

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** NREL**STATE:** MT

**PROJECT TITLE:** Blackfeet Reservation Wind and Solar Assessment: met tower and SODAR; NREL Tracking No. 19-045

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	DE-AC36-08GO28308	NREL-19-045	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 U.S. Department of Energy's (DOE) National Renewable Energy Laboratory is proposing to enter into a subcontract with Harness Energy to install and maintain instrumentation to assess wind and solar resources on the Blackfeet Indian Reservation (Reservation) near Browning, MT.

In April 2017, the Blackfeet Nation (Nation) approved a congressionally enacted settlement of the Nation's water rights. Implementation of the settlement provides the Nation the opportunity to develop new sources of energy, including renewable energy sources such as hydropower, wind, and solar. Part of settlement implementation work is an assessment of potential renewable energy resources on the Reservation. The Bureau of Reclamation (Reclamation) is taking the lead in assessing the Reservation's hydropower resource. Reclamation has entered into an Interagency Agreement with DOE's NREL to provide technical assistance to assess the solar and wind energy potential of the Reservation and conduct preliminary analysis of the potential to develop renewable energy on the Reservation at the community and utility scale.

As part of the renewable energy resource assessment, NREL would measure wind and solar resources on the Reservation, which is located in eastern Glacier County, Montana. NREL would enter into a subcontract with Harness Energy to install and maintain the instrumentation and associated equipment to support the work. Resource data would be collected at three locations. On September 11 and 12 of 2019, representatives from Reclamation, NREL, and Harness Energy met with tribal officials from both the Tribal Land Office and Tribal Historic Preservation

Office (THPO) to select the monitoring locations. Three locations currently used for agricultural purposes (one is a plowed field for alfalfa; the other two are pastureland) were selected in consultation with tribal officials, which are: (1) Site 1: N 48.552062, W 112.897932; (2) Site 2: N 48.532553, W 112.619914; and (3) Site 3: N 48.733008, W 113.140940.

Project activities would include the following:

- a) Installation of one temporary 60m tubular meteorological tower at Site #1. The met tower would be installed using a winch and gin pole. The tower would be anchored by guy wires and 12 manta anchors. A skid-steer would be used to install the anchors by driving them into the ground.
- b) Installation of instrumentation on the met tower to collect both wind and solar resource data. Instruments that would be installed include a pyranometer, humidity sensor, barometric pressure sensor, temperature sensors, speed sensors, and a direction vane.
- c) Placement of a Triton Sound Detection and Ranging (SODAR) remote sensing trailer-mounted unit at all three Sites.

The met tower would be installed for approximately 18 months at Site #1. The SODAR unit would be initially co-located with the met tower at Site #1 for approximately 6 months; the unit would then be moved to Site #2 for another approximately 6 month period; and the unit would be moved once more to Site #3 for approximately 6 months. Installation of the met tower and SODAR placement would take 4-5 days. Relocating the SODAR unit would take 1-2 days each time. At the end of the assessment, the met tower would be dismantled and removed from the site, which would take 3-4 days.

All work would be performed at the selected sites on the Reservation. The total footprint of the met tower, including the guy wires, is approximately 90 yards x 90 yards. The tower base is placed on a metal plate, and the footprint is approximately 1 square yard. The manta anchors would result in minimal ground disturbance because they are driven into the ground directly and do not require digging or trenching to install. The SODAR unit is mounted on a small trailer and requires no ground disturbance to install; the unit is simply parked in place and stabilized with jacks. At the conclusion of the assessment, all equipment would be removed and the disturbed areas would be reclaimed in accordance with Tribal Environmental Permitting requirements.

The U.S. Fish and Wildlife Service's IPaC tool was used to determine if endangered species or migratory birds are present in the proposed project area. The grizzly bear and Canada lynx are two threatened species that could encounter the project area. The wolverine, which is proposed as threatened, may also encounter the project area. All three of these species have low population densities in the project area. The three proposed sites are all in agricultural areas and do not contain quality habitat for these species, and the project area does not contain critical habitat for the grizzly bear and the Canada lynx. Because the project locations are not suitable habitat for any of these species and their population density in the project area is low, the likelihood of one of these species encountering the project sites are very low. Given the low likelihood of individuals from these species being present at one of the sites and the temporary nature of the proposed project, DOE has determined that the proposed project would have no effect on these species.

Five species of birds that are considered birds of conservation concern are present in the project area; they are the Bald eagle, Golden eagle, Long-billed curlew, Marbled godwit, and Willet. These species either breed, winter, or migrate through the project area. The breeding season of these birds spans April to July with the exception of the eagles which breed from January to August. Project equipment would be installed in the fall which is outside of the breeding season for these five species. Although removal of the equipment may coincide with the breeding season of these species, impacts to breeding are not anticipated due to the short timeframe it would take to dismantle the met tower (3-4 days). The SODAR unit is simply driven off-site. The guy wires used to anchor the met tower pose a collision risk to individuals traveling through the project area while wintering or migrating. Bird diverters would be installed on the guy wires to mitigate this risk. Noise produced by the SODAR unit poses a noise risk to individuals traveling through the project area while wintering or migrating (the met tower and associated instrumentation do not emit sound or light). The SODAR unit emits a chirping sound at regular intervals; the sound is directed upward. Birds within a 250-meter radius of the unit could be affected to varying degrees depending on how close they are to the unit. Due to the fact that the noise is intermittent, only one SODAR unit would be used, and it would be located temporarily at each site for 6 months, adverse impacts to migratory birds are unlikely. Based on the above analysis, DOE does not anticipate any adverse impacts to migratory birds.

The proposed project is not likely to impact cultural resources. Representatives from Reclamation, NREL, and Harness Energy met with tribal officials from both the Tribal Land Office and THPO to select monitoring locations that would provide valuable data and would not impact cultural resources. Per direction of the THPO, when the

instruments are ready to be installed a Blackfeet THPO technician must be present to monitor the ground disturbance. If any resources are found, the location of the equipment will be moved to avoid the site and an alternative location will be selected.

Riverine wetlands are located near Site #3, but no impacts to this resource are expected because the SODAR unit would not be placed in or immediately adjacent to this resource; as such, the proposed project would not result in impacts to wetlands or floodplains. The proposed project would not result in impacts to prime farmland. No FAA permitting or tower lighting is required as the height of the tower is below 200 feet and is not near an airport. Project activities shall not commence until all required permits are received. Two permits are required by the Tribe: (1) Ordinance No. 117 Permit for aquatic lands protection; and (2) THPO permit. The THPO permit paperwork has already been filed, and the Ordinance No. 117 permit application has been submitted.

Individuals working on this project could be exposed to hazards during the lifting of the met tower, use of heavy equipment to install the anchors, and installation of guy wires. Existing corporate health and safety policies and procedures would be followed including employee training, proper personal protective equipment, engineering controls, and monitoring. The SODAR unit could pose a noise hazard; direct exposure to the top of the unit would expose a worker to a 100dB noise source. Signage would be posted warning workers to stay back 5 feet or more from the SODAR unit while in operation to avoid noise exposure.

## NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

All required permits and approvals shall be obtained prior to commencing work. All work must be performed in accordance with the terms and conditions defined in the permit(s).

To protect cultural resources, NREL is responsible for ensuring that a Blackfeet THPO technician is present for equipment installation. If any cultural resources are found, the location of the equipment must be moved to avoid the site and an alternative location must be selected.

Notes:

NREL  
Nicole Serio, 11/5/2019

## 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: \_\_\_\_\_



Casey Strickland

NEPA Compliance Officer

Date: 11/7/2019

**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: \_\_\_\_\_