

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:** NREL-20-033 NEXTracker PV Array - Flatirons Campus

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	DE-AC36-08GO28308	NREL-20-033	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:

**DOE/EA 1914 (NREL NWTC)** Final Site-Wide Environmental Assessment of the Department of Energy's National Wind Technology Center at the National Renewable Energy Laboratory

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) proposes to install and operate a NEXTracker photovoltaic (PV) array at the NREL Flatirons Campus (FC) in Boulder, Colorado. The purpose of the proposed project is to obtain measurements to validate high wind speed performance (as predicted by wind tunnel testing and simulations) in the occasionally extreme weather environment experienced at this location.

The proposed project would involve the temporary installation of 18 rows of PV panels arranged in two different tracker configurations (called "Horizon" for "one panel in portrait", 1P, and "Gemini" for "two in portrait", 2P). The PV array and associated equipment would be located in Row 2, south of the existing AES solar pilot installation, and cover about 3.5 acres. A construction laydown area would be located adjacent to the array on the southeast side of the Horizon tracker. Construction vehicles would access the site from the Row 3 road over a short distance of mowed vegetation; a permanent access driveway would not be developed.

Project equipment and infrastructure that would be installed include:

- Horizon tracker: 9 rows of PV modules, using 783 PV modules on 108 foundation piles.
- Gemini tracker: 9 rows of PV modules, using 1080 PV modules on 85 foundation piles.
- 3 or 4 additional piles for a mounting weather station and the Network Control Units.
- Tracker controllers, inverters, and wiring for power
- Seven meteorological ('met') towers (three of 10m/32.8ft height, four of 5m/16.4ft height)
- Three 40ft International Organization for Standardization (ISO) containers

The support structure for the PV modules would be emplaced using driven pier foundations. Connections for electrical lines, data lines, and grounding would be made aboveground. Instrumentation and data acquisition equipment would be mounted to the trackers or placed on top of the ground. Power for the tracker controllers would be taken from Site 3.2 via wiring (estimated length of 1500ft) that would be either aboveground or trenched in using a direct-bury method (3ft deep by 3ft wide). Met towers would be installed around the trackers. Each would include a small concrete base (approximately 2ft by 2ft by 2ft) and three guy wires installed with screw anchors. The ISO containers would be placed in the FC boneyard area to store materials.

Installation would start in August 2020 and last up to two months. Data would be collected for about a year of operational testing, then used to assess the design and instrumentation. If modifications are necessary, a second year of data collection would be conducted.

All ground disturbing activities would be conducted in accordance with existing NREL policies and procedures that guide such work. Ground disturbance would occur in areas that have been previously disturbed, and proper erosion control measures would be used and maintained during the project period. After the project is complete, the PV array and associated equipment would be removed, and the site would be revegetated as needed. Non-hazardous construction waste would be reused, recycled, or disposed of in accordance with applicable regulations and NREL policy and procedures. Air emissions resulting from ground disturbing activities and equipment operation would be de minimis.

Project activities would not affect cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands, and no permits would be required. A migratory bird nesting survey shall be completed if project activities involving ground disturbance occur between March 15 and September 15. If nests or eggs are found, the area would be cordoned off with a proper buffer until nestlings fledge.

Individuals working on this project could be exposed to physical and electrical hazards. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring, as well as obtaining a Safe Work Permit. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified.

Based on the review of the proposed project, DOE has determined that this project is an activity to enhance research, which was analyzed in Section 2.1.1 "Increasing and Enhancing Research and Support Capabilities" of the 2014 Final Site-Wide Environmental Assessment of the NREL NWTC (DOE/EA-1914). DOE has determined that this activity is bound by the environmental impact analysis contained in this EA and its respective FONSI, and no further NEPA review is required.

**NEPA PROVISION**

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

A migratory bird nesting survey shall be completed if project activities involving ground disturbance occur between March 15 and September 15.

Notes:

NREL  
Whitney Doss Donoghue, 7/28/2020

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: Electronically Signed By: Lisa Jorgensen Date: 7/29/2020  
NEPA Compliance Officer

**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: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Office Manager