PMC-EF2a

(2.04.02)

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

RECIPIENT: NREL **STATE:** VT

PROJECT TITLE: Response to Increasing Turbine Cut-In Speed at the Sheffield Wind Farm, Vermont; NREL Tracking No. 12-002

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
		NREL-12-002	GO10337

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:

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.

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.)

Rational for determination:

BACKGROUND

This proposed project utilizing U.S. Department of Energy (DOE) funds through the National Renewable Energy Laboratory (NREL) would have a subcontractor conduct a study to evaluate bat post-construction impacts and response to increasing wind turbine cut-in speeds at an existing commercial-scale wind farm. The wind farm is the Sheffield Wind Farm located in Caledonia County, Vermont, near the town of Sheffield. The wind farm is operated by First Wind, Inc. and is composed of 16 General Electric (GE) 2.5 MW wind turbines with 85-meter tall masts, a rotor diameter of 100 meters, and a rotor-swept area of 7,854 m2 per turbine. The site lies on a forest ridge comprised of deciduous hardwood trees.

PROPOSED ACTION

Under this proposed project, the subcontractor would: (1) conduct a field assessment to determine the difference in bat fatality rates at turbines with different changes in the cut-in speed relative to fully operational turbines; and 2) ascertain the actual economic costs of the study and estimated costs for the entire project area under different curtailment prescriptions and timeframes. The project would begin in April 2012 with the experimental monitoring phase starting in June and continuing through September 2012. The study would be repeated during the same time periods in 2013.

The subcontractor's team, composed of personnel from Bat Conservation International and Texas Tech University, would conduct daily searches at all sample turbines starting on 1 June and continuing through 30 September of each study year. They would use the standard search methods for fatality searches, searcher efficiency, and carcass removal. The measure of fatality for a treatment would be the sum of all fresh bat fatalities (i.e., those determined to have occurred the night prior to the search) found at a given turbine following a particular treatment assignment, thereby evenly distributing the effect of varying wind speed within a night and among nights across all turbines and treatments in the study. Additional details can be found in Task 3 within the Statement of Work uploaded to PMC.

At the completion of the study, the subcontractor would complete project deliverables in accordance with the Statement of Work uploaded into the PMC. The subcontractor would also publish the interim and final results in reports and a scholarly journal, as the study results are finalized and peer reviewed. NOTE: This specific proposed action does not include Task 5 of the uploaded statement of work.

OTHER NEPA DOCUMENTATION, PERMITS, AGENCY CONSULTATIONS

In addition to DOE/NREL funding, the proposed project would also receive funding and support from the U.S. Fish & Wildlife Service (USFWS). However, USFWS has indicated that they have not conducted a NEPA review for their portion of the proposed action and routinely do not do so for contracting actions (See the 1/17/12 email from Ms. Susi

von Oettingen of the USFWS Concord, NH Field Office in the attachment entitled "USFWS Permitting Question for Sheffield.txt" uploaded to the PMC.). There are no federally-listed threatened or endangered avian or bat species present at the project site, therefore no specimen collection permit or other permits are required from the USFWS. Little brown and northern long-eared bats are state-listed species of concern and are present in the study area. A permit with State of Vermont would be required for specimen (carcass) collection.

First Wind, the operator of the wind farm, holds all applicable federal, state, and local permits for the operation of their wind farm.

IMPACTS OF PROPOSED ACTION
The proposed project entails the collection and analysis of bat carcasses at an established and operational commercial-scale wind farm. The study would analyze the effect of increasing the wind turbines cut-in speed, the wind speed in which the turbine blades begin to rotate, on bat mortality. Previous and other ongoing wind turbine curtailment studies at other facilities have indicated reduced mortality by increasing cut-in speeds. Therefore this proposed action may have a positive effect on bat species by reducing mortalities that would have otherwise occurred due to the normal operation of the Sheffield Wind Farm.

Migratory birds occupy or would potentially use the project area during some periods of time, and some birds may be struck and killed by turbines. The project would quantify fatalities of these birds and report them to the USFWS and the State of Vermont. The operating company (First Wind) would be accountable for the fatalities should they occur, and not the subcontractor (Bat Conservation International and Texas Tech University) of this proposed action. As discussed above, one state permit is required to conduct this study other than the existing permits held by the operating company, and the operating company would be accountable for the fatalities of migratory birds, federally-listed, and state-listed threatened or endangered species of bats should they occur, and not the subcontractor.

The proposed action would not require any construction activity or additional infrastructure to be installed at the wind farm. No impact to wetlands, floodplains, prime farm lands, or cultural resources would occur. Implementation of this action would not require the utilization of hazardous materials or result in generation of hazardous waste or air pollutants.

NEPA DETERMINATION
Based upon the information above, the proposed action would qualify for Categorical Exclusions (CXs) A9 and B3.3.

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.

Note to Specialist :

EF2a created by Rob Smith on 01/27/2012.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Lori Gray / Lori Gray Date: 1/30/2012
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 :