

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 – FY19 Characterization; NREL Tracking No 17-003B

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

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), 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.

This project builds on research conducted in a previous cooperative research and development between DOE and NextEra Energy (reference NREL-17-003) that demonstrated wake steering through yaw control at the Peetz Table Wind Energy Center (Peetz) in northeast Colorado.

For this project, additional wind measurement instrumentation would be deployed within the same five turbine cluster used in the previous research at the Peetz wind farm. Three turbine tower-mounted LIDAR's would be installed, each utilizing energy from the turbine nacelles. A crane would be used to lift the units into place.

Three types of ground mounted LIDAR systems (five units in total) would be installed around the five turbine cluster to collect atmospheric and wind profiling data. Portable solar trailers would provide power to the equipment. Power and data cables would be enclosed inside an above ground conduit and each system would be enclosed with cattle fencing.

Installation work would meet NextEra/Logan County construction stormwater requirements and appropriate erosion control measures would be deployed and maintained during and after the project, as needed. Any disturbed areas

would be restored.

The area is currently used for heavy cattle grazing and periodic vehicle use by Peetz employees. During the installation of field equipment, if cultural or archaeological artifacts are encountered, the installers and NREL researchers would stop site installation activities immediately and inform NREL ESH&Q and DOE of the finding.

The U.S. FWS does not list any threatened or endangered species within the specific project areas. There are 18 bird species, protected under the Migratory Bird Treaty Act that may be found traveling through the project area. Project activities are unlikely to affect migrating birds or nesting species as installation would occur in December.

Field equipment would be in place up a maximum of two years (all equipment would be removed prior to Dec. 15, 2020). At the end of this period NREL would remove all of the project associated equipment and reclaim the site.

This NEPA Determination applies to the proposed activities through December 15, 2020.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

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

This NEPA Determination is valid through December 15, 2020. Should NREL propose to extend the activities past this time, a DOE NEPA Specialist must be contacted and a new NEPA review completed.

Notes:

Review completed by Laura Margason 12/17/2018

This NEPA Determination is valid through December 15, 2020. Should NREL propose to extend the activities past this time, a DOE NEPA Specialist must be contacted and a new NEPA review completed.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: **Kristin Kerwin**

NEPA Compliance Officer

Date: 12/17/2018

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____