

Chapter 9 - Glossary and Abbreviations

9.1 Abbreviations and Acronyms

AINW	Archaeological Investigations Northwest Inc.
ASC	Application for Site Certificate
BG	Block Group (Census)
BLM	US Department of the Interior, Bureau of Land Management
BMPs	best management practices
BPA	Bonneville Power Administration
Corps	US Department of the Army, Corps of Engineers
CRGNSA	Columbia River Gorge National Scenic Area
CRP	Conservation Reserve Program
dBA	Decibels (A-weighted)
DEA	David Evans and Associates, Inc.
DEIS	draft environmental impact statement
DEQ	Oregon Department of Environmental Quality
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EFH	Essential Fish Habitat
EIS	environmental impact statement
EMF	electric and magnetic (electromagnetic) fields
EO	Executive Order
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FPPA	Farmland Protection Policy Act
GIS	geographic information system
GSU	generator step-up
kV	kilovolt
KVA	Key Viewing Area

LGIA	Large Generator Interconnection Agreement
LLC	limited liability corporation
LOS	level of service
mph	miles per hour
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NH	Natural Hazards (Sherman County zone combining district)
NMFS	US Department of Commerce, National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPS	US Department of the Interior, National Park Service
NRCS	US Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
O&M	operation and maintenance
OR	Oregon Route
ORNHIC	Oregon Natural Heritage Information Center
ORS	Oregon Revised Statute
PCB	polychlorinated biphenyl
PPM	PPM Energy, Inc.
RI	radio interference
ROD	Record of Decision
RV	recreational vehicle
SCADA	supervisory, control and data acquisition
SHPO	State Historic Preservation Office
SR-14	Washington State Route 14
TSP	Transportation System Plan
TVI	television interference
USC	United States Code
USDA	US Department of Agriculture
USDOE	US Department of Energy
USFS	US Department of Agriculture, Forest Service

USFWS	US Department of the Interior, Fish and Wildlife Service
USGS	US Geological Survey
VRM	Visual Resource Management

9.2 Glossary

Access road – Roads constructed to each structure site first to build the tower and line, and later to maintain and repair it. Access roads are built where no roads exist. Where county roads or other access is already established, access roads are built as short spurs to the structure site. Access roads are maintained after construction, except where they pass through cultivated land. There, the road is restored for crop production after construction is completed.

Bay – An area set aside in a substation for special equipment.

Best management practices (BMPs) – A practice or combination of practices that are most effective and practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

Biological Assessment – A document required by the Endangered Species Act, which requires an evaluation of potential effects on listed species and critical habitat prior to implementing a proposed action. Projected action is defined as any activity authorized, funded or carried out by a federal agency.

Bus pedestals – Supports that elevate bus tubing within a substation.

Bus tubing – A metal “bar” used to carry electricity from one piece of equipment to another within a substation.

Capacity – The maximum *load* that a generator, piece of equipment, substation, transmission line, or system can carry under existing service conditions.

Circuit breaker – A switch, installed at a substation, which breaks or restores the flow of current through the line.

Conductor – The wire cable strung between transmission towers through which electric current flows.

Conservation Reserve Program (CRP) - A voluntary federal program to assist private landowners to convert highly erodible and environmentally sensitive cropland to permanent vegetative cover.

Counterpoise – A buried wire system connected to footing of towers or poles supporting a transmission line. Used to establish a low resistance path to earth, usually for lightning protection.

Cumulative Impact – Cumulative impacts are created by the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions.

Current – The amount of electrical charge flowing through a conductor (as compared to voltage, which is the force that drives the electrical charge).

dB – The first two letters (dB) are an abbreviation for decibel, the unit in which sound is most commonly measured (see decibel). The last letter (A) is an abbreviation for the scale (A scale) on which the sound measurements were made.

Dead-end structures – Heavy towers designed for use where the transmission line loads the tower primarily in tension rather than compression, such as turning large angles along a line or bringing a line into a substation.

Decibel – A decibel is a unit for expressing relative difference in power, usually between acoustic signals, equal to 10 times the common logarithm of the ratio of two levels.

Dispersed recreation – Outdoor recreation in which participants are diffused over a relatively wide area.

Double-circuit – The placing of two separate electrical circuits on the same tower.

Easement – A grant of certain rights to use of a piece of land (which becomes a “right-of-way”). BPA acquires easements for many of its transmission facilities. This includes the right to enter the right-of-way to build, maintain, and repair the facilities. Permission for these activities is included in the negotiation process for acquiring easements over private land.

Electric and magnetic fields (EMF) – The two kinds of fields produced around the electric wire or conductor when an electric transmission line or any electric wiring is in operation.

Endangered species – Those species officially designated by the US Fish and Wildlife Service or NOAA that are in danger of extinction throughout all or a significant portion of their range.

Endangered Species Act – A 1973 federal law, amended in 1978 and 1982 to protect troubled species from extinction. The National Marine Fisheries Service (NOAA Fisheries) and the U.S. Fish and Wildlife Service decide whether to list species as threatened or endangered. Under the Act, federal agencies must avoid jeopardy to and the recovery of listed species.

Environmental impact statement (EIS) – A detailed statement of environmental impacts caused by an action, written as required by the National Environmental Policy Act (NEPA).

Federally listed – Species listed as threatened or endangered by the US Fish and Wildlife Service.

Fiber-optic lines – Special wire installed on the transmission line that is used for communication between one location and another.

Floodplain – That portion of a river valley adjacent to the stream channel which is covered with water when the stream overflows its banks during flood stage.

Footings – The supporting base for the transmission towers. Usually steel assemblies buried in the ground for lattice-steel towers.

Forb – any herbaceous plant that is not a grass or grass like.

Foreground – The viewed landscape from 0 to 0.5 miles from an observer.

Geographic information system (GIS) – A computer system that analyzes graphical map data.

Grillage – Transmission tower footings composed of a 12.5' x 12.5' assembly of steel I-beams that have been welded together and buried 14 to 16 feet deep. Generally used to support heavier towers, such as **dead-end structures**.

Ground wire – Wire that is strung from the top of one tower to the next; it shields the line against lightning strikes.

High Voltage – Lines with 230-kV or above electrical capacity.

Hydrology – The science dealing with the properties, distribution, and circulation of water.

Insulators – A ceramic or other nonconducting material used to keep electrical circuits from jumping over to ground.

Intermittent – referring to periodic water flow in creeks or streams.

Kilovolt [kV] – One thousand volts.

Lattice steel – refers to a transmission tower constructed of multiple steel members that are connected together to make up the frame.

Load – The amount of electric power or energy delivered or required at any specific point on a system. Load originates primarily at the energy-consuming equipment of customers.

Megawatt (MW) – One million watts, or one thousand kilowatts; an electrical unit of power.

Milligauss (mG) - A unit used to measure magnetic field strength. One-thousandth of a gauss.

Mitigation – Steps taken to lessen the effected predicted for each resource, as potentially cause by the transmission project. They may include reducing the impact, avoiding it completely, or compensating for the impact.

National Environmental Policy Act (NEPA) – This act requires an environmental impact statement on all major Federal actions significantly affecting the quality of the human environment. [42 U.S.C. 4332 2 (2)(C).]

Non-Attainment Area – An area that does not meet air quality standards set by the Clean Air Act for specified localities and periods.

Notice of Intent - A public notice that an environmental impact statement will be prepared and considered in the decision-making for a proposed action.

Physiographic – Pertaining to the physical features of a geographic area.

Revegetate – Reestablishing vegetation on a disturbed site.

Right-of-way – An easement for a certain purpose over the land of another, such as a strip of land used for a road, electric transmission line, pipeline, etc.

Scoping – Part of the environmental impact document process where significant issues are identified for detailed analysis.

Species – A group of interbreeding individual not interbreeding with another group.

Structure – A type of support used to hold up transmission or substation equipment, such as a transmission tower.

Substation – The fenced site that contains the terminal switching and transformation equipment needed at the end of a transmission line.

Substation dead-end towers – Dead end towers within the confines of the substation where incoming and outgoing transmission lines end. Dead ends are typically the tallest structures in a substation.

Substation fence – the chain-link fence with barbed wire on top provides security and safety. Space to maneuver construction and maintenance vehicles is provided between the fence and electrical equipment.

Substation rock surfacing – A three-inch layer of rock selected for its insulating properties is placed on the ground within the substation to protect operation and maintenance personnel from electrical danger during substation electrical failures.

Switches – Devices used to mechanically disconnect or isolate equipment; found on both sides of circuit breakers.

Traditional Cultural Properties- A traditional cultural property is defined as one that is eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs (e.g., traditions, beliefs, practices, life ways, arts, crafts, and social institutions) of a living community that are rooted in that community's history and are important in maintaining the continuing cultural identity of the community.

Transformer – Electrical equipment usually contained in a substation that is needed to change voltage on a transmission system.

Transmission dead-end towers - Dead end towers not within the confines of the substation, where segments of the transmission alignment come together at an angle.

Transmission line – The structures, insulators, conductors, and other equipment used to transmit electrical power from one point to another.

Volt – The international system unit of electrical potential and electromotive force.

Voltage – The drive force that causes a current to flow in an electrical circuit.

Wetlands – Those areas that are inundated, or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.