PMC-EF2a

(2.04.02)

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

RECIPIENT: TEXAS COMPTROLLER OF PUBLIC ACCOUNTS **STATE:** TX

PROJECT TITLE : ARRA SEP UNIVERSITY OF NORTH TEXAS - DENTON Phase II

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-EE0000052	EE0000116	GFO-0000116-019	GO116

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 University of North Texas, Denton County, proposes to install three 100-kw wind turbines (Northwind 100) within an existing water retention basin in the vicinity of athletic practice fields and a new football stadium on their campus in the town of Denton (Denton County), Texas. The turbine towers would be 121 feet tall, and with an approximate 35-foot blade length, the maximum height of the structure would be 156 feet. The proposed site is approximately 125 feet from a paved road, 1,000 feet from a single home, and 1,500 feet from the nearest residential neighborhood.

Potential Environmental Impacts:

Land Use – Installation of the turbine would not affect land use, as they will be installed on a master planned site with maintained grass near athletic fields on a college campus. No "areas having a special designation" (per 10 CFR 1021, subpart D, App B) or prime farmland would be affected.

Protected Species – The recipient's contractor (Pandion Systems, Inc.) prepared an Avian and Bat Impact Analysis for the proposed project. The study concluded that the risk of adverse impact to birds or bats is low, as the number and size of the turbines are small.

There are 3 federally listed threatened and endangered species that occur in Denton County (whooping crane, piping plover, and least tern). The proposed site consists of a suburban campus setting with maintained grass, and the lack of cover vegetation. There is no riverine or aquatic habitat within five miles of the project site that would be used for nesting or foraging by piping plovers or least terns. Although the project site is within the migration route of the whooping crane, there are no suitable stopover habitat, such as agricultural fields or aquatic habitat near the University of North Texas that would attract migrating whooping cranes to the area.

Other Biological Resources – The turbines would be located in a water detention basin adjacent to athletic fields on a college campus. The site location consists of maintained grass. Construction of the turbines would have minimal effects on other biological resources. Operation of the turbines could result in a small number of mortalities of common avian and bat fauna in the area.

Cultural Resources – No archaeological resources are present at the proposed project site due to previous land disturbance associated with past construction of campus facilities. The closest national register listed property is the Denton County Courthouse located in the town of Denton approximately 3 miles northeast of the site. At that distance, visual impacts associated with the historical nature of the property are not expected.

Wetlands – A National Wetlands Inventory review was conducted using the USFWS online mapper tool. No applicable wetlands are located in the vicinity of the proposed project.

Floodplains – According to the FEMA Flood Insurance Rate Map for Denton County (Community Panel 48121C0360E), the project site is not within the 100-year floodplain.

Other Surface water and groundwater resources – The proposed turbines would be located in an existing water retention basin. The tops of the foundations would be designed at a level 6-8 feet above the highest level of detention waters expected in the basin. There are no natural surface waters in the vicinity of the proposed project. Geotechnical borehole investigations were conducted at each of the proposed turbine locations. Drilling to a depth of 40 feet did not encounter ground water. Turbine foundations are not expected to be installed at a depth greater than 40 feet. Subsurface waters on or near the project site will not be affected by installation and operation of the turbines.

Noise – The closest residence (single dwelling) is approximately 1,000 feet southwest of the site, and the closest residential neighborhood is approximately 1,500 feet southeast of the site. At those distances, operation of each turbine would result in a noise level of 35-40 decibels. That level of noise is considered negligible and would not result in adverse impacts to people at those distances.

Aesthetics impacts – The visual quality of the area will be changed with the installation of the wind turbines. The surrounding area consists of flat terrain and the turbines will be visible from relatively large distances. Some individuals in the area may consider the turbines an intrusion on the visual landscape. However, several large structures are planned for the college campus, including a large-scale football stadium adjacent to the locations of the proposed turbines. The turbines are expected to be positive educational components of the college campus since they represent cost-saving alternative energy resources for the university. UNT has stated in their feasibility study that a neighborhood meeting conducted on September 9, 2010 did not identify significant issues from area residents regarding the turbines.

Shadow flicker – There are residences 1,000 to 1,500 feet away from the proposed turbines. In general, ten rotor diameters is a reasonable distance beyond which shadow flicker is of little concern. For the proposed turbines, the potential effect of shadow flicker may be an issue at less than 700 feet. Shadow flicker is not expected to cause impacts to area residences or campus facilities.

Hazardous substances and wastes – Hazardous substances will be appropriately managed during construction of the turbines. No hazardous wastes or emissions would be produced during operations.

Health and Safety – The turbines would not be accessible to the general public and would not create any safety hazards.

Aviation – Notifications of no hazard to air navigation have been received from the FAA for each turbine.

Conclusion – The University of North Texas (UNT) proposal involves the development of an energy-efficient industrial practice. The project would meet the conditions that are integral elements of the classes of actions for that and similar categories (10 CFR 1021, Subpt. D, App. B), and would have minimal impacts on the environment. The project therefore can be categorically excluded under category B5.1A CX.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 11/29/10

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION