

PMC-ND

(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Texas Christian University

STATE: TX

PROJECT TITLE : Texturizing Wind Turbine Towers to Reduce Bat Mortality

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001181	DE-EE0007033	GFO-0007033-001	

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:

A9 Information gathering, analysis, and dissemination Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

B3.3**Research****related to conservation of fish, wildlife, and cultural resources**

Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Texas Christian University (TCU) to develop a wind turbine tower coating that would deter bats. The goals of the proposal are to develop a tower coating that is economically feasible, can be applied on-site to operational turbines, and will deter bats, therefore reducing bat mortality rates.

The proposed project would involve the five tasks identified below:

- Task 1: Testing behavioral responses of bats to textures in a flight room.
- Task 2: Development of final texture coating, field study design, and application plan.
- Task 3: Application of coating to turbines at Wolf Ridge wind farm.
- Task 4: Fatality study of control and treatment turbines.
- Task 5: Data analysis and final reporting.

Task 1 would involve multiple activities. TCU would use mist netting to catch wild bats in the Fort Worth area. Specific capture sites could include: Foster Park, Rocky Creek Park, Forest Park, Overton Park, South Z-Boaz Park, Oakmont Linear Park, and Trinity Park. TCU has obtained permission from the City of Fort Worth Parks and Community Service Department to conduct mist netting in these parks. Bats found in the capture areas include Eastern Red, Hoary, Silver-haired, Evening,

Mexican free-tailed, and Tri-colored. There are no endangered bat species found in the capture area, as verified by U.S. Fish & Wildlife Service (USFWS) bat range maps and USFWS's "Information for Planning and Conservation" website (iPaC). TCU would be required to follow the University's general Institute and Animal Care Use Protocol (IACUC permit #14-01). Wild caught bats would be housed in a bat flight facility at TCU, in Fort Worth, Texas. TCU plans to use between 15 – 45 bats in this research. The bat flight facility is pre-existing and no modifications to the facility would be undertaken. TCU would develop and apply different paint and texture coatings to a series of paint-ready, galvanized steel plates. These plates would then be introduced to the flight facility to determine their effectiveness at bat deterrence. No hazardous materials would be used in the coating application. After completion of the flight testing, facility research bats would be released to the wild at the location where they were originally caught. Bats used at the facility will be kept in captivity for approximately 4 weeks.

In Task 2 TCU would use results from Task 1 to develop a final texture coating application which could be applied on-site to towers of operational turbines. TCU would also develop a design for application of the material and for field study work. Final development of the coating application would occur at NextEra Energy Resources at their offices and laboratory facility in Juno Beach, Florida. No new construction or modification to existing facilities would be required. Design work would occur at TCU. No hazardous materials would be used in the process.

Task 3 would involve application of the coating developed in Task 2 to between 8-15 existing wind turbine towers at the Wolf Ridge wind farm near Muenster, Texas. Muenster is approximately 70 miles north of Fort Worth. Treatment would be applied to the towers per the design and plan developed in Task 2. Neither treatment nor coatings would involve use of hazardous materials. No new construction or ground disturbance would be required for this task. Task 3 would occur between April and June 2016.

Task 4 would involve field surveys to monitor bat fatalities at Wolf Ridge wind farm. Survey work would use TCU's established fatality monitoring protocol and would include pre-treatment baseline surveys and post-treatment surveys at both treated and un-treated towers. As with the bat capture area, there are no known endangered bat species found near the wind farm.

Task 5 would involve data analysis and final reporting. Work undertaken for task 5 would occur at TCU.

All researchers handling bats would be required to have pre-exposure rabies vaccinations. All work with bats would be conducted using protective equipment.

No hazardous materials would be used or produced for this research. Any non-hazardous wastes produced would be disposed of through appropriate refuse services.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have significant individual or cumulative impact to human health and/or environment. DOE has determined that the proposed project is consistent with the actions identified in categorical exclusion A9 "information gathering and dissemination", B3.3 "research related to conservation of fish, wildlife, and cultural resources", and B3.6 "small scale research and laboratory operations" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Insert the following language in the award:

You are required to:

Comply with requirements of City of Fort Worth Parks and Community Service Department in regards to mist netting of bats.
Comply with requirements of the University's general Institute and Animal Care Use Protocol (IACUC permit #14-01).

Note to Specialist :

Wind Program

This NEPA determination requires a tailored NEPA provision.

NEPA review completed by Roak Parker on June 16, 2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



Electronically Signed By: Kristin Kerwin

NEPA Compliance Officer

Date:

6/17/2015

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:

Field Office Manager

Date: