

Acid rain: Also called acid precipitation or acid deposition, acid rain is precipitation containing harmful amounts of nitric and sulfuric acids formed primarily by sulfur dioxide and nitrogen oxides released into the atmosphere when fossil fuels are burned. It can be wet precipitation (rain, snow, or fog) or dry precipitation (absorbed gaseous and particulate matter, aerosol particles or dust). Acid rain has a pH below 5.6. Normal rain has a pH of about 5.6, which is slightly acidic. The term pH is a measure of acidity or alkalinity and ranges from 0 to 14. A pH measurement of 7 is regarded as neutral. Measurements below 7 indicate increased acidity, while those above indicate increased alkalinity.

Adequacy (electric): The ability of the electric system to supply the aggregate electrical demand and energy requirements of the end-use customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

Adjustment bid: A bid auction conducted by the independent system operator or power exchange to redirect supply or demand of electricity when congestion is anticipated.

Aggregator: Any marketer, broker, public agency, city, county, or special district that combines the loads of multiple end-use customers in negotiating the purchase of electricity, the transmission of electricity, and other related services for these customers.

Ampere: The unit of measurement of electrical current produced in a circuit by 1 volt acting through a resistance of 1 Ohm.

Ancillary services: Services that ensure reliability and support the transmission of electricity from generation sites to customer loads. Such services may include load regulation, spinning reserve, non-spinning reserve, replacement reserve, and voltage support.

Apparent power: The product of the voltage (in volts) and the current (in amperes). It comprises both active and reactive power. It is measured in "volt-amperes" and often expressed in "kilovolt-amperes" (kVA) or "megavolt-amperes" (MVA).

Ash: Impurities consisting of silica, iron, alumina, and other noncombustible matter that are contained in coal. Ash increases the weight of coal, adds to the cost of handling, and can affect its burning characteristics. Ash content is measured as a percent by weight of coal on an "as received" or a "dry" (moisture-free, usually part of a laboratory analysis) basis.

Available but not needed capability: Net capability of main generating units that are operable but not considered necessary to carry load and cannot be connected to load within 30 minutes.

Average revenue per kilowatthour: The average revenue per kilowatthour of electricity sold by sector (residential, commercial, industrial, or other) and geographic area (State, Census division, and national) is calculated by dividing the total monthly revenue by the corresponding total monthly sales for each sector and geographic area.

Balancing authority (electric): The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

Barrel: A unit of volume equal to 42 U.S. gallons.

Base bill: A charge calculated by taking the rate from the appropriate electric rate schedule and applying it to the level of consumption.

Base load: The minimum amount of electric power delivered or required over a given period of time at a steady rate.

Base load capacity: The generating equipment normally operated to serve loads on an around-the-clock basis.

Base load plant: A plant, usually housing high-efficiency steam-electric units, which is normally operated to take all or part of the minimum load of a system, and which consequently produces electricity at an essentially constant rate and runs continuously. These units are operated to maximize system mechanical and thermal efficiency and minimize system operating costs.

bb: The abbreviation for barrels.

bcf: The abbreviation for billion cubic feet.

Bilateral agreement: A written statement signed by two parties that specifies the terms for exchanging energy.

Bilateral energy transaction: A transaction between two willing parties who enter into a physical or financial agreement to trade energy commodities. Bilateral transactions entail reciprocal obligations and can involve direct negotiations or deals made through brokers.

Biomass: Organic nonfossil material of biological origin constituting a renewable energy source.

Bituminous coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active

U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Boiler: A device for generating steam for power, processing, or heating purposes; or hot water for heating purposes or hot water supply. Heat from an external combustion source is transmitted to a fluid contained within the tubes found in the boiler shell. This fluid is delivered to an end-use at a desired pressure, temperature, and quality.

British thermal unit: The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

Bundled utility service (electric): A means of operation whereby energy, transmission, and distribution services, as well as ancillary and retail services, are provided by one entity.

California power exchange: A State-chartered, non-profit corporation which provides day-ahead and hour-ahead markets for energy and ancillary services in accordance with the power exchange tariff. The power exchange is a scheduling coordinator and is independent of both the independent system operator and all other market participants.

Capacity: See Generating Capacity

Capacity (purchased): The amount of energy and capacity available for purchase from outside the system.

Capacity charge: An element in a two-part pricing method used in capacity transactions (energy charge is the other element). The capacity charge, sometimes called Demand Charge, is assessed on the amount of capacity being purchased.

Circuit: A conductor or a system of conductors through which electric current flows.

Coal: A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time.

Coal synfuel: Coal-based solid fuel that has been processed by a coal synfuel plant; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

Cogenerator: A generating facility that produces electricity and another form of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes. To receive status as a qualifying facility (QF) under the Public Utility Regulatory Policies Act (PURPA), the facility must produce electric energy and "another form of useful thermal energy through the sequential use of energy" and meet certain ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC). (See the Code of Federal Regulations, Title 18, Part 292.)

Coincidental demand: The sum of two or more demands that occur in the same time interval.

Coincidental peak load: The sum of two or more peak loads that occur in the same time interval.

Coke (petroleum): A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (of 42 U.S. gallons each) per short ton.

Combined cycle: An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for utilization by a steam turbine in the production of electricity. This process increases the efficiency of the electric generating unit.

Combined cycle unit: An electric generating unit that consists of one or more combustion turbines and one or more boilers with a portion of the required energy input to the boiler(s) provided by the exhaust gas of the combustion turbine(s).

Combined heat and power (CHP) plant: A plant designed to produce both heat and electricity from a single heat source. Note: This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

Combined pumped-storage plant: A pumped-storage hydroelectric power plant that uses both pumped water and natural stream flow to produce electricity.

Commercial sector: An energy-consuming sector that consists of service-providing facilities and equipment of businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

Competitive transition charge: A non-bypassable charge levied on each customer of the distribution utility, including those who are served under contracts with nonutility suppliers, for recovery of the utility's stranded costs that develop because of competition.

Congestion: A condition that occurs when insufficient transfer capacity is available to implement all of the preferred schedules for electricity transmission simultaneously.

Conservation: A reduction in energy consumption that corresponds with a reduction in service demand. Service demand can include buildings-sector end uses such as lighting, refrigeration, and heating; industrial processes; or vehicle transportation. Unlike energy efficiency, which is typically a technological measure, conservation is better associated with behavior. Examples of conservation include adjusting the thermostat to reduce the output of a heating unit, using occupancy sensors that turn off lights or appliances, and car-pooling.

Contract price: The delivery price determined when a contract is signed. It can be a fixed price or a base price escalated according to a given formula.

Contract receipts: Purchases based on a negotiated agreement that generally covers a period of 1 or more years.

Cooperative electric utility: An electric utility legally established to be owned by and operated for the benefit of those using its service. The utility company will generate, transmit, and/or distribute supplies of electric energy to a specified area not being serviced by another utility. Such ventures are generally exempt from Federal income tax laws. Most electric cooperatives have been initially financed by the Rural Utilities Service (prior Rural Electrification Administration), U.S. Department of Agriculture.

Cost-based rates (electric): A ratemaking concept used for the design and development of rate schedules to ensure that the filed rate schedules recover only the cost of providing the service.

Cost-of-service regulation: A traditional electric utility regulation under which a utility is allowed to set rates based on the cost of providing service to customers and the right to earn a limited profit.

Current (electric): A flow of electrons in an electrical conductor. The strength or rate of movement of the electricity is measured in amperes.

Customer choice: The right of customers to purchase energy from a supplier other than their traditional supplier or from more than one seller in the retail market.

Day-ahead schedule: A schedule prepared by a scheduling coordinator or the independent system operator before the beginning of a trading day. This schedule indicates the levels of generation and demand scheduled for each settlement period that trading day.

Demand: See Energy Demand

Demand bid: A bid into the power exchange indicating a quantity of energy or an ancillary service that an eligible customer is willing to purchase and, if relevant, the maximum price that the customer is willing to pay.

Demand response programs: Demand response programs are incentive-based programs that encourage electric power customers to temporarily reduce their demand for power at certain times in exchange for a reduction in their electricity bills. Some demand response programs allow electrical power system operators to directly reduce the load, while in others, customers retain control. Customer-controlled reductions in demand may involve actions such as curtailing load, operating onsite generation, or shifting electricity use to another time period. Demand response programs are one type of demand-side management, which also covers broad, less immediate programs such as the promotion of energy-efficient equipment in residential and commercial sectors.

Demand-side management (DSM): A utility action that reduces or curtails end-use equipment or processes. DSM is often used in order to reduce customer load during peak demand and/or in times of supply constraint. DSM includes programs that are focused, deep, and immediate such as the brief curtailment of energy-intensive processes used by a utility's most demanding industrial customers, and programs that are broad, shallow, and less immediate such as the promotion of energy-efficient equipment in residential and commercial sectors.

Derate: A decrease in the available capacity of an electric generating unit, commonly due to:

- A system or equipment modification
- Environmental, operational, or reliability considerations. Causes of generator capacity deratings include high cooling water temperatures, equipment degradation, and historical performance during peak demand periods. In this context, a derate is typically temporary and due to transient conditions.

Deregulation: The elimination of some or all regulations from a previously regulated industry or sector of an industry.

Diesel fuel: A fuel composed of distillates obtained in petroleum refining operation or blends of such distillates with residual oil used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline.

Direct access: The ability of a retail customer to purchase electricity or other energy sources directly from a supplier other than their traditional supplier.

Distribution: The delivery of energy to retail customers.

Distribution provider (electric): Provides and operates the wires between the transmission system and the end-use customer. For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the Distribution function at any voltage.

Distribution system: The portion of the transmission and facilities of an electric system that is dedicated to delivering electric energy to an end-user.

Divestiture: The stripping off of one utility function from the others by selling (spinning-off) or in some other way changing the ownership of the assets related to that function. Stripping off is most commonly associated with spinning-off generation assets so they are no longer owned by the shareholders that own the transmission and distribution assets.

Electric industry restructuring: The process of replacing a monopolistic system of electric utility suppliers with competing sellers, allowing individual retail customers to choose their supplier but still receive delivery over the power lines of the local utility. It includes the reconfiguration of vertically-integrated electric utilities.

Electric plant (physical): A facility containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric rate schedule: A statement of the electric rate and the terms and conditions governing its application, including attendant contract terms and conditions that have been accepted by a regulatory body with appropriate oversight authority.

Electric utility: A corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Included are investor-owned electric utilities, municipal and State utilities, Federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and corporately aligned with companies that own distribution facilities are also included.

Electricity: A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

Electricity broker: An entity that arranges the sale and purchase of electric energy, the transmission of electricity, and/or other related services between buyers and sellers but does not take title to any of the power sold.

Electricity congestion: A condition that occurs when insufficient transmission capacity is available to implement all of the desired transactions simultaneously.

Electricity demand: The rate at which energy is delivered to loads and scheduling points by generation, transmission, and distribution facilities.

Electricity demand bid: A bid into the power exchange indicating a quantity of energy or an ancillary service that an eligible customer is willing to purchase and, if relevant, the maximum price that the customer is willing to pay.

Electricity generation: The process of producing electric energy or the amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatthours(kWh) or megawatthours (MWh).

Electricity generation, gross: See Gross Generation

Electricity generation, net: See Net Generation

Electricity only plant: A plant designed to produce electricity only. See also Combined heat and power (CHP) plant.

Electricity paid by household: The household paid the electric utility company directly for all household uses of electricity (such as water heating, space heating, air-conditioning, cooking, lighting, and operating appliances.) Bills paid by a third party are not counted as paid by the household.

Electricity sales: The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Electric Reliability Council of Texas: The Electric Reliability Council of Texas, Inc. (ERCOT) is a Texas 501-c(4), American Non-profit that operates the Texas Electrical Grid.

Energy charge: That portion of the charge for electric service based upon the electric energy (kWh) consumed or billed.

Energy conservation features: This includes building shell conservation features, HVAC conservation features, lighting conservation features, any conservation features, and other conservation features incorporated by the building. However, this category does not include any demand-side management (DSM) program participation by the building. Any DSM program participation is included in the DSM Programs.

Energy deliveries: Energy generated by one electric utility system and delivered to another system through one or more transmission lines.

Energy Efficiency: A ratio of service provided to energy input (e.g., lumens to watts in the case of light bulbs). Services provided can include buildings-sector end uses such as lighting, refrigeration, and heating; industrial processes; or vehicle transportation. Unlike conservation, which involves some reduction of service, energy efficiency provides energy reductions without sacrifice of service. May also refer to the use of technology to reduce the energy needed for a given purpose or service.

Energy efficiency, Electricity: Refers to programs that are aimed at reducing the energy used by specific end-use devices and systems, typically without affecting the services provided. These programs reduce overall electricity consumption (reported in megawatthours), often without explicit consideration for the timing of program-induced savings. Such savings are generally achieved by substituting technologically more advanced equipment to produce the same level of end-use services (e.g. lighting, heating, motor drive) with less electricity. Examples include high-efficiency appliances, efficient lighting programs, high-efficiency heating, ventilating and air conditioning (HVAC)

systems or control modifications, efficient building design, advanced electric motor drives, and heat recovery systems.

Energy Intensity: A ratio of energy consumption to another metric, typically national gross domestic product in the case of a country's energy intensity. Sector-specific intensities may refer to energy consumption per household, per unit of commercial floorspace, per dollar value industrial shipment, or another metric indicative of a sector. Improvements in energy intensity include energy efficiency and conservation as well as structural factors not related to technology or behavior.

Energy Policy Act of 1992 (EPACT): This legislation creates a new class of power generators, exempt wholesale generators, that are exempt from the provisions of the Public Holding Company Act of 1935 and grants the authority to the Federal Energy Regulatory Commission to order and condition access by eligible parties to the interconnected transmission grid.

Energy receipts: Energy brought into a site from another location.

Energy service provider: An energy entity that provides service to a retail or end-use customer.

Energy source: Any substance or natural phenomenon that can be consumed or transformed to supply heat or power. Examples include petroleum, coal, natural gas, nuclear, biomass, electricity, wind, sunlight, geothermal, water movement, and hydrogen in fuel cells.

ERCOT: See Electric Reliability Council of Texas

Exchange energy: See exchange electricity

Exempt wholesale generator (EWG): Wholesale generators created under the 1992 Energy Policy Act that are exempt from certain financial and legal restrictions stipulated in the Public Utilities Holding Company Act of 1935.

Facility: An existing or planned location or site at which prime movers, electric generators, and/or equipment for converting mechanical, chemical, and/or nuclear energy into electric energy are situated or will be situated. A facility may contain more than one generator of either the same or different prime mover type. For a cogenerator, the facility includes the industrial or commercial process.

Federal Energy Regulatory Commission (FERC): The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent

regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

Federal Power Act: Enacted in 1920, and amended in 1935, the Act consists of three parts. The first part incorporated the Federal Water Power Act administered by the former Federal Power Commission, whose activities were confined almost entirely to licensing non-Federal hydroelectric projects. Parts II and III were added with the passage of the Public Utility Act. These parts extended the Act's jurisdiction to include regulating the interstate transmission of electrical energy and rates for its sale as wholesale in interstate commerce. The Federal Energy Regulatory Commission is now charged with the administration of this law.

Federal Power Commission (FPC): The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the Department of Energy was created. Its functions were divided between the Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

Firm power: Power or power-producing capacity, intended to be available at all times during the period covered by a guaranteed commitment to deliver, even under adverse conditions.

Flue-gas particulate collector: Equipment used to remove fly ash from the combustion gases of a boiler plant before discharge to the atmosphere. Particulate collectors include electrostatic precipitators, mechanical collectors (cyclones), fabric filters (baghouses), and wet scrubbers.

Fly ash: Particulate matter mainly from coal ash in which the particle diameter is less than 1×10^4 meter. This ash is removed from the flue gas using flue gas particulate collectors such as fabric filters and electrostatic precipitators.

Forced outage: The shutdown of a generating unit, transmission line, or other facility for emergency reasons or a condition in which the generating equipment is unavailable for load due to unanticipated breakdown.

Fossil fuel: An energy source formed in the Earth's crust from decayed organic material. The common fossil fuels are petroleum, coal, and natural gas.

Fossil fuel plant: A plant using coal, petroleum, or gas as its source of energy.

Fuel expenses: These costs include the fuel used in the production of steam or driving another prime mover for the generation of electricity. Other associated expenses include unloading the shipped fuel and all handling of the fuel up to the point where it enters the first bunker, hopper, bucket, tank, or holder in the boiler-house structure.

Full forced outage: The net capability of main generating units that are unavailable for load for emergency reasons.

Futures market: A trade center for quoting prices on contracts for the delivery of a specified quantity of a commodity at a specified time and place in the future.

Gas: A non-solid, non-liquid combustible energy source that includes natural gas, coke-oven gas, blast-furnace gas, and refinery gas.

Gas turbine plant: A plant in which the prime mover is a gas turbine. A gas turbine consists typically of an axial-flow air compressor and one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases are passed to the turbine and where the hot gases expand drive the generator and are then used to run the compressor.

Generating unit: Any combination of physically connected generators, reactors, boilers, combustion turbines, and other prime movers operated together to produce electric power.

Generation: The process of producing electric energy by transforming other forms of energy; also, the amount of electric energy produced, expressed in kilowatthours.

Generation company: An entity that owns or operates generating plants. The generation company may own the generation plants or interact with the short-term market on behalf of plant owners.

Generator capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for ambient conditions.

Generator nameplate capacity (installed): The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically attached to the generator.

Geothermal energy: Hot water or steam extracted from geothermal reservoirs in the earth's crust. Water or steam extracted from geothermal reservoirs can be used for geothermal heat pumps, water heating, or electricity generation.

Geothermal plant: A plant in which the prime mover is a steam turbine. The turbine is driven either by steam produced from hot water or by natural steam that derives its energy from heat found in rock.

Gigawatt (GW): One billion watts or one thousand megawatts.

Gigawatthour (GWh): One billion watthours.

Greenhouse effect: The result of water vapor, carbon dioxide, and other atmospheric gases trapping radiant (infrared) energy, thereby keeping the earth's surface warmer than it would otherwise be. Greenhouse gases within the lower levels of the atmosphere trap this radiation, which would otherwise escape into space, and subsequent re-radiation of some of this energy back to the Earth maintains higher surface temperatures than would occur if the gases were absent.

Grid: The layout of an electrical distribution system. See Electric Power Grid.

Gross generation: The total amount of electric energy produced by generating units and measured at the generating terminal in kilowatthours (kWh) or megawatthours (MWh).

Heat content: The amount of heat energy available to be released by the transformation or use of a specified physical unit of an energy form (e.g., a ton of coal, a barrel of oil, a kilowatthour of electricity, a cubic foot of natural gas, or a pound of steam). The amount of heat energy is commonly expressed in British thermal units (Btu). Note: Heat content of combustible energy forms can be expressed in terms of either gross heat content (higher or upper heating value) or net heat content (lower heating value), depending upon whether or not the available heat energy includes or excludes the energy used to vaporize water (contained in the original energy form or created during the combustion process). The Energy Information Administration typically uses gross heat content values.

Hedging contracts: Contracts which establish future prices and quantities of electricity independent of the short-term market. Derivatives may be used for this purpose.

Hydroelectric power: The use of flowing water to produce electrical energy.

Hydrogen: The lightest of all gases, occurring chiefly in combination with oxygen in water; exists also in acids, bases, alcohols, petroleum, and other hydrocarbons.

Implied heat rate: A calculation of the day-ahead electric price divided by the day-ahead natural gas price. Implied heat rate is also known as the 'break-even natural gas market heat rate,' because only a natural gas generator with an operating heat rate (measure of unit efficiency) below the implied heat rate value can make money by burning natural gas

to generate power. Natural gas plants with a higher operating heat rate cannot make money at the prevailing electricity and natural gas prices.

Independent power producer: A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an electric utility.

Independent system operator (ISO): An independent, federally regulated entity established to coordinate regional transmission in a non-discriminatory manner and ensure the safety and reliability of the electric system.

Industrial sector: An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity manufacturing (NAICS codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities. Various EIA programs differ in sectoral coverage.

Interchange (electric): Energy transfers that cross Balancing Authority boundaries.

Interchange authority (electric): The responsible entity that authorizes implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communication of Interchange information for reliability assessment purposes.

Interchange transaction (electric): An agreement to transfer energy from a seller to a buyer that crosses one or more Balancing Authority Area boundaries.

Interdepartmental service (electric): Interdepartmental service includes amounts charged by the electric department at tariff or other specified rates for electricity supplied by it to other utility departments.

Intermediate load (electric system): The range from base load to a point between base load and peak. This point may be the midpoint, a percent of the peak load, or the load over a specified time period.

Internal combustion plant: A plant in which the prime mover is an internal combustion engine. An internal combustion engine has one or more cylinders in which the process of combustion takes place, converting energy released from the rapid burning of a fuel-air

mixture into mechanical energy. Diesel or gas-fired engines are the principal types used in electric plants. The plant is usually operated during periods of high demand for electricity.

Interruptible gas: Gas sold to customers with a provision that permits curtailment or cessation of service at the discretion of the distributing company under certain circumstances, as specified in the service contract.

Interruptible load: This Demand-Side Management category represents the consumer load that, in accordance with contractual arrangements, can be interrupted at the time of annual peak load by the action of the consumer at the direct request of the system operator. This type of control usually involves large-volume commercial and industrial consumers. Interruptible Load does not include Direct Load Control.

Interruptible load or interruptible demand (electric): Demand that the end-use customer makes available to its Load-Serving Entity via contract or agreement for curtailment

Investor-owned utility (IOU): A privately-owned electric utility whose stock is publicly traded. It is rate regulated and authorized to achieve an allowed rate of return.

Jet fuel: A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

Kerosene: A light petroleum distillate that is used in space heaters, cook stoves, and water heaters and is suitable for use as a light source when burned in wick-fed lamps. Kerosene has a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point, a final boiling point of 572 degrees Fahrenheit, and a minimum flash point of 100 degrees Fahrenheit. Included are No. 1-K and No. 2-K, the two grades recognized by ASTM Specification D 3699 as well as all other grades of kerosene called range or stove oil, which have properties similar to those of No. 1 fuel oil. Also see Kerosene-type jet fuel.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu.

Lignite: The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent The heat content of lignite ranges

from 9 to 17 million Btu per ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per ton, on the as-received basis (i.e. containing both inherent moisture and mineral matter).

Load (electric): An end-use device or customer that receives power from the electric system. Source.

Load loss (3 hours): Any significant incident on an electric utility system that results in a continuous outage of 3 hours or longer to more than 50,000 customers or more than one half of the total customers being served immediately prior to the incident, whichever is less.

Load-serving entity (electric): Secures energy and transmission service (and related Interconnect Operations Services) to serve the electrical demand and energy requirements of its end-use customers. See.

Manufactured gas: A gas obtained by destructive distillation of coal or by the thermal decomposition of oil, or by the reaction of steam passing through a bed of heated coal or coke. Examples are coal gases, coke oven gases, producer gas, blast furnace gas, blue (water) gas, carbureted water gas. Btu content varies widely.

Market clearing price: The price at which supply equals demand for the Day-ahead or hour-ahead markets.

Market-based pricing: Prices of electric power or other forms of energy determined in an open market system of supply and demand under which prices are set solely by agreement as to what buyers will pay and sellers will accept. Such prices could recover less or more than full costs, depending upon what the buyers and sellers see as their relevant opportunities and risks.

Maximum demand: The greatest of all demands of the load that has occurred within a specified period of time.

Megawatt (MW): One million watts of electricity.

Megawatthour (MWh): One thousand kilowatt-hours or 1 million watt-hours.

Native gas: Gas in place at the time that a reservoir was converted to use as an underground storage reservoir in contrast to injected gas volumes.

Native load (electric): The end-use customers that the Load-Serving Entity is obligated to serve.

NERC: See **North American Electric Reliability Corporation (NERC)**

Net actual interchange (electric): The algebraic sum of all metered interchange over all interconnections between two physically Adjacent Balancing Authority Areas.

Net energy for load (electric): Net Balancing Authority Area generation, plus energy received from other Balancing Authority Areas, less energy delivered to Balancing Authority Areas through interchange. It includes Balancing Authority Area losses but excludes energy required for storage at energy storage facilities.

Net generation: The amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries. Note: Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.

Net summer capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30.) This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

Net winter capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of peak winter demand (period of December 1 through February 28). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

Noncoincidental peak load: The sum of two or more peak loads on individual systems that do not occur in the same time interval. Meaningful only when considering loads within a limited period of time, such as a day, week, month, a heating or cooling season, and usually for not more than 1 year.

Nonfirm power: Power or power-producing capacity supplied or available under a commitment having limited or no assured availability.

Nonutility power producer: A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for electric generation and is not an electric utility. Nonutility power producers include qualifying cogenerators, qualifying small power producers, and other nonutility generators (including independent power producers). Non-utility power producers are without a designated franchised service area and do not file forms listed in the Code of Federal Regulations, Title 18, Part 141

North American Electric Reliability Corporation (NERC): A nonprofit corporation formed in 2006 as the successor to the North American Electric Reliability Council

established to develop and maintain mandatory reliability standards for the bulk electric system, with the fundamental goal of maintaining and improving the reliability of that system. NERC consists of regional reliability entities covering the interconnected power regions of the contiguous United States, Canada, and Mexico.

North American Industry Classification System (NAICS): A new classification scheme, developed by the Office of Management and Budget to replace the Standard Industrial Classification (SIC) System, that categorizes establishments according to the types of production processes they primarily use.

Nuclear electric power (nuclear power): Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

Nuclear fuel: Fissionable materials that have been enriched to such a composition that, when placed in a nuclear reactor, will support a self-sustaining fission chain reaction, producing heat in a controlled manner for process use.

Off peak gas: Gas that is to be delivered and taken on demand when demand is not at its peak.

Ohm: A measure of the electrical resistance of a material equal to the resistance of a circuit in which the potential difference of 1 volt produces a current of 1 ampere.

Open access: A regulatory mandate to allow others to use a utility's transmission and distribution facilities to move bulk power from one point to another on a nondiscriminatory basis for a cost-based fee.

Open access (electric): Federal Energy Regulatory Commission Order No. 888 requires public utilities to provide non-discriminatory transmission service over their transmission facilities to third parties to move bulk power from one point to another on a nondiscriminatory basis for a cost-based fee. Order 890 expanded Open Access to cover the methodology for calculating available transmission transfer capability; improvements that opened a coordinated transmission planning processes; standardization of energy and generation imbalance charges; and other reforms regarding the designation and undesignation of transmission network resources.

Open access transmission tariff (electric): Electronic transmission tariff accepted by the U.S. Federal Energy Regulatory Commission requiring the Transmission Service Provider to furnish to all shippers with non-discriminating service comparable to that provided by Transmission Owners to themselves.

Operable nuclear unit (foreign): A nuclear generating unit outside the United States that generates electricity for a grid.

Other generation: Electricity originating from these sources biomass, fuel cells, geothermal heat, solar power, waste, wind, and wood.

Outage: The period during which a generating unit, transmission line, or other facility is out of service.

Peak demand: The maximum load during a specified period of time.

Peak load plant: A plant usually housing old, low-efficiency steam units, gas turbines, diesels, or pumped-storage hydroelectric equipment normally used during the peak-load periods.

Peaking capacity: Capacity of generating equipment normally reserved for operation during the hours of highest daily, weekly, or seasonal loads. Some generating equipment may be operated at certain times as peaking capacity and at other times to serve loads on an around-the-clock basis.

Percent difference: The relative change in a quantity over a specified time period. It is calculated as follows: the current value has the previous value subtracted from it; this new number is divided by the absolute value of the previous value; then this new number is multiplied by 100.

Petroleum: A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include non hydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

Petroleum coke: See Coke (Petroleum).

Planned generator: A proposal by a company to install electric generating equipment at an existing or planned facility or site. The proposal is based on the owner having obtained either (1) all environmental and regulatory approvals, (2) a signed contract for the electric energy, or (3) financial closure for the facility.

Planning authority (electric): The responsible entity that coordinates and integrates transmission facility and service plans, resource plans, and protection systems.

Plant: A term commonly used either as a synonym for an industrial establishment or a generating facility or to refer to a particular process within an establishment.

Plant use: The electric energy used in the operation of a plant. Included is the energy required for pumping at pump-storage plants.

Plant-use electricity: The electric energy used in the operation of a plant. This energy total is subtracted from the gross energy production of the plant.

Power: The rate of producing, transferring, or using energy, most commonly associated with electricity. Power is measured in watts and often expressed in kilowatts (kW) or megawatts (mW). Also known as "real" or "active" power.

Power exchange: An entity providing a competitive spot market for electric power through day- and/or hour-ahead auction of generation and demand bids.

Power exchange generation: Generation scheduled by the power exchange.

Power exchange load: Load that has been scheduled by the power exchange and is received through the use of transmission or distribution facilities owned by participating transmission owners.

Power marketers: Business entities engaged in buying and selling electricity. Power marketers do not usually own generating or transmission facilities. Power marketers, as opposed to brokers, take ownership of the electricity and are involved in interstate trade. These entities file with the Federal Energy Regulatory Commission (FERC) for status as a power marketer.

Power pool: An association of two or more interconnected electric systems having an agreement to coordinate operations and planning for improved reliability and efficiencies.

Power production plant: All the land and land rights, structures and improvements, boiler or reactor vessel equipment, engines and engine-driven generator, turbo generator units, accessory electric equipment, and miscellaneous power plant equipment are grouped together for each individual facility.

Price: The amount of money or consideration-in-kind for which a service is bought, sold, or offered for sale.

Prime mover: The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly (e.g., photovoltaic solar and fuel cells).

Production: See production terms associated with specific energy types.

Profit: The income remaining after all business expenses are paid.

Propane (C₃H₈): A straight-chain saturated (paraffinic) hydrocarbon extracted from natural gas or refinery gas streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of -44 degrees Fahrenheit. It includes all products designated in ASTM Specification D1835 and Gas Processors Association specifications for commercial (HD-5) propane.

Public authority service to public authorities: Public authority service includes electricity supplied and services rendered to municipalities or divisions or agencies of State or Federal governments under special contracts, agreements, or service classifications applicable only to public authorities.

Public street and highway lighting: Electricity supplied and services rendered for the purpose of lighting streets, highways, parks, and other public places; or for traffic or other signal system service, for municipalities or other divisions or agencies of State or Federal governments.

Public Utility Regulatory Policies Act of 1978: The Public Utility Regulatory Policies Act of 1978, passed by the U.S. Congress. This statute requires States to implement utility conservation programs and create special markets for co-generators and small producers who meet certain standards, including the requirement that States set the prices and quantities of power the utilities must buy from such facilities.

Pumped-storage hydroelectric plant: A plant that usually generates electric energy during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

Purchased power adjustment: A clause in a rate schedule that provides for adjustments to the bill when energy from another electric system is acquired and its cost varies from a specified unit base amount.

Pure pumped-storage hydroelectric plant: A plant that produces power only from water that has previously been pumped to an upper reservoir.

Qualifying facility (QF): A cogeneration or small power production facility that meets certain ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC) pursuant to the Public Utility Regulatory Policies Act (PURPA).

Railroad and railway electric service: Electricity supplied to railroads and interurban and street railways, for general railroad use, including the propulsion of cars or

locomotives, where such electricity is supplied under separate and distinct rate schedules.

Rate base: The value of property upon which a utility is permitted to earn a specified rate of return as established by a regulatory authority. The rate base generally represents the value of property used by the utility in providing service and may be calculated by any one or a combination of the following accounting methods: fair value, prudent investment, reproduction cost, or original cost. Depending on which method is used, the rate base includes cash, working capital, materials and supplies, deductions for accumulated provisions for depreciation, contributions in aid of construction, customer advances for construction, accumulated deferred income taxes, and accumulated deferred investment tax credits.

Rate base (electric): The value of property, upon which, a utility is permitted to earn a specified rate of return as established by a regulatory authority.

Ratemaking authority: A utility commission's legal authority to fix, modify, approve, or disapprove rates as determined by the powers given the commission by a State or Federal legislature.

Reactive power: The portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive power must be supplied to most types of magnetic equipment, such as motors and transformers. Reactive power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is a derived value equal to the vector difference between the apparent power and the real power. It is usually expressed as kilovolt-amperes reactive (KVAR) or megavolt-ampere reactive (MVAR).

Real Power: The component of electric power that performs work, typically measured in kilowatts (kW) or megawatts(MW)--sometimes referred to as Active Power. The terms "real" or "active" are often used to modify the base term "power" to differentiate it from Reactive Power and Apparent Power.

Receipts:

- Deliveries of fuel to an electric plant
- Purchases of fuel
- All revenues received by an exporter for the reported quantity exported
- Also see Received

Regional Transmission Group: A utility industry concept that the Federal Energy Regulatory Commission (FERC) embraced for the certification of voluntary groups that would be responsible for transmission planning and use on a regional basis.

Regulation: The governmental function of controlling or directing economic entities through the process of rulemaking and adjudication.

Reliability coordinator (electric): The entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operators vision.

Reregulation: The design and implementation of regulatory practices to be applied to the remaining regulated entities after restructuring of the vertically-integrated electric utility. The remaining regulated entities would be those that continue to exhibit characteristics of a natural monopoly, where imperfections in the market prevent the realization of more competitive results, and where, in light of other policy considerations, competitive results are unsatisfactory in one or more respects. Regulation could employ the same or different regulatory practices as those used before restructuring.

Reserve margin (operating): The amount of unused available capability of an electric power system (at peak load for a utility system) as a percentage of total capability.

Residential/commercial (consumer category): Housing units, wholesale or retail businesses (except coal wholesale dealers); health institutions (hospitals, social and educational institutions (schools and universities); and Federal, state, and local governments (military installations, prisons, office buildings, etc.). Excludes shipments to Federal power projects, such as TVA, and rural electrification cooperatives, power districts, and state power projects.

Restricted-universe census: This is the complete enumeration of data from a specifically defined subset of entities including, for example, those that exceed a given level of sales or generator nameplate capacity.

Restructuring: The process of replacing a monopoly system of electric utilities with competing sellers, allowing individual retail customers to choose their electricity supplier

but still receive delivery over the power lines of the local utility. It includes the reconfiguration of the vertically-integrated electric utility.

Retail sales (electric): Sales made directly to the customer that consumes the energy product.

Retail wheeling: The process of moving electric power from a point of generation across third-party-owned transmission and distribution systems to a retail customer.

Revenue - (electricity): The total amount of money received by an entity from sales of its products and/or services; gains from the sales or exchanges of assets, interest, and dividends earned on investments; and other increases in the owner's equity, except those arising from capital adjustments.

Right-of-way (electric): A corridor of land on which electric lines may be located. The Transmission Owner may own the land in fee, own an easement, or have certain franchise, prescription, or license rights to construct and maintain lines.

Running and quick-start capability: The net capability of generating units that carry load or have quick-start capability. In general, quick-start capability refers to generating units that can be available for load within a 30-minute period.

Sales: See Energy Sales

Sales for resale: A type of wholesale sales covering energy supplied to other electric utilities, cooperatives, municipalities, and Federal and state electric agencies for resale to ultimate consumers.

Sales for resale (electric): A type of wholesale sales covering energy supplied to other electric utilities, cooperatives, municipalities, and Federal and state electric agencies for resale to ultimate consumers.

Scheduled outage: The shutdown of a generating unit, transmission line, or other facility for inspection or maintenance, in accordance with an advance schedule.

Scheduling coordinators: Entities certified by the Federal Energy Regulatory Commission (FERC) that act on behalf of generators, supply aggregators (wholesale marketers), retailers, and customers to schedule the distribution of electricity.

Securitization: A proposal for issuing bonds that would be used to buy down existing power contracts or other obligations. The bonds would be repaid by designating a portion of future customer bill payments. Customer bills would be lowered, since the cost of bond payments would be less than the power contract costs that would be avoided.

Securitize: To aggregate contracts into one pool, which then offers shares for sale in the investment market. This strategy diversifies project risks from what they would be if each project were financed individually, thereby reducing the cost of financing.

Short ton (st): A unit of weight equal to 2,000 pounds.

Small power producer (SPP): Under the Public Utility Regulatory Policies Act (PURPA), a small power production facility (or small power producer) generates electricity using waste, renewable (biomass, conventional hydroelectric, wind and solar, and geothermal) energy as a primary energy source. Fossil fuels can be used, but renewable resource must provide at least 75 percent of the total energy input. (See Code of Federal Regulations, Title 18, Part 292.)

Solar energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Spark spread: A measurement of the difference between the price that a generator can obtain from selling one megawatt hour (MWh) of electricity and the cost of the natural gas needed to generate the MWh of electricity. Spark spread is a measure of potential profit for generating electricity on a particular day.

A key component in the spark spread equation is the heat rate (measure of efficiency) of the generating unit. A common measure for heat rate used in the trade press is 7,000 Btu/kWh. This heat rate is broadly representative of the efficiency of newer natural gas combined-cycle power plants. (By way of comparison, a plant that has a 50% efficiency rate has a heat rate of 6,824 Btu/kWh.) The most efficient natural gas combined-cycle power plants have heat rates somewhat below the 7,000 Btu/kWh threshold; they can make money even when the implied (breakeven) heat rate is a little below 7,000 Btu/kWh. Conversely, as the level of plant efficiency decreases, the spark spread diminishes—thus, older, less efficient plants have lower spark spreads than those with a heat rate of 7,000 Btu/kWh.

Spinning reserve: That reserve generating capacity running at a zero load and synchronized to the electric system.

Spot purchases: A single shipment of fuel or volumes of fuel purchased for delivery within 1 year. Spot purchases are often made by a user to fulfill a certain portion of energy requirements, to meet unanticipated energy needs, or to take advantage of low-fuel prices.

Stability: The property of a system or element by virtue of which its output will ultimately attain a steady state. The amount of power that can be transferred from one machine to

another following a disturbance. The stability of a power system is its ability to develop restoring forces equal to or greater than the disturbing forces so as to maintain a state of equilibrium.

Stability (electric): The ability of an electric system to maintain a state of equilibrium during normal and abnormal conditions or disturbances.

Standard Industrial Classification (SIC): Replaced with North American Industry Classification System.

Standby facility: A facility that supports a utility system and is generally running under no-load. It is available to replace or supplement a facility normally in service.

Standby service: Support service that is available as needed to supplement a customer, a utility system, or another utility if a schedule or an agreement authorizes the transaction. The service is not regularly used.

Steam electric power plant (conventional): A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Stocks: Inventories of fuel stored for future use.

Stranded benefits: Benefits associated with regulated retail electric service which may be at risk under open market retail competition. Examples include conservation programs, fuel diversity, reliability of supply, and tax revenues based on utility revenues.

Stranded costs: Costs incurred by a utility which may not be recoverable under market-based retail competition. Examples include undepreciated generating facilities, deferred costs, and long-term contract costs.

Subbituminous coal: A coal whose properties range from those of lignite to those of bituminous coal and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million Btu per ton on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Substation: Facility equipment that switches, changes, or regulates electric voltage.

Sulfur: A yellowish nonmetallic element, sometimes known as "brimstone." It is present at various levels of concentration in many fossil fuels whose combustion releases sulfur

compounds that are considered harmful to the environment. Some of the most commonly used fossil fuels are categorized according to their sulfur content, with lower sulfur fuels usually selling at a higher price. Note: No.2 Distillate fuel is currently reported as having either a 0.05 percent or lower sulfur level for on-highway vehicle use or a greater than 0.05 percent sulfur level for off-highway use, home heating oil, and commercial and industrial uses. Residual fuel, regardless of use, is classified as having either no more than 1 percent sulfur or greater than 1 percent sulfur. Coal is also classified as being low-sulfur at concentrations of 1 percent or less or high-sulfur at concentrations greater than 1 percent.

Supervisory Control and Data Acquisition (electric): A system of remote control and telemetry used to monitor and control the transmission system.

Supplemental gaseous fuels supplies: Synthetic natural gas, propane-air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

Switching station: Facility equipment used to tie together two or more electric circuits through switches. The switches are selectively arranged to permit a circuit to be disconnected or to change the electric connection between the circuits.

System (electric): Physically connected generation, transmission, and distribution facilities operated as an integrated unit under one central management or operating supervision.

System operator (electric): An individual at a control center (Balancing Authority, Transmission Operator, Generator Operator, Reliability Coordinator) whose responsibility it is to monitor and control that electric system in real time.

Telemetry (electric): The process by which measurable electrical quantities from substations and generating stations are instantaneously transmitted to the control center, and, by which, operating commands from the control center are transmitted to the substations and generating stations.

Terawatt-hour: One trillion watt hours.

Thermal rating (electric): The maximum amount of electrical current that a transmission line or electrical facility can conduct over a specified time period before it sustains permanent damage by overheating or before it sags to the point that it violates public safety requirements.

Tie line (electric): A circuit connecting two Balancing Authority Areas. Also, describes circuits within an individual electrical system.

Transformer: An electrical device for changing the voltage of alternating current.

Transmission (electric): An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems.

Transmission (electric) (verb): The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.

Transmission constraint (electric): A limitation on one or more transmission elements that may be reached during normal or contingency system operations.

Transmission line (electric): A system of structures, wires, insulators and associated hardware that carry electric energy from one point to another in an electric power system. Lines are operated at relatively high voltages varying from 69 kV up to 765 kV, and are capable of transmitting large quantities of electricity over long distances.

Transmission operator (electric): The entity responsible for the reliability of its localized transmission system, and that operates or directs the operations of the transmission facilities.

Transmission owner (electric): The entity that owns and maintains transmission facilities.

Transmission Service Provider (electric): The entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable transmission service agreements.

Transmission system (electric): An interconnected group of electric transmission lines and associated equipment for moving or transferring electric energy in bulk between points of supply and points at which it is transformed for delivery over the distribution system lines to consumers or is delivered to other electric systems.

Transmitting utility: A regulated entity which owns and may construct and maintain wires used to transmit wholesale power. It may or may not handle the power dispatch and coordination functions. It is regulated to provide non-discriminatory connections, comparable service, and cost recovery.

Turbine: A machine for generating rotary mechanical power from the energy of a stream of fluid (such as water, steam, or hot gas). Turbines convert the kinetic energy of fluids to mechanical energy through the principles of impulse and reaction, or a mixture of the two.

Ultimate customer: A customer that purchases electricity for its own use and not for resale.

Unbundling: Separating vertically integrated monopoly functions into their component parts for the purpose of separate service offerings.

Uniform system of accounts: Prescribed financial rules and regulations established by the Federal Energy Regulatory Commission for utilities subject to its jurisdiction under the authority granted by the Federal Power Act.

Uprate: An increase in available electric generating unit power capacity due to a system or equipment modification. An uprate is typically a permanent increase in the capacity of a unit.

Useful thermal output: The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

Utility distribution companies: The entities that will continue to provide regulated services for the distribution of electricity to customers and serve customers who do not choose direct access. Regardless of where a consumer chooses to purchase power, the customer's current utility, also known as the utility distribution company, will deliver the power to the consumer.

Vertical integration: The combination within a firm or business enterprise of one or more stages of production or distribution. In the electric industry, it refers to the historical arrangement whereby a utility owns its own generating plants, transmission system, and distribution lines to provide all aspects of electric service.

Voltage reduction: Any intentional reduction of system voltage by 3 percent or greater for reasons of maintaining the continuity of service of the bulk electric power supply system.
Waste coal: Usable material that is a byproduct of previous coal processing operations. Waste coal is usually composed of mixed coal, soil, and rock (mine waste). Most waste coal is burned as-is in unconventional fluidized-bed combustors. For some uses, waste coal may be partially cleaned by removing some extraneous noncombustible constituents. Examples of waste coal include fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste.

Waste oils and tar: Petroleum-based materials that are worthless for any purpose other than fuel use.

Watt (W): The unit of electrical power equal to one ampere under a pressure of one volt. A Watt is equal to 1/746 horse power.

Watt hour (Wh): The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

Wheeling service: The movement of electricity from one system to another over transmission facilities of interconnecting systems. Wheeling service contracts can be established between two or more systems.

Wholesale competition: A system whereby a distributor of power would have the option to buy its power from a variety of power producers, and the power producers would be able to compete to sell their power to a variety of distribution companies.

Wholesale power market: The purchase and sale of electricity from generators to resellers (who sell to retail customers), along with the ancillary services needed to maintain reliability and power quality at the transmission level.

Wholesale sales: Energy supplied to other electric utilities, cooperatives, municipals, and Federal and state electric agencies for resale to ultimate consumers.

Wholesale transmission services: The transmission of electric energy sold, or to be sold, in the wholesale electric power market.

Wind energy: Kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.

Wires charge: A broad term referring to fees levied on power suppliers or their customers for the use of the transmission or distribution wires.