

**WAC 296-45-035 Definitions.** These definitions apply to chapter 296-45 WAC.

**Aerial manlift equipment.** Equipment such as extended towers, boom-mounted cages or baskets, and truck-mounted ladders, that is primarily designed to place personnel and equipment aloft to work on elevated structures and equipment.

**Affected employee.** An employee whose job requires him or her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him or her to work in an area in which such servicing or maintenance is being performed.

**Apprentice.** An employee who is being trained to be journey level.

**Approved.** Meets or exceeds the recognized standards of safety within the industry.

**Approved protectors.** Gloves worn over rubber insulating gloves which are of such material or substance and so constructed as to protect the rubber gloves from abrasions, lacerations, or other physical damage which might otherwise occur to rubber gloves. Approved protectors must conform to the standards which are recognized by the industry.

**Attendant.** An employee assigned to remain immediately outside the entrance to an enclosed or other space to render assistance as needed to employees inside the space.

**Authorized employee.** An employee who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

**Automatic reclosing device.** A self-controlled device for interrupting and reclosing an alternating current circuit with a predetermined sequence of opening and reclosing followed by resetting, hold-closed, or lockout operation.

**Barricade.** A physical obstruction such as tapes, cones, or A-frame type wood or metal structures intended to provide a warning about and to limit access to a hazardous area.

**Barrier.** A physical obstruction which is intended to prevent contact with energized lines or equipment or to prevent unauthorized access to a work area.

**Bond.** The electrical interconnection of conductive parts designed to maintain a common electrical potential.

**Bus.** A conductor or a group of conductors that serve as a common connection for two or more circuits.

**Bushing.** An insulating structure, including a through conductor or providing a passageway for such a conductor, with provision for mounting on a barrier, conducting or otherwise, for the purposes of insulating the conductor from the barrier and conducting current from one side of the barrier to the other.

**Cable.** A conductor with insulation, or a stranded conductor with or without insulation and other coverings (single-conductor cable), or a combination of conductors insulated from one another (multiple-conductor cable).

**Cable sheath.** A conductive protective covering applied to cables.

Note: A cable sheath may consist of multiple layers of which one or more is conductive.

**Circuit.** A conductor or system of conductors through which an electric current is intended to flow.

**Clearance (between objects).** The clear distance between two objects measured surface to surface.

**Clearance (for work).** Authorization to perform specified work or permission to enter a restricted area.

**Communication lines.** (See "Lines, communication.").

**Conductor.** A material, usually in the form of a wire, cable, or bus bar, used for carrying an electric current.

**Contract employer.** An employer, other than a host employer, that performs work covered by this chapter under contract.

**Covered conductor.** A conductor covered with a dielectric having no rated insulating strength or having a rated insulating strength less than the voltage of the circuit in which the conductor is used.

**Current-carrying part.** A conducting part intended to be connected in an electric circuit to a source of voltage. Noncurrent-carrying parts are those not intended to be so connected.

**Deenergized.** Free from any electrical connection to a source of potential difference and from electric charge; not having a potential difference from that of the earth.

Note: The term is used only with reference to current-carrying parts, which are sometimes energized (alive).

**Designated employee.** A person who is designated by the employer to perform specific duties under the terms of this chapter and who is knowledgeable in the construction and operation of the equipment and the hazards involved.

Note: Considering an employee to be a designated employee will depend on various circumstances in the workplace, on the level of training they have received, and the proficiency demonstrated by the employee with the tasks required of the job.

**Electric line truck.** Any vehicle used to transport employees, tools, and material, which serves as a traveling workshop for electric power line construction and maintenance work. It may be equipped with a boom and auxiliary equipment for setting poles, digging holes, and elevating material and/or workers.

**Electric supply equipment.** Equipment that produces, modifies, regulates, controls, or safeguards a supply of electric energy.

**Electric supply lines.** (See "Lines, electric supply.").

**Emergency.** An unforeseen occurrence endangering life, limb, or property.

**Enclosed.** Surrounded by a case, cage, fence or otherwise which will protect the contained equipment and prevent accidental contact of a person with live parts.

**Enclosed space.** A working space, such as a manhole, vault, tunnel, or shaft, that has a limited means of egress or entry, that is designed for periodic employee entry under normal operating conditions, and that under normal conditions does not contain a hazardous atmosphere, but that may contain a hazardous atmosphere under abnormal conditions.

Note: Spaces that are enclosed but not designed for employee entry under normal operating conditions are not considered to be enclosed spaces for the purposes of this section. Similarly, spaces that are enclosed and that are expected to contain a hazardous atmosphere are not considered to be enclosed spaces for the purposes of this section. Such spaces meet the definition of permit spaces in chapter 296-809 WAC, Confined spaces, and entry into them must be performed in accordance with that standard.

**Energized (alive, live).** Electrically connected to a source of potential difference, or electrically charged so as to have a potential significantly different from that of earth in the vicinity.

**Energy isolating device.** A physical device that prevents the transmission or release of energy, including, but not limited to, the following: A manually operated electric circuit breaker, a disconnect switch, a manually operated switch, a slide gate, a slip blind, a line valve, blocks, and any similar device with a visible indication of the

position of the device. (Push buttons, selector switches, and other control-circuit-type devices are not energy isolating devices.)

**Energy source.** Any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal, or other energy source that could cause injury to personnel.

**Entry** (as used in WAC 296-45-205 of this chapter). The action by which a person passes through an opening into an enclosed space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

**Equipment (electric).** A general term including material, fittings, devices, appliances, fixtures, apparatus, and the like used as part of or in connection with an electrical installation.

**Exposed.** Not isolated or guarded.

**Fall restraint system.** A fall protection system that prevents the user from falling any distance.

**Fault current.** The current that flows in an electrical system because of a defect in the circuit induced accidentally or otherwise.

**First-aid training.** Training in the initial care, including cardiopulmonary resuscitation (which includes chest compressions, rescue breathing, and, as appropriate, other heart and lung resuscitation techniques), performed by a person who is not a medical practitioner, of a sick or injured person until definitive medical treatment can be administered.

**Fixed ladder.** A ladder that is permanently secured to a structure.

**Ground.** A conducting connection, whether intentional or accidental, between an electric circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

**Grounded.** Connected to earth or to some conducting body that serves in place of the earth.

**Grounded system.** A system of conductors in which at least one conductor or point (usually the middle wire, or neutral point of transformer or generator windings) is intentionally grounded either solidly or through a current-limiting device (not a current-interrupting device).

**Groundperson.** A member of crew working on ground under direction of a leadworker.

**Guarded.** Covered, fenced, enclosed, or otherwise protected, by means of suitable covers or casings, barrier rails or screens, mats, or platforms, designed to prevent the possibility, under normal conditions, of dangerous approach or accidental contact by persons or objects.

Note: Wires which are insulated, but not otherwise protected, are not considered as guarded.

**Hazardous atmosphere.** An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from an enclosed space), injury, or acute illness from one or more of the following causes:

(a) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);

(b) Airborne combustible dust at a concentration that meets or exceeds its LFL;

Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less;

(c) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

(d) Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in chapter 296-62 WAC, Part L, or in chapter 296-62 WAC, toxic and hazardous substances, and which could result in employee exposure in excess of its dose or permissible exposure limit;

Note: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

(e) Any other atmospheric condition that is "immediately dangerous to life or health" (IDLH).

**High-power tests.** Tests in which fault currents, load currents, magnetizing currents, and line-dropping currents are used to test equipment, either at the equipment's rated voltage or at lower voltages.

**High-voltage tests.** Tests in which voltages of approximately 1000 volts are used as a practical minimum and in which the voltage source has sufficient energy to cause injury.

**High wind.** A wind of such velocity that the following hazards would be present:

(a) An employee would be exposed to being blown from elevated locations; or

(b) An employee or material handling equipment could lose control of material being handled; or

(c) An employee would be exposed to other hazards not controlled by the standard involved.

Note: Winds exceeding 40 miles per hour (64.4 kilometers per hour), or 30 miles per hour (48.3 kilometers per hour) if material handling is involved, are normally considered as meeting this criteria unless precautions are taken to protect employees from the hazardous effects of the wind.

**Host employer.** An employer that operates, or that controls the operating procedures for, an electric power generation, transmission, or distribution installation on which a contract employer is performing work covered by this chapter.

Note: The division of occupational safety and health (DOSH) will treat the electric utility or the owner of the installation as the host employer if it operates or controls operating procedures for the installation. If the electric utility or installation owner neither operates nor controls operating procedures for the installation, DOSH will treat the employer that the utility or owner has contracted with to operate or control the operating procedures for the installation as the host employer. In no case will there be more than one host employer.

**IDLH.** Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

Note: Some materials (hydrogen fluoride gas and cadmium vapor, for example) may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse twelve to seventy-two hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Note: For air contaminants for which WISHA has not determined a dose or permissible exposure limit, other sources of information, such as safety data sheets that comply with the hazard communication program, WAC 296-901-140, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

**Insulated.** Separated from other conducting surfaces by a dielectric (including air space) offering a high resistance to the passage of current.

Note: When any object is said to be insulated, it is understood to be insulated for the conditions to which it is normally subjected. Otherwise, it is, within the purpose of this section, uninsulated.

**Insulation (cable).** That which is relied upon to insulate the conductor from other conductors or conducting parts or from ground.

**Insulation shielding.** An envelope which encloses the insulation of a cable and provides an equipotential surface in contact with cable insulation.

**Isolated.** An object that is not readily accessible to persons unless special means of access are used.

**Leadworker.** The person directly in charge of workers doing the work, regardless of title.

**Line-clearance tree trimmer.** An employee who, through related training or on-the-job experience or both, is familiar with the special techniques and hazards involved in line-clearance tree trimming.

Note 1: An employee who is regularly assigned to a line-clearance tree-trimming crew and who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a line-clearance tree trimmer is considered to be a line-clearance tree trimmer.

Note 2: A line-clearance tree trimmer is not considered to be a "qualified electrical employee" under this section unless they have the training required for a qualified electrical employee under WAC 296-45-065. However, under the electrical safety-related work practices standard, a line-clearance tree trimmer is considered to be a "qualified employee." Tree trimming performed by such "qualified employees" is not subject to the electrical safety-related work practice requirements contained in WAC 296-24-970. (See also the note following WAC 296-24-970 for information regarding the training an employee must have to be considered a qualified employee.)

**Line-clearance tree trimming.** The pruning, trimming, repairing, maintaining, removing, or clearing of trees or the cutting of brush that is within the following distance of electric supply lines and equipment:

(a) For voltages to ground of 50 kilovolts or less - 3.05 meters (10 feet);

(b) For voltages to ground of more than 50 kilovolts - 3.05 meters (10 feet) plus 0.10 meters (4 inches) for every 10 kilovolts over 50 kilovolts.

**Lines.**

(a) **"Communication lines."** The conductors and their supporting or containing structures which are used for public or private signal or communication service, and which operate at potentials not exceeding 400 volts to ground or 750 volts between any two points of the circuit, and the transmitted power of which does not exceed 150 watts. If the lines are operating at less than 150 volts, no limit is placed on the transmitted power of the system. Under certain conditions, communication cables may include communication circuits exceeding these limitations where such circuits are also used to supply power solely to communication equipment.

Note: Telephone, telegraph, railroad signal, data, clock, fire, police alarm, cable television, and other systems conforming with this definition are included. Lines used for signaling purposes, but not included under this definition, are considered as electric supply lines of the same voltage.

(b) **"Electric supply lines."** Conductors used to transmit electric energy and their necessary supporting or containing structures. Signal lines of more than 400 volts are always supply lines within this section, and those of less than 400 volts are considered as supply lines, if so run and operated throughout.

**Live-line tools and ropes.** Tools and ropes specifically designed for work on energized high voltage lines and equipment.

**Load-break elbow.** A connector designed to close and interrupt current on energized circuits within the design current and voltage rating.

**Manhole.** A subsurface enclosure which personnel may enter and which is used for the purpose of installing, operating, and maintaining submersible equipment or cable.

**Manhole steps.** A series of steps individually attached to or set into the walls of a manhole structure.

**May** and **should** or **it is recommended**. These terms are used to indicate the provisions are not mandatory but are recommended.

**Minimum approach distance.** The closest distance an employee is permitted to approach an energized or a grounded object.

**Must.** As used in this chapter make the provisions mandatory.

**Network system.** An electrical installation fed from multiple primary sources directly associated with area-wide secondary network connected into a common grid.

**Neutral.** A system in which one conductor is used as the neutral for one or more circuits; one conductor may be used as the neutral for both primary and secondary circuits of a distribution system.

**Personal fall arrest system.** A system used to arrest an employee in a fall from a working level.

**Pole.** Any device used to support a power distribution or transmission line. The pole may be made of any substance including wood, concrete, metal, is usually cylindrical in shape and comparatively slender. It is the upright standard to which is affixed part of the power distribution and transmission line system as defined in this chapter.

**Power dispatcher (load dispatcher or system operator).** A person who has been designated by the employer as having authority over switching and clearances of high voltage lines and station equipment.

**Protective devices.** Devices such as rubber gloves, rubber blankets, line hose, rubber boots, or other insulating devices, which are specifically designed for the protection of employees.

**Qualified electrical employee.** A person who is familiar and knowledgeable in the construction and operation of the electric power generation, transmission, and distribution equipment involved, and such lines and/or equipment that concerns his/her position and who is fully aware of the hazards connected therewith, or, one who has passed a journey status examination for the particular branch of the electrical trades with which he/she may be connected.

Notes:

- An employee must have the training required by WAC 296-45-065 in order to be considered a qualified electrical employee.
- An employee who is undergoing on-the-job training (an apprentice) who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified electrical employee is considered to be a qualified electrical employee for the performance of those duties.
- An employee having experience and training comparable to journey level would be considered a qualified electrical employee.

**Roadway or public highway.** Every way, land, road, street, boulevard, and every other way or place in the state open as a matter of right to public vehicular travel, both inside and outside the limits of cities and towns, regardless of ownership.

**Rubber.** Any goods, equipment, or tool made out of either natural or synthetic rubber.

**Secured ladder.** A ladder which is not capable of being dislodged from the top by lateral, or jerking motion(s).

**Sheath.** As applied to tools carried in a lineman's tool belt, a sheath that effectively covers the tool and prevents such tool from falling from the belt.

**Should and may or it is recommended.** These terms are used to indicate the provisions are not mandatory but are recommended.

**Statistical sparkover voltage.** A transient overvoltage level that produces a 97.72 percent probability of sparkover (that is, two standard deviations above the voltage at which there is a 50 percent probability of sparkover).

**Statistical withstand voltage.** A transient overvoltage level that produces a 0.14 percent probability of sparkover (that is, three standard deviations below the voltage at which there is a 50 percent probability of sparkover).

**Step bolt.** A bolt or rung attached at intervals along a structural member and used for foot placement during climbing or standing.

**Supporting structure.** The main supporting unit (usually a pole or tower).

**Switch.** A device for opening and closing or for changing the connection of a circuit. In these rules, a switch is understood to be manually operable, unless otherwise stated.

**System operator or power dispatcher.** A qualified electrical employee who has been designated by the employer and having authority over switching, clearances, and operation of the system and its parts.

**Tag.** A system or method of identifying circuits, systems, or equipment for the purpose of alerting employees and others that the circuit, system, or equipment is being worked on.

**Underground residential distribution system (URD).** An electrical installation normally fed from a single primary source which may feed one or more transformers with secondaries not connected to a common grid.

**Utility.** An organization responsible for the installation, operation, or maintenance of electric supply or communications systems.

**Vault.** An enclosure, above or below ground, which personnel may enter and which is used for the purpose of installing, operating, or maintaining equipment or cable.

**Vented vault.** A vault that has provision for air changes using exhaust flue stacks and low level air intakes operating on differentials of pressure and temperature providing for airflow which precludes a hazardous atmosphere from developing.

**Voltage.** The effective (rms) potential difference between any two conductors or between a conductor and ground. Voltages are expressed in nominal values unless otherwise indicated. The nominal voltage of a system or circuit is the value assigned to a system or circuit of a given voltage class for the purpose of convenient designation. The operating voltage of the system may vary above or below this value.

Note: Low voltage includes voltages from 50 to 600 volts. High voltage shall mean those voltages of 601 volts to 230,000. Extra high voltage means any voltage over 230,000 volts. Where the words "high voltage" are used in this chapter it shall include extra high voltage, unless otherwise specified.

**Work-positioning equipment.** A body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a utility pole or tower leg, and work with both hands free while leaning.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and chapter 49.17 RCW. WSR 19-13-083, § 296-45-035, filed 6/18/19, effective 8/1/19; WSR 16-10-082, § 296-45-035, filed 5/3/16, effective 7/1/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 29 C.F.R. 1910 Subpart Z. WSR 14-07-086, § 296-45-035, filed 3/18/14, effective 5/1/14. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 01-11-038, § 296-45-035, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.010, [49.17].040, [49.17].050 and [49.17].060. WSR 98-07-009, § 296-45-035, filed 3/6/98, effective 5/6/98.]