

December 29, 2017

Sarah T. Esterson

Energy Facility Siting Analyst

Oregon Department of Energy

550 Capital Street NE, 1st Floor

Salem, OR 97301

Subject: Written Request for Amendment #4 Eugene-Medford 500 kV Transmission Line

Dear Ms. Esterson:

PacifiCorp dba Pacific Power (PacifiCorp) is requesting a fourth amendment to the Eugene-Medford 500-kilovolt (kV) Transmission Line Site Certificate (Request). PacifiCorp submits this Request for "Type A" amendment review under the new OAR chapter 345, division 27 rules.

In this Request, PacifiCorp seeks to:

- Expand the Energy Facility Siting Council (EFSC)-certificated facility boundary to include the Grants Pass-Sams Valley Transmission Line, a new 17.6 mile, 230 kV transmission line double circuited with an existing 115 kV transmission line.
- Expand the EFSC-certificated facility to include a new substation, the Sams Valley Substation, as a related and supporting facility.
- Make substantial improvements by reconductoring 4.9-miles of the existing 230 kV transmission line between the new Sams Valley Substation and the existing PacifiCorp Whetstone substation, known as the Sams Valley-Whetstone Reconductoring.

PacifiCorp understands that this Request will be processed under the Oregon Department of Energy's (ODOE's) new administrative rules governing site certificate amendments. This Request is a preliminary Request for Amendment, and PacifiCorp anticipates completeness once the supplement is provided, along with responses to ODOE's requests for additional information.

Thank you for your consideration, and we look forward to working with you toward approval of this Request.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Aniello', with a stylized flourish extending to the right.

John Aniello

Enclosure

Cc: ODOE/ODOJ Team

PacifiCorp/Schwabe/Tetra Tech Team

Written Request for Amendment #4 Eugene–Medford 500 kV Transmission Line

**Sams Valley Reinforcement Projects
December 2017**

Prepared for



PacifiCorp

Prepared by



Tetra Tech, Inc.

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Acronyms and Abbreviations

BLM	U.S. Bureau of Land Management
EFSC	Energy Facility Siting Council
EMF	electromagnetic frequencies
IRP	Integrated Resource Plan
kV	kilovolt
OAR	Oregon Administrative Rule
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statutes
PacifiCorp	PacifiCorp dba Pacific Power
Project	Sams Valley Reinforcement Projects
Request	Request for Amendment No. 4
Site Certificate	Eugene-Medford 500 kV Transmission Line Site Certificate
SNHA	State Natural Heritage Area

1.0 Introduction

Pursuant to Oregon Administrative Rule (OAR) 345-027-0050(4), PacifiCorp dba Pacific Power (PacifiCorp) proposes to amend the Eugene–Medford 500-kilovolt (kV) Transmission Line Site Certificate (Site Certificate) for its transmission facilities in Douglas, Jackson, Josephine, and Lane counties, Oregon through the Sams Valley Reinforcement Projects (Project). In this Request for Amendment No. 4 (Request), PacifiCorp seeks to:

- Expand the Energy Facility Siting Council (EFSC)-certificated facility boundary to include the **Grants Pass–Sams Valley Transmission Line**, a new 17.6 mile, 230 kV transmission line double circuited with an existing 115 kV transmission line.
- Expand the EFSC-certificated facility to include a new substation, the **Sams Valley Substation**, as a related and supporting facility.
- Make substantial improvements by reconductoring 4.9-miles of the existing 230 kV transmission line between the new Sams Valley Substation and the existing PacifiCorp Whetstone substation, known as the **Sams Valley–Whetstone Reconductoring**.

1.1 Existing Site Certificate and Prior Amendments

On December 21, 1982, EFSC issued the Site Certificate to PacifiCorp for the Eugene–Medford 500 kV Transmission Line in Lane, Douglas, and Jackson counties. The Site Certificate has been amended three times.

The Site Certificate authorized PacifiCorp to construct and operate a 137-mile 500 kV transmission line from the existing Meridian Substation near Medford, Oregon to the existing Spencer Switching Station (now referred to as Alvey Substation) south of Eugene, Oregon. The Site Certificate also authorized related and supporting facilities, including transmission structures, foundations, substation expansions, transformer banks, access roads, microwave facilities, and temporary storage and staging areas for construction.

Amendment No. 1: In 1988, Amendment 1 extended the completion of construction date from December 31, 1990 to December 31, 1993.

Amendment No. 2: In 1990, based on landowner interaction, the following changes were made: Relocation of the expanded Dixonville Substation facilities, rerouting of 3.6 miles of the Canyonville relocation in Douglas County, rerouting of 4.7 miles of the Green Canyon relocation in Jackson County, and rerouting of 2 miles of the approved route in the Ramsey Canyon–Meridian Substation Segment in Jackson County. An Environmental Assessment was completed with the U.S. Bureau of Land Management (BLM). A letter from BLM indicated no potential effects on health due to long-term exposure to electromagnetic frequencies (EMF).

Amendment No. 3: In 1990, PacifiCorp requested use of a different tower type as a result of new technology and available designs. The new tower type was a triangular or “delta” configuration, and

was used except where single pole towers were needed. Modification of the tower type required minor modification of the conductor and shield wire sizing. PacifiCorp also requested an extension of the completion of construction from December 31, 1993 to December 31, 1994.

The Eugene-Medford 500 kV Transmission Line project was completed in December 1994, and has remained in continuous operation since.

1.2 Amendment Required under OAR 345-027-0050 & Review Process under OAR 345-027-0051

OAR 345-027-0050(4) requires a certificate holder to submit a request to amend its site certificate to design, construct, or operate a facility in a manner different from the description in the site certificate, if the proposed change:

- (a) Could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource protected by Council standards;*
- (b) Could impair the certificate holder's ability to comply with a site certificate condition; or*
- (c) Could require a new condition or a change to a condition in the site certificate.*

The changes PacifiCorp proposes require a Site Certificate amendment under subsection (c) because it will enlarge the facility site boundary, add a new related or supporting facility, and substantially modify a portion of the existing facility. Specifically, an amendment is required for the reasons described below.

The Oregon Department of Energy (ODOE) determined in an August 15, 2017 memorandum (Attachment 1) that the Grants Pass-Sams Valley Transmission Line is an “energy facility” because it is a high voltage transmission line of more than 10 miles in length, with a capacity of 230,000 volts or more, and will be constructed in more than one city or county: Josephine and Jackson counties, and the City of Rogue River. The Grants Pass-Sams Valley Transmission Line is replacing 115 kV transmission line structures to create a double circuit with a new 230 kV transmission line, and is therefore within 500 feet of an existing transmission line corridor with a capacity of 115 kV for its entirety. The Grants Pass-Sams Valley Transmission Line is also within 500 feet of an existing 230 kV transmission line corridor for all but 3.5 miles near the City of Rogue River. Because the Grants Pass-Sams Valley Transmission Line is not within 500 feet of an existing 230 kV transmission line corridor for its entirety, the exclusion provided in Oregon Revised Statutes (ORS) 469.300(11)(a)(C)(i) does not apply. Consequently, the Grants Pass-Sams Valley Transmission Line is subject to EFSC jurisdiction and is included in this Request.

Also, the memo provides that the Sams Valley Substation is a related and supporting facility to either the EFSC-jurisdictional Eugene-Medford 500 kV (also known as Alvey-Dixonville-Meridian) Transmission Line, or a related and supporting facility to the new EFSC-jurisdictional Grants Pass-Sams Valley Transmission Line. As such, EFSC approval is required prior to construction, and therefore, the Sams Valley Substation is included in this Request.

The memo from ODOE also noted that reconductoring a portion of the existing 230 kV transmission line between the new Sams Valley Substation and the existing Whetstone Substation, including replacement of approximately 16 structures, is considered to be a part of the EFSC-jurisdictional facility site certificate review because structure replacement constitutes a “substantial modification.” Without conceding EFSC’s jurisdiction as to this component, the Sams Valley–Whetstone Reconductoring is included in this Request.

Attachment 1 also mentions that the Grants Pass Substation constitutes existing infrastructure outside of EFSC jurisdiction. New equipment within the Grants Pass Substation will be required to accommodate the termination of the new Grants Pass–Sams Valley Transmission Line, including 115kv and 230kv tap lines. The new equipment is consists of minor changes within the non-EFSC jurisdictional substation, but is included within the Site Boundary for EFSC’s information.

Because the proposed changes require an amendment under OAR 345-027-0050(4), the review process is a Type A, pursuant to OAR 345-027-0051(2). As noted in OAR 345-027-0051(2), the Type A review process consists of rules OAR 345-027-0059, OAR 345-027-0060, OAR 345-027-0063, OAR 345-027-005167, OAR 345-027-0071, and OAR 345-027-0075. OAR 345-027-0060 outlines the requirements for a request for amendment for a Type A review:

345-027-0060 Preliminary Request for Amendment

- (1) To request an amendment to the site certificate required by OAR 345-027-0050(3) and (4), the certificate holder shall submit a written preliminary request for amendment to the Department of Energy that includes the following:*

The requirements of OAR 345-027-0060 are addressed in the following sections.

2.0 Certificate Holder Information (OAR 345-027-0060(1)(a))

- (a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.*

2.1 Name of the Facility

Eugene-Medford 500-kV Transmission Line.

2.2 Name and Mailing Address of the Certificate Holder

PacifiCorp (dba Pacific Power)
825 NE Multnomah Boulevard
Portland, Oregon 97232

2.3 Name and Mailing Address of the Individuals Responsible for Submitting the Request

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3.0 Detailed Description of the Proposed Change (OAR 345-027-0060(1)(b))

(b) A detailed description of the proposed change, including:

In this Request, PacifiCorp proposes to construct, operate, and maintain a new 230 kV transmission line, which will run from the existing Grants Pass Substation in Josephine County near Grants Pass, Oregon, east to a proposed new 500/230 kV substation in Jackson County, Oregon, north of Medford (**Figure C-1**).

In accordance with OAR 345-001-0010(55), the new Site Boundary includes the previously site certificated locations depicted in Figure C-1, along with the following facility areas and related or supporting facilities (Figure C-2):

- **The Grants Pass-Sams Valley Transmission Line:** A new 230/115 kV double circuit transmission line, which will run from the existing Grants Pass Substation in Josephine County near Grants Pass, Oregon, east 17.6 miles to the proposed 500/230 kV Sams Valley Substation in Jackson County, approximately 10 miles northwest of Medford, Oregon. The new transmission line will be sited in the existing right-of-way of the 115 kV Grants Pass-Lone Pine transmission line, creating a new 230/115 kV double circuit line on new 230 kV structures. In most areas, an additional 35 feet of right-of-way (135 feet total) will be required to provide a safe operating system per National Electrical Safety Code. New equipment within the Grants Pass Substation to accommodate the termination of the Grants Pass-Sams Valley Transmission Line will also be required. Specifically, a new 230 kV bay, circuit breakers, and support equipment will be constructed, all within the existing substation fence.
- **The Sams Valley Substation:** The proposed Sams Valley Substation will be a 500/230 kV substation constructed in Sams Valley, Jackson County, Oregon, which is approximately 6

miles northwest of Medford, Oregon. The Sams Valley Substation will join the 230 kV circuit of the new 230/115 kV double circuit Grants Pass–Sams Valley Transmission Line (the 115 kV circuit of this line will continue on directly to the existing Whetstone Substation), the existing 230 kV Grants Pass–Whetstone Transmission Line, and the existing 500 kV Dixonville–Meridian Transmission Line. The Sams Valley Substation will be sited entirely on land owned by PacifiCorp. Tap lines will be constructed for the existing 230 and 500 kV transmission lines as part of the Project.

- **Sams Valley–Whetstone Reconductoring:** Approximately 4.9 miles of the existing 230 kV Grants Pass–Meridian Transmission Line will be reconducted between the proposed Sams Valley Substation and the existing Whetstone Substation, which is approximately 6 miles north of Medford, Oregon. Up to 16 new 230 kV structures will be required as part of the reconducting process. No new rights-of-way will be required.

3.1 Proposed Project Components, Structures, and Systems (OAR 345-021-0010(1)(b)(B)&(C))

3.1.1 Transmission Line Facilities (Grants Pass–Sams Valley Transmission Line and Sams Valley–Whetstone Reconductoring)

The following sections describe proposed transmission facilities for both the new, double circuit 230/115 kV Grants Pass–Sams Valley Transmission Line and the reconducted portion of the existing 230 kV Grants Pass–Meridian line between the Sams Valley and Whetstone substations, (the Sams Valley–Whetstone Reconductoring). These two Project components are similar in terms of site preparation, structure installation, and conducting methods; however, minor differences in structure types, temporary work areas, and other details are noted where applicable.

3.1.1.1 Existing 115 kV Line Decommissioning and Rebuild Process

Prior to construction of the Grants Pass–Sams Valley Transmission Line, the existing 115 kV line will be taken out of service and demolished by section from dead-end to dead-end. The de-energized line, old structures, and conductor will be removed and taken to an off-site location and disposed of. Old concrete foundations will be removed to approximately 2 to 3 feet below grade, and the area will be filled with soil or gravel.

The Grants Pass–Sams Valley Transmission Line will be approximately 17.6 miles long and will be constructed as a 230/115 kV double circuit that will also carry the existing 115 kV line. The new double circuit line will replace the existing 115 kV transmission line. The new double circuit structures will be taller and larger than the existing structures to support additional weight and maintain required code clearances, but will be located as close to the existing structure locations as possible. Span lengths are typically about 300 to 2,500 feet, depending on topography, structure type, engineering constraints, and other considerations. To accommodate the Grants Pass–Sams

Valley Transmission Line, the existing Grants Pass-Lone Pine 115 kV transmission line right-of-way will be expanded from 100 feet to 135 feet.

The expanded right-of-way will retain the original 115 kV centerline to the extent possible; however, the centerline may shift in some areas (expanding more to one side of centerline than the other) to avoid encroachment into other existing clearances or sensitive resources. This construction sequence will allow for the safe construction of the new lines.

3.1.1.2 Structures

Different types of structures will be used, depending on the location. Tangent structures are structures in a straight line of each other and generally on flatter terrain. Dead-end structures are used at line angles, canyon spans, and at other places intermittently along the line. Dead end structures are larger, stronger and may be two pole structures to provide additional load carrying capacity and support. Typical double circuit structures are shown in Figure 1.

Structures will either be set on concrete foundations or directly embedded into the soil. Tangent structures could have foundations that are up to 4 feet in diameter (12.5 square feet). Dead-end structures will likely have larger foundations that could be up to 8 feet in diameter (50 square feet). Additional grading or a rock landing may be needed at the base of structures where soils are unstable or slopes make it difficult for construction vehicles to access the site, and to allow for safe assembly and erection of the structures. Between 90 and 120 new double circuit structures will be installed within the right-of-way for the Grants Pass-Sams Valley Transmission Line. Structures will be installed as close to the existing Grants Pass-Lone Pine 115 kV Transmission Line structures that the Project is replacing as possible; however, some structures will be installed between existing structure locations to break up long spans, facilitate easier pulling and tensioning, or to avoid sensitive resources.

In addition, up to 16 structures will be replaced along the Sams Valley-Whetstone Reconductoring. The exact number of structure replacements will be identified during detailed engineering. Replacement structures will be nearly identical to existing H-frame structures, with the exception of slightly larger-sized components (e.g., larger diameter conductor and higher grade poles or cross arms). The structures will be installed in as close to the same location (typically within 10 feet) as the existing structures they are replacing. Replacement structures will most likely be directly embedded into the soil.

Depending on engineering and site-specific visual requirements for permit compliance, structures will be made of wood, self-weathering steel, or galvanized steel. Structure heights at particular locations will depend on terrain, the length of the span, and other factors, but will be less than 200 feet in height.

3.1.1.3 Site Preparation and Structure Installation

Construction will occur in accordance with PacifiCorp's standard construction techniques and best practices. Minor grading may occur within the new right-of-way and around each structure as

needed. Individual structure sites will be cleared as necessary to provide a safe temporary work area for the installation of the transmission line structures and to facilitate access for future maintenance. Clearing individual structure sites may involve grading/blading the required area, but in general ground disturbance will be minimal. Within the temporary work area, vegetation will be cleared or mowed on an as-needed basis, and will be crushed rather than cut where feasible.

At each new structure location, a temporary work area approximately 135 by 200 feet (0.6 acres per structure) will be needed for construction laydown, structure assembly, and structure installation. At dead-end structure sites, the temporary work area may extend beyond the right-of-way at 90 degree angles, requiring up to 0.3 acres of additional workspace. Replacement structures along the reconductored portion will require smaller work areas, approximately 100 by 200 feet (0.5 acres per structure), and will not expand outside the existing right-of-way except at dead-end structure sites.

Where a structure is located on steep side slopes, a flat work area for structure installation and maintenance may require cutting into the side slope and using the cut material as fill to form part of the flat work area, or making a full bench cut and side casting the spoil below the pad. The actual dimensions of the flat work area disturbance may vary depending on factors such as terrain and vegetation. Total disturbance, including cuts and fills or spoils, will be larger than the flat work area, and varies by side slope and soil type.

For structures that are directly embedded:

- Structure holes will be dug in advance of setting.
- Structures will be embedded to 10 percent of pole height, plus 5 additional feet (with the potential for deeper setting depth due to heavy structure loading).
- Structure pole diameters along the Grants Pass-Sams Valley Transmission Line will typically range from 36 to 60 inches.
- Structure pole diameters along the Sams Valley-Whetstone Reconductoring will typically range from 18 to 30 inches.
- Holes will be dug 1 to 2 feet wider than the pole butt diameter, and somewhat deeper than the final installation depth, to allow maneuvering room for installation and placement of compacted backfill.
- Structures will be installed on-site in pre-drilled holes and backfilled.

For structures that are set on foundations:

- Structure holes for foundations will range between 4 to 8 feet in diameter.
- Depths will vary depending on loading and soil conditions.
- Foundation installation includes placing a reinforcing steel rebar cage set in the hole, setting the anchor bolt cage, and pouring concrete.
- The finished grade of the concrete foundation is typically 1 foot above the ground elevation.

- Structures will either be assembled at the structure site and lifted into place using a large crane, or assembled at a staging area¹ and set in place by a large sky crane helicopter.

3.1.1.4 Conductors, Ground Wire, and Counterpoise

Structures along the Grants Pass-Sams Valley Transmission Line will be double circuit, meaning they each have six conductors (three conductors for each circuit) and two shield wires.

Replacement structures along the Sams Valley-Whetstone Reconductoring will be single circuit, meaning each structure will only have three conductors and two shield wires.

Conductors will have an approximate diameter of 1.34 inches, will be made of non-spectral aluminum and steel, and will be attached using stand-off insulators to prevent electricity in the conductors from moving to the structures. One of the shield wires on the double circuit line will contain fiber optic wire (optical ground wire), which will facilitate communications for relaying, system control, and monitoring.

The conductor will be installed by setting up a pulling and tensioning site at the beginning and end of each identified pulling section. Typically, pulling sections are lengths along the right-of-way that are no more than 25 structures long. Conductor pulling and tensioning sites will be needed approximately every 2 to 4 miles, depending on the length of each span and the terrain, and at line angles and dead-end positions. Approximately twelve, 0.3-acre pulling sites (nine along the new line and three along the reconducted line) will be required (approximately 3.6 acres total).

After the equipment (puller and tensioner) is set up, a sock line (usually a rope) will be strung through all the structures. This stringing will be done using a helicopter or by workers on the ground using a pickup truck or all-terrain vehicle. The sock line will be connected to a hard line (typically a small stranded steel wire), which will be connected to the new conductor and pulled through the structures. Once in place, the new conductor will be tensioned and sagged in place, and securely clipped into all of the structures.

At the same time that the conductors are installed, overhead ground wire and counterpoise will be installed. Overhead ground wire provides protection of the energized conductors from lightning strikes, while counterpoise is installed in the ground to provide grounding protection to the structure. Counterpoise wires will be buried at the base of the structure, approximately 6 to 18 inches to the outside of the structures, where they will connect to a ground rod. Ground rods typically measure 10 feet in length, and will be placed entirely underground in a vertical orientation. Generally, only one wire will be buried per structure. The wires will be buried approximately 30 inches below the ground surface. In areas where bedrock is at or near the surface, the wires will be laid on the surface and buried with loose aggregate.

All line work will require existing lines to be de-energized.

¹ The staging areas will be on private land and will be permitted separately, not under EFSC jurisdiction.

3.1.1.5 Helicopter-Assisted Construction

While the entire line length (23.5 miles) may be strung by helicopter, at a minimum, areas identified as steep slope (e.g., deep valleys and cliffs) or sensitive areas (e.g., Rogue River) will be strung by helicopter (totaling 6.3 miles), as the terrain will make it too difficult to string from the ground.

Access roads leading to each tower site are required for construction and for operation and maintenance activities. Helicopters may be used to support these activities. Project construction activities potentially facilitated by helicopters may include delivery of construction laborers, equipment, and materials (including structures) to structure sites; structure placement; hardware installation; and wire stringing operations. Vehicle access to each structure site is required regardless of the construction method employed.

To allow the construction contractor flexibility in which construction methods can be used, the construction specification will be written to allow the contractor the option of using ground-based or helicopter construction methods, or a combination thereof. Use of a helicopter for structure erection may be driven by various factors, including access to the structure locations, construction schedule, and construction economics².

3.1.1.6 Vegetation Clearing and Management

Temporary vegetation clearing will be needed to accommodate right-of-way widening, temporary work areas, pulling and tensioning sites, and access road improvements. Most vegetation removal will be temporary, and will primarily affect shrub/scrub, herbaceous, and hay/pasture cover types. It is PacifiCorp's policy to not clearcut all woody vegetation within the right-of-way. The amount of forest and shrub/scrub vegetation cleared will be minimized by limiting clearing to those areas directly impacted by construction activities and trees that pose a hazard to the proposed transmission line.

Additionally, existing snags and large woody debris within the right-of-way will be retained, provided they are not a safety hazard (i.e., have the potential to fall onto the line or encroach on minimum clearance standards) to minimize the loss of potential wildlife habitat. In addition, riparian corridors will be spanned to the extent possible, thus retaining any existing riparian/drainage vegetation for use as wildlife travel corridors.

Following construction, vegetation management will be performed in accordance with the specifications identified in PacifiCorp's *Transmission and Distribution Vegetation Management Program Specification Manual* (Attachment P-5). Integrated vegetation management works to minimize adverse impacts to fish and wildlife habitat and species by establishing sustainable plant

² The Project contractors will likely use their own fueling areas and would use staging areas to pick up the equipment (helicopters used in this context typically don't land; they just hover while on-the-ground workers attach the equipment to be air lifted for placement). The staging areas will be on private land and will be permitted separately, not under EFSC jurisdiction.

communities that are compatible with the Project, while promoting plant diversity and establishment of a sustainable supply of forage, escape, and nesting cover, and movement corridors.

3.1.1.7 Access Roads

During construction, vehicular access will be required to each structure. The transmission line corridor will be accessed from existing roads. Roads leading to the transmission line are generally multi-use roads (e.g., PacifiCorp access, back country roads, and residential access) used by a variety of individuals for various purposes. Access roads range from paved to gravel or bare soil surfaces, and are under the ownership of Jackson or Josephine counties, private individuals, or BLM. Existing access roads within the right-of-way have generally been created for use by PacifiCorp, typically have an 8-foot wide travel way, and are either bare soil or gravel. There will be no new temporary or permanent access roads constructed for the Project.

Construction equipment will access each structure site using existing access roads or the right-of-way. Approximately 25.1 miles of existing multi-use access roads may be improved for use in the Project. Most of these improved roads will be expanded from an 8-foot wide travel way to a 14-foot wide travel way to be used for the construction of the transmission lines. These roads may be temporarily widened an additional 5.5 feet on either side of the permanent travel way to facilitate construction of the Project, such as at sharp turn areas (for a total width up to 25 feet) to allow for the safe passage of heavy construction equipment. The extent of the disturbance area varies between flat and steep terrain. In addition to widening, improvements could include removal of overgrown vegetation, blading to shape existing road surfaces and turnouts, placement of surfacing aggregate (i.e., gravel) to maintain or restore existing road surfacing where needed, and installing water bars and drain dips as needed to manage stormwater runoff.

An additional 23.2 miles of existing multi-use roads will also be utilized, but no improvements beyond the existing travel ways are expected on those roads. Existing bridges and stream fords will be used for construction vehicles and equipment to cross streams.

3.1.1.8 Transmission Line Operation and Maintenance

As allowed in the existing right-of-way grant, PacifiCorp will maintain the proposed transmission system through line maintenance and vegetation management activities. Ongoing maintenance activities will be similar to those used for the existing 115 kV and 230 kV transmission lines, and in accordance with PacifiCorp's *Overview of Operation & Maintenance Activities for Electric Transmission and Distribution Power Lines* (Attachment 2). Vegetation management within and along the right-of-way and access roads will occur periodically to keep vegetation a safe distance from the conductor, maintain access to structures, and to help control noxious weeds. Vegetation management is guided by *Transmission & Distribution Vegetation Management Program Standard Operating Procedures* (Attachment P-5). Vegetation management methods include manual methods (e.g., chainsaws, handsaws, pruning shears), mechanical methods (e.g., slashbuster), and chemical methods (e.g., herbicide use). Herbicide use on BLM-managed lands will be restricted to BLM-approved herbicides and application methods.

Trees located on or off the right-of-way that are identified as a danger³ or hazard will be removed on an as-needed basis as part of the construction of the Project, and such identification and removal will continue throughout the life of the Project as part of maintenance activities. Danger and hazard trees will be felled with a chainsaw, feller buncher, or other mechanical means, and branches will be lopped and either scattered or chipped. How trees are felled and disposed of generally depends on the location of the trees and agreements with landowners. Because danger and hazard trees are the property of landowners, they are free to utilize them as they wish. PacifiCorp will discuss tree removal activities with landowners and federal land managers prior to removal.

Areas disturbed by construction activities, except permanent road surfaces, will be reseeded with a site-specific native seed mix approved by BLM on public lands, or an appropriate seed mix agreed on with private landowners.

3.1.2 Sams Valley Substation

The new 500/230 kV Sams Valley Substation is proposed on private land south of Oregon Highway 234, approximately 1.3 miles southwest of the unincorporated community of Sams Valley, in Jackson County, Oregon (Figure C-2). Construction is planned to begin in 2019. The Sams Valley Substation will occupy approximately 20 acres, and consist of a fenced and secured graveled yard containing transformers, switches, circuit breakers, and other supporting equipment. Existing vegetation on-site will be cleared, and the site will be filled and graded, then insulating rock will be installed. Access will occur via an improved access driveway from Tresham Lane, near its intersection with Oregon Highway 234.

The Sams Valley Substation will join the 230 kV circuit of the new 230/115 kV double circuit Grants Pass-Sams Valley Transmission Line (the 115 kV circuit of this line will continue on directly to the existing Whetstone Substation), the existing 230 kV Grants Pass-Whetstone Transmission Line, and the existing 500 kV Dixonville-Meridian Transmission Line. Tap lines will be constructed for the existing 230 and 500 kV transmission lines as part of the Project. There will be three new 500 kV monopole structures associated with the Sams Valley Substation (where the existing 500 kV transmission breaks to tap into the new Sams Valley Substation).

3.2 Proposed Change Effects on Facility (OAR 345-027-0060(1)(b)(A))

(A) a description of how the proposed change affects the facility,

The Grants Pass-Sams Valley Transmission Line and Sams Valley Substation are necessary to improve system reliability and to keep up with population growth and increased energy usage since the 1990s, when the Eugene-Medford 500 kV Transmission Line was first built. The Project will break the Dixonville-Meridian 500 kV Transmission Line (part of the Eugene-Medford 500 kV Transmission Line) to tap into the new Sams Valley Substation, and reconductor part of the existing

³ Danger trees are trees on or off the right-of-way that may contact electric facilities either through growth or by falling.

230kV Grants Pass–Lone Pine Transmission Line, which is within the existing 500 kV transmission line’s EFSC-certificated facility boundary.

PacifiCorp, under its business unit Pacific Power, provides electric service to almost 750,000 customers in Oregon, Washington, and northern California. PacifiCorp, as a regulated utility, is required to provide safe and reliable service for all customers within its service territory. In 1972, PacifiCorp recognized that a future 500 kV transmission line will be needed in its southern Oregon service area. PacifiCorp began acquiring additional rights-of-way along its existing Alvey–Dixonville 230 kV Transmission Line. In 1981, PacifiCorp submitted an Application for Site Certificate to ODOE to upgrade the Alvey–Dixonville and Dixonville–Lone Pine 230 kV transmission lines to the Eugene–Medford 500 kV Transmission Line. In 1982, EFSC issued PacifiCorp a site certificate to construct and operate the Eugene–Medford 500 kV Transmission Line. PacifiCorp amended this Site Certificate once in 1988 and twice in 1990. The Eugene–Medford 500 kV Transmission Line, as of the Third Amended Site Certificate, was approximately 135 miles long, required approximately 936 acres of new rights-of-way, contained approximately 52 miles of new access roads, and included substation upgrades (**Figure C-1**).

System modeling indicates that a new 230 kV line between the existing Grants Pass Substation and a new 500/230 kV substation (the Sams Valley Substation) north of Medford is necessary for reliability and to provide for future load growth⁴. Modeling indicates that the current system is at risk of unacceptable failure based on the following:

- An outage of the 230 kV Grants Pass–Dixonville line will overload the 230 kV Meridian–Whetstone line.
- A failure of the Meridian Substation breaker 1R49 will cause the loss of the 230 kV Meridian–Whetstone line and the loss of the 230 kV Meridian–Lone Pine No. 2 line, causing an overload of the 230 kV Meridian–Lone Pine No. 1 line.
- An outage of both the 230 kV Meridian–Whetstone line and the 230 kV Meridian–Lone Pine No. 2 line will result in the loss of all Grants Pass and Crescent City loads.
- An outage of 500 kV supply to the Meridian Substation, or loss of both Meridian 500-230 kV transformer banks, will cause low voltage on the 230 kV system, and will require significant load shedding (i.e., the need to drop customers).

The new Sams Valley Substation is required to interconnect the new 230/115 kV double circuit Grants Pass–Sams Valley Transmission Line and the existing Dixonville–Meridian 500 kV Transmission Line. It must be located as close as possible to where the existing 500 kV Dixonville–Meridian and 115 kV Grants Pass–Lone Pine transmission line corridors intersect. The proposed location is in the unincorporated Sams Valley area, at the intersection of the new 230 kV line and

⁴ Exhibit N establishes the need for the Project under the system reliability rule for transmission lines, OAR 345-023-0030.

existing Dixonville-Meridian 500 kV and 115 kV Grants Pass-Lone Pine transmission lines (**Figure C-1**).

3.3 Applicable Laws and Council Rules (OAR 345-027-0060(1)(b)(B))

(B) a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and

Sections 4 and 6 describe or reference the exhibits where EFSC may find the required analysis of the proposed changes protected by applicable laws and EFSC standards.

3.4 Location of the Proposed Change OAR 345-027-0060(1)(b)(C))

(C) the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.

The 23.5-mile Project is located in the jurisdictions of unincorporated Josephine and Jackson counties, and crosses a small portion of the City of Rogue River. In total, the Project crosses 4.5 miles of land managed by BLM, 18.6 miles of privately owned land, and 0.3 miles of land managed by the State of Oregon at the Rogue River crossing near the existing Whetstone Substation. The Sams Valley Substation will be sited entirely on land owned by PacifiCorp in Jackson County, 6 miles north of Medford. Exhibit C provides the specific location and associated maps for the Project, including by Township, Range, Section, County, and Tax Lot ID Number for the Project. Figure C-2 provides an updated map book for the Project.

4.0 Division 21 Requirements

(c) References to any specific Division 21 information that may be required for the Department to make its findings.

4.1 Proposed Transmission Line; Corridor Selection Assessment (OAR 345-021-0010(b)(D))

OAR 345-021-0010(b)(D) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, a corridor selection assessment explaining how the applicant selected the corridor(s) for analysis in the application. In the assessment, the applicant shall evaluate the corridor adjustments the Department has described in the project order, if any. The applicant may select any corridor for analysis in the application and may select more than one corridor. However, if the applicant selects a new corridor, then the applicant must explain why the applicant did not present the new corridor for comment at an informational meeting under OAR 345-015-0130. In the assessment, the applicant shall discuss the reasons for selecting the corridor(s), based upon evaluation of the following factors:

ODOE determined that the Project includes a transmission line that, by itself, is an energy facility under the definition in ORS 469.300. Thus, a “corridor selection assessment” is provided below. PacifiCorp may select any corridor for analysis, may select only one corridor, and may select more than one corridor. PacifiCorp has selected a corridor to take maximum advantage of existing transmission line rights-of-way. The new transmission line will be a double circuit (co-located) with the existing 115 kV Grants Pass–Lone Pine Transmission Line. The Project will be sited along the centerline of the existing right-of-way corridor, although this existing right-of-way must be widened to 135 feet to meet required safety standards. In compliance with OAR 345-021-0010(1)(b)(D), PacifiCorp is required to discuss the reasons for selecting the corridor, based upon evaluation of the following factors:

(i) Least disturbance to streams, rivers and wetlands during construction.

PacifiCorp has designed the Project to avoid impacts to streams, rivers, and wetlands to the maximum extent practicable by co-locating the Grants Pass–Sams Valley Transmission Line with an existing transmission line. Streams, rivers, and wetlands have been considered in the siting and evaluation process since Project initiation at both the macro- and micro-siting level. No impacts to wetlands and other waters of the State are anticipated for Project construction activities associated with the Grants Pass–Sams Valley Transmission Line, Sams Valley–Whetstone Reconductoring, and associated access roads (**Exhibit J**).

(ii) Least percentage of the total length of the pipeline or transmission line that would be located within areas of Habitat Category 1, as described by the Oregon Department of Fish and Wildlife.

The Project will avoid all Category 1 habitat, as explained in **Exhibit P**.

(iii) Greatest percentage of the total length of the pipeline or transmission line that would be located within or adjacent to public roads [as defined in ORS 368.001] and existing pipeline or transmission line rights-of-way.

PacifiCorp has designed the Project to take advantage of existing transmission line corridors. The Project will be sited in the existing 115 kV Grants Pass–Lone Pine right-of-way corridor. This existing corridor ranges from 40 to 100 feet wide, is approximately 17.9 miles long, and crosses both privately owned and BLM-managed lands. To accommodate the new line, the existing right-of-way corridor will need to be widened from 40 or 100 feet to 135 feet. The 4.7-mile Sams Valley–Whetstone Reconductoring portion of the Project will all be located within the existing 230 kV Grants Pass–Meridian Transmission Line corridor, with no right-of-way expansion need.

The new Sams Valley Substation will be located directly under the existing 500 kV Dixonville–Meridian Transmission Line corridor. The substation, which is necessary to support the new transmission line, is planned for three parcels owned by PacifiCorp located near the intersection of Tresham Lane and Oregon Highway 234. This site is located at the intersection of the existing transmission lines necessary for the construction of the Project. This greatly reduces impacts, as it will avoid requiring entirely new transmission lines, with new easements, across otherwise unaffected properties.

(iv) Least percentage of the total length of the pipeline or transmission line that would be located within lands that require zone changes, variances or exceptions.

PacifiCorp elects to obtain an EFSC determination on land use. See **Exhibit K**. No zone changes are anticipated. A Goal 4 exception request is included in Exhibit K for access road improvements. PacifiCorp believes the exception is not necessary because the road improvements are necessary to construct a permitted use, but provided the exception in case EFSC does not concur with this position.

(v) Least percentage of the total length of the pipeline or transmission line that would be located in a protected area as described in OAR 345-022-0040.

The Project will be located in portions of the Table Rocks State Natural Heritage Area (SNHA) and Areas of Critical Environmental Concern (ACEC) as noted below:

- **Grants Pass-Sams Valley Transmission Line:** 0.3 miles of the Table Rocks SNHA.
- **Sams Valley-Whetstone Reconductoring:** 1.2 miles of the Table Rocks Preserve SNHA and 0.2 miles of the Table Rocks ACEC.

Because the existing 115 kV transmission line and 230 kV transmission line are located in these protected areas, utilizing the existing transmission corridor was selected rather than developing a new right-of-way. The new Sams Valley Substation will not be located in a protected area.

(vi) Least disturbance to areas where historical, cultural or archaeological resources are likely to exist.

The Project will avoid areas where historical, cultural, or archaeological resources are likely to exist, as explained in **Exhibit S**.

(vii) Greatest percentage of the total length of the pipeline or transmission line that would be located to avoid seismic, geological, and soils hazards.

The Project will avoid seismic, geological, and soils hazards, as explained in **Exhibit H**. Project construction will not adversely affect slope stability or cause long-term erosion impacts.

(viii) Least percentage of the total length of the pipeline or transmission line that would be located within lands zoned for exclusive farm use.

Locations within Exclusive Farm Use (EFU) lands are unavoidable due to the location of the existing 500 kV Dixonville-Meridian Transmission Line and the existing Whetstone Substation. No other route could avoid lands zoned as EFU. Transmission lines with towers less than 200 feet in height are considered a “utility facility necessary for a public service,” and are permitted in the EFU under subsection (1) of ORS 215.283. Moreover, as described in **Exhibit K**, the Project route is the most reasonably direct route available that also minimizes impacts because it is sited in an existing utility right-of-way that only requires minor expansion to accommodate the Project.

4.2 Information Required for Transmission Line Projects (OAR 345-021-0010(b)(E))

OAR 345-021-0010(1)(b)(E) If the proposed energy facility is a pipeline or transmission line or has, as a related or supporting facility, a transmission line or pipeline of any size:

(i) The length of the pipeline or transmission line.

The Project is an approximately 23.5-mile transmission line consisting of:

- **The Grants Pass-Sams Valley Transmission Line:** new construction of 17.6 miles of 230 kV transmission line double circuited with an existing 115 kV transmission line; and
- **Sams Valley-Whetstone Reconductoring:** reconductoring of 4.9 miles of 230 kV transmission line to connect to the Sams Valley Substation.

(ii) The proposed right-of-way width of the pipeline or transmission line, including to what extent new right-of-way will be required or existing right-of-way will be widened.

The proposed right-of-way width is 135 feet – 40 to 100 feet of existing right-of-way (existing 115 kV transmission line) and widened to 135 feet to accommodate the new 230kV transmission line.

(iii) If the proposed transmission line or pipeline corridor follows or includes public right-of-way, a description of where the transmission line or pipeline would be located within the public right-of-way, to the extent known. If the applicant proposes to locate all or part of a transmission line or pipeline adjacent to but not within the public right-of-way, describe the reasons for locating the transmission line or pipeline outside the public right-of-way. The applicant must include a set of clear and objective criteria and a description of the type of evidence that would support locating the transmission line or pipeline outside the public right-of-way, based on those criteria.

The proposed transmission line does not follow or include public rights-of-way. The Project is utilizing existing utility right-of-way.

(iv) For pipelines, the operating pressure and delivery capacity in thousand cubic feet per day and the diameter and location, above or below ground, of each pipeline.

The Project is not a pipeline. OAR 345-021-0010(1)(b)(E)(iv) is not applicable.

(v) For transmission lines, the rated voltage, load carrying capacity, and type of current and a description of transmission line structures and their dimensions.

- Rated voltage – 230 kV.
- Operating voltage – PacifiCorp will operate the Project between 110 kV and 120 kV for the 115 kV line and 220 kV and 240 kV for the 230 kV line.
- Load carrying capacity – The 115 kV line summer continuous rating is 566 amperes (Amps) and winter continuous rating is 787 Amps. The 230 kV line summer continuous rating 1,145 Amps and winter continuous rating is 1,675 Amps.

- Type of Current – Alternating current.

Transmission line structures and dimensions are generally described in Section 3.1.1.

4.3 Construction Schedule (OAR 345-021-0010(1)(b)(F))

OAR 345-021-0010(1)(b)(F) A construction schedule including the date by which the applicant proposes to begin construction and the date by which the applicant proposes to complete construction. Construction is defined in OAR 345-001-0010. The applicant shall describe in this exhibit all work on the site that the applicant intends to begin before the Council issues a site certificate. The applicant shall include an estimate of the cost of that work. For the purpose of this exhibit, “work on the site” means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor, that the applicant anticipates or has performed as of the time of submitting the application.

For the purpose of this Request, “work on the site” means any work within a site or corridor, other than surveying, exploration, or other activities to define or characterize the site or corridor.

Construction is planned to begin on the Sams Valley Substation will occur in January 2019.

Construction on the new Grants Pass–Sams Valley Transmission Line will begin in January 2020 and continue through December 2020. The Sams Valley–Whetstone Reconductoring will begin in July 2019 and continue through December 2020. Additional engineering, wetland and water, cultural, and geotechnical investigations may occur prior to issuance of the Site Certificate Amendment. No other construction work is anticipated to begin prior to issuance of the Amendment.

4.4 Permits Required (OAR 345-021-0010(1)(e))

OAR 345-021-0010(1)(e) Exhibit E. Information about permits needed for construction and operation of the facility, including:

(A) Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, mailing address, email address and telephone number of the agency or office responsible for each permit.

(B) A description of each permit, the reasons the permit is needed for construction or operation of the facility and the applicant’s analysis of whether the permit should or should not be included in and governed by the site certificate.

(C) For any state or local government agency permits, licenses or certificates that are proposed to be included in and governed by the site certificate, evidence to support findings by the Council that construction and operation of the proposed facility will comply with the statutes, rules and standards applicable to the permit. The applicant may show this evidence:

Exhibit E identifies all federal, state, and local government permits related to the siting of the Project. EFSC determines compliance with all Oregon and local government statutes, regulations, and permitting requirements related to siting the Project, except for federal permits and federally-delegated state permits. Upon issuance of the Site Certificate, and following submission by PacifiCorp of the appropriate applications and payment of proper fees, the affected state agencies and local governments will issue the permits addressed in the Site Certificate.

4.5 Materials Analysis (OAR 345-021-0010(1)(g))

OAR 345-021-0010(1)(g) Exhibit G. A materials analysis including:

- (A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation.*
- (B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills.*
- (C) The applicant's plans to manage non-hazardous waste materials during construction and operation.*

Exhibit G was prepared to meet the submittal requirements for the Project per OAR 345-021-0010(1)(g) related to materials analysis.

4.6 Electric and Magnetic Fields (OAR 345-021-0010(1)(aa))

OAR 345-021-0010(1)(aa) Exhibit AA. If the proposed energy facility is a transmission line or has, as a related or supporting facility, a transmission line of any size:

- (A) Information about the expected electric and magnetic fields, including:*
 - (i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way.*
 - (ii) The type of each occupied structure, including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals, within 200 feet on each side of the proposed center line of each proposed transmission line.*
 - (iii) The approximate distance in feet from the proposed center line to each structure identified in (A).*
 - (iv) At representative locations along each proposed transmission line, a graph of the predicted electric and magnetic fields levels from the proposed center line to 200 feet on each side of the proposed center line.*
 - (v) Any measures the applicant proposes to reduce electric or magnetic field levels.*
 - (vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line.*

(vii) The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels.

(B) An evaluation of alternate methods and costs of reducing radio interference likely to be caused by the transmission line in the primary reception area near interstate, U.S. and state highways.

Exhibit AA was prepared to meet the submittal requirements for the Project, per OAR 345-021-0010(1)(aa), related to EMF. Exhibit AA's analysis focuses on two of the Project segments: the Grants Pass-Sams Valley Transmission Line and the Sams Valley-Whetstone Reconductoring.

4.7 Additional Statutes and Administrative Rules – OAR 345-021-0010(cc)

OAR 345-021-0010(cc) Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant shall identify all statutes, administrative rules and ordinances that the applicant knows to be applicable to the proposed facility, whether or not identified in the project order. To the extent not addressed by other materials in the application, the applicant shall include a discussion of how the proposed facility meets the requirements of the applicable statutes, administrative rules and ordinances.

Exhibit CC identifies state statutes and administrative rules and local government ordinances containing approval criteria that the Project must meet for EFSC to issue a site certificate for the Project, other than those statutes, rules, or ordinances identified in Exhibit E.

5.0 Site Certificate Revisions (OAR 345-027-0060(1)(d))

OAR 345-027-0060(1)(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment.

Pursuant to OAR 345-027-0060(1)(d), PacifiCorp's proposed changes to the Site Certificate and operational conditions are included as Attachment 3.

6.0 Other Standards and Permits (OAR 345-027-0060(1)(e))

OAR 345-027-0060(1)(e) A list of the Council standards and all other laws - including statutes, rules and ordinances applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0075(2).

This Request serves as a list of EFSC standards and all other laws applicable to the Project to demonstrate that the Facility, as modified by the Request, will comply with the requirements of ORS Chapter 469, applicable EFSC rules, and applicable state and local laws, rules, and ordinances, consistent with EFSC’s findings in the three prior final orders. Generally, EFSC standards relevant to the proposed amendment are Division 22 (General Standards for Siting Facilities), Division 23 (Need Standard for Nongenerating Facilities), and Division 24 (Specific Standards for Siting Facilities), which are addressed in the following sections. Besides standards and laws addressed and referenced herein, Section 6.1 identifies the relevant Exhibits where EFSC may find the required analysis to make findings of compliance for the proposed changes. In addition, **Exhibit E** provides information about permits that PacifiCorp will need for construction and operation of the Project, and Exhibit CC identifies state statutes and administrative rules and local government ordinances containing approval criteria that the Project must meet for EFSC to issue an amended Site Certificate for the Project.

6.1 Applicable Division 22 Standards

PacifiCorp has provided the attached Exhibits with the Request, which contain the information required under OAR 345-021-0010 to address the applicable Division 22 standards. These Exhibits and their relevant standards are shown in Table 1. Each Exhibit contains the information necessary for EFSC to find that the Project, as modified by this Request, meets the applicable Division 22 standard.

Table 1. Division 22 Standards Relevant to Proposed Amendment

Standard	Exhibit
OAR 345-022-0000 General Standard of Review	J, O, U, X
OAR 345-022-0010 Organizational Expertise	D
OAR 345-022-0020 Structural Standard	H
OAR 345-022-0022 Soil Protection	I
OAR 345-022-0030 Land Use	K
OAR 345-022-0040 Protected Areas	L
OAR 345-022-0050 Retirement and Financial Assurance	M, W
OAR 345-022-0060 Fish and Wildlife Habitat	P
OAR 345-022-0070 Threatened and Endangered Species	Q
OAR 345-022-0080 Scenic Resources	R
OAR 345-022-0090 Historic, Cultural and Archaeological Resources	S
OAR 345-022-0100 Recreation	T
OAR 345-022-0110 Public Services	U
OAR 345-022-0120 Waste Minimization	V

6.2 Applicable Division 23 Standards

6.2.1 Need for a Facility (OAR 345-023-0005)

This division applies to non-generating facilities as defined in ORS 469.503(2)(e), except non-generating facilities that are related or supporting facilities. To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other non-generating facilities. This division describes the methods the applicant shall use to demonstrate need.

(1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a “National Interest Electric Transmission Corridor” designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;

OAR 345-023-0005(1) provides that PacifiCorp shall demonstrate the need for the Project. PacifiCorp chooses to demonstrate the need for the Project under the system reliability rule consistent with OAR 345-023-0030, as demonstrated in **Exhibit N**.

6.3 Division 24 Standards

6.3.1 Specific Standards for Transmission Lines (OAR 345-024-0090)

To issue a site certificate for a facility that includes any transmission line under EFSC jurisdiction, EFSC must find that the site certificate holder:

(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;

(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.

Exhibits AA and DD were prepared to meet the submittal requirements for the Project related to specific standards for transmission lines. Exhibit AA relates to transmission line EMF regulations, data, and predicated levels (see Section 4.6). Exhibit DD demonstrates that the transmission lines associated with the Project will be designed, constructed, and operated to ensure alternating current electric fields do not exceed 9 kV per meter at 1 meter above the ground surface in areas accessible to the public. Exhibit DD also shows that the induced currents resulting from the Grants Pass-Sams Valley Transmission Line and related or supporting facilities will be as low as reasonably achievable.

6.3.2 Carbon Dioxide Emission Standards and Offsets for Non-generating Energy Facilities; Standard for Non-generating Energy Facilities (OAR 345-024-0620)

To issue a site certificate, the Council must find that the energy facility complies with any applicable carbon dioxide emissions standard adopted by the Council or enacted by statute. The Council shall adopt standards for fossil-fueled power plants and may adopt carbon dioxide emission standards for other energy facilities that emit carbon dioxide.

The Project does not include a base load gas plant, does not include a non-base load power plant, and will not emit carbon dioxide. Therefore, OAR 35 345-021-0010(1)(y) is not applicable to the Project, and Exhibit Y does not need to include the carbon dioxide emissions information provided for in that rule.

7.0 Property Owners Located within or Adjacent to the Site of the Facility (OAR 345-027-0060(1)(f))

OAR 345-027-0060(1)(f) An updated list of the owners of property located within or adjacent to the site of the facility, as described in OAR 345-021-0010(1)(f).

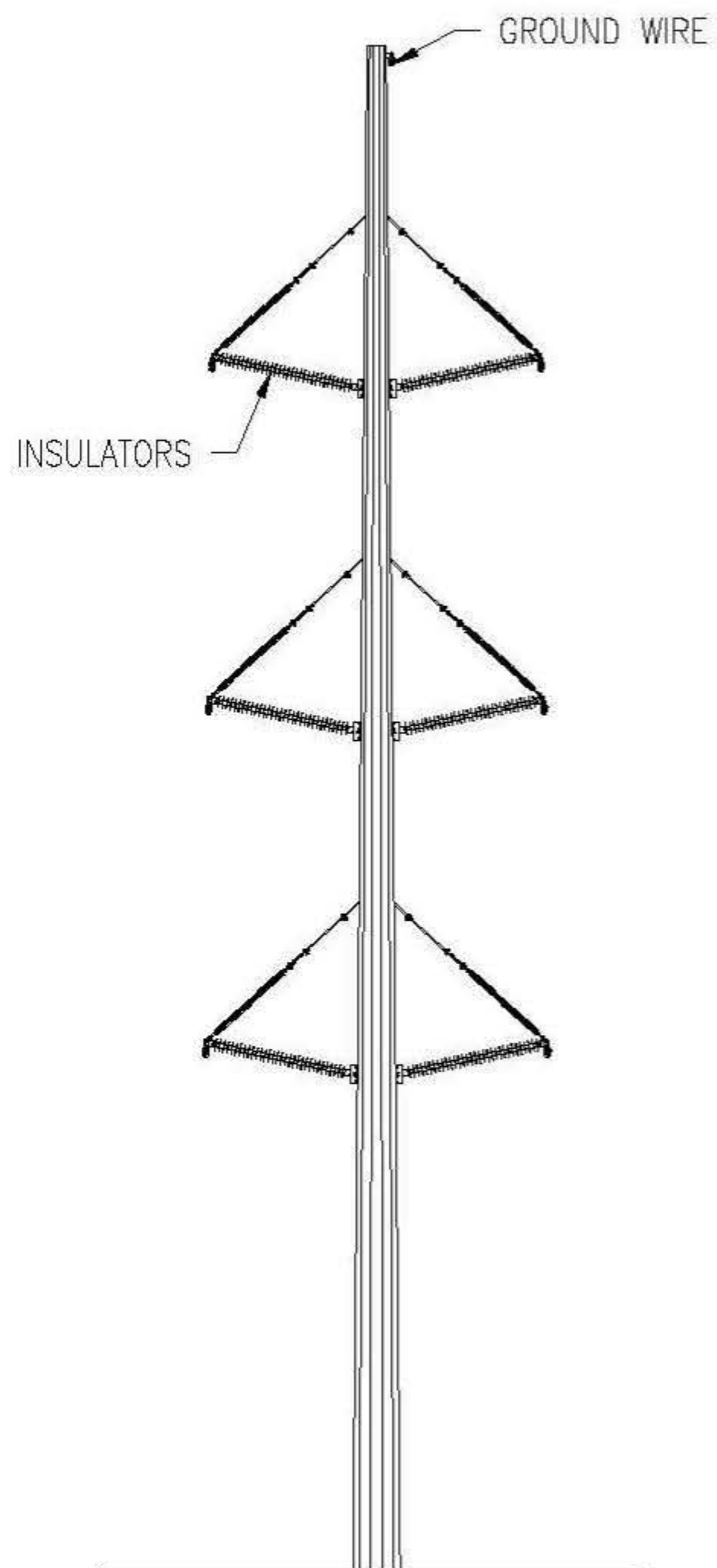
OAR 345-027-0060(f) requires that, if an amendment would change the Site Boundary, extend the deadlines for beginning or completing construction, or change the legal description of the facility, an updated list of the owners of property located within or adjacent to the site of the facility, as described in OAR 345-021-0010(1)(f), must be provided. Because this Request proposes a change to the Site Boundary, a revised property owner list will be provided as **Exhibit F** at the request of ODOE after the completeness review.

8.0 Conclusion

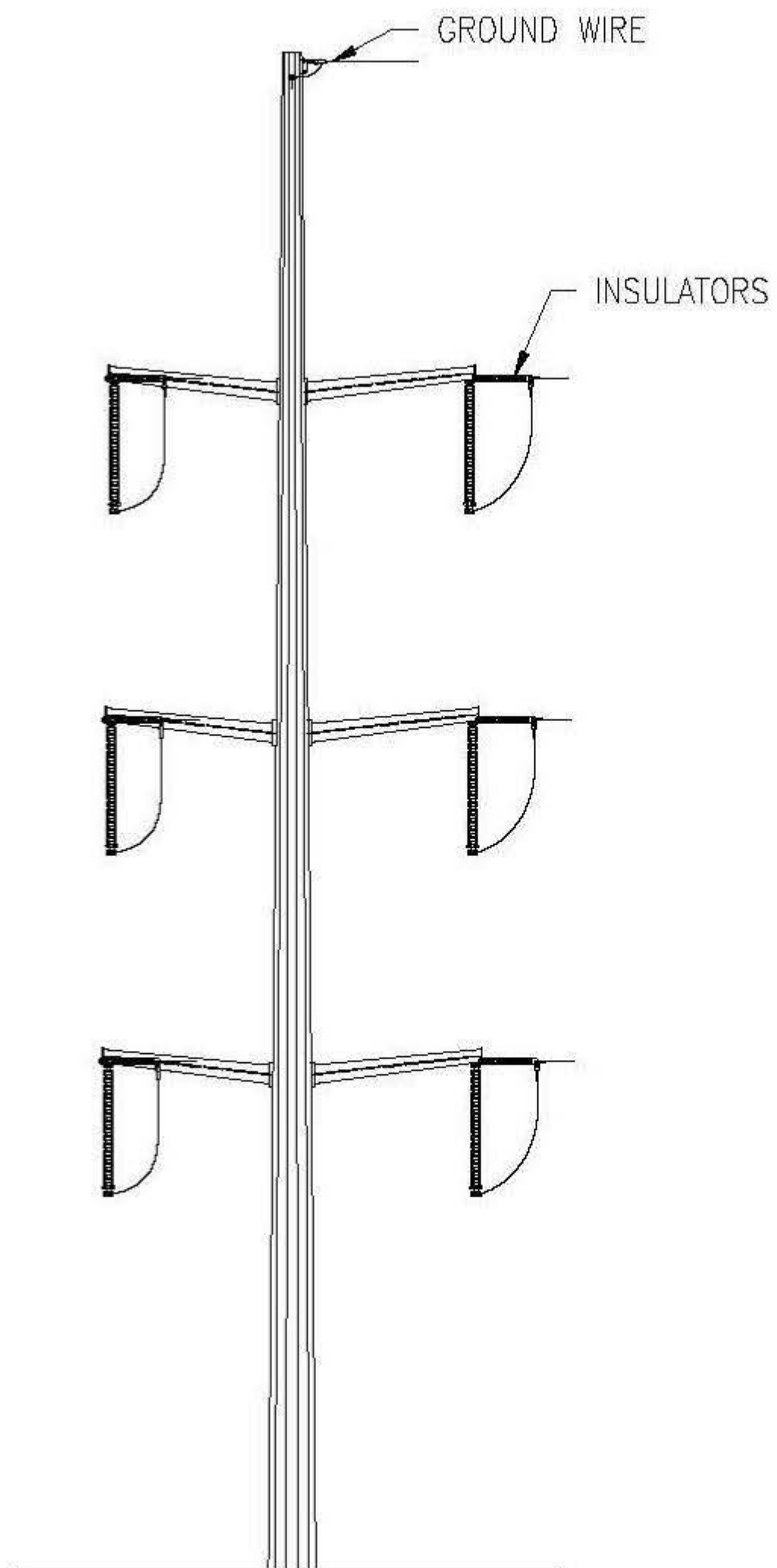
For the reasons stated above, PacifiCorp respectfully requests approval of its Request.

Figures

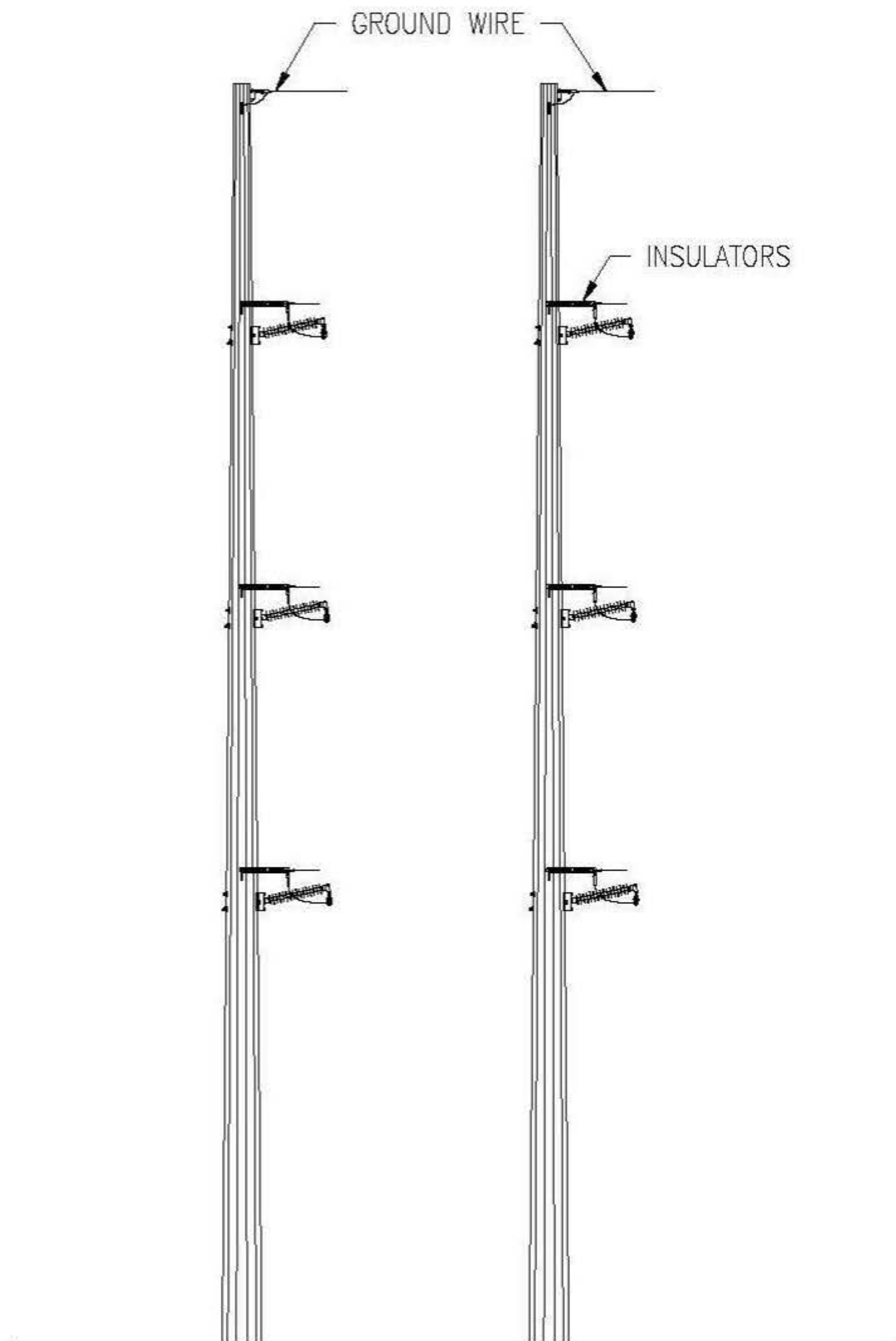
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DOUBLE CIRCUIT
BRACED POST TANGENT



DOUBLE CIRCUIT
SINGLE POLE DEADEND



DOUBLE CIRCUIT
TWO POLE DEADEND

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Attachment 1. Jurisdiction Letter from ODOE

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Oregon

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MEMORANDUM

To: Mr. John Aniello
Mr. Dustin Till
PacifiCorp
Sent via email to john.aniello@pacificorp.com and dustin.till@pacificorp.com

From: Todd R. Cornett, Oregon Department of Energy, Assistant Director

Date: August 15, 2017

Re: PacifiCorp Sams Valley Reinforcement Projects, Josephine and Jackson Counties, EFSC Jurisdiction Determination

This letter is regarding the proposed PacifiCorp Sams Valley Reinforcement Projects, including the proposed Grants Pass-Sams Valley 230 kV transmission line and the Sams Valley substation project in Josephine and Jackson Counties. These projects have been the subject of recent email correspondence between PacifiCorp and the Oregon Department of Energy (ODOE) regarding Energy Facility Siting Council (EFSC) jurisdiction for review and permitting of the facilities. This letter outlines our findings, based on the information we have at this time. As discussed in this letter, ODOE has preliminarily determined that the Grants Pass-Sams Valley 230 kV transmission line is an EFSC-jurisdictional energy facility, and the Sams Valley substation is a related and supporting facility to an EFSC-jurisdictional energy facility. As such, both require approval from EFSC before construction or operation of these facilities can commence. We are requesting a meeting with PacifiCorp to discuss our jurisdictional determination and the site certificate amendment process.

We note that in a July 30, 2017 email from John Aniello to ODOE's compliance officer Duane Kilsdonk, it was referenced that PacifiCorp had previously discussed the two projects with Tom Stoops, the former manager of the ODOE Siting Division. The email stated that Mr. Stoops and PacifiCorp had agreed that the Grants Pass-Sams Valley 230 kV transmission line was exempt from EFSC jurisdiction. We have searched our files, including Mr. Stoops' old emails, and we find no record of such a determination. If such a record exists, please forward to our attention immediately. However, the July 30, 2017 email from Mr. Aniello notes that the discussion with Mr. Stoops was only regarding the transmission line, with no mention of the Sams Valley substation. ODOE considers both the substation and transmission line to be subject to EFSC

jurisdiction, for different reasons, as outlined in this letter. Additionally, the configuration and scope of the Grants Pass-Sams Valley 230 kV transmission line project may have changed since it was considered by Mr. Stoops, because as we outline in this letter, there is no outright statutory exemption for double-circuiting existing transmission lines, and based on the information we have at hand, the Grants Pass-Sams Valley 230 kV transmission line is not entirely within an existing right-of-way. As further described below, the transmission line is not exempt from EFSC jurisdiction.

Our information sources include direct communication with PacifiCorp staff, including emails and conversations with the ODOE compliance officer, a site visit by the ODOE compliance officer to inspect the existing EFSC-jurisdictional Eugene-Medford 500 kV transmission line¹, the PacifiCorp website for the projects, and the BLM's environmental assessment for the project completed in November 2016.

Understanding of Project Scope

Based on these sources, ODOE understands that the scope of PacifiCorp's project includes four main components:

1. Construct a new 230 kV transmission line between existing Grants Pass substation in Josephine County to the new Sams Valley substation in Jackson County. This transmission line would roughly follow the path of an existing 115 kV transmission line, but would not be built entirely in the same right of way, and would be constructed to double-circuit the new 230 kV line with an existing 115 kV line;
2. Construct a new substation (Sams Valley substation) at the intersection of the existing EFSC-jurisdictional Eugene-Medford (Dixonville-Meridian segment) 500 kV transmission line and the new Grants Pass-Sams Valley 230 kV transmission line. The substation would be approximately 20 acres;
3. Upgrades to the existing Grants Pass substation to accommodate the termination of the new 230 kV transmission line; and
4. Reconductor a portion of the existing 230 kV transmission line between the new Sams Valley substation and the existing Whetstone substation.

EFSC Jurisdictional Definition

EFSC jurisdiction is established in Oregon Revised Statute (ORS) 469.300(11)(a). Specifically, ORS 469.300(11)(a)(C) includes the parameters of EFSC jurisdiction for high voltage transmission lines. The definition states:

A high voltage transmission line of more than 10 miles in length with a capacity of 230,000 volts or more to be constructed in more than one city or county in this state, but excluding:

- (i) *Lines proposed for construction entirely within 500 feet of an existing corridor occupied by high voltage transmission lines with a capacity of 230,000 volts or more; and*

¹ ODOE understands that PacifiCorp refers to the Eugene-Medford 500 kV transmission line as the Alvey-Meridian 500 kV transmission line, or Alvey-Dixonville-Meridian 500 kV transmission line

- (ii) *Lines of 57,000 volts or more that are rebuilt and upgraded to 230,000 volts along the same right of way*

EFSC also maintains jurisdiction over “related or supporting facilities” associated with jurisdictional energy facilities. Related and supporting facilities are defined at ORS 469.300(24),

Related or supporting facilities means any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility, including associated transmission lines, reservoirs, storage facilities, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures.

In 1982, EFSC authorized the construction and operation of the Eugene-Medford 500 kV transmission line (Alvey-Meridian line). Since that time, EFSC has maintained continual responsibility for facility compliance with the terms and conditions of the site certificate, including during construction and operation. ODOE compliance staff routinely conducts site visits with PacifiCorp personnel to inspect the facility.

EFSC Jurisdictional Determination

Based on the information reviewed, ODOE makes the following determinations:

1. The Grants Pass-Sams Valley 230 kV transmission line is subject to EFSC jurisdiction and cannot be constructed until a site certificate or amended site certificate has been authorized by EFSC.

ORS 469.300(11)(a)(C) A high voltage transmission line of more than 10 miles in length with a capacity of 230,000 volts or more to be constructed in more than one city or county in this state...

It is stated on the PacifiCorp website and in the BLM EA that the Grants Pass-Sams Valley 230 kV transmission line would be approximately 18 miles in length, would have a capacity of 230 kV, and would be located in Josephine and Jackson counties. Therefore, all three of the EFSC jurisdictional criteria are met.

...but excluding:

- (i) *Lines proposed for construction entirely within 500 feet of an existing corridor occupied by high voltage transmission lines with a capacity of 230,000 volts or more; and*

This exclusion does not apply. As stated on the PacifiCorp website, the existing transmission line corridor includes a 115 kV line, and not a 230 kV or more transmission line.

- (ii) *Lines of 57,000 volts or more that are rebuilt and upgraded to 230,000 volts along the same right of way*

This exclusion also does not apply. As stated on the PacifiCorp website and in the BLM’s EA, the Grants Pass-Sams Valley 230 kV transmission line would be built as a double-

circuit line, carrying both the new 230 kV transmission line and the existing 115 kV line. This is different from “rebuilt and upgraded to 230,000 volts.” Additionally, the exclusion does not apply because, as stated in the BLM’s EA, the new 230 kV line will not be built “along the same right of way,” but rather, will require new, additional right of way. The BLM’s EA states that PacifiCorp will require an expanded right of way on BLM land from existing 100 feet to 135 feet. The EA also states that additional right of way on non-federal land will also be required, from between 35 to 95 feet of additional right of way. In total, the BLM’s EA states that the additional permanent right of way needed for the transmission line is 82 acres.

In addition, it is stated in the BLM’s EA that construction of the 230 kV transmission line would involve improvement to approximately 23 miles of existing access road. ODOE will discuss with PacifiCorp the extent of the improvements to determine if the improvements should be considered “substantially modified,” per the definition of “related or supporting facilities” which states that “related or supporting facilities include any structure, proposed by the applicant, to be constructed or *substantially modified* in connection with the construction of an energy facility....”

Please also note that pulling and tensioning sites, temporary staging areas, construction laydown yards, and any other area of temporary construction-related impact are all considered during the EFSC site certificate or site certificate amendment review.

2. The Sams Valley substation is a related and supporting facility to either the EFSC-jurisdictional Eugene-Medford 500 kV (Alvey-Dixonville-Meridian) transmission line, or a related and supporting facility to the EFSC-jurisdictional Grants Pass-Sams Valley 230 kV transmission line. As such, a site certificate or site certificate amendment that considers and includes the Sams Valley substation must be approved by EFSC before construction can commence. Based on the definition of related and supporting facility, the Sams Valley substation is proposed to be constructed, owned, and operated by PacifiCorp in connection with the Eugene-Medford 500 kV transmission line and the Grants Pass-Sams Valley 230 kV transmission line. The BLM’s EA states that the new Sams Valley substation will interconnect the existing EFSC-jurisdictional Eugene-Medford 500 kV transmission line (along the Dixonville-Meridian segment) with the new Grants Pass-Sams Valley 230 kV transmission line, and that the Sams Valley substation would be built directly underneath the existing corridor of the Eugene-Medford 500 kV line and the existing 115 kV transmission line. Substations are typically included in and governed by EFSC site certificates when they are built and operated in connection with an energy facility. As outlined in the Proposed Pathway below, ODOE recommends that the Sams Valley substation be considered a related and supporting facility in connection with the Eugene-Medford 500 kV transmission line, and that a site certificate amendment is the appropriate procedural pathway for EFSC review and determination of compliance with applicable Council standards and rules.
3. Upgrades to the existing Grants Pass substation to accommodate the termination of the new 230 kV transmission line could be considered as part of the EFSC-jurisdictional facilities site certificate review, though the Grants Pass substation itself is not EFSC

jurisdictional. The Grants Pass substation is existing infrastructure outside of EFSC jurisdiction, but, as discussed above, the definition of related or supporting facilities includes “any structure, proposed by the applicant, to be constructed or *substantially modified* in connection with the construction of an energy facility....” The upgrades to the Grants Pass substation include a new 230 kV bay and two breakers to accommodate the new 230 kV transmission line. ODOE will discuss with PacifiCorp if these upgrades constitute a “substantial modification” and as such, if the upgrades should be considered during the EFSC site certificate amendment review.

4. Similarly, reconductoring a portion of the existing 230 kV transmission line between the new Sams Valley substation and the existing Whetstone substation, including replacement of approximately 16 structures, could be considered as part of the EFSC-jurisdictional facilities site certificate review for the same reasons as discussed above regarding the existing Grants Pass substation upgrades. ODOE will discuss with PacifiCorp if the reconductoring and structure replacement constitutes a “substantial modification” and as such, if the upgrades should be considered during the EFSC site certificate amendment review.

EFSC and BLM jurisdiction

It is important to understand that EFSC jurisdiction applies to all lands in Oregon except those managed by Tribal Governments. This includes federally-owned land. In order to proceed with the Grants Pass-Sams Valley 230 kV transmission line, as outlined in this letter, PacifiCorp needs approval from EFSC. On federal land, PacifiCorp needs approval from both EFSC and the responsible federal agency, in this case the BLM.

Proposed Pathway Forward

It is ODOE’s current determination that the Sams Valley substation should be considered a “related and supporting facility” to the Eugene-Medford 500 kV transmission line. Additionally, the Grants Pass-Sams Valley 230 kV transmission line can likely be considered as an amendment to the Eugene-Medford 500 kV transmission line facility. As such, the appropriate compliance pathway is for PacifiCorp to submit one request for amendment for the Eugene-Medford 500 kV transmission line site certificate, incorporating both the Sams Valley substation and the Grants Pass-Sams Valley 230 kV transmission line into the amendment request. The EFSC amendment request application requirements are described at Oregon Administrative Rules (OAR) 345-027-0060 and -0070. Contents of an Application are described at OAR 345-021-0010, and EFSC standards are included at OAR 345, divisions 22, 23, and 24. The Grants Pass-Sams Valley 230 kV transmission line is subject to the EFSC need standard for nongenerating facilities (OAR 345, division 23), and the specific standards for transmission lines (OAR 345-024-0090). Please also note that while ODOE understands that the Oregon Department of State Lands has already issued a removal-fill permit authorizing wetland impacts for the Sams Valley substation, for an EFSC-jurisdictional energy facility, removal-fill permits are included in and governed by the site certificate and are subject to EFSC jurisdiction, review, and decision, not DSL. The removal-fill permit application must be included in the request for amendment for Council consideration and decision.

ODOE would like to first meet with PacifiCorp, preferably in person, to discuss the proposed project and the ODOE jurisdictional determinations outlined in this letter. At this meeting, we will confirm the scope and details of the project, timelines, and confirm the review and permitting pathway.

c: Michael Kaplan, Director, Oregon Department of Energy
Ruchi Sadhir, Governor Brown's Energy Policy Advisor
Maxwell Woods, Senior Policy Advisor, Oregon Department of Energy
Duane Kilsdonk, Compliance Officer, Oregon Department of Energy
Jesse Ratcliffe, Assistant Attorney General, Oregon Department of Justice

Attachment 2. Overview of Operation & Maintenance Activities for Electric Transmission and Distribution Power Lines

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Overview of Operation & Maintenance Activities for Electric Transmission and Distribution Power Lines

February 2012

For additional information, please contact:
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1.0 Purpose

PacifiCorp, d.b.a. Pacific Power and Rocky Mountain Power, has prepared this document to assist federal land managers with their development of Land Resource Management Plans (Resource Management Plans and Forest Plans), or other plans, and with their issuance of right-of-way (ROW) grants, easements or other permits and authorizations. This document describes typical operational and maintenance activities performed by PacifiCorp personnel, or its contractors, on existing transmission and distribution power lines and poles/structures; hereafter referred to as power lines. Since many of these power lines are located on federal lands it is important for land managers to understand operational requirements and maintenance activities, what type of equipment is typically utilized, and how often the work is performed. It is also important to understand PacifiCorp's ongoing need to access its power lines in order to perform necessary and required maintenance activities. This is intended to be a living document and may be updated or revised by PacifiCorp as needed.

2.0 PacifiCorp and Its Commitment to the Environment

PacifiCorp is a large electric utility serving approximately 1.7 million customers in six western states. PacifiCorp's service territory covers about 136,000 square miles. Approximately 750 communities are served by Pacific Power or Rocky Mountain Power via 60 operations centers located throughout WY, UT, ID, OR, WA and CA. Its infrastructure includes over 16,000 miles of transmission lines (the larger structures with larger diameter wire and many insulators, typically steel towers or 2-pole configuration); 44,000 miles of overhead distribution lines (wires and poles found in neighborhoods); 13,000 miles of underground distribution lines; over 1,200 substations; and 130 interconnects with other utilities.

PacifiCorp has committed to operating and maintaining its power lines in ways that minimize impacts to the environment. To that end PacifiCorp and its contractors, will during the course of normal work:

- Conduct all maintenance activities with due regard to preventing damage to vegetation, timber, soil, crops, roads and improvements, and preventing water and soil pollution.
- Not pursue, harass, intentionally harm or injure biological resources.
- Respect cultural and historic properties.
- Restore the soil disturbed by necessary activities to as near as possible to its original condition at the completion of maintenance activities.
- Remove any waste material generated because of its maintenance operations.
- Fully comply with the provisions of all applicable environmental laws and regulations.

2.1 Reliability and Needed Upgrades

A key factor in providing reliable electricity is regular inspection and maintenance. Congress has recognized the fact that many power lines are in need of repair or upgrade

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as illustrated by language contained in the Energy Policy Act of 2005. Among other things, the Act establishes mandatory reliability standards for power lines and provides incentives to transmission companies to upgrade and maintain existing facilities. Various State Public Service Commissions have also imposed inspection and corrective maintenance requirements upon utilities doing business within their states.

3.0 Existing and Future Utility Corridors

The value and necessity of regional transmission lines was recognized in the 1992 Western Utility Group study of strategic utility corridors in the western United States. That study identified all existing electric transmission lines located across the western United States and, with the cooperation of numerous federal and state agencies, designated new transmission corridors or existing lines as strategically important because of their significance in providing intrastate and interstate energy services to the western US. Many of the utility corridors identified as strategically important contain one or more of PacifiCorp's power lines.

Activities generally excluded from or restricted within transmission (high voltage) utility corridors include mining, materials storage and disposal, range and wildlife habitat improvements involving facility construction, blasting, excavation, and high profile (tall) facility development.

Identification of new energy corridors on western federally managed lands is required in the Energy Policy Act. This includes placement of new facilities and designation of energy corridor siting opportunities through the region on BLM and Forest Service-administered lands, except wilderness study areas and some special management areas (including areas of critical environmental concern). PacifiCorp has provided comment and identified potential corridors during the Western Energy Corridor Programmatic EIS process. New facilities would be placed in or adjacent to existing infrastructure within designated energy corridors, when possible, but not adjacent to each other if safety, reliability or resource conflict issues were identified. Areas with important or sensitive resource values would be avoided. Specific proposals would require site-specific environmental analysis and compliance with established permitting processes.

4.0 Access to Power Lines

Federal land managers administer ROW grants and issue easements on federal lands for construction, operation and maintenance of power lines. Pre FLMPA grants and easement language may or may not be clear on access to the power lines but is either directly expressed or implicitly understood in each grant or easement. In many cases, PacifiCorp's ROW grants and easement were granted to permit the construction, operation and maintenance of an "Electric Power Line" and continued access to the power line. Most federal land managers recognize the need for PacifiCorp to access its power lines since the operation, maintenance and emergency repair of the power lines cannot be accomplished without reasonable access for vehicles and personnel. In most situations, this will be accomplished by using historical or existing roads and trails but in

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some cases, the use of overland travel or improvement to historic access routes will be required.

The current condition of many access roads is adequate for routine line maintenance activities, while others may need to be reworked (generally site-specific activities) or relocated. Reworking or relocating access roads will not be conducted without the expressed authorization of the land managing agency.

Most Federal Resource Management Plans (RMPs) restrict the use of off road vehicles, including over the snow, in areas of sensitive resources or special management areas. PacifiCorp does have power lines that provide power to facilities within some special management areas or has power lines that run through or adjacent to them. PacifiCorp must be allowed access to inspect or repair its structures and facilities in these sensitive areas.

In the event of an emergency PacifiCorp must respond as quickly as possible to restore power and may be required to take actions beyond those authorized in its ROW grant. This may include construction of new access routes or reworking access roads without prior review or approvals. However, in these cases, PacifiCorp will put forth good-faith efforts to notify the land manager of the emergency and actions taken to respond to the emergency as soon as possible, as well as implement appropriate and approved restoration or remedial measures.

5.0 Maintenance Requirements

Maintaining the thousands of miles of power lines requires the dedication of many employees and the use of various vehicles and equipment. Operations of PacifiCorp's power lines are managed by Dispatchers located in Portland, Oregon and Salt Lake City, Utah. The flow and amount of electricity on PacifiCorp's lines is dictated by customer demands, generation production, price, and available capacity on the power lines themselves. Maintenance activities are field intensive.

Operation and maintenance activities can be broken down into three components: Routine (inspections, corrective and vegetation management), Major Corrective and Emergency.

- **Routine maintenance activities** - are ordinary maintenance tasks that have historically been performed and carried out on a routine basis to identify and repair any deficiencies. These activities do not require new ground disturbances or additional land manager approvals.
- **Major corrective maintenance activities** - are relatively large-scale planned efforts that occur on an infrequent basis. Facilities may require replacement due to being damaged by man or nature, age of facility, or other factors. Such activities may require site-specific environmental analysis and compliance with established permitting processes.
- **Emergency maintenance activities** - are those activities necessary to repair a power line or prevent damage to a line. Such work is required to eliminate a

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safety hazard, prevent imminent damage to the power line or to restore service in the event of an outage.

5.1 Routine Maintenance (Inspections)

PacifiCorp conducts several types of Inspections:

1. Visual Assurance Inspection (ground and aerial)
2. Detail Inspection (ground)
3. Wood Pole Test and Treat (ground)
4. Outage Cause Inspection (aerial or ground)

5.1.1 Visual Assurance Inspection

PacifiCorp is required to perform a visual assurance inspection of each of its transmission lines on a cycle that varies from twice per year to every other year. This inspection is performed by an inspector generally via a 4-wheel drive pickup, 4-wheel drive all-terrain vehicle (ATV), or from the air via a helicopter. Additional support vehicle(s) may be required. In some cases, the inspector walks the ROW. The inspector assesses the condition of the transmission line and hardware to determine if any components need to be repaired or replaced, or if other conditions exist that require maintenance or modification activities. The inspector will also note any encroachments and or other activities on the ROW that could constitute a safety hazard or are unauthorized. The inspector accesses locations along each line and uses binoculars and spotting scopes to perform this inspection. Visual assurance inspections for distribution lines are conducted every other year.

5.1.2 Detail Inspection

PacifiCorp performs a detailed inspection of its transmission and distribution lines on a 1 to 20 year cycle dependent on the criticality of the line segment as determined by PacifiCorp management. The inspector will access all structures of the transmission line and check all equipment and other components to determine if repairs or maintenance is required. Inspectors performing this work generally use conventional 4-wheel drive trucks, 4-wheel drive ATV's, snow cats, or the inspector may walk the line. Additional support vehicle(s) may be required. Helicopters are not utilized for detail inspections. These inspections are also done using binoculars and spotting scopes. Minor repairs to structures may also be made during detailed ground inspections.

5.1.3 Wood Pole Test and Treat (Detailed Inspection)

PacifiCorp undertakes a wood pole test and treat program. Each pole is tested on a 10 to 20 year cycle. This program includes hand excavating around the wood pole, completing a detailed inspection of the ground line of the wood pole (to determine extent of wood pole deterioration) and re-treating the ground line portion of the wood pole if necessary. Access to structures is required and generally performed using 4-wheel drive trucks or 4-wheel drive ATV's. All work included in the detail inspection is also performed at this time. Additional support vehicle(s) may be required.

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5.1.4 Outage Caused Inspection

In the event of an outage or interruption in the transmission and distribution of electricity on PacifiCorp's power lines, PacifiCorp will conduct an inspection (aerial or ground) to determine the cause of the interruption. Outage cause inspections are performed utilizing similar equipment and points of access as for the other above listed inspections. In addition, trouble trucks (typically a 4-wheel drive truck with a personnel bucket to lift employees to the pole) are used by Lineman to gain access to the pole to determine the cause of the outage and make necessary repairs. This inspection may take place at any time of the day or night and result in emergency repairs. Additional support vehicle(s) may be required.

5.2 Routine Maintenance (Corrective)

Routine maintenance activities are ordinary maintenance tasks that have historically been performed and are carried out on a routine basis. The work performed is typically repair or replacement of individual components (no new ground disturbance), performed by a relatively small crew using a minimum of required equipment, and usually conducted within a period from a few hours up to a few days. Work requires access to the damaged portion of the line to allow for a safe and efficient repair of the facility. Equipment required for this work may include a 4-wheel drive truck, material (flatbed) truck, bucket truck, boom truck, or man lift. Additional support vehicles may be required. This work is scheduled and is typically required due to issues found during inspections.

Examples of activities classified as routine maintenance include:

- Insulator Replacement
- Cross Arm Repair or Lowering
- Cross Arm Replacement
- Hardware Tightening
- Conductor Repair
- Installation of Bird Line Markers
- Retrofitting Pole/Structure(s) to Avian Safe Construction Standards
- Guy Wire Tightening
- Access Road Maintenance (removal of obstructions)
- Problem Nest Removal and Nest Platform/Pole Installation
- Ground and Aerial Inspections
- Pole Test and Treat
- Pole replacement (same location)
- Vegetation Management

Responsibly conducted routine maintenance activities have little or no potential to disturb or unduly affect resources within ROWs or access roads and would not require additional permitting or review from land manager.

5.3 Routine Maintenance (Vegetation Management)

The objective of PacifiCorp's Vegetation Management Program is to manage tall vegetation under or around PacifiCorp's power lines in a cost effective and environmentally conscientious manner to provide safe and reliable power to its

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customers. PacifiCorp uses integrated vegetation management (IVM) technique to remove trees and undesirable vegetation. The goal of IVM on utility rights-of-way is to establish sustainable, low-growing plant communities that are compatible with power lines and discourage undesirable tall vegetation that could pose potential safety, access, fuel load or reliability problems. IVM requires a combination of manual, mechanical and herbicide control methods. Equipment and materials used will vary with each control method selected. Access is required along the power line ROW.

With proper IVM, the low-growing vegetation can eventually dominate the right-of-way, inhibit tall-growing vegetation or incompatible species and reduce the need for future treatments. Other benefits include minimized soil disturbance, enhanced plant diversity and improved habitat for wildlife. Establishing native vegetation will also reduce the invasion of noxious weeds into the corridor.

Integrated Vegetation Management techniques include but are not limited to:

- Manual and mechanical cutting, where wood debris is left on site to enrich the soil. Hand-operated power tools (chainsaws), mechanical equipment and hand tools are used to cut, clear, or prune herbaceous and woody target species.
- Cover type conversion, which uses herbicides in combination with manual/mechanical cutting to remove incompatible tall-growing trees and other vegetation from the right-of-way in order to establish a stable, low-growing plant community.

5.3.1 Tree Removal

PacifiCorp would remove trees under the following circumstances.

- 1) All fast-growing trees located directly below **distribution lines** and that could continually grow back into the lines would be removed. Tree removal would be limited to the ROW corridor and would not exceed 15 feet on either side of the wires. However removal of large hazard trees would be required beyond this distance
- 2) Tree removal on **transmission lines** would vary depending on the height of the wires. A graphical representation of PacifiCorp's Best Management Practices (BMPs) for tree removal on transmission line rights-of-way is provided in Figure 1 below; taken from PacifiCorp's *Transmission and Distribution Vegetation Management Program* (PacifiCorp 2007:56) and further discussed in Section 7, Best Management Practices.

5.4 Major Corrective Maintenance Activities

Major corrective maintenance, such as replacement or rebuild activities, is a relatively large-scale effort that occurs on an infrequent basis. Facilities may require replacement due to being damaged by man or nature, age of facility, or other factors. This work generally is planned and encompasses more work than defined by routine or under emergency activities. It may involve multiple structures, larger work crews, a variety of equipment, including heavy equipment, and usually take weeks or months to complete. Equipment that may be involved includes 4-wheel drive truck, man lifts, material (flatbed) truck, bucket truck, boom truck, tractor trailer, snow cat, excavator (back hoe or

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track hoe), grader, concrete truck, pumping equipment, crane, conductor puller, conductor tensioner, etc. Most major activities may involve grading, excavation or disturbing soils, and/or vegetation removal or crushing. New access to or along the power line ROW may be required.

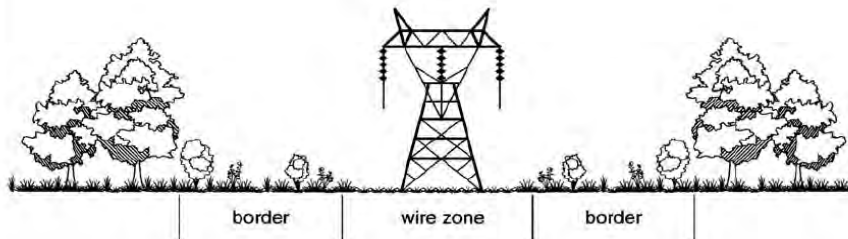
Examples of major corrective activities include:

- Conductor Replacement (generally many miles replaced during one project and requires the use of lay-down areas for wire and equipment)
- Access Road Improvement and/or Relocation (involves grading and repair or installation of culverts, drains, loss of vegetation, etc)
- Multiple Structure Relocation or Replacement (generally within or just outside of ROW)
- Anchor Replacement (requires excavation and setting anchor in ground)

Figure 1

Wire Zone – Border Zone Vegetation Management

Figure 6.2. Bramble and Byrnes Wire Zone - Border Zone (From Yahner, Bramble and Byrnes, 2001).



5.5 Emergency Maintenance Activities

The implementation of routine operation and maintenance activities on power lines will minimize the need for most emergency repairs. Emergency maintenance activities are often those activities necessary to repair natural hazard, fire or man-caused damages to a line. Such work is required to eliminate a safety hazard, prevent imminent damage to the power line or to restore service in the event of an outage. In the event of an emergency, PacifiCorp must respond as quickly as possible to restore power. For instance, during a disruption of the flow of electricity, PacifiCorp personnel or its authorized agents must be able to enter onto the ROW area and conduct inspections and/or repairs. An emergency as pertaining to this plan is defined as:

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A condition or situation that is imminently likely to endanger life or property or that is imminently likely to cause a material adverse effect on security of, or damage to PacifiCorp's electrical system and/or flow of electricity.

PacifiCorp is authorized to cross, on a temporary basis, all lands to avert an imminent emergency.

The equipment necessary to carry out emergency repairs is similar to that necessary to conduct Routine Maintenance or Major Corrective Maintenance, depending on the situation. Emergency response to outages may require additional equipment to complete the repairs.

As stated in Section 4.0, in the event of an emergency PacifiCorp must respond as quickly as possible to restore power and may be required to take actions beyond those authorized in its ROW grant. This may include construction of new access routes or reworking access roads without prior review or approvals. However, in these cases, PacifiCorp will put forth good-faith efforts to notify the land manager of the emergency and actions taken to respond to the emergency as soon as possible, as well as implement appropriate and approved restoration or remedial measures. PacifiCorp will be responsible for implementation of the mutually agreed upon measures.

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6.0 Photos and General Power Line Descriptions

Transmission and Distribution Lines



Transmission lines carry electricity from generating plants to substations. Transmission lines generally go “cross-country”.

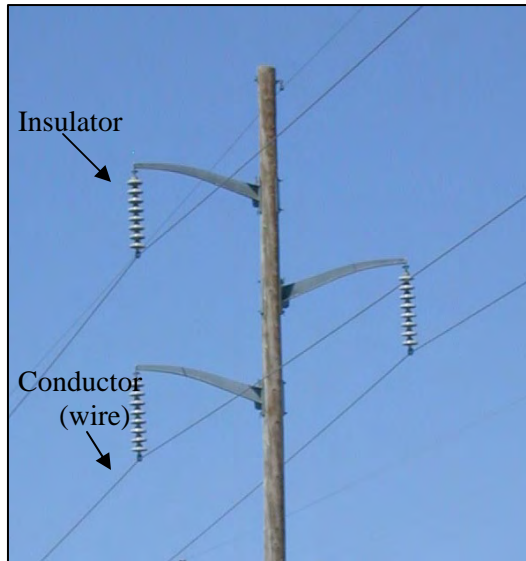


Distribution lines deliver electricity from substations to homes, businesses, farms, and are much smaller than transmission lines.

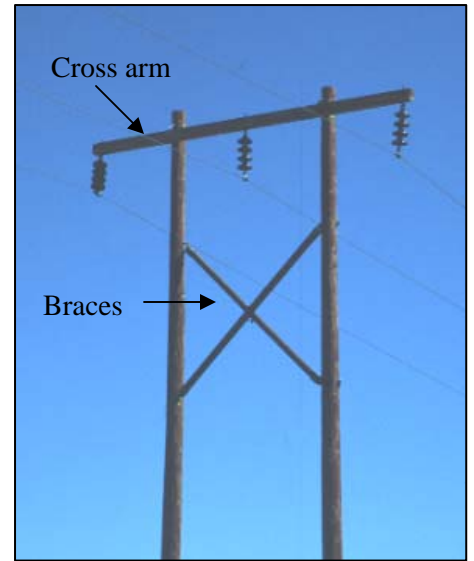
Examples of Transmission Configurations



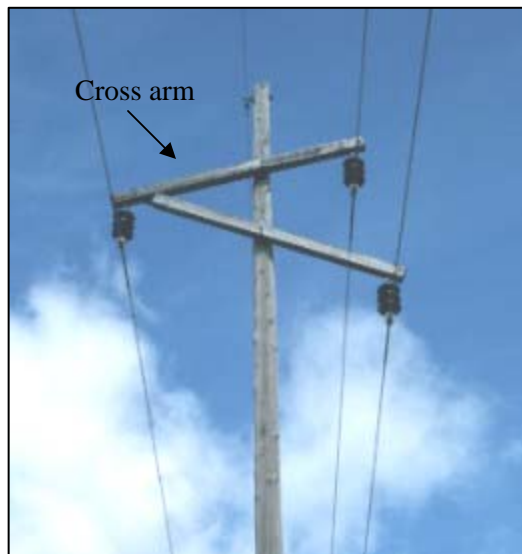
Steel lattice



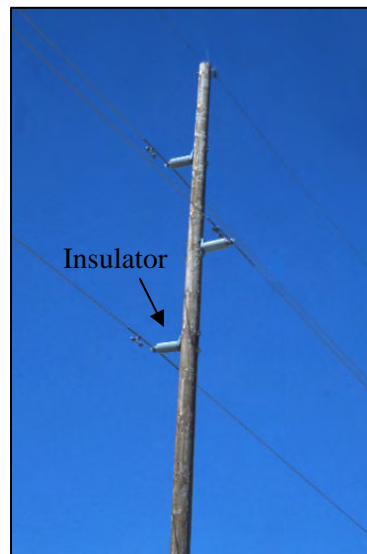
Suspended insulators



H-frame



YS or wishbone



Post-mounted insulators

Examples of Distribution Configurations



Three phase tangent, lowered 8-foot arm
(Raptor-safe construction)

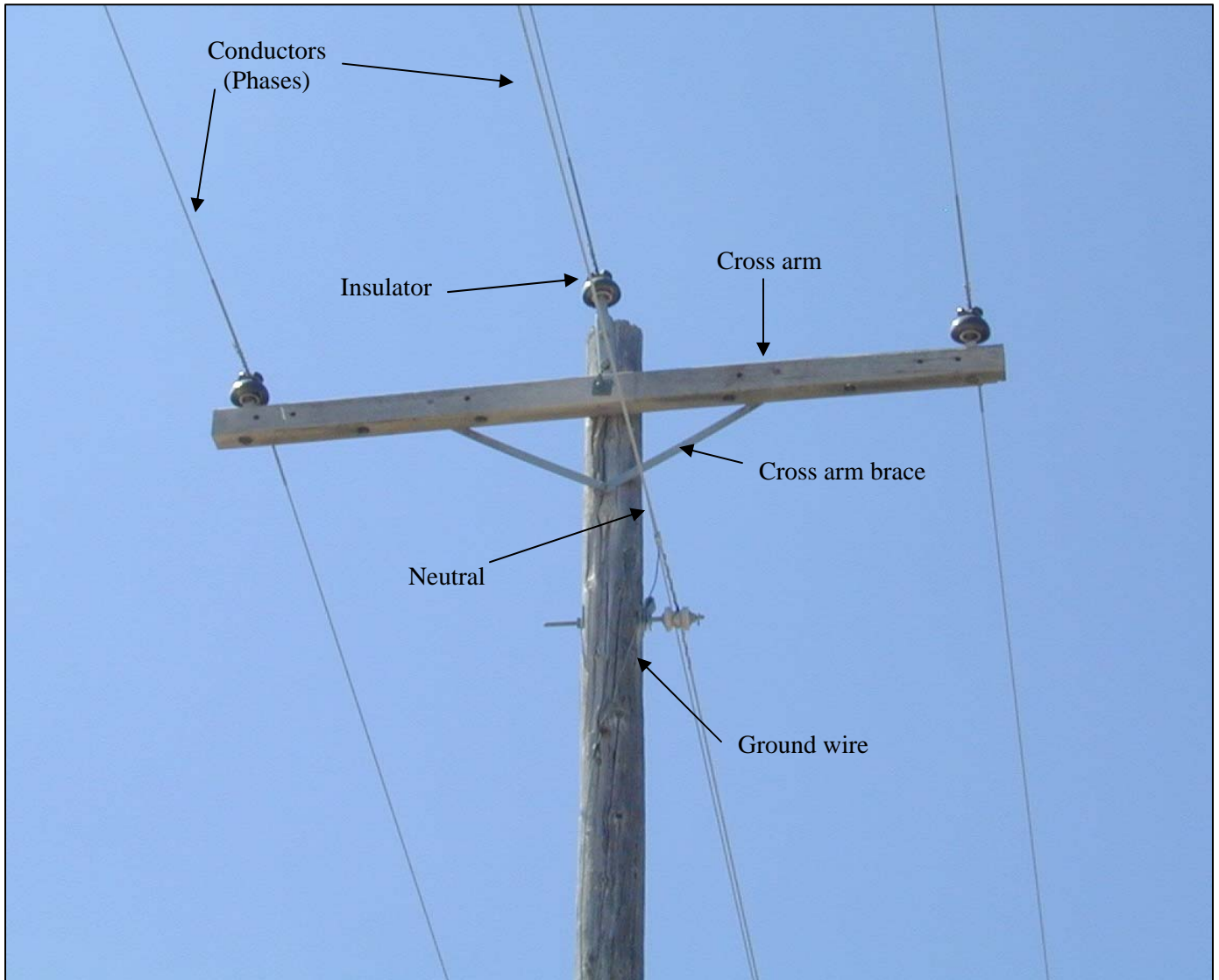


Three phase tangent, 10-foot arm
(Raptor-safe construction)



Three phase tangent

Terminology



7.0 Best Management Practices

In order to minimize adverse impacts to the environment, PacifiCorp is committed to maintaining its power lines through implementation of the following typical Best Management Practices (BMPs) during maintenance activities:

7.1 General O&M BMPs

All maintenance activities are to be conducted with due regard to preventing damage to sensitive vegetation, timber, soil, agricultural lands, roads and improvements, while preventing soil erosion and pollution of habitat and water. Current methods and up-to-date products (applicable to the O&M activity) are to be used during O&M activities, including utility vegetation management. The following BMPs shall be implemented (as applicable):

7.1.1 Cultural and Historic Resources

Cultural and historic properties should always be respected. If intrusive or mechanical O&M activities take place near known sites, these sites are to be adequately marked by PacifiCorp, its designated contractor, or by the governing agency, in the field prior to the commencement of activities and are not to be disturbed. Significant O&M activities shall conform to the guidelines of the governing agency.

Ground-disturbing mechanical methods of vegetation management are not be used in areas with known cultural resources unless determined acceptable through coordination with the relevant governing agency.

7.1.2 Wetlands and Waterbodies

O&M activities within or near riparian or wetland areas shall be conducted in accordance with the governing agency's management plan and/or guidelines and adhere to State and local guidelines to protect vegetation and water quality. Soil, debris or slash generated through management activities shall not be placed in any waterbody unless otherwise directed by the governing agency. O&M activities should be conducted in a manner to minimize ground disturbance near waterbodies. If O&M activities are to take place in riparian or wetland areas, it should take place during dry periods of the year as practicable and where required, the appropriate governing agency should be notified prior to activities.

7.1.3 Species of Concern

O&M activities are to be avoided, as practicable through coordination with the governing agency, in habitats of known rare, threatened, endangered, or sensitive plant or animal species and should not harm or disturb such species. As needed, prior to commencement of O&M activities on Federal or State land, PacifiCorp or their designated contractor shall contact the governing agency to determine if such species are found within the ROW. O&M activities shall conform to the responsible governing agency's management plans and/or guidelines in these areas.

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Ground-disturbing mechanical methods shall not to be used in areas with known species of concern (as identified by the governing agency) unless determined appropriate through coordination with the governing agency.

7.1.4 Migratory Birds/Raptors

Intrusive O&M activities, should generally be performed after the nesting season for most raptors and migratory birds. However, if activities are to occur during the nesting season, PacifiCorp or their designated contractor may conduct a nest survey and will contact the responsible governing agency to solicit input as needed. Areas with occupied/active nests are to be avoided, as practicable, until later in the season. Any work performed around active nests should be conducted in a manner, which minimizes disturbance by providing an appropriate buffer (distance from nest). O&M activities may proceed in areas around nests that have been identified as unoccupied/inactive. If nests are located on structures or trees, which require removal, Rocky Mountain Power Environmental Services shall be notified and activities coordinated with the appropriate agency.

7.1.5 Invasive and Noxious Weeds

As practicable, before beginning O&M activities on federal or state land, PacifiCorp or their designated contractors shall clean vehicles and equipment that will operate off-road or disturb the ground at an off-site location. To limit spread and establishment of noxious weed species in disturbed areas, reclamation activities on significantly disturbed areas should take place as soon as possible after ground-disturbing activities and during the optimal period for vegetative re-establishment.

7.1.6 Reclamation

Soil disturbed by O&M activities, shall be restored to as near as possible to its original condition. Disturbed areas shall be revegetated with an approved “noxious weed free” seed mix as needed. Mulch material shall also be “noxious weed free”. Wet soils and areas shall be avoided as practicable to minimize disturbance.

7.1.7 Waste Material

Generation of waste materials shall be minimized. Any waste generated during O&M activities shall be removed and properly disposed of in an approved manner.

7.1.8 Hazardous Materials

Appropriate measures required to prevent and contain accidental discharge of hazardous materials shall be implemented. Gasoline, diesel fuel and lubricants are generally the only hazardous materials used during O&M activities. In the event of a spill, the crew is expected to act immediately to safely contain the spill, contact appropriate authorities, and remove and properly dispose of contaminated materials, including soils unless otherwise directed.

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The following BMPs and management methods specifically address vegetation management and are in addition to the “General O&M BMPs” listed above.

Note: Listed, discussed and additional vegetation management BMPs can be found in PacifiCorp’s *Transmission & Distribution Vegetation Management Program Specification Manual* (T&D Vegetation Management Manual) dated June 1, 2007 and PacifiCorp’s *Vegetation Maintenance in Power Line Rights-of-Way, Environmental Assessment (EA)*, dated September 2005 (Uinta-Wasatch-Cache National Forest specific). For more detail and information regarding BMPs and vegetation management procedures, refer to the noted documents.

7.2 International Society of Arboriculture BMPs

PacifiCorp and its designated contractors shall adhere to the International Society of Arboriculture (ISA) BMPs as found in the *Best Management Practices: Utility Pruning of Trees*, 2004; and the ISA’s *Integrated Vegetation Management—Best Management Practices*, 2007 (or more recent editions of these manuals). Please refer to these manuals for additional information.

7.3 Integrated Vegetation Management

Integrated vegetation management (IVM) is a management system that identifies undesirable vegetation, considers threshold actions and environmental factors, and evaluates possible control options or combinations of control options. With proper IVM, low-growing vegetation should dominate the ROW; limiting undesirable, ROW incompatible and potentially hazardous tall vegetation. This ultimately reduces the need for future vegetation management activities, and it minimizes soil disturbance, reduces fire risk and provides improved habitat for wildlife.

The following BMPs address three control options or methods commonly implemented as part of IVM (manual, mechanical and herbicide):

7.3.1 Manual Methods—BMPs

When conducting manual vegetation management all applicable general O&M BMPs shall be followed, in addition to the following procedural BMPs:

7.3.1.1 Tree Removal (Procedural)

Distribution lines: See Section 5.3.1 for additional information.

Transmission lines: See Section 5.3.1 for additional information. *Tree removal BMPs are further detailed and pertain only to transmission lines where the ROW is wide enough to accommodate the wire-border zone methodology (refer to Figure 1) as follows:*

- **Region A**—areas where power lines are less than 50 feet off the ground. Vegetation management of the ROW in this region follows the wire zone-border zone recommendations of Bramble and Byrnes as shown in the Figure 1, Section 5.3.

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- **Region B**—areas where the power lines are between 50 and 100 feet off the ground. A border zone is established in this zone throughout the ROW. Trees with a potential mature height that provide less than 50 feet of clearance to the conductor are removed within this region.
- **Region C**—areas where power lines are 100 feet or more off the ground. Trees with less than 50 feet of clearance are removed within this region.
- Hazard trees are removed if there is a high probability of interfering with transmission or distribution facilities.
- Stumps are cut to within 6 inches of the ground or as low as practicable.

7.3.1.2 Debris/Slash Management

Methods of slash dispersal (i.e. stacking, chipping and spreading) shall be in accordance with the responsible governing agency's guidelines and/or recommendations. Management of slash can result in enhanced wildlife habitat, reduced wildfire hazard, and reduced soil erosion—where clearing is conducted.

7.3.2 Mechanical Methods—BMPs

When conducting mechanical vegetation management, all applicable general O&M BMPs are to be followed, in addition to the following procedural BMPs:

7.3.2.1 Ground Disturbance

Ground disturbance shall be minimized through implementation of the following BMPs:

- Mechanical equipment that causes ground disturbance shall not to be used on areas that exceed slope thresholds recommended by the responsible governing agency or as a general guideline and as practicable, on slopes in excess of 20% where recommendations are not given.
- To prevent rutting, use of ground disturbing or heavy mechanical clearing activities shall be conducted when the ground is sufficiently dry.
- Highly compactable soils shall be worked on during the dry season for the area when using ground disturbing mechanical equipment.
- Highly-erosive soils are to be avoided, as practicable, when using ground disturbing mechanical equipment.

7.3.2.2 Tree Removal

See Section 7.3.1.1

7.3.1.3 Debris/Slash Management

See Section 7.3.1.2

7.3.3 Herbicide—BMPs

Herbicide use is part of the IVM strategy and intended to select against tall growing, ROW incompatible species. Herbicide is used only in approved areas. To ensure proper use of approved herbicides, PacifiCorp and its designated contractors shall adhere to all applicable general O&M BMPs in addition to the following procedural BMPs:

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7.3.3.1 Approved Herbicides

Only herbicides approved by the relevant governing authority and that have been reviewed by PacifiCorp for effectiveness and environmental considerations are to be used.

7.3.3.2 Procedural BMPs

- Crews are to follow product label mandatory provisions such as registered uses, maximum use rates, application restrictions, worker safety standards, restricted entry intervals, environmental hazards, weather restrictions, and equipment cleaning.
- Crews are to follow all product label advisory statements such as mixing instructions, recommendations for protective clothing and other matters.
- A copy of the herbicide label and Material Safety Data Sheets (MSDS) are to be retained onsite during use of herbicides.
- Herbicide applications are to be conducted in the presence of a licensed applicator valid for the state where the work is performed and in accordance with applicable agency or governing authority stipulations.
- All herbicide applications are to be documented (in the *Daily Report*), detailing active ingredient(s), rate, date, location, etc. and made available for inspection and review by the governing agency.

7.3.3.3 Wetlands and Waterbodies

Appropriate buffer zones shall be established and adhered to when applying herbicides near wetlands and any other waterbody (refer to PacifiCorp's T&D Vegetation Management Manual for recommended buffer zones). In order to decrease risk of migration to a waterbody, climate, geology and soil types shall be considered when formulating the herbicide mix.

7.3.3.4 Application Methods

The appropriate herbicide application method(s) are to be used in order to ensure effectiveness and reduce the possibility of drift and leaching. Drift reduction agents are to be used when necessary. Herbicide shall not be sprayed when wind velocity exceeds recommended limits for general application and application near open water. Spray detection cards are to be used to monitor drift when deemed necessary.

7.3.3.5 Species of Concern and Wildlife

The broadcast application method of herbicides shall not be used within established distances (determined in cooperation with the governing agency) from known species of concern (sensitive plants) and near known sensitive animal species or their breeding zones, such as amphibians.

7.3.3.6 Spills and Misapplications

To reduce risk of accidental spills of herbicides, all associated equipment is to be well maintained and operated by trained personnel. Absorptive material should always be

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available during use of herbicides. In the event of a spill or misapplication, the applicator and crew are to:

- Contain the spill or halt the misapplication
- Isolate the area
- Call the Spill Hotline: 800.94.SPILL or appropriate authority
- Request the help of and notify supervisor and PacifiCorp forester
- Clean-up the spill
- Wash affected equipment and vehicles
- Properly dispose of cleanup materials
- Follow-up with appropriate documentation

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Attachment 3. Redlined Site Certificate

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EUGENE-MEDFORD
500 KV TRANSMISSION LINE
SITE CERTIFICATION AGREEMENT

between

The State of Oregon acting by and through its
ENERGY FACILITY SITING COUNCIL

and

PACIFICORP

EUGENE-MEDFORD
500 KV TRANSMISSION LINE
SITE CERTIFICATION AGREEMENT

between

The State of Oregon acting by and through its
ENERGY FACILITY SITING COUNCIL

and

~~PACIFIC POWER & LIGHT COMPANY~~ PacifiCorp

This certification agreement is made and entered into in the manner provided by ORS 469.300 through ORS 469.570 and ORS 469.992, by and between the State of Oregon (State), acting by and through its Energy Facility Siting Council (EFSC), and ~~Pacific Power & Light Company (PP&L)~~ PacifiCorp dba PacifiCorp (PacifiCorp), an Oregon Corporation licensed to do business in the State of Oregon.

I. SITE CERTIFICATION

- A. This agreement certifies that, to the extent authorized by State law and those warranties and conditions set forth herein, the State approves and authorizes the construction and operation of a 500 kV transmission line and associated facilities between Eugene and Medford in the manner described in ~~PP&L's~~ PacifiCorp's site certificate application, this agreement, and the record of the administrative hearings held pursuant to ORS 469.300 through ORS 469.570, including but not limited to supporting testimony filed by ~~PP&L~~ PacifiCorp with EFSC. This approval by the State binds the State and all counties, cities, and political subdivisions in the State as to the approval of the site and the construction and operation of the transmission line and associated facilities, subject only to the conditions of this agreement. However, each agency that issues a permit, license or certificate shall continue to exercise enforcement authority over such permit, license or certificate.
- B. This certificate requires ~~PP&L~~ PacifiCorp to comply with applicable state laws as they exist on the date it is executed by EFSC, and with stricter State laws adopted subsequent thereto if compliance with such stricter State laws is necessary to avoid a clear danger to the public health and safety.

II. ROUTE AND TRANSMISSION LINE DESCRIPTION

A. Route Description

The site of the route along which the transmission line is to be constructed is as follows:

1. Spencer – Dixonville Segment: Beginning at the existing Spencer Switching Station in Section 21, Township 18 South, Range 3 West, W.M., Lane County, Oregon, and running thence southerly along the route of PP&L's existing Alveny–Dixonville 230 kV Transmission Line to the Northwest Quarter of Section 7, Township 27 South, Range 4 West, W.M., Douglas County, Oregon. Along this segment of the transmission line, the line will replace the Alvey-Dixonville 230 kV line (which will be removed), and will utilize the existing right-of-way plus an additional 50 feet of right-of-way width for the first 3.8 miles south of Spencer Switching Station which is to be acquired to accommodate the larger line. From the Northwest Quarter of said Section 7, the line deviates from the existing Alvey–Dixonville 230 kV Transmission Line and runs southerly to the new Dixonville 500 kV Substation site in the Southwest Quarter of Section 18 in Township 27 South, Range 4 West, W.M., and in the Southeast Quarter of Section 13 and the Northeast Quarter of Section 24, both in Township 27 South, Range 5 West, W.M., all in Douglas County, Oregon and will utilize a right of way 175 feet wide.
2. Dixonville-Ramsey Canyon Segment: Beginning at the aforesaid Dixonville Substation and running thence southwesterly to the existing Dixonville 230 kV Substation in the South Half of Section 24, Township 27 South, Range 5 West, W.M., Douglas County, Oregon; thence running south generally along the route of PP&L's existing Line No. 54 230 kV Transmission Line to a point near Ramsey Canyon, in Section 31, Township 34 South, Range 2 West, W.M., Jackson County, Oregon, with three deviations as described below. Along this segment of the transmission line, the line will replace Line No. 54 (which will be removed), and will utilize the existing right-of-way plus an additional 75 feet of right-of-way width which will be acquired to accommodate the larger line. The right-of-way width to be acquired for the relocated segments will be 175 feet. ~~PP&L~~ PacifiCorp shall relinquish its easements for the corresponding sections of the existing corridors except as noted in the relocated segments.
 - (i) Canyonville Relocation: Beginning at an angle point on Line No. 54 in Government Lot 5 of Section 19, Township 30 South, Range 4 West, W.M., Douglas County, Oregon; thence deviating from the existing corridor and heading in a southeasterly direction approximately two miles to an angle point in the Southeast Quarter of the Northwest Quarter of Section 31, Township 30 South, Range 4 West, said County and State; thence continuing in a southwesterly direction for approximately one and one-half miles before intersecting the existing Line No. 54 at an angle point in the southeast quarter of Section 1, Township 31 South, Range 5 West, W.M., Douglas County, Oregon. ~~PP&L~~ PacifiCorp will not relinquish the existing easements for the

corridor north of the section line between Section 35, Township 30, South, Range 5 West, and Section 2, Township 31 South, Range 5 West.

- (ii) Green Mountain Relocation: Beginning at an angle point on Line No. 54 in the Southwest Quarter of Section 28, Township 32 South, Range 4 West, W.M., in Douglas County, Oregon; thence southeasterly in a straight line, deviating from the existing Line No. 54 for a distance of approximately four miles, to a point intersecting the existing Line No. 54 in the southwest quarter of Section 11, Township 33 South, Range 4 West, W.M., in Jackson County, Oregon.
 - (iii) Evans Creek Relocation: Beginning at an angle point on Line No. 54 in Section 15, Township 34 South, Range 3 West, W.M., Jackson County, Oregon; thence southeasterly in a straight line deviating from the existing Line No. 54 for a distance of approximately 1-1/2 miles before rejoining Line No. 54 at an angle point in the Northwest Quarter of Section 23, Township 34 South, Range 3 West, W.M., Jackson County, Oregon, and thence continuing along the route of Line No. 54 to aforesaid point near Ramsey Canyon.
3. Ramsey Canyon - Meridian Substation Segment: Beginning at the aforesaid point near Ramsey Canyon; thence south through Sams Valley to Table Rock Switching Station replacing the existing Line No. 54; thence parallel to Line No 54 east and south following the existing transmission line corridor through the White city area to the Medford Sports Park; thence south and east along Line No. 54 to its termination at Meridian Substation, situated in Section 7, Township 37 South, Range 1 East, W.M., Jackson County, Oregon, with one deviation, as described below.
- (i) Meridian Relocation: Beginning at an angle point in the Northeast Quarter of Section 34, Township 36 South, Range 1 West, W.M., Jackson County, Oregon, thence southeasterly in a straight line deviating from Line No. 54 and the existing transmission line corridor approximately two miles to intersection with Line No. 54 and the existing transmission line corridor in the Southeast Quarter of Section 2, Township 37 South, Range 1 West; thence continuing parallel to Line 54 and the existing transmission line corridor to its termination at Meridian Substation situated in the Southwest Quarter of Section 7, Township 37 South, Range 1 East, W.M., Jackson County, Oregon.

B. Transmission Line, Related, and Supporting Facilities' Descriptions

The transmission line to be constructed and operated along the foregoing route consists of the following:

1. The transmission line will be an overhead three phase AC line with a nominal capacity of 500,000 Volts. Each phase will consist of a three-conductor bundle, making a total of nine conductors. Lightning protection will be provided where appropriate by two shield wires supported at the peaks of each tower. The conductors will be suspended from the towers by "V" string insulators (25 on each side) and will weight approximately 600 pounds. Conductors will be approximately 1.4 inches in diameter and composed of stranded aluminum with a steel wire core and weighing approximately 1.7 pounds per foot. The three conductors of each phase will be 18 inches apart and will be separated by spacers at intervals throughout each span. Spacing between phases will be 37.0 feet. Two shield wires approximately 1/2 inch in diameter will be installed at the peaks of each tower for lightning protection, and may contain optical ~~fibres~~-fibers for communication purposes.
2. The proposed towers will be free-standing metal structures. Different tower design types will be used according to structural requirements at particular tower sites and the provisions of this Agreement; however, "delta" configuration towers (as generally depicted in the Exhibit attached hereto) will be utilized at all locations permitted by right of way width constraints. The height of a typical single-circuit lattice-type tangent tower will be 122 feet, and 110 feet for angle and dead end towers. Such typical tangent towers will weigh approximately 25,000 pounds each. Tower base dimensions will vary with tower height; however, a typical tangent structure will occupy 800 square feet, and tower structures will normally be erected on cast- in-place concrete cylinder footings using auger excavation techniques, unless other techniques are approved by the project review officer(s). Tower height, location, and span length will be governed primarily by the terrain being traversed. Based on a 120-F temperature, the minimum clearance between the conductors and the ground surface will be 38 feet, and clearance will be increased to 45 feet for crossing major highways, 42 feet for cultivated land, and 55 feet for railroads. The average span length will be approximately 1,200 feet, resulting in 4,3 structures per mile. The transmission line will be designed and constructed in compliance with the standards of the latest edition of the National Electrical Safety Code.
3. The project will include the addition of a 500 kV to 230 kV transformer bank and power circuit breakers at the new Dixonville 500 kV Substation site described in Section II.A.1. near the existing Dixonville Substation. An additional power circuit breaker will be installed at the existing Meridian Substation, and an additional power circuit breaker will be installed between the Alvey Substation and Camas Swale. Existing common carrier or private microwave facilities will be employed for protection and control of

the line. Other related and supporting facilities such as temporary storage and staging areas will be required for construction of the line.

4. The project will include a connecting 500 kV line beginning at BPA's existing Alvey Substation in Section 14, 18S, R3W, W,M,, Lane County, Oregon, and running thence westerly approximately 2 miles parallel to and on the southerly side of BPA's existing transmission corridor to the Spencer Switching Station in S21, T18S, R3W, W,M., Lane County, Oregon. This related and supporting facility is to be constructed by the Bonneville Power Administration (BPA). However, without amendment to this agreement, ~~PP&L~~ PacifiCorp may construct the connecting transmission line from Spencer to Alvey consistent with the terms and conditions of the agreement.

III. WARRANTIES

In consideration of the execution of this Certification Agreement by the EFSC, and pursuant to ORS 469.400(4) and ORS 469.470(3), the following warranties are made:

A. Completion of Construction

PacifiCorp warrants that erection of towers and stringing of conductors will not begin before January 1, 1991 and construction of the transmission line and associated facilities will be completed by December 31, 1994.

B. Financial Ability

~~PP&L~~ PacifiCorp warrants that it has reasonable assurance of obtaining sufficient financial resources to construct and operate the transmission line, including funds necessary to cover construction costs, operating costs for the designed lifetime of the line, and the costs of permanently retiring the line.

C. Ability to Construct and Operate

~~PP&L~~ PacifiCorp warrants that it has the ability to take those actions necessary to ensure that the 500 kV transmission line is constructed and operated in a manner consistent with its representations regarding effects on the public health, safety, and welfare contained in its site certificate application, and supporting testimony and the terms and conditions of this agreement, including compliance with all design, quality assurance, and personnel qualifications and training requirements.

D. Protection of Public Health and Safety

~~PP&L~~ PacifiCorp warrants that it will take those actions, including compliance with all state and Federal statutes, rules and regulations necessary to ensure that construction and operation of the 500 kV transmission line poses no danger to the public health and safety.

IV. CONDITIONS

The following conditions are provided pursuant to the provisions of ORS 469.400 and OAR 345-80-010,

A. State and Federal Law

1. **PP&L PacifiCorp** and EFSC shall abide by all applicable state laws, including all laws and state administrative rules and regulations in effect on the date this site certificate is executed, except upon a clear showing that there is danger to the public health and safety that requires stricter laws or rules, then, in that case, EFSC may, subject to ORS 469.400, require **PP&L PacifiCorp** to meet stricter state statutes or rules of EFSC or other state agencies or ordinances of cities or counties adopted subsequent to the execution of this agreement.
2. Nothing in this agreement shall relieve **PP&L PacifiCorp** from complying with requirements of federal laws and regulations which may be applicable to construction and operation of the transmission line and associated facilities, and with the terms and conditions of any permits and licenses which may be issued to **PP&L PacifiCorp** by pertinent federal agencies.

B. Control of Site

Prior to commencement of construction of the transmission line authorized herein, **PP&L PacifiCorp** shall present evidence satisfactory to the EFSC that **PP&L PacifiCorp** has obtained control over the site, whether by ownership, lease or easement, or otherwise, to construct and maintain the transmission line and associated facilities.

C. Conditions Related to **PP&L PacifiCorp** Representations of Compliance With EFSC Standards.

1. The transmission line shall be designed, built and operated to meet the noise standards of the Oregon Department of Environmental Quality set forth in OAR ch 340, div 35.
2. The transmission line and related and supporting facilities shall be designed, built, and operated so as not to exceed the alternating current electrical fields of 9 kV per meter limit set forth in OAR 345-80-055(2).
3. The transmission line and related and supporting facilities shall be designed, built, and operated so that induced currents resulting from the transmission lines and related and support facilities shall be as low as reasonably achievable.
4. **PP&L PacifiCorp** will ground all permanent gates, fences, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity. **PP&L PacifiCorp** will take all necessary steps to assure that such permanent structures remain grounded during the life of the transmission line, and will assist landowners upon request, in grounding new permanent structures installed after completion of the line, in accordance with the program outlined in PP&L's testimony. (See prefiled testimony of Mr. Carl Fishback, Applicant's Exhibit 31.)

5. ~~PP&L~~ PacifiCorp shall design, build, and operate the transmission line and related and supporting facilities in a manner consistent with the 1977 edition of the National Electric Safety Code (American National Standards Institute Section C2, 1977 Edition).
6. ~~PP&L~~ PacifiCorp shall restore the reception of radio and television at residences and commercial establishments in the primary reception area of any radio or television station to the level present prior to operation of the transmission line. Such restoration shall be at no cost to the residents or commercial establishments whose reception is interfered with by construction or operation of the line.
7. ~~PP&L~~ PacifiCorp shall design, build and operate the transmission line and related and supporting facilities without infringing upon the existing water rights of other persons.
8. Throughout the design, construction, and operation of the transmission line and related and supporting facilities ~~PP&L~~ PacifiCorp shall continuously cooperate with Jackson, Douglas and Lane Counties, the City of Medford, the City of Roseburg, and the City of Eugene to identify the resources necessary to mitigate any adverse socioeconomic impacts.
9. ~~PP&L~~ PacifiCorp shall design, build, and operate the transmission line and related and supporting facilities in accordance with all representations made by ~~PP&L~~ PacifiCorp in its application and supporting testimony before EFSC in satisfaction of OAR 345-80-060 (Environmental Impact) and any other representations made in satisfaction of EFSC's Site Certificate standards, including but not limited to the need for this facility by 1990.

D. Special Environmental Conditions

1. ~~PP&L~~ PacifiCorp shall design, build, and operate the transmission line and related and supporting facilities in accordance with all representations made by ~~PP&L~~ PacifiCorp in its letters to Mr. Philip Hamilton, Chief, Division of Planning and Environmental Coordination, Bureau of Land Management, dated October 23, 1981 and April 12, 1982, and appearing as Appendix A in the document entitled "Draft 12 Environmental Impact Statement - Proposed Eugene-Medford 500 kV Transmission Line" (DEIS) published by the Bureau of Land Management, United States Department of Energy, and the Oregon Department of Energy, dated May 1982 and a copy of which letters are attached hereto as Exhibit A.
2. ~~PP&L~~ PacifiCorp shall conduct all burning activities associated with the construction or operation of the transmission line so as they are in compliance with the Oregon Smoke Management Plan administered by the Oregon Department of Forestry.

3. D.3. ~~PP&L~~ PacifiCorp shall use all available, practical construction techniques to minimize adverse impacts to soils, such as erosion and compaction. More specifically, ~~PP&L~~ PacifiCorp shall follow the techniques presented in the BLM's **most current** management plan on construction techniques associated with various soil types.
4. ~~PP&L~~ PacifiCorp shall design, build, and operate the transmission line and related and supporting facilities so that construction roads shall be located so as to minimize disturbance to riparian areas and sensitive wildlife habitat areas.
5. ~~PP&L~~ PacifiCorp shall limit the use of herbicides for vegetation management within the right-of-way to ground application, and any land owner may prohibit the use of herbicides for vegetation management on those portions of the right-of-way on his, her or its property, provided that the owner and ~~PP&L~~ PacifiCorp agree to an alternate vegetation management plan.
6. ~~PP&L~~ PacifiCorp shall design and build the transmission line using non-reflective structures and non-reflective conductors from a point 3 miles north of Table Rock Switching Station (the north end of Sam's Valley) to Meridian Substation. Tubular steel structures shall be used from a point 3 miles north of Table Rock Switching Station to Table Rock Switching Station and from White City Substation to the angle point in Jackson County Sports Park where the line turns south towards Meridian Substation. Jackson County and ~~PP&L~~ PacifiCorp shall agree on the selection and use of tower designs between Table Rock Switching Station and White City Substation. The Project Review Officers appointed by EFSC pursuant to Part IX of this Agreement shall make a final determination in the event of any failure of ~~PP&L~~ PacifiCorp and Jackson County to agree on any tower design.
7. ~~PP&L~~ PacifiCorp shall construct the transmission line in the area of Option Gin conformance with the agreement dated June 13, 1982 between ~~PP&L~~ PacifiCorp and Robert Storey and Robert Gilkey.
8. ~~PP&L~~ PacifiCorp shall construct the transmission line in the area of White City in conformation with its letter dated July 14, 1982 to Mrs. Ann Todd, a copy of which is attached hereto as Exhibit B.
9. ~~PP&L~~ PacifiCorp shall design, build, and operate the transmission line in cooperation with landowners to help ensure that tower placement on agricultural lands would minimize the loss of agricultural lands and minimize disruption of farm practices.
10. ~~PP&L~~ PacifiCorp shall consult with Jackson County Parks Department on designs and plans that will ensure compatibility between the transmission line and existing and proposed public park sites that might be impacted.

11. ~~PP&L PacifiCorp~~ shall design this transmission line project through Jackson County in such a manner that will maximize the ~~utility~~ utility of the existing right-of-way corridor.
12. Following construction of the approved transmission line, ~~PP&L PacifiCorp~~ shall cooperate with Jackson County, within its legal limitations, in developing plans for multiple use of the transmission line right-of-way for recreational or other purposes that are compatible with the facility.
13. ~~PP&L PacifiCorp~~ shall design, build, and operate the transmission lines so that adverse effects on industrial property owned by the City of Medford will be minimized.

E. Special Conditions Relating to the Transmission Line Route

1. Between Ramsey Canyon and the Meridian Substation (as described in Section II(A)(3) hereof), and along the deviations from the right-of-way of existing lines to be replaced (as described in Section II(A)(2)(i), (ii) and (iii) hereof), ~~PP&L PacifiCorp~~ will construct the transmission line along an appropriate centerline to be identified after surveys and negotiations with affected landowners, within the 1000-foot-wide study corridor described in ~~PP&L PacifiCorp's~~ application herein and the DEIS.
2. In the event that ~~PP&L PacifiCorp~~ deems it necessary or desirable to construct any portion of the transmission line outside of said 1000-foot-wide study corridor to mitigate the impact of the transmission line on any affected parcel or parcels of property, ~~PP&L PacifiCorp~~ shall give written notice of such deviation to EFSC and any landowners whose lands would not have been crossed by the line if it had been constructed within said corridor. At the written request of any of such landowners or upon EFSC's own motion if it has reason to believe that such deviation will result in environmental, safety or health impacts not generally considered in the proceedings herein, EFSC will hold a public comment hearing on the issue as to whether or not such deviation should be authorized. EFSC shall authorize such deviation as an amendment to this Agreement, unless it finds on the basis of such hearing that the proposed deviation is not in the public interest in accordance with the standards of OAR 345-80-055 and 060.
3. It is agreed by EFSC and ~~PP&L PacifiCorp~~ that construction of the transmission line and its related and supporting facilities, other than as set forth in this Agreement, shall require an amendment of this Agreement as provided in Part VI hereof.

V. APPROVALS

The following approvals, permits, licenses, or certificates by governmental agencies are considered necessary to construct and operate this transmission line. Each appropriate state agency and local government shall issue the permits identified below consistent with the conditions in this Agreement and not later than 90 days from the time of filing of a complete application for such permit by **PP&L PacifiCorp**. **PP&L PacifiCorp** shall make application for these approvals, permits, licenses, or certificates, paying all applicable fees and other forms of compensation, prior to commencement of construction of the line or later as appropriate.

1. State Highway Division

Permits to install overhead power transmission line along and crossing affected State Highways.

2. Public Utility Commissioner

Certificate of Public Convenience and Necessity to acquire right-of-way by condemnation as provided in ORS 758,015,

3. State Aeronautics Division

Notification with respect to compliance with air traffic laws and regulations.

4. Division of State Lands

Right-of-way across state lands under the jurisdiction of the Division of State Lands, if any.

5. Department of Fish and Wildlife

Right-of-way across state lands under the jurisdiction of the Department of Fish and Wildlife, if any.

6. Department of Forestry

Right-of-way across state lands under the jurisdiction of the Department of Forestry and permits necessary for logging and slash disposal during right-of-way clearing operations.

7. Lane, Douglas Jackson Counties.

Any necessary building permits, county road-crossing permits, conditional use or other comparable land- use permits and right-of-way across county lands.

8. City of Medford

Right-of-way across city lands.

VII. AMENDMENT OF SITE CERTIFICATION AGREEMENT

- A. **PP&L PacifiCorp** and EFSC recognize a need to provide a means of amending this Agreement because of the length of time which may pass between the date of its execution and the date of construction and the length of the operation of the facilities. Therefore, the parties agree that in the event future unforeseen developments cause the construction or operation of the transmission line or

associated facilities to present a danger to the public health, safety or welfare, or if a federal standard applicable to this facility, if not complied with, would cause Oregon to lose a federal delegation of authority to regulate a federal program, this Agreement may be amended by further written agreement executed in the manner provided in ORS 469.400(3) after compliance with the procedures of B through F below.

- B. ~~PP&L PacifiCorp~~ or EFSC, on its own motion, may file an application for a corrective amendment. Any such application shall be served on the parties to the site certificate proceeding which authorized this Agreement. The proposal shall set forth the amendment verbatim, together with a statement of the reasons therefor.
- C. The EFSC shall distribute the proposed amendment to the interested state agencies and to the county and city advisory group as defined in ORS 469.480, requesting comments and recommendations on the proposed amendment within 30 days of the date of distribution.
- D. If ~~PP&L PacifiCorp~~ and EFSC do not agree on an amendment or if after public notice in a regularly published EFSC meeting agenda 10 or more members of the public or an organization representing 10 or more members of the public requests a hearing, EFSC shall hold a public hearing on the proposed amendment within 90 days after distribution of the proposed amendment.
- E. At the conclusion of any hearing, and in no case more than 120 days after the proposed amendment was distributed, the EFSC will, based upon its findings as to danger to public health, safety and welfare, either recommend or reject the proposed amendment. Rejection or approval of the proposed amendment will be subject to judicial review the same as this Agreement.
- F. For amendments not affecting the public health, safety or welfare, and where ~~PP&L PacifiCorp~~ and EFSC agree that it is desirable to amend this site certification for reasons other than set forth in subparagraph A of this section, ~~PP&L PacifiCorp~~ may file with the EFSC an application for an amendment to the site certificate agreement, which application shall state the necessary reasons therefor. The EFSC may grant such application without further proceedings at its regular public meeting.

VIII. SUCCESSORS AND ASSIGNS

This agreement is binding upon ~~PP&L PacifiCorp~~ and any co-owners, partners or joint venturers of ~~PP&L PacifiCorp~~ in the construction and operation of the transmission line and associated facilities, and upon any successors in interest to or assignees of either ~~PP&L PacifiCorp~~ or any co-owner, partner or joint venture.

IX. SPECIAL PRE-DESIGN AND CONSTRUCTION CONDITIONS

- 1. Prior to commencement of and during the design of the transmission line and related and supporting facilities and during the construction of the facility, ~~PP&L~~

PacifiCorp shall regularly review all design and construction activities for consistency with the terms and conditions of this agreement.

2. EFSC shall appoint one or more project review officers who shall, at no charge to EFSC, have access at any time to all construction sites associated with the facility and any information relating to design or construction of the facility. **PP&L PacifiCorp** shall also provide written summations of its review conducted, pursuant to paragraph 1 of this section, to the Project Review Officer(s) at a schedule and in a form determined by the Project Review Officer(s),
3. **PP&L PacifiCorp** and the Project Review Officers shall establish and maintain during design and construction of the facility, at **PP&L PacifiCorp's** expense, special telephone lines or other means by which members of the public may receive information and make complaints to **PP&L PacifiCorp** and EFSC concerning design or construction of the facility. The Project Review Officer(s) shall enforce compliance with the conditions set forth in Section IV-D and elsewhere in this agreement.
4. The Project Review Officers shall regularly inform EFSC of any violation of the terms and conditions of this Agreement, complaints by members of the public, the progress of design and construction of the facility, and the need for any amendments to this agreement,
5. **PP&L PacifiCorp**, prior to commencing construction of the transmission line, shall, in writing, provide assurances satisfactory to EFSC that construction by BPA of the related and supporting facility consisting of a connecting transmission line from Spencer Switching Station to Alvey Substation will be constructed as described in Paragraph II-B-4 of this Agreement. Copies of all written submissions by **PP&L PacifiCorp** to EFSC relating to the BPA connecting transmission line shall be served on the City of Eugene by **PP&L PacifiCorp** at the time of submission to EFSC,
6. Any physical connection of any portion of the **PP&L PacifiCorp** facility owned or operated by **PP&L PacifiCorp** to any other BPA transmission line not in existence at the time of execution of this Agreement shall require an amendment to this Agreement as provided by Part VII of this Agreement. Provided, however, that connection to a BPA transmission line which has otherwise been found by EFSC to be consistent with EFSC's substantive standards for siting of transmission lines shall not require an amendment to this Agreement.
7. EFSC and **PP&L PacifiCorp** shall endeavor to assure that any future EPA-constructed, -owned or -operated transmission line between the **PP&L PacifiCorp** transmission line and Lane Substation will be constructed in accordance with the substantive siting standards of EFSC, as required by the provisions of ORS ch 469.

IN WITNESS WHEREOF, this Site Certificate Agreement has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and ~~Pacific Power & Light Company~~ **PacifiCorp** as below subscribed on this 21st day of December, 1982.

X. FOURTH AMENDMENT SITE CERTIFICATE

Specific Facility Conditions

Standard: Organizational Expertise (OAR 345-022-0010)

- **Organizational Expertise Condition 1:** Throughout the life of the Project, the site certificate holder shall be responsible for any matter of non-compliance under the site certificate. Any notice of violation issued under the site certificate will be issued to the site certificate holder. Any civil penalties under the site certificate will be levied on the site certificate holder.
- **Organizational Expertise Condition 2:** Throughout the life of the Project, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the site certificate holder must report the conditions or circumstances to the department, in addition to the requirements of OAR 345-026-0170.
- **Organizational Expertise Condition 3:** Prior to construction, the site certificate holder shall notify the department of the identity and qualifications of the major design, engineering, and construction contractor(s) for the facility. The site certificate holder shall select contractors that have substantial experience in the design, engineering, and construction of similar facilities. The site certificate holder shall report to the department any changes of major contractors.
- **Organizational Expertise Condition 4:** Prior to construction, the site certificate holder shall notify the department of the identity and qualifications of the construction manager to demonstrate that the construction manager is qualified in environmental compliance and has the capability to ensure compliance with all site certificate conditions.
- **Organizational Expertise Condition 5:** Prior to construction, the site certificate holder shall contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the site certificate holder of responsibility under the site certificate.
- **Organizational Expertise Condition 6:** Prior to construction, the site certificate holder shall notify the department before conducting any work on the site that does not qualify as surveying, exploration, or other activities to define or characterize the site. The notice must include a description of the work and evidence that its value is less than \$250,000 or evidence that the certificate holder has satisfied all conditions that are required prior to construction.
- **Organizational Expertise Condition 7:** Prior to construction on a communication station requiring third-party electrical distribution service, the site certificate holder shall provide evidence to the department that the relevant third-party electrical distribution service provider that will construct, own, and operate the distribution line has obtained all

necessary approvals and permits for the distribution line and that the site certificate holder has a contract with the third-party provider for use of the distribution line.

Standard: Structural (OAR 345-022-0020)

- **Structural Standard Condition 1:** Prior to construction, the Certificate Holder shall conduct a site-specific geological and geotechnical investigation, and shall submit to the Department a Site-Specific Geological and Geotechnical Report.

Standard: Soil Protection (OAR 345-022-0022)

- **Soil Protection Condition 1:** PacifiCorp will develop a project-specific Erosion and Sediment Control Plan (ESCP) that will be completed to fulfill requirements of the National Pollutant Discharge Elimination System permit 1200-C.
- **Soil Protection Condition 2 (Materials Condition 1):** Prior to construction, the certificate holder shall submit to the Department a copy of an Oregon Department of Environmental Quality–approved construction-related Spill Prevention, Control, and Countermeasures Plan (SPCC Plan).

Standard: Land Use (OAR 345-022-0030)

- **Land Use Condition 1:** During construction in Josephine County, PacifiCorp shall develop a traffic management plan that includes traffic control measures to mitigate the effects of Project construction traffic and provide the same to the Josephine County Public Works Department. PacifiCorp shall conduct all work in compliance with the traffic management plan.
- **Land Use Condition 2:** PacifiCorp will prepare a wildfire mitigation plan in coordination with the fire district with jurisdiction: Jackson County Fire District #3, Rural Metro Fire in Grants Pass, Rogue River Fire District #1, and the Grants Pass Fire/Rescue within the Department of Public Safety. This plan will detail how PacifiCorp will prevent, respond to, and manage fire risk during the Project’s construction and operation. Specific measures and precautions will be taken on forest lands to address fire risks.
- **Land Use Condition 3:** Prior to initiating development, PacifiCorp shall obtain a commercial road approach permit from Jackson County Roads.
- **Land Use Condition 4:** Prior to initiating development, PacifiCorp shall contact Permit Specialist Roger Allemand at 541-774-6360 to obtain any miscellaneous (utility) permits that may be needed for construction within ODOT right-of-way (Hwy. 234).
- **Land Use Condition 5:** During construction in Jackson County, PacifiCorp shall develop a traffic management plan that includes traffic control measures to mitigate the effects of Project construction traffic and provide the same to the Jackson County Roads Department. PacifiCorp shall conduct all work in compliance with the traffic management plan.
- **Land Use Condition 6:** A 50-foot primary fuel break must be developed and maintained around the perimeter of the Sams Valley Substation development envelope.

- **Land Use Condition 7:** PacifiCorp will include a written statement that will be recorded prior to construction that recognizes the rights of adjacent and nearby land owners to conduct forest operations consistent with the Forest Practices Act and Rules in accordance with OAR 660-006-0025(5).
- **Land Use Condition 8:** Prior to initiating development, PacifiCorp will file and receive a determination from the Oregon Department of Aviation as required by OAR738-070-0060 on FAA Form 7460-1 Notice of Proposed Construction or Alteration to determine if this development will pose a hazard to aviation safety. A subsequent submittal to the FAA may also be required. In addition, a basic site plan showing the location of the substation in relation to the Medford airport will be needed to help assess land use compatibility relative to the airport, specifically to help identify any structures that may interfere with aircraft operations.
- **Land Use Condition 9:** If temporary filling or grading is necessary in a mapped floodplain, PacifiCorp will demonstrate to the Jackson County Floodplain Administrator that the temporary improvements (grading) in the floodplain will not increase floodplain on adjacent properties, increase erosive velocity, or reduce slope stability.

Standard: Protected Areas (OAR 345-022-0040)

- **Protected Areas Condition 1:** The certificate holder will coordinate with the Nature Conservancy and Bureau of Land Management prior to construction to identify, if necessary, specific construction specifications for work completed in Table Rocks to ensure the Project complies with the management and preservation goals of the Table Rocks Management Area Management Plan.

Standard: Retirement and Financial Assurance (345-022-0050)

- See General Site Conditions 8 & 9.

Standard: Fish and Wildlife Habitat (OAR 345-022-0060)

- **Fish and Wildlife Condition 1:** Prior to construction, the certificate holder shall submit a Reclamation and Revegetation Plan to the Department.
- **Fish and Wildlife Condition 2:** Prior to construction, the certificate holder shall submit a Noxious Weed Plan to the Department.
- **Fish and Wildlife Condition 3:** Prior to construction, the certificate holder shall submit a final Fish and Wildlife Habitat Mitigation Plan to the Department.
- **Fish and Wildlife Condition 4:** Prior to construction, the certificate holder shall instruct all construction personnel on the protection of sensitive natural resources. During construction, the certificate holder shall flag sensitive natural resources as restricted work zones.

- **Fish and Wildlife Condition 5:** During construction, the certificate holder shall employ a speed limit of 25 miles per hour on facility access roads, unless the applicable land-management agency or landowner has designated an alternative speed limit.
- **Fish and Wildlife Condition 6:** During construction and operation, the certificate holder shall restrict activities that may disturb occupied nests of raptor species, during nesting season. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the raptor and its nest.
- **Fish and Wildlife Condition 7 (Waters of this State Condition 1):** Prior to construction, the certificate holder shall obtain from the Oregon Department of State Lands a Removal-Fill Permit.
- **Fish and Wildlife Condition 8 (Waters of this State Condition 2):** During construction, the certificate holder shall conduct all work in compliance with a Removal-Fill Permit.

Standard: Threatened and Endangered Species (OAR 345-022-0070)

- **Threatened and Endangered Condition 1:** During construction and operation, the certificate holder shall not conduct work activities that produce loud noises above ambient levels within specified distances (see Table below) of any active northern spotted owl nest site during the critical early nesting period, March 1 – June 30, or until two weeks after the fledging period. This seasonal restriction may be waived if protocol surveys have determined the activity center is not occupied, owls are non-nesting, or owls failed in their nesting attempt. The distances listed in the table may be shortened if significant topographical breaks or blast blankets (or other devices) would muffle sound between the work location and nest sites.

Work Activities that Produce High Ambient Levels

Activity	Zone of Restricted Operation
Heavy equipment (including non-blasting quarry operations)	105 feet
Chain saws	195 feet
Impact pile driver, jackhammer, rock drill	195 feet
Small helicopter or plane	360 feet ¹
Type 1 or Type 2 helicopter	0.25 miles ¹
Blasting; 2 pounds of explosive or less	360 feet
Blasting; more than 2 pounds of explosives	1 mile

1. If less than 1,500 feet above ground level.

- **Threatened and Endangered Condition 2:** Prior to construction, the certificate holder shall conduct state listed Threatened and Endangered plant species surveys on those portions of the Site Boundary that have not been previously surveyed, if potential habitat may exist. If state listed Threatened and Endangered plant species are found during surveys, they will be flagged and avoided where possible.

Standard: Scenic Resources (OAR 345-022-0080)

- No Conditions.

Standard: Historic and Cultural Resources (OAR 345-022-0090)

- **Cultural Resources Protection Condition 1:** The certificate holder will coordinate with the State Historic Preservation Office (SHPO) prior to construction to identify, if necessary, the need for cultural and historical surveys on those portions of the Site Boundary not previously surveyed.
- **Cultural Resources Protection Condition 2:** Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that will be disturbed during construction and the areas that were surveyed for historic, cultural, and archaeological resources.
- **Cultural Resources Protection Condition 3:** Before beginning construction, the certificate holder shall label all identified historic, cultural or archaeological resource sites on construction maps and drawings as "no entry" areas.
- **Cultural Resources Protection Condition 4:** If construction activities will occur within 200 feet of an identified site, the certificate holder shall flag a 30-meter no-entry buffer around the site.
- **Cultural Resources Protection Condition 5:** Prior to construction, the certificate holder shall finalize, and submit to the Department, a draft and final Cultural Resources Mitigation and Monitoring Plan (CRMMP).
- **Cultural Resources Protection Condition 6:** Before beginning construction, the certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-0070, trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the Department upon request.
- **Cultural Resources Protection Condition 7:** During construction, the certificate holder shall conduct all work in compliance with the final CRMMP as well as the Inadvertent Discovery Plan (IDP).

- **Cultural Resources Protection Condition 8:** During construction, the Site Certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the Department and the SHPO of the find. If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the NRHP, the certificate holder shall, in consultation with the Department, SHPO, interested Tribes and other appropriate parties, make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery. The certificate holder shall not restart work in the affected area until the Department, in consultation with SHPO, agree that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.

Standard: Recreation (OAR 345-022-0100)

- No Conditions.

Standard: Public Services (OAR 345-022-0110)

- No Conditions.

Standard: Waste Minimization (OAR 345-022-0120)

- **Waste Management Condition 1:** Prior to construction, the certificate holder shall develop and submit to the Department a Construction Waste Management Plan, which addresses:
 - a. The number and types of waste containers to be maintained at construction sites and construction yards;
 - b. Waste segregation methods for recycling or disposal;
 - c. Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction;
 - d. During construction, the certificate holder shall conduct all work in compliance with the Construction Waste Management Plan referenced above.
 - e. During construction, the certificate holder shall provide to the Department a report on the implementation of the Construction Waste Management Plan referenced above in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).

Siting Standards for Transmission Lines Conditions (OAR 345-024-0090)

- **Siting Standards for Transmission Lines Condition 1:** During construction, in order to reduce or manage human exposure to electromagnetic fields, the site certificate holder shall construct all aboveground transmission lines in accordance with the requirements of the current edition of the National Electrical Safety Code.

- **Siting Standards for Transmission Lines Condition 2:** During operation, the certificate holder shall take the following steps to reduce or manage human exposure to induced currents:
 - a. Providing to landowners a map of overhead transmission lines on their property;
 - b. Implementing a safety protocol to ensure adherence to NESC grounding requirements.

Standard: Noise Control Regulation (OAR 345-035-0035)

- **Noise Control Regulation Condition 1.** The certificate holder shall design and build the Sams Valley Substation to adhere to the applicable approval standards in Oregon Administrative Rule (OAR) 340-035-0035. Supplementary analysis, which may include (but not be limited to) collection of field data, will be conducted as necessary, to adequately demonstrate compliance with the standards.

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