



The Electric Industry: Glossary of Terms and Acronyms

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Advanced Metering System (AMS): An enhancement to the electric grid that allows residential customers to use more technologically advanced electric meters that will provide greater detail and increased control over their electric usage. The system also new efficiencies and capabilities for transmission and distribution utilities, such as remote meter-reading, improved storm response. It also enhances the ability of retail electric providers to provide demand response programs and other competitive market services.

Affiliated Retail Electric Provider (Affiliated REP or AREP): This term was used during the transition to a fully competitive retail electric market in ERCOT. It refers to a retail electric provider that was previously part of a fully-integrated utility. As of December 31, 2006, all providers are on equal footing. See Retail Electric Provider (REP).

Aggregator: A buying group that signs up customers to bargain on their behalf for electricity and related services.

Ancillary Service: A broadly used term to refer to any wholesale market product that is designed to ensure the continuous balance of electricity and load. For example, a company might bid into the ancillary services market that it has a certain amount of power available to meet a sudden shortfall of power.

Baseload Generation: Generation that operates over 90 percent of the time throughout the year, to meet customer demand. Coal-fired and nuclear generation comprise the majority of baseload generation in Texas, though some natural gas-fired generation also operates nearly continuously.

Black Start: The process of restoring a portion of the electric grid following a complete shutdown. An electric generator with Black Start capabilities must be able to start up without being connected to the external electric grid. The larger process of restoring a power grid after a complete shutdown is a complex engineering challenge, because the grid must be uniformly electrified to restore power.

Broker: In the competitive retail electric market, a broker may seek customers

Capacity: See Generation Capacity.

Certificate of Convenience and Necessity (CCN): A certificate that must be issued by the PUC to utilities before the initial steps of gaining approval for construction of new power lines can proceed.

Competitive Renewable Energy Zone (CREZ): Specific areas in West Texas and the Panhandle that have been identified as high-wind areas. Legislation passed in 2005 directed identifying CREZ regions to foster development of transmission lines to bring wind from rural areas to high-population regions of Texas.

Competitive Retail Electric Provider (Competitive REP, CREP or CR): This term was used during the transition to a fully competitive retail electric market in ERCOT. It refers to a retail electric provider that was not previously part of a fully-integrated utility. As of December 31, 2006, all providers are on equal footing. See Retail Electric Provider (REP).

Consumption and Demand: Consumption refers to the amount of electricity used by residents, industrial and business customers, etc., over time. This is measured in kilowatt-hours (kWh) on a customer's bill, reflecting the total usage. Megawatt-hours (MWh) and Gigawatt-hours (GWh) are larger units of consumption. Demand refers to the amount of electricity used at a moment in time. It is measured in watts, such as kilowatts, Megawatts, Gigawatts. An electric grid is built to ensure that customers have enough power during times of highest demand (often called peak demand), rather than the total consumption of electricity.

Cramming: Illegally adding charges to a customer's electric bill for services not requested or authorized by the customer.

DC Tie: An interconnection of transmission between ERCOT and neighboring electric grids. DC Ties are non-synchronous, which means the two sides of the DC Tie operate independently, and only provide power to one another on demand. ERCOT has two DC Ties with the Eastern Interconnection and three DC Ties with Mexico.

Demand Response (DR): A program in which a consumer can reduce their load during times of high usage in exchange for financial compensation. For example, a large industrial customer can enter into an agreement to reduce operations during the hottest part of a summer day when the electric load is strained and receive compensation for providing that service to the grid.

Dispatchable Generation: Electric generation that can be placed on the electric grid on-demand. Natural gas-fired generation, coal-fired generation, nuclear power and battery storage can all be used to meet electric demand based on electricity usage that day.

Distributed Generation (DG): Small-scale generation owned or operated by an end-use consumer to supplement energy needs. Rooftop solar is an example of distributed generation.

Distribution Lines: Local wires, transformers, substations and other equipment used to deliver electricity to homes and businesses.

Economic Dispatch: The concept of using power from the lowest-cost plant to meet electric demand whenever possible.

Electric Cooperative (Co-op): Co-ops are electric businesses owned by the customers they serve, with a governing board that oversees the business.

Electric Reliability Council of Texas (ERCOT): The Independent System Operator (ISO) located entirely within Texas. ERCOT oversees the grid that covers about 75 percent of the land area and 85 percent of the electric load in Texas. The competitive electric market is located in ERCOT.

Electric Service Identifier (ESID or ES-ID): An identification number for electric meters. Every meter within ERCOT has been assigned an ESID. The term is used by ERCOT and the PUC to count the number of households and businesses that have switched providers.

Energy Information Administration (EIA): A part of the Department of Energy focused on providing data, forecasts and analyses to policymakers and the public.

Federal Energy Regulatory Commission (FERC): The Federal agency charged with regulating interstate energy transactions. Because ERCOT is contained fully within Texas, it is not under FERC's jurisdiction. The other transmission grids (MISO, SPP and WECC) are regulated by FERC.

Fuel Mix/Generation Mix: The percentage of power generated listed by the power source used.

Fully-Integrated Utility (FIU): An investor-owned electric utility that operates under the traditional model, owning generation and interfacing with retail customers. In Texas, the electric utilities outside ERCOT are FIUs.

Generation Capacity: The maximum demand that a given generator or group of generators can meet at a given time. For example, a 1,000 megawatt power plant could meet the demand of 1,000 homes using 1 kW of power simultaneously.

Gigawatt (GW): 1,000 Megawatts or 1 million kilowatts.

Grid: The network of generation, transmission lines and distribution lines that connect customers to electricity.

Independent Market Monitor (IMM): Created by the 79th Texas Legislature, the Independent Market Monitor is an outside contractor employed by ERCOT and reporting to the PUC that monitors wholesale market activity.

Independent System Operator (ISO): An ISO manages a transmission grid. Its responsibilities include providing non-discriminatory access to the grid, managing congestion, maintaining the reliability and security of the grid, and providing billing and settlement services. ERCOT, SERC, SPP and WECC are ISOs.

Intermittent Generation: Electric generation that cannot be placed on the electric grid on-demand. Wind power and solar power are the main sources of intermittent generation, since they're dependent on weather conditions to provide electricity.

Investor-Owned Utility (IOU): An electric utility owned by a corporation or other private entity. Often IOU refers specifically to a vertically-integrated utility, though it can also refer to a transmission and distribution utility. IOUs are closely overseen by the PUCT.

kilowatt (kW): A kilowatt is equal to one thousand watts. As a point of comparison, a kilowatt is equal to about 1.34 horsepower. The number of kilowatts a household requires is a snapshot of the amount of electricity that household is using at exactly that moment.

kilowatt- hour (kWh): This is the most common measure of household electricity consumption, measured as the number of hours-worth of kilowatts used. If a home used 1,000 kWh in a month, this means it averaged about 1400 Watts (1.4 kW) of demand for the month.

Load- growth: The increase of load over time.

Load: See Consumption and Load.

Load-Serving Entity (LSE): An entity that serves electric load in the ERCOT market. This includes retail electric providers, electric cooperatives and municipally owned utilities.

Megawatt (MW): 1,000 kilowatts. In the hottest areas of the state, where demand is highest in the summer, 1 MW of generation can provide power for about 200 homes.

Midcontinent Independent Transmission System Operator (MISO): MISO monitors the grid that covers the Midwest and most of the southern United States, including parts of southeast Texas, including the Beaumont, Port Arthur and The Woodlands areas.

Municipally- Owned Utility (Muni, MOU): An electric utility owned by a city or municipality. MOUs are governed entirely by the structure created by their city governments.

Nodal Market: A method of assessing congestion costs to nodes within zones. Currently, in the zonal market, costs within each zone are socialized based on the size of each generator's load. In a nodal market, these costs would be individually assessed based on a smaller node. See Uplift.

Nonbypassable Charge: A charge that is assessed to all retail electric providers by the TDU. These include transition charges and operational charges.

Non-Opt-In Entity (NOIE): An electric cooperative or municipally owned utility in ERCOT that has not opted-in to the competitive retail electric market.

North American Electric Reliability Council (NERC): The organization consisting of all electric grids in North America. ERCOT, SERC, SPP and WECC are all part of NERC.

Office of Public Utility Counsel (OPUC): OPUC is an agency created to represent the interests of residential and small commercial customers in state utility matters before the PUC, courts, and other utility regulatory agencies.

Operating Reserve Demand Curve (ORDC): A complex economic mechanism used in the ERCOT wholesale market. It is a mechanism that increases the value of wholesale power when electric supplies need to be incentivized to meet electricity demand.

Peak Demand (Peak Load): The maximum expected load for a given period of time.

Peaking Generation: Generation that only operates at times of high demand, and is not needed at times of low demand. Peaking generation in Texas has historically been fueled by natural gas, but newer technologies such as energy storage may also provide peaking service.

Price-To-Beat (PTB): The price-to-beat was a transitional pricing mechanism approved by the PUC that was made available by the affiliated REP to residential and small-commercial customers through 2006.

Provider of Last Resort (POLR): A company that serves as the interim provider for customers whose retail electric provider has left Texas' market.

Qualified Scheduling Entity (QSE): A market participant in ERCOT that settles payments and charges with in the market. Essentially a trading entity.

Rapid Response Service: An ancillary service in the ERCOT market, in which generators and entities willing to reduce load quickly offer to do so when power is needed to ensure grid reliability.

Rate Case: A PUC project in which a regulated electric utility (including IOUs and TDUs) is assessed by the PUC to determine the rates the electric utility may charge for its service.

Regional Transmission Organization (RTO): A form of ISO.

Reliability- Must- Run Status (RMR): When determining whether a power plant should be retired, ERCOT may order the plant to remain operational to ensure the grid operates reliably, even if the plant is uneconomic in the competitive market.

Reliability Unit Commitment (RUC): An ERCOT process to require an electric generation unit to participate in the wholesale electric market to meet the forecasted load on a given day.

Renewable Portfolio Standard (RPS): A legislative or regulatory mandate or goal for power generated from renewable sources.

Reserve Margin: The amount of capacity above the maximum expected usage expressed as a percentage of peak demand. For example, a 15 percent ERCOT reserve margin means that on the hottest day of the year, ERCOT would still have a 15 percent surplus of generation available, assuming its forecast is accurate.

Resource Adequacy: The term used to refer to the need for generation to meet electric load. There are many initiatives under discussion at the PUC to address resource adequacy concerns.

Retail electric provider (REP): An entity that sells electric energy to retail customers in this state. A retail electric provider may not own or operate generation assets.

Slamming: The unauthorized, illegal transfer of a customer's electric service by a retail electric provider.

Smart Grid: See Advanced Metering System

Southwest Power Pool (SPP): The SPP grid covers Oklahoma, Kansas, portions of Arkansas, Louisiana and the Texas Panhandle and parts of northeast Texas, including the cities of Amarillo, Lubbock, Texarkana, Longview and Marshall.

Substation: A large electric grid component that decreases the voltage from a transmission line to a voltage suitable for a distribution network. That voltage is subsequently stepped down for customer use by a transformer.

System Benefit Fund (SBF): The System Benefit Fund was a charge assessed to customers in areas of the state open to electric competition to support an array of programs designed to help low-income Texans, as well as administrative costs of the PUC and the Office of Public Utility Counsel. The SBF was no longer assessed as of September 2014.

Texas Commission on Environmental Quality (TCEQ): The state environmental agency. It oversees air emissions, clean water and waste management.

Texas Energy Reliability Council (TERC): Established by Senate Bill 3 in 2021, TERC was established to analyze the electric grid, including its supply lines of natural gas, to enhance reliability. It includes leaders from key state agencies and representatives of the electric industry.

Texas Railroad Commission (RRC): The state regulator of oil and gas operations, including producers, pipeline transporters, natural gas utilities and coal and uranium mining operations.

Transformer: An electric grid component that increases or decreases electric current. For example, a transformer on a distribution line steps down the voltage from the power line to a level appropriate for in-home use.

Transmission and Distribution Utility (TDU), Transmission and Distribution Service Provider (TDSP): A company that provides transmission and distribution service. TDUs/TDSPs remain closely regulated by the PUC.

Transmission Congestion: See Congestion.

Transmission Congestion: Transmission congestion results when transmission system operators must limit generation to maintain the voltage integrity of the grid. It occurs when there is a transmission constraint.

Transmission Lines: Lines that are used to deliver power from electric generating plants at high voltage to facilities that distribute the power at lower voltage to homes and businesses.

Unbundling: The separation of traditional electric utilities into three companies—retail, wires and generation—by either separating into affiliated companies owned by a common holding company, separating into nonaffiliated companies or selling assets to a third party. Unbundled utilities are governed by code of conduct rules to ensure a fair and competitive market.

Vertically-Integrated Utility: An investor-owned utility that owns transmission and distribution, generation and provides retail services to its customers, and that is still regulated by the PUC.

Western Electricity Coordinating Council (WECC): Covering all or part of 14 states, two Canadian provinces and northern Baja California, Mexico, WECC is the largest grid in North America, though it does not have the same centralized oversight as an ISO/RTO. El Paso and its suburbs are located in the WECC service area.

Wholesale Market Oversight (WMO): The subset of the electric utility division of the PUC that monitors Texas' wholesale markets for market abuse. WMO is also performed by an Independent Market Monitor, employed by ERCOT and reporting to the PUC