site is flat and is a graded field on the Sinton High School campus There are no drainages or surface waters on or adjacent to the site, and according to the National Wetlands Inventory, the nearest wetland is 0.2 miles southeast of the site. The Sinton ISD has received a letter from the Corps of Engineers stating that the site is not subject to jurisdiction under Section 404 of the Clean Water Act.

Floodplains – According to the FEMA Flood Insurance Rate Map for Sinton, the proposed turbine location is within the 100-year floodplain of Chiltipin Creek. Therefore, DOE prepared a floodplain assessment to evaluate the potential impacts of implementing the project within the floodplain, as required by 10 CFR 1022, Compliance with Floodplain and Wetland Environmental Review Requirements. DOE distributed that floodplain assessment to appropriate government agencies and other interested parties for review and comments; no comments were submitted. As required by 10 CFR 1022, DOE prepared a Floodplain Statement of Findings. DOE concluded that the installation of the proposed wind turbine would have no adverse impacts on the natural and beneficial values of the floodplain, would not affect lives or property in the surrounding area, and would be compatible with applicable floodplain protection standards. DOE will post a Floodplain Statement of Findings on our Golden Field Office public reading room: http://www.eere.energy.gov/golden/Reading_Room.aspx.

Other Surface water and groundwater resources – There are no surface waters on or near the project site and installation and operation of the turbine would not affect surface or groundwater resources.

Coastal Zone Consistency Review – The Sinton ISD is within the area managed by the Texas coastal management program. Therefore, a coastal zone consistency review was conducted by the Texas General Land Office on behalf of the Coastal Coordination Council (CCC). DOE concluded that the project is consistent with Coastal Management Program (CMP) goals and policies for construction of electrical generating and transmission facilities. The CCC review determined that the project would not have adverse impacts on coastal natural resource areas in the coastal zone. (letter dated 03/10/2011).

Noise – According to the turbine manufacturer, the sound level generated by the turbine would be about 55 dB(A) at 98 feet. The nearest residences to the Sinton ISD property are directly across Pirate Blvd to the west of the school or directly east of the campus across Tooley Newlin Drive. These residences are more than 1,000 feet from the proposed turbine location (which is near the northeastern corner of the school campus). The campus buildings are between the turbine location and the primary residential area to the west of the campus, further dampening the sound. At the nearest residences, the sound level would have decreased by about 12 to 15 dB(A), which probably would not be detectable. Sound generated by the turbine would not be loud enough to disrupt classroom or other school activities.

Aesthetics impacts – The 156-foot-tall turbine would be visible for up to at least 0.5 miles and possibly up to one mile in areas with an unobstructed view. However, it would not be clearly visible within much of Sinton because of presence of trees, buildings, and other obstructions. The campus buildings would at least partially block the view of the turbine for those residences west and southwest of the high school. It is possible that some residences would consider the turbine an intrusion on the visual landscape.

Shadow flicker – Shadow flicker generally is indistinct at distances of more than 10 times the rotor diameter of a wind turbine. Because the nearest residences are a distance of more than 14 rotor diameters from the proposed turbine location, the turbine should not cause an adverse shadow effect on residences. The turbine may cast a flickering shadow on the part of the school .located to the west of the turbine location but that effect would occur most often early in the morning (likely when the school is not occupied) and could be overcome by using shades on windows in the school.

Hazardous substances and wastes – According to the "Full Environmental Assessment Form" submitted by the Sinton ISD, there are no hazardous substances or contaminated soils on the project site.

Health and Safety – The turbine tower would be fenced and would not present a safety hazard.
Aviation – The nearest airport, the Alfred Thomas airport, is about 2.4 miles west of the project site. The Federal Aviation Administration issued a Determination of No Hazard to Air Navigation to the Sinton ISD on October 6, 2010. Therefore, it is concluded that there is no effect to air navigation.

Conclusion – DOE and the Sinton ISD have conducted consultations with applicable agencies. The critically endangered whooping crane has a significant presence near the Texas coast in the project region. DOE made a determination that the project would not likely adversely affect the whooping crane and other listed species, and this determination was concurred with by the FWS. DOE also concluded that the installation of the proposed wind turbine would have no adverse impacts on the natural and beneficial values of the floodplain, would not affect lives or property in the surrounding area, and would be compatible with applicable floodplain protection standards. Installation of the 100 kW wind turbine at the Sinton High School would be an energy-efficient and energy conserving industrial practice as included in category B5.1 of DOE's categorical exclusions applicable to specific agency actions. Because the proposed project meets the conditions that are integral elements of the classes of actions for that and other similar categories (10 CFR 1021, Subpart D, App. B) and would have minimal impacts on the environment and surrounding area, the project is categorically excluded under category B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Prepared by Ron Green

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 4/21/11
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager