

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:** NWTC Offsite Transmission Line and XCEL Switchyard; NREL Tracking No.

|  |                                      |                            |                   |
|--|--------------------------------------|----------------------------|-------------------|
| <b>Funding Opportunity Announcement Number</b> | <b>Procurement Instrument Number</b> | <b>NEPA Control Number</b> | <b>CID Number</b> |
|  | DE-AC36-08GO28308                    | NREL-14-015C               | 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:

|  |   |
|--|---|
| <b>B4.11 Electric power substations and interconnection facilities</b> | Deactivation, dismantling, and removal of electric transmission facilities (including, but not limited to, electric powerlines, substations, and switching stations) and abandonment and restoration of rights-of-way (including, but not limited to, associated access roads). |
| <b>B4.12 Construction of powerlines</b>                                | Construction of electric powerlines approximately 10 miles in length or less, or approximately 20 miles in length or less within previously disturbed or developed powerline or pipeline rights-of-way.   |
| <b>DOE/EA 1914 (NREL NWTC)</b>   | 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) is proposing to expand the electrical transmission capacity at the National Wind Technology Center (NWTC). The NWTC is a federally-owned facility that consists of 305 acres and is used for electrical grid, wind, and solar energy research, development, and testing. The NWTC is located southeast of the intersection of Colorado State Highways 93 and 128, in Jefferson County, Colorado.

Project Description:

NREL's proposed Power Generation Upgrade Project would increase the electrical transmission capacity at the NWTC and connect to Xcel Energy's transmission infrastructure. The proposed project would include the construction of a 1.3-mile 115kv overhead transmission line, an Xcel Energy switching station, and associated infrastructure (including a fiber optic cable). The transmission line would run south from the NWTC property across the U.S. Fish and Wildlife Service (USFWS) Rocky Flats National Wildlife Refuge (the Refuge), through a short segment of private property, to an Xcel Energy switching station. This project would be for the exclusive use of the NREL NWTC and would not support new or existing residential or commercial areas.

Transmission Line and Fiber Optic Cable:

The 1.3-mile 115kv transmission line would consist of three electrical conductors and two data wires supported by 13 single-pole steel structures (poles) and two A-frame support structures at each end. Transmission line structures would range in height between 55 and 90 feet. Four of the poles would be set in a concrete foundation at depths up to 21 feet deep and up to 8 feet in diameter. Nine poles would be placed directly in the ground, in boreholes at a depths of 10 to 15 feet and up to 8 feet in diameter and then backfilled. The poles would be located approximately 0.1 mile apart, with the lowest electrical conductor being no less than 26 feet above the ground. The two A-frame transmission line structures would be located on each end of the line; one would be located on the DOE NWTC substation site and the other within the Xcel Energy switching station.

A fiber optic communication cable would be run from the NWTC substation to the northern most pole located on the Refuge. Cable installation would require a 4-foot-deep, 2-foot-wide, and 220-foot-long trench which would create an overall disturbance of 880 square feet (less than 0.02 acres). The fiber optic cable would be laid in the trench and the trench would be backfilled.

Of the 13 transmission line steel poles, 10 would be located along the western most boundary of the Refuge and 3 would be on private property easements. From the NWTC substation, the transmission line would run south for about 1 mile on the Refuge then veer westward and run for approximately 0.3 miles across private land, ending at an Xcel Energy switching station. This would require acquisition of a right-of-way through the Refuge and easements over two parcels of private property. DOE has submitted a right-of-way (ROW) application to the USFWS and would acquire easements across private lands.

The easement across the privately owned parcels would be approximately 60 feet wide. This area has previously been disturbed by gravel mining and various industrial uses. Within this area is a railroad spur that runs parallel between Highway 93 and the Refuge, as well as piles of discarded bricks, construction debris, and dirt. DOE would install a rail crossing ramp over the small section of the rail spur to prevent damage to the vehicles and the tracks.

The ROW through the Refuge would be a maximum of 150 feet wide. This area has also been previously disturbed by gravel mining activities. There is residual evidence of these activities but area is no longer in use and the grassland has reestablished.

#### Xcel Energy Switching Station:

To accommodate DOE's project, Xcel Energy would purchase an approximately 6.8-acre site and construct a new switching station at the southern end of DOE's proposed transmission line. The proposed switching station site is on a parcel of land along Highway 93, in an industrial use area. Xcel Energy's switching station project would include:

- \* A switching station with associated electrical equipment;
- \* Four steel power line structures (two for DOE's line and two to connect to Xcel Energy's existing Plainview-Eldorado 115kV transmission line);
- \* Stormwater mitigation (including a detention pond with stormwater overflow area, swales and several culverts); and
- \* Gravel-paved roads onto the site and around fenced equipment areas (approximately 40' x 80').

Xcel Energy's switching station would be constructed approximately in the middle/eastern portion of the site. The area would be cleared, graded, and then uniformly covered with crushed rock. The switching station would be approximately 94' x 300' (approximately 0.5 acre) in size. Components of the switching station would include electrical equipment such as a metering unit, bus bar, circuit switchers/breakers, relay panel, metering unit; telephone circuit; and other associated equipment.

#### Analysis of Potential Impacts to the Human Environment:

DOE has considered potential impacts of the proposed project to the human environment, including potential impacts to cultural and historic resources, wetlands and floodplains, air and water quality, and vegetation and wildlife (including threatened and endangered species and migratory birds).

On behalf of DOE, ERO Resources Corporation (ERO) conducted a cultural resource survey and analyzed the potential impacts to cultural and historic resources. The analysis considered an area of potential effect (APE) of 5-miles surrounding the proposed project for indirect impacts. The APE for direct impacts is the footprint of the proposed construction activities (28.11 acres). One previously documented cultural resource, a segment of the Denver, Utah & Pacific (DU&P) Railroad that had been determined ineligible for listing in the National Register of Historic Places, was identified within the 5-mile APE for indirect impacts. ERO also documented a new segment of the DU&P Railroad (5JF742.2) and recommended the segment as being "non-supporting to the eligibility of the site". The ERO report recommended that a determination of "no historic properties affected" pursuant to 36 Code of Federal Regulations 800.4(d)(1) of the National Historic Preservation Act (NHPA) would be appropriate for this project. DOE will initiate consultation with the Colorado State Historic Preservation Office (SHPO). Construction of the proposed project would not be authorized until DOE has completed consultation with the SHPO per section 106 of the NHPA.

On behalf of DOE, Pinyon Environmental Inc. surveyed the project site and developed an Environmental Report which assessed potential impacts to land use; visual resources; air quality; water quality (including stormwater and ground water); wildlife and vegetation (including threatened and endangered species and migratory birds); historic resources; hazardous materials; tourism and recreation; and cumulative effects.

Additional site surveys and environment analyses were conducted on behalf of DOE by NREL biologists and

environmental staff. No wetlands or floodplains on or adjacent to the project location were identified. No suitable habitat was found in the project area for Preble's meadow jumping mouse, Ute ladies' tresses orchid, Colorado butterfly plant, Black-tailed prairie dog or Burrowing owl. Based on this information and findings of the Pinyon Report, DOE has determined that there would be no impacts to federally listed, state protected, or species of special concern. This NEPA Determination constitutes a record of DOE's "No Effect" finding per section 7 of the Endangered Species Act.

The Avian Power Line Interaction Committee (APLIC) 2012 guidelines have been integrated into the project planning and design, including bird diverters on the cable line. Following these guidelines would minimize perching sites and other potential hazards to migratory birds and raptors.

Stormwater best management practices would be followed during construction and reclamation of the boreholes and trenching. Reclamation would include replacing top soil separated during excavations followed by reseeding with a native plant mixture.

NREL's 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 or authorized in a Safe Work Permit.

Xcel Energy would follow their established corporate health, safety, and site reclamation procedures.

In consideration of the proposed project and based on the analysis conducted, DOE has concluded that the proposed project would not result in significant direct, indirect, or cumulative impacts to the human environment.

#### NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

NEPA review completed by Laura Margason on November 15, 2018.

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



Kristin Kerwin

Date: 11/19/2018

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: \_\_\_\_\_

Field Office Manager

Date: \_\_\_\_\_