Categorical Exclusion Determination

Bonneville Power Administration
Department of Energy

Proposed Action: Silver Creek Substation and Silver Creek-Mayfield No. 1 230kV Transmission Line Upgrade Project

Project No.: P01092

Project Manager: Alaric Hsu – TEPS-TPP-1

Location: Lewis County, WA

Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021): B4.6 Additions and modifications to transmission facilities, B4.13 Upgrading and rebuilding existing powerlines

Description of the Proposed Action: To improve reliability and facilitate maintenance access, Bonneville Power Administration (BPA) proposes several improvements at the Silver Creek Substation, Chehalis Substation, Tacoma Power's Mayfield Substation and along a portion of the Chehalis-Silver Creek No. 1 230kV transmission line.

Silver Creek Substation Rebuild: BPA would redesign and rebuild the Silver Creek substation. The 230kV substation yard work would include replacement of all bus and associated pedestals and footings, dead-end towers and footings, disconnect switches and associated structures and footings, as well as the new installation of a power circuit breaker (PCB), disconnect switches, surge arresters, free standing current transformers (CTs) and bus potential transformers (PTs). All new duct runs, manholes, station service panel and drainage would be installed. The 69kV yard would include replacing disconnect switches, PCBs, sync capacitor voltage transformers (CVTs) and bus PTs. In addition, one new disconnect switch and one new PCB with sync CVT would be installed. All new duct runs and manholes and a new station service yard panel would be installed. A new control house with all new control systems, battery backup, revenue metering and telecom systems would be constructed, and the old control house and legacy systems would be removed. The existing stormwater management system would be replaced with an upgraded system to match the new substation footprint.

Chehalis Substation Upgrades: BPA would replace 230kV disconnect switches with new structures and footings, as well as replacing rigid risers with seismic risers and would replace PCB jumper cables. In addition, new surge arresters would be installed to replace the existing rod gaps. New system control and line protection equipment would be installed in the Chehalis Substation control house.

Mayfield (Tacoma Power) Switchyard Upgrades: BPA would replace CTs and bus PTs including new structures and footings at the Mayfield substation. New conduit would be installed to existing manholes or existing control house. The existing wave trap structure would be removed and new bus supports would be installed. Updated telecom equipment would also be installed in the control house.

Chehalis-Silver Creek No. 1 230 kV Transmission Line Rebuild: BPA would rebuild an about 1.2-mile-long portion of the existing Chehalis-Silver Creek No. 1 230 kV transmission line between the Mayfield (Tacoma Power) Substation and Silver Creek Substation and split it into two new line segments, the Mayfield-Silver Creek No. 1 230kV line and the Silver Creek-Chehalis No. 1 230 kV line. The rebuild of the Mayfield-Silver Creek segment and the first two transmission line structures outside of the Silver Creek substation on the Silver Creek-Chehalis segment would include replacement of the wood pole structures, crossarms, conductors, insulators and hardware with similar structures and equipment in the same locations. A pulling area where the conductor cables would be strung onto the line would be located in or just beside the Mayfield Substation and a tensioning site would be located next to the Silver Creek substation in BPA right-of-way. New fiber optic cable would be installed on the Mayfield-Silver Creek segment to replace the existing cable and a fiber optic vault would be installed just south of the Silver Creek Substation to connect the fiber optic cable to the substation.

During the Silver Creek substation construction, two temporary wood pole structures called a shoo-fly would be installed to the southwest of the substation yard to keep the transmission line connected between the Mayfield substation and the Chehalis substation.

Chehalis-Silver Creek No. 1 230 kV Transmission Line Access Road Upgrades: BPA would upgrade access roads along the newly-named Silver Creek-Mayfield transmission line segment. Approximately 1.3 miles of existing access roads would be improved, with 150 feet of existing roads being reconstructed and 150 feet of new access roads being constructed. Six landing areas next to towers to be replaced would be constructed for equipment setup, totaling approximately 0.4 acres.

The Federal Columbia River Transmission System Act directs BPA to construct, acquire, operate, maintain, repair, relocate, and replace the transmission system, including facilities and structures appurtenant thereto. (16 United States Code [U.S.C] § 838i(b)). The Administrator is further charged with maintaining electrical stability and reliability, selling transmission and interconnection services, and providing service to BPA's customers. (16 U.S.C § 838b(b-d)). The Administrator is also authorized to conduct electrical research, development, experimentation, tests, and investigation related to construction, operation, and maintenance of transmission systems and facilities. (16 U.S.C § 838i(b)(3)).

Findings: In accordance with Section 1021.410(b) 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, Jul. 9, 1996; 61 FR 64608, Dec. 6, 1996; 76 FR 63764, Nov. 14, 2011; 89 FR 34074, April 30, 2024), BPA has determined that the proposed action:

1) fits within a class of actions listed in Appendix B of 10 CFR 1021, Subpart D (see attached Environmental Checklist);
2) does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal; and
3) has not been segmented to meet the definition of a categorical exclusion.

Based on these determinations, BPA finds that the proposed action is categorically excluded from further NEPA review. [1]

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Douglas Corkran
Environmental Protection Specialist

Concur:

KATEY GRANGE

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Katey C. Grange
NEPA Compliance Officer

Attachment(s): Environmental Checklist

[1] BPA is aware that the Council on Environmental Quality (CEQ), on February 25, 2025, issued an interim final rule to remove its NEPA implementing regulations at 40 C.F.R. Parts 1500–1508. Based on CEQ guidance, and to promote completion of its NEPA review in a timely manner and without delay, in this CX BPA is voluntarily relying on the CEQ regulations, in addition to DOE's own regulations implementing NEPA at 10 C.F.R. Part 1021, to meet its obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

Categorical Exclusion Environmental Checklist

This checklist documents environmental considerations for the proposed project and explains why the project would not have the potential to cause significant impacts on environmentally sensitive resources and would meet other integral elements of the applied categorical exclusion.

Proposed Action: Silver Creek Substation and Silver Creek-Mayfield No. 1 230kV Transmission Line Upgrades

Project Site Description

The Silver Creek Substation is in Western Washington on a low plateau above the Cowlitz River valley. The Chehalis Mayfield No. 1 transmission line leaves the Silver Creek substation and passes over a forested ridge directly south of the substation before dropping into the Mayfield Substation next to the Mayfield Dam and hydroelectric plant. The Silver Creek substation sits just north of a lightly forested wetland meadow with a small stream running through it. The transmission line corridor passes through a coniferous forest, much of which was logged and replanted in the early 1990s. The surrounding area is a mix of forested hills and rural residential properties, with the two-lane Highway 12 running through it immediately north of the substation. The Chehalis Substation sits on a low ridge to the west of the Chehalis River Valley and is surrounded by rural residential and small woodland lots. The substation yards are graveled and surrounded by a perimeter security fence.

Evaluation of Potential Impacts to Environmental Resources

1. Historic and Cultural Resources

Potential for Significance: No

Explanation: BPA initiated consultation with Cowlitz Indian Tribe, Confederated Tribes of the Chehalis Reservation, and Washington Department of Archaeology and Historic Preservation (DAHP) on February 21, 2024. BPA conducted background research followed by an intensive field survey of the APE in spring 2024 and wrote a report summarizing the findings. Three built environment historic properties are within the APE, including the BPA Chehalis Substation, Mayfield Substation, and Chehalis-Mayfield No. 1 Transmission Line. BPA determined that implementation of the undertaking would result in no adverse effect to historic properties and sent the report and determination letter to consulting parties on August 12, 2024. DAHP responded in an email requesting a historic property inventory form be completed for the Chehalis-Mayfield No. 1 Transmission Line. BPA provided the requested information and DAHP concurred with the determination of eligibility and effect in a letter dated October 8, 2024. BPA would follow the post-review discovery procedures in the event that cultural material is unexpectedly encountered during implementation of the project. Impacts to historic and cultural resources would be low to none.

2. Geology and Soils

Potential for Significance: No

Explanation: The project area is heavily vegetated with few steep slopes where construction would occur. No evidence of landslides or erosion was noted during site visits. Access road and landing work would expose soils, but erosion control BMP's would be implemented and any

soil eroded from the site would be trapped by the surrounding dense vegetation. Impacts to geology and soils would be low.

3. Plants (including Federal/state special-status species and habitats)

Potential for Significance: No

Explanation: The project area does not contain federally-listed or sensitive plant species. Some vegetation removal for access road work and structure placement would be needed, but this would mostly be limited to brushy and herbaceous species. No trees would be removed as part of this project. Common weed species such as Himalayan blackberry, reed canarygrass, and other species are widespread in much of the right-of-way and adjacent areas. Equipment and vehicles may move weed seeds or plants locally, but due to the existing widespread areas of weed species in the project area, this would not represent a significant impact because no new populations of weeds would be introduced into the project area and existing weed seedbanks are so extensive that weeds are likely to proliferate in spite of any reduction efforts. No vegetation impacts from work within the substations would occur. Overall, impacts to plants would be low.

4. Wildlife (including Federal/state special-status species and habitats)

Potential for Significance: No

Explanation: No special status or listed wildlife species are documented in the project area and field surveys did not document suitable habitat. Common wildlife species may be temporarily affected by construction, but the limited scope and duration of construction of the access road work and transmission line work would only have minor impacts to them. Overall impacts to wildlife would be low.

5. Water Bodies, Floodplains, and Fish (including Federal/state special-status species, ESUs, and habitats)

Potential for Significance: No

Explanation: A small intermittent stream runs through the wetland just south of the Silver Creek Substation. Work in this location would take place during the dry season and be accomplished with wetland mats that would span the creek and would not permanently affect flow or floodplain function. Stormwater management facilities in the substation yard would be upgraded to prevent hazardous materials from moving into the wetland and stream area. The project would have low to no impact to water bodies, floodplains, and fish.

6. Wetlands

Potential for Significance: No

Explanation: The proposed project would permanently impact approximately 295 square feet (0.007 acres) of wetland for a fiber vault and two new wood pole structures and guy anchors and approximately 144 square feet (0.003 acres) of wetland for two temporary shoo-fly towers and their associated guy anchors (total of 0.010 acres). Impacts from the proposed project are covered by Nationwide Permit 57 Electric Utility Line and Telecommunications Activities, but are below the 0.1 acre reporting threshold. Wetland mats would be installed prior to equipment passage or use of the wetland area for tensioning the conductors to minimize ground disturbance and soil impacts to the wetland area. Areas of temporary soil disturbance would likely revegetate naturally; if needed, they would be revegetated with a native wetland seed mix in the spring following construction. Overall, with the protection measure and restoration, wetland impacts would be low.

7. Groundwater and Aquifers

Potential for Significance: No

Explanation: The substation work would take place within an existing substation fenced and graveled yard and would help to reduce stormwater discharges and potential releases of hazardous materials to the environment, which would reduce potential impacts to groundwater and aquifers. Access road work and tower replacements would cause temporary and minor local soil disturbances, but no hazardous materials or discharges would be anticipated. On-site fuel and oil spill containment would be available during construction which would prevent any contamination of groundwater or aquifers. Overall, there would be no impact to groundwater or aquifers.

8. Land Use and Specially-Designated Areas

Potential for Significance: No

Explanation: The project would upgrade existing transmission facilities and would not represent a change in land use. No specially designated areas are in or near the project area. No impacts to land use or specially designated areas would occur.

9. Visual Quality

Potential for Significance: No

Explanation: Work would take place within existing substation yards and on existing transmission line right-of-way. All work at Chehalis Substation would occur in the existing substation yard and would be virtually indistinguishable from current conditions. The entire Silver Creek Substation would be rebuilt, but with similar equipment and design as the current substation and all work would remain inside the current fenced substation boundary so some visual changes would be noticeable, but not obtrusive. The rebuilt transmission line towers and equipment would be located in similar locations and use similar materials to the current facilities, with some towers being 10-15 feet higher than existing. Views of most of the transmission line corridor where work would take place is mostly blocked by terrain and tree cover from nearby residences and other sensitive viewing areas, therefore the expected changes to the visual appearance of the transmission line would likely not be noticeable from most residential areas and represent only minor visual changes from areas where it can be viewed. Other changes to the visual environment would be minimal and most likely due to some small areas of exposed earth and vegetation removal associated with access road work. Overall impacts to visual quality would be low.

10. Air Quality

Potential for Significance: No

Explanation: The project would not create any new permanent sources of air emissions. Temporary fugitive dust and construction equipment emissions would occur during construction and may briefly affect the immediate construction area. Overall, impacts to air quality would be low.

11. Noise

Potential for Significance: No

Explanation: The project would not create any new permanent sources of noise. Temporary noise emissions would occur during construction which could affect nearby residents during the day for several months Overall impacts to noise would be moderate.

12. Human Health and Safety

Potential for Significance: No

Explanation: No new hazardous conditions would be created by the project. Replacement of transmission equipment and access road improvement is expected to improve the safety profile of the transmission line and substation. The existing stormwater collection and containment facilities at the Silver Creek Substation would be rebuilt to accommodate the new yard layout including catch basins, subsurface drainage pipes, oil water separators, and other facilities that would reduce the potential for hazardous material releases from transmission system equipment in the yard. Overall, impacts to human health and safety would be low.

Evaluation of Other Integral Elements

The proposed project would also meet conditions that are integral elements of the categorical exclusion. The project would not:

Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders.

Explanation: N/A

Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators) that are not otherwise categorically excluded.

Explanation: N/A

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.

Explanation: N/A

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 of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

Explanation: N/A

Landowner Notification, Involvement, or Coordination

Description: Affected landowners would be notified prior to construction.

Based on the foregoing, this proposed project does not have the potential to cause significant impacts to any environmentally sensitive resource.

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