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United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: August 8, 2014

REPLY TO ATTN OF: KEC-4

SUBJECT: Environmental Clearance Memorandum

TO: Charla Burke
Project Manager – TEP-TPP-1

Proposed Action: Morrow Flat Substation Construction and Related Improvements Near Boardman, Oregon

Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021: B 4.11 Electric power substations and interconnection facilities, and B4.13 Upgrading and rebuilding existing powerlines

Location: Morrow, Umatilla and Gilliam counties, Oregon

Proposed by: Bonneville Power Administration (BPA)

Description of the Proposed Action: BPA proposes to build a 230/115-kilovolt (kV) substation called Morrow Flat Substation near Boardman, Oregon. This project would also entail the following activities to support the proposed substation:

- Replacing steel transmission towers, and installing wires and conductor, one mile in both directions of the proposed substation
- Reducing sag in the McNary-Boardman and McNary-Jones Canyon transmission lines, using a variety of methods that would include replacing towers
- Installing communicatons equipment at three nearby substations
- Making road improvements

These enhancements would help BPA serve up to 250 megawatts of load growth in the Boardman, Oregon area, and ensure that safety and operational standards are met. The increase in demand comes from existing development and food processing plants, as well the development of new data centers. The proposed project would include activities in Umatilla, Morrow and Gilliam counties.

Morrow Flat Substation would be approximately 1.5 miles east of the existing Boardman Substation, along an existing corridor containing three BPA transmission lines – the 230-kV McNary-Boardman, 230-kV McNary-Jones Canyon and 500-kV McNary-Coyote Springs. The McNary-Boardman and McNary-Jones Canyon lines would feed through Morrow Flat Substation. Approximately 22 acres of land zoned for industrial use, and formerly for agricultural production, would be developed for the substation. The site would be excavated and graded; and a grounding mat would be placed 18 inches below the surface, extending outside the substation fence perimeter by 4 feet. A 3-inch layer of rock would be placed over the grounding mat. Equipment to be installed in the fenced substation yard would include power circuit breakers, voltage and current transformers, a power transformer, disconnect switches, bus tubing and pedestals, substation dead-end towers, transformer towers, control house and conduit, electrical panel boards, station service rack, lighting, oil containment and a drainage system. Access to the substation site would be via Lewis and Clark Drive, an existing paved road.

To support the installation of the substation, communication equipment would also be installed within the control house at McNary, Jones Canyon and Boardman substations, to remotely protect equipment from outages or other major system disturbances. This equipment consists of racks of computers and other devices that allow grid operators to monitor the system and make adjustments. At McNary Substation, a three-pole wood structure within the substation yard would be replaced to straighten the alignment of the conductor and reduce the lateral tension on the structure.

To support the weight of the additional overhead ground wire and new conductor that would be added to the transmission lines one mile in each direction from the proposed substation, 22 steel-lattice towers designed to withstand the weight and torque would replace the existing steel towers.

As part of the project, BPA would need to make other improvements to the McNary-Boardman and McNary-Jones Canyon transmission lines. Analysis shows impairments on both lines that would need to be corrected to meet operational and safety standards. Line impairments occur when the conductor sags too close to the ground. Where the impairments are relatively small, at 32 towers, the line would be raised by making changes to the towers' hardware, such as shortening the insulator strings or conductor spans. At these locations, the conductor would be temporarily unclipped from the insulators and fixed to a rigid surface, such as a boom truck or the tower itself, while the insulator string is replaced or the conductor span shortened.

At 33 towers, where the line impairment is larger, new towers approximately 10 to 20 feet taller would be built. One new dead-end structure would be added on the McNary-Boardman line. New towers would be placed within 50 to 70 feet of their existing location in the same alignment as the rest of the transmission line.

All of the new towers would be between 80 and 105 feet tall, and designed with fall protection measures to ensure worker safety. The area of disturbance at each tower would be approximately 100 by 100 feet. Plate footings would be installed at suspension structures. These plates would consist of a 4-foot by 4-foot steel plate, buried 9.5 feet deep, at each of the four tower corners. Grillage footings (a framework of crossing beams that helps provide support) would be used at dead-end structures. These footings would consist of a 15-foot by 15-foot assembly of steel I-beams, welded together, and buried 12.5 feet deep. Once the new tower is in place, the old tower would be removed, the concrete footings would be cut off two feet below grade, and the site covered with soil and reseeded. Construction equipment may include line trucks, crane, excavator and bulldozer.

BPA would need to acquire rights and make improvements to the road system that accesses the towers where construction activities would occur. BPA would acquire rights to 3.5 miles of roads, improve 1.6 miles of road, reconstruct 2.4 miles and construct 375 feet of new road. Road improvements would include grubbing and clearing vegetation, shaping and compacting the subgrade, adding rock and installing drainage features.

Temporary disturbances would include the construction of guard structures at road crossings, railroad crossings and line crossings where the new conductor will be installed. Eight pulling and tensioning sites, typically 100 by 300 feet each, would also be required to provide a space where workers would tighten the conductor and ground wire to the proper tension once it is mounted on the transmission structures. Construction materials would be either stored in a temporarily graded, graveled and fenced area south of the substation, or within an existing fenced and graveled lot near the project corridor accessible by existing maintained roads.

Findings: BPA has determined that the proposed action complies with Section 1021.410 and Appendix B of Subpart D of the Department of Energy's (DOE) National Environmental Policy Act (NEPA) Regulations (57 FR 15144, Apr. 24, 1992, as amended at 61 FR 36221-36243, July 9, 1996;

61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011). The proposed action does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal. The proposal is not connected [40 C.F.R. 1508.25(a)(1)] to other actions with potentially significant impacts, has not been segmented to meet the definition of a categorical exclusion, is not related to other proposed actions with cumulatively significant impacts [40 C.F.R. 1508.25(a)(2)], and is not precluded by 40 C.F.R. 1506.1 or 10 C.F.R. 1021.211. Moreover, the proposed action would not (i) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, (ii) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities, (iii) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation and Liability Act-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases, (iv) have the potential to cause significant impacts on environmentally sensitive resources, or (v) 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.

Based on the provisions identified on the attachment, this proposed action meets the requirements for the Categorical Exclusion referenced above. We therefore determine that the proposed action may be categorically excluded from further NEPA review and documentation.

/s/ Carolyn A. Sharp
Carolyn A. Sharp
Contract Environmental Protection Specialist
Act 1 Group

Reviewed by:

/s/ David Kennedy for
Gene Lynard
Supervisory Environmental Protection Specialist

Concur:

/s/ Katherine S. Pierce *Date: August 8, 2014*
Katherine S. Pierce
NEPA Compliance Officer

Attachment:
Provisions
Environmental Checklist for Categorical Exclusions

ATTACHMENT

PROVISIONS

This categorical exclusion will meet the following provisions:

Wetlands:

- Avoid using wetland areas for construction staging, equipment or materials storage, fueling of vehicles or related activities.
- Use existing road systems to access structure locations.
- Flag or stake wetland boundaries in the vicinity of construction areas and avoid these areas during construction.
- Use construction matting when accessing towers located within wetlands to avoid soil compaction and loss of wetland function.

Weed Control:

- A Weed Management Plan will be developed for the project based on the preconstruction Undesirable Plant Survey Report and will include baseline information on known weed occurrences in spring 2014 field surveys; include specific actions in the management plan to minimize spread and control infestations, including construction BMPs, control actions (chemical, cultural, biological, and physical methods) both pre- and post-construction, and actions to be taken to monitor the spread of weeds into the project vicinity for at least 18 months after project implementation.
- Build vehicle and equipment washing stations in areas of high concentration of noxious weeds where vehicles and equipment in use will be washed daily prior to entering and leaving the project area.
- Site stabilization is a critical step in reducing the potential for weeds to colonize a freshly disturbed area. Implement restoration or stabilization actions as soon as is reasonably possible after ground disturbing activities with a native seed mix, a seed mix recommended by ODFW or as agreed upon with landowners for use on their property.
- Perform additional noxious weed treatments until restored areas are relatively weed free.
- Monitor seed germination of seeded areas with at least 3 field visits per year until site stabilization (defined as at least 70 percent cover by native or acceptable nonnative species) is achieved; if vegetative cover is inadequate, implement contingency measures and reseed areas as appropriate to ensure adequate revegetation of disturbed soils.

Dust Abatement:

- Water or use palliatives on exposed soil surfaces in areas disturbed during construction.
- Encourage construction personnel to travel at low speeds on access roads and at construction sites to minimize dust.

Coyote Springs Wildlife Management Area –

- Avoid construction within the Coyote Springs Wildlife Management Area from the Thanksgiving holiday through the end of January when recreational use is at its peak.
- Use flaggers and/or signage around construction sites to reduce user conflicts with recreational use within the management area.
- Oregon Department of Fish and Wildlife will post notice of construction schedule in the game bird regulations publications.
- Implement restoration or stabilization actions to restore the site as soon as is reasonably possible after ground disturbing activities and revegetate with a seed mix recommended by ODFW.

Environmental Checklist for Categorical Exclusions

Name of Proposed Project: Morrow Flat Substation Construction and Transmission Line Improvements near Boardman, Oregon

Work Order #: 00342315, 00342209, 00342211

This project does not have the potential to cause significant impacts on the following environmentally sensitive resources. See 10 CFR 1021, Subpart D, Appendix B for complete descriptions of the resources. This checklist is to be used as a summary – further discussion may be included in the Categorical Exclusion Memorandum.

Environmental Resources	No Potential for Significance	No Potential, with Conditions (describe)
1. Historic Properties and Cultural Resources	X	
Cultural survey conducted April/May 2014. No effect determination, SHPO concurrence received 7/23/14.		
2. T & E Species, or their habitat(s)	X	
None present. Washington ground squirrel surveys (candidate species) conducted spring 2014.		
3. Floodplains or wetlands	X	
Wetland delineation survey completed spring 2014. Permanent impacts to all floodplains and wetlands will be avoided.		
4. Areas of special designation	X	
Effects to Coyote Springs Wildlife Management Area will be minimized by scheduling construction before peak recreational use and following provisions listed in the CX..		
5. Health & safety	X	
New towers will have fall protection design features.		
6. Prime or unique farmlands	X	
Tower relocations have been optimized to minimize effects to agriculture. Where unavoidable, landowners will be compensated for lost productivity.		
7. Special sources of water	X	
West Extension Irrigation District canals present in study area will not be effected by project activities.		
8. Other (describe)	X	
Noxious weed survey conducted spring 2014. Data will be used to prepare weed management plan and identify locations of wash stations.		

List supporting documentation:

Cultural Resource Survey Report (2014)
Section 106 Consultation Correspondence
Washington Ground Squirrel Surveys (2014)
Wetland Delineation Report (2014)

Signed: \s\ *Carolyn Sharp* Date: *August 8, 2014*