

PMC-ND
(1.08.09.13)

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE : NextEra Wake Steering; NREL Tracking No. 17-003

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-17-003	GO28308

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:

B3.1 Site characterization and environmental monitoring Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The Department of Energy's National Renewable Energy Laboratory (NREL), in collaboration with NextEra, is proposing to conduct field studies and data gathering to study the interactions of multiple wind turbines in wind farms, specifically how the wakes of individual turbines affect those that are located down wind.

The field studies would take place within a five turbine cluster on the Peetz Wind Farm in NE Colorado. NREL researchers plan to install a met tower, a LIDAR, and two SODAR units around the turbine cluster.

The met tower is a tilt-up NRG style tower which is 60m tall, having 4 sets of ~55m radius guy wires, and a tower base (a steel plate) that is 5'x5' (25 sq ft). Site prep would involve leveling an area approximately six square feet. Guywires would be secured with screw-in type anchors.

The LIDAR would be located adjacent to the met tower within the footprint of the tower's guywires. Site preparation would involve creating a level surface, about 6-8 square feet, where prefab concrete pads would then be placed. The LIDAR would then be secured to the pads. The LIDAR would be powered by a propane generator which would have either a 100# propane tank swapped approximately every 2wks by Peetz staff or a larger "submarine" style tank would be installed for the duration of the campaign. Propane tanks would also be secured to the prefab concrete pads. The generator used would not require an APEN air permit.

All leveling ground disturbance activities would occur either with a hand shovel or bobcat. Collectively the tower base and the LIDAR site disturbance area would be less than 100 square feet. The two SODAR systems are self-contained and sit directly on the ground, requiring no site preparation. Fencing would be installed around the met tower and

LIDAR to prevent cattle from interfering or damaging the equipment. Field equipment would be in place up to 12 months and then be removed and the site reclaimed at the end of the project.

The ground leveling activities that would occur as part of the equipment installation would have minimal and temporary impacts. The area is currently used for heavy cattle grazing and periodic vehicle use by Peetz wind farm employees.

During the installation of field equipment, if cultural or archaeological artifacts are encountered, the installers and NREL researchers would stop the site installation activities immediately and inform NREL ESH&Q and DOE of the finding. DOE would consult with the State Historic Preservation Office to determine the appropriate path forward.

The U.S. FWS does not list any threatened or endangered species within the specific project area. There are 18 bird species, protected under the Migratory Bird Treaty Act, that may be found traveling through the project area. To minimize impacts to birds, a ground nesting bird survey would be conducted prior to the beginning of work. Should a nest be found, the project location would be moved to accommodate the nest (offset of 50 meters minimum).

Based on the review of the proposed project, DOE has determined the project would not have a significant or cumulative impact to the human and natural environment. DOE has determined that these activities are consistent with actions contained in DOE categorical exclusion B3.1 "Site characterization and environmental monitoring" and are 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 the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:

During the installation of field equipment, if cultural or archaeological artifacts are encountered, the installers and/or NREL researchers must stop the site installation activities immediately and inform NREL ESH&Q and DOE of the finding.

NREL must ensure that ground nesting bird surveys are conducted prior to the beginning of work. Should a nest be found, the project location will need to be moved to accommodate the nest (offset of 50 meters minimum).

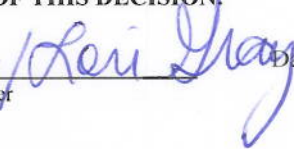
Note to Specialist :

NREL
Laura Margason 3/23/2017

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Lori Gray
NEPA Compliance Officer



Date: 3/23/2017

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: _____