

# Categorical Exclusion Determination

Bonneville Power Administration  
Department of Energy



**Proposed Action:** Alvey Substation 230-kV Reactor Replacement

**Project No. (if applicable):** xxxxx

**Project Manager:** Mike Gilchrist

**Location:** Lane County, Oregon

**Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021):** B4.11 Electric power substations and interconnection facilities

**Description of the Proposed Action:** BPA is proposing to replace equipment and expand its Alvey Substation yard near the City of Eugene in Lane County, Oregon. An existing 230-kilovolt (kV) reactor used to mitigate high voltage conditions has reached the end of its serviceable life due to insulation degradation, and is in violation of local, state, and federal environmental regulations as a result of leaking oil. In addition, noise associated with the normal operation of the reactor exceeds BPA noise policy standards for acceptable levels at the substation perimeter. The installation of a new reactor and associated equipment, and the expansion of the substation yard to accommodate the new equipment, would provide the required voltage support during high voltage conditions to maintain system reliability, and ensure compliance with required environmental regulations and BPA noise policy standards.

In order to complete the project, BPA would first conduct a geotechnical study of the proposed expansion area using a track-mounted hollow-stem auger to drill 8-inch diameter borings up to 50 feet in depth. BPA would remove and decommission the failed 230-kV reactor, a 230-kV 2000 Ampere (A) circuit switcher, a 230-kV 1600A disconnect switch, the concrete footing, protective underground liner, and associated detention pond. BPA would expand the eastern side of Alvey Substation yard by approximately 0.40 acre within BPA fee-owned property. A backhoe would excavate a four foot deep hole for new concrete footings, concrete footings would be poured, and a new 180 megavolt ampere reactive (MVAR) 3-phase 241.5-kV reactor would be attached to the footings. BPA would install new equipment associated with the new reactor in the expansion area, including a new 2000A 40 thousand ampere (KA) power circuit breaker, a new 180-kV surge arrester, a new 2000A 120KA disconnect switch, protective relaying, bus, steel support, overhead grounding wire, and conduit. Control cables and wiring would be installed in underground conduit to connect the new reactor and associated equipment with the control house. To install the conduit, trenches would be excavated up to three feet deep from the new reactor and expansion area to connect with existing manholes and underground conduit ducts. A new grounding mat would be installed 18 inches below grade in the expansion area, and connected to the existing substation grounding mat. The perimeter fence would be extended to enclose the expansion area and new reactor. All disturbed areas within the substation yard would be graded and rocked.

The proposed project would require that BPA temporarily disturb up to 12.30 acres for construction activities and equipment storage, and permanently disturb approximately 0.40 acres to accommodate the substation expansion and installation of new equipment within the limits of previously disturbed

BPA fee-owned land. Disturbance would result from organics/soil/debris removal, excavation, trenching, grading, the addition and compaction of fill materials, and the movement of construction vehicles and heavy equipment.

**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, July 9, 1996; 61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011), 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.

/s/ Zach Gustafson

Zach Gustafson  
Contract Environmental Protection Specialist  
David Evans and Associates, Inc.

Reviewed by:

/s/ Gene Lynard

Gene Lynard  
Supervisory Environmental Protection Specialist

Concur:

/s/ Katherine S. Pierce

Katherine S. Pierce  
NEPA Compliance Officer

Date: April 24, 2015

Attachment(s): Environmental Checklist

# 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:** Alvey Substation 230-kV Reactor Replacement

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## Project Site Description

The project site is located on BPA fee-owned property near the City of Eugene. The site consists of control houses, maintenance and equipment sheds, transmission lines and towers, substation equipment, and graveled and paved areas for vehicle circulation and equipment storage. The surrounding landscape includes forested stands, scrub-shrub and herbaceous plant communities, and palustrine emergent and palustrine scrub-shrub wetland complexes. Vegetated areas of the proposed project site are previously disturbed with evidence of fill and grading. Existing vegetation is primarily non-native forbs and grasses, and invasive weeds. Much of the site has been cleared and is regularly mowed to accommodate the transmission lines and towers present on the site. Two palustrine emergent wetlands were identified within the project area.

## Evaluation of Potential Impacts to Environmental Resources

Environmental Resource Impacts	No Potential for Significance	No Potential for Significance, with Conditions
1. <b>Historic and Cultural Resources</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Explanation: Oregon State Historic Preservation Office (SHPO) concurrence with no adverse effect determination September 17, 2014. Tribes consulted: the Confederated Tribes Siletz, the Cow Creek Band of Umpqua Tribe of Indians, and the Confederated Tribes of Grand Ronde.

Mitigation:

✓ In the event any archaeological material is encountered during project activities, the following actions should be taken:

- Stop work in the vicinity and immediately notify the BPA environmental lead, a BPA archaeologist, appropriate BPA project staff, interested Tribes, Oregon SHPO, and the appropriate local, state, and federal agencies.
- Implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering.
- Take reasonable steps to ensure the confidentiality of the discovery site, including restricting access.

2. <b>Geology and Soils</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: 0.40 acres of permanent disturbance for substation expansion and equipment installation.

Mitigation:

- ✓ Implement erosion and sediment control best management practices (BMPs) immediately after clearing and prior to initiating ground disturbing activities to prevent erosion and runoff.
- ✓ Limit the amount of time soils are left exposed. Use BMPs on exposed piles of soil to reduce erosion potential from rain or wind.

3. **Plants** (including federal/state special-status species)



Explanation: No federally-listed or state special-status plant species are present. 0.40 acres of non-native forbs, grasses, and invasive weeds to be removed.

Mitigation:

- ✓ Reseed disturbed areas with a regionally appropriate seed mix and apply mulch.
- ✓ Clean and inspect all construction vehicles and equipment for weeds prior to accessing the project site.

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



Explanation: No special-status species or designated habitat present at the project site. Project area has been previously disturbed for construction of substation and associated access roads.

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



Explanation: The project site is located 1.5 miles upstream of Middle Fork Willamette River, which contains migration, spawning, and rearing habitat for bull trout, chinook salmon, and steelhead trout; no other listed fish species are present. Critical habitat for bull trout and Upper Willamette ESU chinook salmon designated in Middle Fork Willamette River. No in-water work is proposed for the project.

Mitigation:

- ✓ Implement erosion and sediment control best management practices (BMPs) immediately after clearing and prior to initiating ground disturbing activities to prevent erosion and runoff.
- ✓ Do not allow petroleum products, sediment, and other deleterious materials (i.e. concrete wash out) to enter any stream, wetland, waterbody, or drainage conveyance.

6. **Wetlands**



Explanation: Two palustrine emergent wetlands totaling 0.13 acres were identified and delineated by PBS Engineering and Environmental on November 11, 2014, and documented in a wetland delineation report dated December 2014. Oregon Department of State Lands (DSL) concurred with the delineation report on April 9, 2014 (WD#2014-0549). The proposed project would permanently disturb up to 0.08 acres of wetlands. This activity is authorized under Nationwide Permit (NWP) #12 Utility Line Activities, issued by the U.S. Army Corps of Engineers. A permit application is not required for projects that will discharge to wetland and will result in the loss of less than 0.10 acre of wetlands. The NWP authorizes "...the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States."

Mitigation:

- ✓ Implement erosion and sediment control best management practices (BMPs) immediately after clearing and prior to initiating ground disturbing activities to prevent erosion and runoff.
- ✓ Do not allow petroleum products, sediment, and other deleterious materials (i.e. concrete wash out) to enter any stream.

7. **Groundwater and Aquifers**



Explanation: No new wells or use of ground water proposed.

Mitigation:

- ✓ Ensure spill containment and cleanup materials are readily available at the project site, staging areas, and in construction vehicles and equipment. Replace any used spill response material within 24 hours.

8. **Land Use and Specially Designated Areas**



Explanation: All work on BPA fee-owned property. Project area has been previously disturbed for construction of substation and associated access roads.

9. **Visual Quality**



Explanation: The additional equipment would be visually consistent with existing structures and equipment already located at the substation.

10. **Air Quality**



Explanation: Small amount of dust and vehicle emissions during construction activities.

11. **Noise**



Explanation: Temporary, intermittent noise from construction activities during daylight hours. Operation noise would be in compliance with BPA noise policy.

12. **Human Health and Safety**



Explanation: No impact to human health and safety from the proposed project.

### **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, if necessary:

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

Explanation, if necessary:

- 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, if necessary:

- 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, if necessary:

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**Landowner Notification, Involvement, or Coordination**

No notification – all work on BPA fee-owned property and no visual or other effects to adjacent landowners.

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

Signed: /s/ Zachary Gustafson

Zachary Gustafson

Environmental Protection Specialist

Date: April 23, 2015