Electrical Terms

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A

Term	Definition
Air Break Switches (ABS)	A group of switches that can isolate a portion of a primary electrical circuit.
All Aluminum Alloy Conductor (AAAC)	A conductor is often used in overhead distribution.
Alternating Current (A/C)	Electric current that reverses direction at regular intervals. The power company provides alternating current to residential homes and businesses.
Aluminum Conductor Steel Reinforced (ACSR)	A conductor is often used in overhead distribution.
Ampacity	Current capacity is in amps.
Ampere	The practical unit of electrical current (produced by a pressure of 1 volt across a circuit having a resistance of 1 ohm), is like a cubic foot of water flowing per second.
Anchor (or Anchor Rod)	Is a device installed in the ground and attached to the guy wire.
Arc	The flow of electric current across a gap between two conductors, terminals or contacts which usually results in sparks, a loud noise and a brief or lengthy outage as protective equipment operates.
Arrester	Also called Lightning Arrester, a device that protects an electrical circuit, transformer or other equipment from lightning damage

B

Term	Definition
Bad Order	Term to describe equipment that has failed due to physical, mechanical or electrical damage, such as a bad order pole or bad order transformer.
Bank	Two or more devices, connected electrically, to produce a desired voltage. Common transformer banks can produce voltages such as 120/240, 120/208, and 277/480.
Bonding	Electrical connection of two or more points to reduce any difference of potential.
Breaker	A device that detects over current conditions and disconnects power to protect the electrical system. Also called Circuit Breaker.
Breaker backed out	The power is connected, but the customer's main circuit breaker is off and, in this case, the main is an older style breaker that consist of a screw-in or twist- type fuses, which are twisted out far enough to break the connection of power from the meter to the customer's house circuit. Customer must twist or screw the fuses back in position in order to establish power.
Breaker Operation	An outage condition that occurs in a substation as the result of a fault on a feeder line. (A large tree falling across a distribution feeder will usually cause a breaker operation.)
British Thermal Unit (BTU)	Term frequently used to describe the size of boilers, heating and air conditioning units; a single BTU is the amount of heat energy required to raise one pound of water by one degree Fahrenheit.
Brownout	A condition where the voltage supplied to the system falls below the specified operating range, but above zero volts.
Buck arm	A crossarm, usually double crossarms, that is set at an angle to the distribution line; buck arms may be used at corners and at points where branch circuits are taken off at a right angle to the distribution line.
Burning days	Describes when a streetlight or other outdoor light is improperly staying on, usually due to a bad photocell eye.
Bus	Conductor or a group of conductors that serve as a common connection for multiple circuits.
Bus (or buss) bar	A metallic strip is used to transfer electricity from one place to another; usually a rigid piece of copper, aluminum, or other conduction material.
Bushing	An insulating structure made of porcelain or polymer that prevents energized conductors from coming in contact with each other. They also prevent conductors from energizing structures or facilities that are not designed to carry electricity.

C

Term	Definition
Cable	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).
Capacitor	An electrical device for storing a charge of electricity and returning it to the line. It is used to balance the inductance of a circuit. Capacitor banks are installed on distribution lines. (Capacity is measured in microfarads.)
Capacity	The load for which a powerline, electric generating unit, transformer or other electrical equipment is rated.
Circuit	A continuous system of conductors through which electricity flows.
Circuit Breaker	A device for interrupting a circuit between separable contacts under normal or abnormal conditions; may be operated manually or automatically for circuit control by overload or other selected conditions.
Clearance	A statement from a person having proper authority that a particular circuit or piece of electrical apparatus is disconnected from all sources of electricity.
Climbers	Devices attached to boots and legs to enable a line worker to climb a pole; also called gaffs or hooks.
Closed	Refers to a switch which is "closed," thus providing a complete circuit. A switch must be closed in order for a circuit to become energized.
Co-gen	Customer who has a generator and sells excess power back to the utility.
Conductance	The reciprocal of electrical resistance.
Conductivity	The ease with which a substance transmits electricity.
Conductor	Any carrier of electric current. In practical terms, a wire or cable designed to carry electric current. A conductor can be insulated or un-insulated depending on application. Examples include wire, cable and bus bar.
Crimp	To squeeze down on a connector to make it fit securely over two pieces of conductor.
Crossarm	A wooden beam, parallel to the horizon, attached to a utility pole. The crossarm is used to mount and support the insulators which secure the conductor.
C.T. can	C.T. rated meter enclosure or meter socket.
Current	A flow of electrical charge, measured in amperes.
Current Limiting Fuse (CLF)	A device that limits the amount of fault current flowing into the protected device. Current limiting fuses are often used to protect distribution transformers.
Current Transformer (C.T.)	A small transformer used in conjunction with a meter for measuring heavy currents in power leads. Current transformers are often abbreviated as "C.T."
Cut in flat	This term most usually refers to a piece of wire or copper buss/bar that is used when a meter is not available in order to complete the connection in the meter socket, so that the customer will have power until a meter is set.
Cutout	A device used to make a fused connection between primary conductors; this device is often called a "fused cutout" or a "fuse switch". If the fuse fails this mechanism provides a visible open which can be seen from the ground.

D

Term	Definition
Dead	De-energized; free from any electrical connection to a source.
Dead end	A point on a distribution line where conductors terminate. A "double dead-end" has conductors terminating from two directions. Jumpers are used to connect these two sets of conductors.
Dead Front	A padmount and equipment design with no exposed high-voltage parts. See also Live Front.
Dead Leg	A conductor that has become de-energized, usually due to a fault condition.
Dead man	Anchor on a guy wire to hold wire in the ground.
Delta	A type of connection for a three phase electrical machine or for transformers. Delta connections provide secondary voltages such as 120/240 volt or 240/480 volt.
Demand Meter	A watthour meter containing an extra dial which measures the maximum demand over a specified period of time, usually 15 minutes.
Direct Buried	Also referred to as a URD or underground distribution. Cable is laid in a trench and directed to specific locations using padmount transformers, switch gear, load break centers, riser poles, etc.
Direct Current (D/C)	A unidirectional electric current.
Distribution or Distribution Lines	Power lines, like those found in neighborhoods, carry medium voltage electricity which is stepped down to household and business levels by transformers.
Distribution Transformer	Transformers that are used for voltage transformation on a distribution system.
Dry-Type Transformer	A transformer which operates without oil as a cooling medium and designed with insulation to withstand higher temperatures.

E

Term	Definition
Easement	The area in which a powerline is located that allow a utility company access to the line.
Elbow	Underground cable terminations in padmount transformers. An elbow, sometimes called a load break connector, offers an insulated high voltage connection. They may be disconnected under load (assuming proper personal protection is taken). Elbows are also known as pistols.
Electricity	The flow or motion of electrons through a conductor.
Electro-Magnetic Fields (EMF)	Magnetic energy fields generated by electrical devices.

Term	Definition
Electrical Metallic Tubing (EMT)	This is a thin-wall conduit that protects electrical wires.
Equipotential Zone (EPZ)	The state of maintaining a near-identical electrical potential between two or more items, as compared to the nominal voltage present. An equipotential zone is a work zone in which the worker is protected from electric shock from differences in electric potential between objects in the work area. These differences in potential can be caused by induced voltage, line reenergization, or lightning.
Eye	See "Photo Cell Eye."

F

Term	Definition
Fault	A partial or local failure in the insulation of continuity of a conductor. A fault produces fault current that can damage electrical systems.
Fault Indicator	A small device which indicates if a circuit has experienced a surge of current or a failure.
Feed	The source from which a cable or wire is energized. For example, customers are "fed" from a transformer.
Feeder	A conductor or group of conductors connecting two substations, a generating station and a substation or feeding point, or a substation and a feeding point. Feeders are named for the substation from which they originate and are numbered for identification. Feeders are also called the "backbone."
Fish	Term to describe a fiberglass insulator, often installed in guy wires.
Float	Expression used for a conductor that is temporarily not attached to a pole or insulator, but is “floating” above it.
Frequency	The number of cycles per second of an alternating current; the unit of measurement is hertz.
Fuse	A part of a circuit made of low-melting point material so that it will melt and break the circuit when a specified current is exceeded. Always the weakest point in the circuit. This device usually causes a loud bang or popping noise, like a big firecracker, just before a customer's lights go out. The fuse will usually blow when something like a limb gets on the line or the line falls off the pole. It is a safety device used to kill out the power until trouble can be repaired.

G

Term	Definition
Gang Switch	An overhead switch, usually pole mounted, which gives the operator the capability of energizing or de-energizing all three phases at once. This is also referred to as a GOAB.
Generator or portable generator	A device that converts mechanical energy into electrical energy. A generator improperly installed can back feed into power lines creating a hazardous condition.
Gen-set	Typically a standby generator.
GOAB	Gang Operated Air-Break Switch .See Gang Switch.
Grasshopper Fuse	Another name for a fuse switch or fused cutout, although the grasshopper fuse differs in design.
Ground	Ground has several meanings: a conductive connection whether intentional or accidental which completes an electrical circuit; to connect an electrical circuit to reference ground; the conductive body, usually earth, to which an electric potential is reference.
Ground Bus	A bus used to connect a number of grounding conductors to one or more grounding electrodes.
Ground Rod	A device for ensuring a secure ground.
Grounded	Connected to earth or some conducting body that serves in place of the earth.
Grunt	Lineman's helper.
Guy (or Guy Wire)	A support brace or cable used to stabilize a utility pole.

H

Term	Definition
High Pressure Sodium (HPS) light	A light that appears overall amber in color. Great security light because it puts out more lumens of light per watt, but would not be good on a car lot to show the colors of a car at night.
High Side	The primary side in a distribution system. In a transformer hook-up, the primary connection is the high side; the secondary connection is the low side.
High Voltage	Generally greater than 600 volts (may sometimes refer to voltages greater than 100,000 volts depending on application).
Hold Card	A card that is placed on a piece of de-energized equipment to inform anyone that the equipment is being inspected and should not be energized until the hold card is released.
Horsepower	A unit of power equal to 746 watts.
Hot	Energized electrically.
Hot spot	A localized high temperature reading on electrical equipment.

Term	Definition
Hot-line connector	This device is also known as a "hot tap connector." A mechanical connector that provides a connection point between two primary conductors, from a cutout to an overhead line, or from overhead line to overhead line. This connector is operated with a shotgun.
Hot-line tools or hot sticks	Special tools used for replacing circuit components or for other types of work with the circuit energized. A "shotgun" is one type of hot stick.

I

Term	Definition
Impedance	The opposition a circuit offers to a flow of alternating current.
Induction	This process of generating electrical current in a conductor by placing the conductor in a changing magnetic field is called electromagnetic induction or just induction. It is called induction because the current is said to be induced in the conductor by the magnetic field.
Insulation	Non-conductive material that is applied over a conductor (e.g. cable, wire) to insulate a conductor from other conductors or ground.
Insulators	A device made of porcelain or polymer that prevents energized conductors from coming in contact with each other. They also prevent conductors from energizing structures or facilities that are not designed to carry electricity. Bushings are a type of insulator.
Isolate	To reroute power around a particular area in order to isolate it from an energy source while repairs are being made.

J

Term	Definition
Jacket	The outer covering of a cable: a tough plastic material that provides physical protection for the cable. Jacketed cable protects against physical damage and corrosion, thus reducing the risk of damage to the primary neutral.
Johnny Ball	Porcelain insulators used to separate conductors from each other or from ground, often installed in guy wires.
Jumper	Wire(s) that transfer power from one point to another. Jumpers can be permanent or temporary, insulated or un-insulated. This term most usually refers to a piece of wire or copper buss/bar that is used when a meter is not available in order to complete the connection in the meter socket, so that the customer will have power until a meter is set and is commonly referred to as being Cut-in-flat.

K

Term	Definition
K	Abbreviation for 1,000 (34.5 kv = 34,500 volts)
Kilovolt-ampere (KVA)	The product of volts times amperes. A unit of power in an alternating-current circuit. Transformers are rated in terms of KVA.
Kilowatt	1000 watts
Kilowatt-hour	A unit of electrical consumption which is equal to the amount of electricity needed to burn ten, 100-watt light bulbs for one hour.

L

Term	Definition
Lateral	A primary circuit usually feeding off a main distribution feeder and protected by a fused cutout.
Lateral Fuse	Fuse that is used to separate extensions of a line extended off of the main circuit or feeder.
Leg	Term used to describe 1 phase or line that feeds electricity to a facility or house. If someone has part lights or are low power they could be experiencing a "Leg out", "Lost a leg".
Leg out	Meaning fuse blown. either on the transformer, but most often referred to when a line fuse is blown.
Lightning Arrester	A device which can reduce the voltage of a surge, usually caused by lightning, by passing the surge current to ground.
Live	Electrically “hot” or energized.
Live Front	A pad mount or equipment design that incorporates exposed high-voltage parts. See Dead Front.
Load	The total demand for electricity at any given time.
Load Break	Equipment, such as a switch, which can be disconnected or operated while energized (under load) assuming all other safety precautions are taken.
Locked and Loaded	A situation where a meter cannot be set or power turned on, because the customer was not home and the customer's main breaker was not off and a load was on the meter. We require that a customer is home or the main breaker is off in order to establish power.
Loop Feed	A distribution design with two sources (e.g. feeders). Normally loops are split in half, with half the customers being fed from one feed point and half from another. Customers fed by a loop system have the advantage of receiving power from another source should their original source or "feed" point go bad.
Low Side	The secondary side in a distribution system. In a transformer hook-up, the primary connection is the high side; the secondary connection is the low side.
Low Voltage	Generally less than 600 volts, sometimes referred to as secondary voltage. Most homes and small businesses operate from low voltage service.

M

Term	Definition
Main Inverted	The power is connected, but the customer's main circuit breaker is off and in this case the main is an older style breaker that consist of cartridge fuses which are inverted to break the connection of power from the meter to the customer's house circuit. Customer must install the pull-out main in its proper position in order to establish power.
Main off	Power connected but customers main circuit breaker is off. To establish power the customer must simply turn on their main breaker.
Manhole	A subsurface enclosure which personnel may enter; manholes are used for installing, operating, and maintaining underground cable systems.
MCM	A measurement of conductor; MCM stands for a thousand circular mils.
Megavoltamperes (MVA)	Millions of voltamperes, which are a measure of apparent power
Megawatts	One million watts.
Mercury Vapor Light	A light that appears to be overall white in color and allows the human eye to see more of the color ranges and blue tones. This is a good security light and is also used in commercial applications where not only security is an issue, but seeing the colors of objects is important too.
Metal Halide	A light that appears to be overall white in color and allows the human eye to see more of the color ranges and blue tones. This is a good security light and is also used in commercial applications where not only security is an issue, but seeing the colors of objects is important too.
Meter Base/ Meter Can/ Meter Enclosure	The box or enclosure that houses the socket in which the meters are plugged into. This is usually installed by a customer's private electrician.
Meter Circuit	Conductors that power a C.T. rated meter from the C.T.s and/or P.T.s
Meter Loop	A portion of the electrical system owned and maintained by the customer (with the exception of the meter itself). "Meter loop damage" or "weather head damage" is a condition that requires the customer to contact a private electrician to make repairs.
Meter Test Switch	Switch ahead of a C.T. meter that allows meterman to by-pass, isolate and test a C.T. rated meter.

Term	Definition
Mid-Span Drop	An electrical service wire that goes to a customer's house which starts at a location where the wire is tied directly into the secondary wire running between two poles, and then runs to the customer's weatherhead. (This is not a standard practice in all operating companies.) Many Operating Companies (OPCOs) require a pole to be the point of origin in order to maintain a secure attachment point in which to connect and work from and will not connect mid-span.
Momentary	An electrical outage of short duration.
Motor Operated Air-Break Switch (MOAB)	This is simply a gang switch to which a motor operator has been attached. This may or not be integrated into a SCADA system.
Motor Operated Disconnect	A disconnect switch (usually load break) which is opened and closed using a motor.

N

Term	Definition
Network	An underground system incorporating network protectors and submersible equipment in vaults; the secondaries of the transformers are tied together.
Network Transformer	A large transformer used in an underground network. Network transformers are usually located in vaults.
Neutral (or Neutral Wire)	The grounded conductor, usually located under the primary on a utility pole or as a bare conductor on a service drop.
Non-load Break	Equipment, such as a switch, which normally cannot be safely disconnected while energized (not under load). (See also "load break")
Normal Open	A connecting point, usually switchgear or a transformer, that can function as a "bridge" for a loop fed distribution system during an outage.

O

Term	Definition
Ohm	The unit of electrical resistance (equivalent to the resistance of 1000 feet of number 10 copper wire).
Ohmmeter	Instrument used to measure electrical resistance.
Ohm's Law	E=IR, or R=E/I. E=voltage, I=Current and R=Resistance.
Oil Circuit Breaker (OCB)	A circuit breaker is a device for interrupting a circuit between separable contacts. The contacts are immersed in oil to reduce the occurrence of arcs.
One-line Diagram	A diagram that represents all three phases of a three phase circuit as one line. A schematic diagram, in contrast, uses three lines to represent three phases.

Term	Definition
Open	Refers to a switch, which is "open," therefore there will not be a complete circuit.
Outdoor Light (ODL)	A security light installed and maintained by the utility company and paid for by the customer.

P

Term	Definition
P	P = E x I (Power = volts x amps)
Pad	A concrete slab used to support the weight of a transformer fastened to it (the pad mount or pad mounted transformer).
Padmount Transformer	A transformer encased in a steel housing. This transformer is designed to sit on a pad at ground level. Primary (high voltage) and secondary (low voltage) cables enter the transformer housing from beneath the pad.
Part Lights	Terminology used to describe when a customer has only partial power into their house or facility.
Peak Load	The maximum load consumed or produced by a unit or group of units.
Pedestal	A secondary connection compartment.
Phase	The relative time of change in values of current. Values, which change exactly together, are in phase. Difference in phase is expressed in degrees, a complete cycle or double reversal being taken as 360 degrees. In practical terms, each phase is represented by a single cable or wire. Most systems are either single or three phase systems. The phases are identified by letters (A, B, C).
Photo Cell Eye	Device used to determine when it is daylight or night that will allow an outdoor light to come on automatically when it gets dark.
Pick-up-pole (or spot pole)	A pole installed between the primary and the meter loop, usually consisting of low voltage secondary service.
Polarity	Refers to the direction of current flow in a closed circuit. It is often marked with a white dot.
Poly Vinyl Chloride (PVC)	A plastic used to make conduit for running wires.
Pot	See "Transformer."
Potential Transformer (P.T.)	A small transformer used in connection with high voltage measurement. The primary is connected to the high-voltage circuit. The low-voltage secondary provides the measuring potential for a voltmeter.
Pothead	Cable terminations; point where separate or overhead electrical conductors come together and continue as a cable. Usually found on riser poles, switchgear and substations.
Power Factor	The relation of real to apparent power in an alternating current circuit. Power factor is measured as a percentage, dividing Active Power by Apparent Power.

Term	Definition
Primary	High voltage facilities (e.g. conductor) generally over 600 volts. Usually only very large industrial customers are served with primary voltage.
Primary meter	Meter located on the incoming feed of a primary (12, 34.5 KV, etc.) circuit and will always be C.T. rated.
Pull-in	Term used to describe the act of pulling buried electrical wires into a padmounted transformer, pedestal or other enclosure.

R

Term	Definition
Rack	A fixture on which a conductor (or set of conductors) is installed.
Radial Feed	A URD design that incorporates only one source (e.g., a padmount transformer with only one bushing per phase). A radial design has a cable energized or fed from only one direction. A loop design, in contrast, has two feed points for the cable.
Rated KVA of a transformer	The output which can be delivered for the time specified at rated secondary voltage and rated frequency without exceeding the specified temperature limitations.
Recloser	A pole-mounted device attached to overhead lines that are sensitive to interruptions of current flow in the overhead wires. When the recloser senses an interruption it automatically opens and immediately re-closes. If current problems persist after a number of reclosings or "shots" the recloser will remain open; this will cut off power until the recloser is reset manually.
Reconductoring	Replacing existing conductor in the overhead distribution system.
Regulators	A device used to maintain the level of voltage within a prescribed range in order to maintain efficient equipment operation or to prevent equipment damage.
Relay	An electrically operated device for the closing and opening of a circuit. Relays are extensively used in the operation of substations.
Release	A HOLD card is used on de-energized equipment to prevent it from being energized. When the operators in the field have reported that they have completed their work on the equipment, the trouble foreman can order the HOLD card released.
Resistance	The opposition of a conductor to a flow of electric current. Resistance is normally expressed as ohms or Megohms.
RF Meter	A type of electric meter that can be read by Radio Frequency (RF), which means the meter reader does not have to be in the yard to read the meter.
Rigid (conduit)	Metal conduit used to protect electrical wires. Rigid conduit is thicker and stronger than EMT conduit or PVC conduit.
Riser	The pole or conduit where electric cables enter the ground; the point where an overhead and underground system are connected together.
Romex	Plastic coated secondary cable designed for indoor wiring purposes.

S

Term	Definition
Sag	The distance that the lowest point of a span is below the straight line between supports. A Sag can also be used in terms of power quality to describe a reduction in voltage - typically for several cycles, but less than a second or two.
Schematic	A wiring diagram that represents all three phases of a three phase circuit using three lines. A one-line diagram, in contrast, uses one line to represent three phases.
Secondary	Low voltage facilities (e.g., conductors) generally under 600 volts. Most businesses and almost all homes are served by secondary voltage.
Sectionalizer	An automatic protective device used to isolate permanent faults on distribution branch circuits (it is designed to isolate the feeder from an outage). A sectionalizer opens on a de-energized line when the fault occurs beyond the sectionalizer in order to isolate the section of line that has faulted. Applied in combination with a backup recloser, the sectionalizer does not interrupt fault current but counts the fault interrupting operations of the backup recloser. When a preset number of counts are registered within a definite time period, the sectionalizer will automatically open during the open interval of the backup recloser's operating cycle. If the fault is cleared before the required count total is reached, the counting mechanism of the sectionalizer resets automatically.
Service	The low-voltage facilities between a customer's house and the first pedestal pad or pole. Sometimes referred to as the "house service" or "customer service."
Service Drop	The low-voltage facilities between a customer's house and the utility pole. See Service Wire.
Service Wire	The conductor entering a customer's meter from the service pole. See Service Drop.
Shotgun	A "hotstick" designed for working with energized conductors; a shotgun is usually constructed of fiberglass and is at least 6 feet long.
Slim Line Construction	A type of pole line construction that uses fiberglass insulated standoffs instead of wooden cross arms.
Splice	A connection or connector between two cables.
Squirrel-cage	An induction motor with a cage winding in the rotor. It is the most popular motor used in industrial drive systems because it is inexpensive to produce and very reliable.
Step-down Transformer	A transformer in which the primary is the high-voltage winding and the secondary is the low-voltage winding.
Step-up Transformer	A transformer in which the primary is the low-voltage winding and the secondary is the high-voltage winding.
Stirrup or Hot Line Stirrup	A "u" shaped device attached to a primary line; it is built to accept a hot line connector. The stirrup functions to keep the hot line connector from being in direct contact with the conductor.

Term	Definition
Stress Cone	A cone-shaped stress relief device used on high-voltage cable, similar in function to a pothead.
Stringing Block	A device used to support and allow the movement of cable being installed. It is usually used when overhead cable is being installed between poles. Also known as a stringing dolly. The photo below shows a typical stringing block. 
Substation	An installation that accomplishes the following: • voltage changed from one level to another level. • voltage regulated to compensate for system voltage changes. • electric transmission and distribution circuits switched into and out of the system. • electric power flowing in the transmission and distribution circuits measured. • communication signals are connected to the circuits.
Switch	A device for opening or closing connections in an electrical circuit.
Switchgear	A device primarily used to energize or de-energize three phases at one time.
Switching Request	The operating instructions provided to the person in the field responsible for de-energizing specific equipment.

T

Term	Definition
Tap	A line (overhead or underground) which branches off a main line or feeder. Taps can be single-phase, two-phase or three-phase.
Tap Changer	Device on a transformer to change the number of turns in the windings to adjust the voltage rating of a transformer.
Terminal	Any device used at the end of a cable.
Terminator	Contact or point at the end of a conductor to attach or connect a device (such as an elbow).
Three Phase	A term applied to circuits or machines carrying three voltages 120 degrees apart in phase, used mostly in commercial and industrial applications.
Tie/tie-wire/ wire-tie	Wire used to secure a conductor to an insulator. Ties can be manually formed or pre-formed.

Term	Definition
Ton	Term frequently used by air conditioning contractors to describe the size of a central air conditioning unit, i.e. "3 ton unit". A ton is equal to 12,000 BTU's (British Thermal Units).
Transformer	A device, utilizing windings, for transferring alternating-current electrical energy from one circuit to another circuit by electromagnetic means. Other names for a transformer are **pot**, **tub** and **can**.
Transformer fuse	Fuse that is located on the transformer itself. For example, 3 phase service will have a fuse on each of three transformers.
Transmission Line	High voltage line that moves bulk electricity from a generating plant to a substation or between substations.
Transient Voltage	Transient voltages and currents are caused by sudden changes within the electric power system. Opening or closing of a switch or circuit breaker causes a change in circuit configuration and the associated voltages and currents. A finite amount of time is required before a new stable operating point is reached. Lightning strikes to exposed transmission or distribution circuits inject a large amount of energy into the power system in a very short time, causing deviations in voltages and currents which persist until the excess energy is absorbed. Both events cause a temporary departure of system voltage and current from their normal steady-state sinusoidal waveforms. All transients are caused by either connection or disconnection of elements within the electric circuit or injection of energy due to a direct or indirect lightning stroke or static discharge.
Tree Crew	Contract employees that trim and remove trees and tree hazards from power lines.
Tub	See "Transformer"

U

Term	Definition
U-guard	A "u" shaped protective device made of wood, plastic, or metal used to protect cable when it is run up the side of a pole.
Underground Electric Distribution (UED)	The system of electrical service facilities that incorporates pad mounted transformers and concentric neutral cable. In a URD system, cable is laid in a trench and directed to specific locations through the use of pad mounted transformers, switch gear, load break centers, riser poles, etc.
URD	Underground Residential Distribution – see "Underground Electric Distribution" above.

V

Term	Definition
Vacuum Circuit Breaker (VCB)	A circuit breaker is a device for interrupting a circuit between separable contacts. A VCB uses a vacuum as an interrupting medium to prevent arcs.
Vault	An underground enclosure which personnel can enter; vaults are primarily used to install, operate, and maintain equipment supporting a network system.
Volt	The practical unit of electrical pressure; the pressure which will cause a current of 1 amp to flow against a resistance of 1 ohm, similar to water pressure in pounds per square inch.
Voltage Transformer (V.T.)	Has the same definition as the Potential Transformer (PT). It is split within the industry and AEP as to which term is used.
Voltmeter	Instrument used to measure voltage. Volts x Amps = Watts

W

Term	Definition
Watt	The unit of electric power. To find the watts consumed in a given electrical circuit, such as a lamp, multiply the volts by the amperes by the power factor.
Watt-hour	A unit of electrical energy equal to 1 watt of power acting for 1 hour.
Weatherhead	A portion of the electrical system owned and maintained by the customer, generally referring to the electrical conduit from the meter base to the point in which the utility company's wire connects to the customer's wire. "Weatherhead damage" is a condition that requires the customer to contact a private electrician to make repairs.
Wye	A star or Y connection. Wye is a common three-phase transformer connection producing secondary voltages such as 120/208 volt or 277/480 volt.

X

Term	Definition
XLPE	Cross-linked polyethylene insulation used on cables.