

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-21-004 Characterizing Wind Conditions at CSP Plant - Boulder City, NV](#)

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	<a href="#">DE-AC36-08GO28308</a>	<a href="#">NREL-21-004</a>	<a href="#">GO28308</a>

**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 U.S. Department of Energy (DOE) is proposing to provide federal funding to the National Renewable Energy Laboratory (NREL) to characterize the turbulent wind conditions within a concentrating solar power (CSP) plant through a field campaign at an existing, privately-owned CSP plant.

NREL would partner with Acciona Energy for the proposed project. NREL has an agreement with Acciona Energy to use their site, the Nevada Solar One CSP Plant in Boulder City, Nevada, for this field campaign. No change in the use, mission, or operation of the Nevada Solar One plant would arise out of the proposed project activities.

The campaign would use a set of instruments which include four (4) short meteorological evaluation (met) towers, a profiling lidar, and a scanning lidar. NREL would perform all work associated with the project including installation, operation, and disassembly of the instruments. NREL has contracted with Structural Components to provide analysis of the anchors that would be used for attaching the guy wires; however, there would be no involvement from any third party or Acciona for the installation work.

Project equipment and infrastructure that would be installed at each location include:

- One (1) inflow met tower (15m tall) attached with two sonic anemometers (at 3m and 7m), one cup anemometer (at 15m), a pressure sensor (at 2.5m), and a humidity sensor (at 3.5m).
- Three (3) tilt-up met towers (8m tall) supporting two anemometers (at 4m and 7m).
- One (1) inflow profiling lidar.
- One (1) scanning lidar installation.

The base of each tower would sit on the ground. Each met tower would have four (4) primary guy wires and four (4) secondary guy wires attached to four (4) ground helical anchors. The anchors would have a minimum depth of 26," not to exceed 36". The met towers would have vendor authorized grounding and lightning protection and would be powered by AGM batteries installed in an approved battery box enclosure with secondary containment. The batteries would be charged via a charge controller with PV panels mounted on a portable rack that would be filled with loose material (i.e. dirt, rock) to provide ballast. The output of the charge controller is 12 VDC which would deliver the necessary power to each met tower via armored insulated cable that would rest above ground. The lidars would sit on the ground with no excavation or anchoring required.

Minor ground disturbance resulting from the temporary emplacement of the met towers would occur entirely within an area of extensive previous development. 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.

The installation phase would require two NREL technicians working typical 8-hour workdays for approximately 1 – 2 weeks. The installed instruments would gather wind speed data at and around the CSP plant. Instruments would be remotely controlled, and the data would be transferred remotely via cellular wireless connections. After the campaign is complete, all instruments and their supports would be disassembled and returned to the NREL Flatirons Campus. The campaign is expected to run from January 2021 to April 2021.

Individuals working on this project could potentially be exposed to physical and electrical hazards during the course of the project. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring. All work is to be conducted in accordance with established written procedures.

#### 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. If nests or eggs are found, the area would be cordoned off with a proper buffer until nestlings fledge.

Notes:

NREL  
Whitney Doss Donoghue, 1/11/2021

#### 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: Lisa Jorgensen** Date: 1/12/2021  
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