PMC-EF2a
(2.04.02)

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

RECIPIENT: Texas State Energy Office **STATE:** TX

PROJECT TITLE : Seadrift Wind Turbine

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0000116	GFO-0000116-022	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:

The Texas Comptroller of Public Accounts proposes to provide the City of Seadrift $364,000 of ARRA SEP funds to install a 100-kw wind turbine (Northwind 100) on a city owned vacant site adjacent to the city's existing waste water treatment plant (WWTP) in Calhoun County, Texas.

The turbine tower would be a 121-foot-tall monopole steel tower with an approximate 35-foot blade length and a maximum height of 156 feet. The structure would be supported by an approximately 624-square-foot steel-reinforced concrete foundation. An electrical interconnection would be installed to feed the wind-generated electricity to the WWTP controls and the public grid. The site work is expected to be limited to clearing a flat area adjacent to the waste water treatment plant fence. According to the sub-recipient, the post construction footprint would be 12ft x 12ft.

Potential Environmental Impacts:
Land Use – Installation of the turbine would not affect land use, as it will be installed in a previously disturbed industrial setting on the WWTP property. No "areas having a special designation" (per 10 CFR 1021, subpart D, App B) or prime farmland would be affected.

Protected Species – There are 11 federally protected species in Calhoun County including five species of sea turtles, the West Indian manatee, the American black bear, and four bird species (bald eagle, northern aplomado falcon, piping plover, and whooping crane). There are also several additional state-protected species. There would be no effect to sea turtles and the West Indian manatee since they occur at the shoreline or in open water. Due to the industrial and residential characteristics of the site, the black bear would not be present in the project area. The proposed site does not contain habitat typically used by any of the listed bird species.

The whooping crane overwinters primarily in the Aransas National Wildlife Refuge (about 10 miles southwest) and to a lesser extent at Matagorda Island State Park (about 12 miles south). An area of whooping crane critical habitat occurs 5 miles south of the project site and subsumes Aransas, Matagorda, and the southern half of San Antonio Bay. The project site is within a FWS designated "whooping crane population area of interest." 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 in previously disturbed area adjacent to the existing WWTP, 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 or short segments of aboveground 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.

Other Biological Resources – The turbine would be located in a disturbed area controlled by the city's WWTP. Construction of the turbine would have minimal effects on other biological resources. The television cable tower at the adjacent industrial site is a popular perch for local vultures. Operation of the turbine could result in a small number of mortalities of birds and bats.

Cultural Resources – Installation of the turbine would not affect any archeological or historical architectural resources. The recipient's contractor submitted a request for SHPO consultation on June 1, 2010 and received a determination of "no affect" from the SHPO on August 11, 2010. Approximately 1.5 miles northeast of the proposed project site is the Seadrift Cemetery, a state historic site. Operation of the turbine would not contribute to any indirect visual or auditory effects on this property.

Wetlands – The project site has been previously disturbed and/or graded. The recipient requested a determination on March 23, 2010 from the U.S. Army Corps of Engineers regarding wetlands. The COE responded on June 28, 2010 with an approved jurisdictional determination. The National Wetlands Inventory shows wetlands within 160 feet of the site consisting of freshwater forested/shrub habitat and the Seadrift stream channel, which drains to San Antonio Bay. No impacts from construction or operation of the turbine are expected at these habitats.

Floodplains – The FEMA Flood Insurance Rate Map for Calhoun County (Community Panel 4801000001C) indicates the project site is within the 100-year floodplain, with a flood elevation level of 8 feet above mean sea level. 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 – A fresh water drainage channel is located approximately 200 feet east of the project location. Groundwater was encountered at a depth of 10 feet during exploratory drilling. Surface and subsurface waters on or near the project site will not be affected by installation and operation of the turbine.

Coastal Zone Consistency Review – The City of Seadrift 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 02/25/2011).

Noise – The closest residences are approximately 400 feet south and southeast of the site where operation of the turbine would result in a noise level of 45-50 decibels. That level of noise is considered minor and would not result in adverse impacts to people at that distance.

Aesthetics impacts – The City of Seadrift has stated that the visual quality of the area will be changed with the erection of the wind turbine. There is an existing tall structure (television cable tower) on adjacent industrial property. The surrounding area consists of flat terrain and the turbine will be visible from long distances. Some individuals in the area may consider the turbine an intrusion on the visual landscape.

Shadow flicker – There are residences 400 feet to the south and southwest of the proposed turbine and 750 feet east across the drainage channel. In general, ten rotor diameters is a reasonable distance beyond which shadow flicker is of little concern. For the proposed turbine, the potential effect of shadow flicker may be an issue at less than 700 feet. There would be little concern at the residences across the channel. Those residences south and southwest of the site should have minimal affect because of the direction and angle of the sun in relation to the turbine.

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

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

Aviation – The City of Seadrift made a determination of no effect to air navigation by using the FAA's notice criteria tool website. The city requested an obstruction evaluation and analysis determination from the FAA on March 26, 2010, and requested a response from the FAA if they disagreed with the determination; no response from the FAA was received. Therefore, it is concluded that there is no effect to air navigation.

DOE has carefully reviewed all of the above information for the proposed project and determined that it does not pose a significant impact to human health and/or environment. Installation of the 100 kW wind turbine at the City of Seadrift WWTP would be an energy-efficient and energy conserving industrial practice. Therefore this project is Categorically Excluded under B5.1 "Actions to Conserve Energy".

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
If the project start date falls within the migratory timeframe (from late March to early May and late October to mid-November) aerial hazards above 15 feet associated with construction equipment shall be marked and lowered at night. Noise disturbance associated with work activity shall be minimized.

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