

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE Installation of Additional Wind Turbine and Tower at NWTC Site 3.2; NREL Tracking No. 13-013

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308		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:

B5.18 The installation, modification, operation, and removal of a small number (generally not more than 2) of **Wind turbines** commercially available wind turbines, with a total height generally less than 200 feet (measured from the ground to the maximum height of blade rotation) that (1) are located within a previously disturbed or developed area; (2) are located more than 10 nautical miles (about 11.5 miles) from an airport or aviation navigation aid; (3) are located more than 1.5 nautical miles (about 1.7 miles) from National Weather Service or Federal Aviation Administration Doppler weather radar; (4) would not have the potential to cause significant impacts on bird or bat populations; and (5) are sited or designed such that the project would not have the potential to cause significant impacts to persons (such as from shadow flicker and other visual effects, and noise). Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. Covered actions include only those related to wind turbines to be installed on land.

DOE/EA

1378 Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's National Wind (NREL Technology Center NWTC)

Rational for determination:

NREL is working with AnemErgonics, a wind energy tower and foundation manufacturer to install a new wind turbine and tower at the National Renewable Energy Laboratory's (NREL's) National Wind Technology Center (NWTC), located southeast of the intersection of Colorado Highway (CO) 93 and CO-128, in Jefferson County, Colorado. The NWTC is a federally-owned facility that consists of 305 acres and is primarily used for wind energy research, development, and testing. The purpose of the collaborative project is to test turbines and demonstrate performance under NWTC wind conditions. AnemErgonics is proposing to install an additional turbine and tower at Site 3.2 of the NWTC.

A NEPA determination was previously conducted at Site 3.2 for the upgrade and installation of a total of three turbines (NREL Tracking Number 13-003). In addition, a meteorological tower was installed and documented in a memorandum to file, dated 03/07/2013. Currently, only one small wind turbine is operational at Site 3.2. A second turbine is partially installed. This project proposes to install a new Primus Windpower turbine at a new location. A location map is provided in the Statement of Work, attached as a Supporting Document in the PMC. This foundation would be established approximately 50 feet south-southwest of the existing, most southern foundation.

The foundation of the proposed turbine is a new concept, which would utilize "direct embedment". To perform the direct embedment, a 12-inch to 15-inch diameter hole would be augered to a total depth of 8 feet. Once the foundation would be complete, a 33-foot self-supporting tilt-up tower would be installed. An small "Air 40 Turbine" would be installed on the tower. The turbine has a rotor diameter of 46 inches and a rated power of about 300W, as described in the Primus Windpower Products brochure, attached as a Supporting Document in the PMC. It is similar to the other turbines at Site 3.2 in terms of size and output. No guy wires are required for this tower or turbine. No trenching for data or electrical lines is required as lines would be run above ground in existing conduit.

AnemErgonics is proposing to use a new foundation material, instead of concrete. The product is called Poly-Set (see attached MSDS) and, although it is new at NWTC, is used commonly for installing electric utility poles in the utility industry. Poly-Set is an expanding foam product that would surround the tower foundation in the annular space of the borehole. All Health & Safety requirements would be met including pre-construction meeting/verification and proper use of PPE and chemical handling per manufacture's labeling and EHS procedures. Once the components have been mixed and cured, Poly-Set becomes a solid, inert material. This is a material in which no further chemical reaction will take place.

A U.S. EPA General Construction Permit for stormwater is not required for this project since total disturbance is less than 1.0 acre. No grading or clearing would be required for this project. Soil cuttings generated during this project would be less than 0.4 cubic yards and could be spread and seeded on-site or hauled off, per the project manager's discretion. The area would be vegetated in accordance with NREL Procedure 6-2.16: Stormwater Pollution Prevention for Construction Activities: NWTC. Temporarily disturbed areas would be reseeded with native seed mix. Any mobile point emission sources from construction equipment would be negligible. There would be noise typical of construction equipment. Work would be conducted only during daylight hours. Construction-related noise would consist of a short-term increase in ambient noise levels. Per agency consultations conducted during the Site-Wide Environmental Assessment for the NWTC (DOE/EA-1378), no cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands would be impacted by this proposed project. An FAA permit application is not required for this project, due to the height of the towers. If any construction or construction-related activities (i.e., surveying, off-road vehicle traffic, trenching, etc.) occurs between March 15 and September 1, a survey for ground-nesting birds would be completed by NREL's ESH&Q Office before these activities are initiated per NREL policy. NREL and all contractors would follow all federal, state, local safety and security regulations.

The proposed action (the addition of one small wind turbine at Site 3.2) was analyzed as part of the proposed action in the May 2002 Final Site-Wide Environmental Assessment of NREL's NWTC (DOE/EA-1378). A Finding of No Significant Impact determination for DOE/EA-1378 was issued in May 2002. As this proposed project was analyzed as part of the proposed action in DOE/EA-1378 and with no extraordinary circumstances identified, the May 2002 FONSI determination applies to this proposed action.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

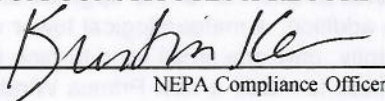
If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing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

Note to Specialist :

EF2a completed by Amy L. Van Dercook on 6/3/13.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date:

6/3/2013

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 :