

TCCFUI PRESENTS
**GAS AND
ELECTRIC
RATE
REGULATION
IN TEXAS**

A GLOSSARY AND PRIMER

MORE THAN 200
PUBLIC UTILITY
COMMISSION
OF TEXAS
AND
RAILROAD
COMMISSION
OF TEXAS
REGULATORY
TERMS



A PRESENTATION OF
**The Texas Coalition of
Cities for Utility Issues**

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TCCFUI.ORG

ABOUT THE TEXAS COALITION OF CITIES FOR UTILITY ISSUES

TCCFUI is a coalition of more than 50 Texas municipalities dedicated to protecting and supporting the interests of the citizens and cities of Texas with regard to utility issues. The Coalition is comprised of large municipalities and rural villages. TCCFUI monitors the activities of the United States Congress, the Texas Legislature, the Public Utility Commission of Texas, the Electric Reliability Council of Texas, the Texas Railroad Commission, and the Federal Communications Commission on utility issues of importance to cities.



ELECTRIC AND GAS RATE REGULATION

A TEXAS GLOSSARY AND PRIMER

Utility rate regulation in Texas is most often associated with two state agencies: the Public Utility Commission of Texas (PUC) and the Railroad Commission of Texas (RRC). However, municipal governments also serve an important role. Cities, for example, exercise legal authority (i.e. original jurisdiction) over electric and gas rates charged within their municipal boundaries. Cities also participate in ratemaking matters at the PUC and Railroad Commission. Over the years, regulatory work by cities has helped secure billions of dollars in avoided cost savings for local businesses and residents. City regulatory work also has contributed to service and reliability improvements.

To promote a better understanding of rate regulation in Texas — and the key role played in it by cities — the Texas Coalition of Cities For Utility Issues presents this policy primer and glossary. Included here are explanatory details about the PUC and Railroad Commission, a brief historical summary of rate regulation in Texas and a glossary of important regulatory terms. TCCFUI has drawn information for this publication from publicly available sources, including documents found on the websites of the PUC and RRC, a 2016 guide on electric regulation from the Regulatory Assistance Project, publications from various public utilities and other resources, as noted.

Why Rate Regulation? Why Cities?

Texas operates a bifurcated regulatory system, one in which state and city governments share regulatory authority over public utilities. But cities came first as regulators. Even before the Gas Utility Regulatory Act of 1983, the Public Utility Regulatory Act of 1975 and the Cox Act of 1920, cities were serving as utility regulators.

There are practical reasons both for utility rate regulation and for municipal participation in it.

Rate regulation is important because the public absolutely depends upon safe and affordable electricity and gas service. At the same time, gas and electric utilities operate as monopolies, and if left unchecked could overcharge customers or provide unreliable service. In the absence of free-market competition (which is impractical or impossible for infrastructure-heavy public utilities), it therefore falls upon regulators to protect customers.

Cities play a role in rate regulation because their local citizens and businesses feel the impact when utilities charge excessive rates or deliver unreliable service. In such cases, local citizens rightfully turn to local leaders to correct matters. Public utilities also require city rights of way and city cooperation (in the form of franchise agreements) to operate within city limits. Thus, the involvement of city governments at the PUC, the Railroad Commission and through the exercise of original jurisdiction authority ensures that Texans maintain a strong voice in exceedingly complex matters that directly affect their quality of life.



RATE REGULATION IN TEXAS: A VERY BRIEF HISTORY

The Lone Star State's dual regulatory system — that is, a system whereby cities share regulatory authority with the state — can be traced back to June 12, 1920. It was on that date that Texas lawmakers adopted the Cox Gas Bill, also known as the "Cox Act." This legislation granted municipal governments authority over gas rates charged within city limits, but granted the Railroad Commission of Texas authority over gas rates within unincorporated areas. It also granted the Railroad Commission rate-setting responsibilities in those instances when cities declined to exercise their original jurisdiction authority. Further, the Cox Act stipulated that the Railroad Commission possessed appellate authority over local rate decisions; that is, whenever a utility appealed a municipal rate ordinance, that appeal went to the Railroad Commission.

It was a series of gas shortages during the winters of 1919 and 1920 — and demands from Dallas-based Lone Star Gas for higher rates and proposed hikes from the Houston Gas Fuel Company — that prompted the adoption of the Cox Act. The legislation applied only to gas utilities, although Texas lawmakers followed the same dual regulatory paradigm in 1975 with the adoption of House Bill 819 for electric and telephone utilities. That bill established the Public Utility Regulatory Act and created the Public Utility Commission, and granted the new agency authority over both industries. However, much of the telephone industry became deregulated in subsequent years, as has electric generation and retail electric service in part of the state. Moreover, the Texas Legislature in 2013 shifted regulatory oversight for water and sewer utilities to the PUC. As a consequence, the PUC now focuses its rate regulation activities on vertically-integrated electric utilities located outside the state's deregulated areas, transmission and distribution electric utilities located inside its deregulated areas, and water and sewer utilities statewide.

CITIES PLAY A HISTORIC ROLE IN PROTECTING GAS AND ELECTRIC UTILITY CUSTOMERS

Municipal governments were the state's first utility regulators. Cities have played this historic role because it is their citizens and businesses that are the captive customers of electric and gas utilities, and because utilities largely depend upon city rights of way for their distribution systems. Unreasonably high utility bills for city facilities can also impact city budgets, which translates into less money for essential city services.

ELECTRIC RATE REGULATION AT THE PUBLIC UTILITY COMMISSION OF TEXAS

Generation providers, retail electric providers and certain other entities that operate within areas of Texas with electric deregulation are not subject to rate regulation. Instead, these entities face free-market competition, with supply-and-demand forces available to keep prices at bay. By contrast, transmission and distribution utilities — that is, the “wires” companies that own and manage power lines in these areas — operate as natural monopolies. Under Texas law, these companies therefore *are* subject to governmental rate regulation.

As noted elsewhere, the regulatory scheme for electricity is a bifurcated one, with the PUC and municipal governments each playing a role. Texas law grants cities original jurisdiction authority over distribution rates charged within municipal boundaries and gives the PUC original jurisdiction over rates charged outside municipal boundaries and over transmission service. Texas law also grants the PUC authority over rates charged within cities that have ceded their original jurisdiction authority, and appellate jurisdiction over local rate decisions.

Electric utilities assess rates on a systemwide basis — that is, the rates are charged in a uniform fashion across wide swaths that include more than just the territories of original jurisdiction cities. As a consequence, utilities, when seeking to change their base rates, will file the necessary paperwork in a simultaneous fashion both within original jurisdiction cities as well as at the Texas Public Utility Commission.

Electric base rate cases can be exceedingly complex, with the necessary “Statement of Intent” filings including information on all aspects of the utility’s business. In order to represent their citizens’ and business’s interests in a cost effective manner, cities band together in coalitions that share legal costs and the expense of contracting with subject matter experts. Studies have shown the cost savings to ratepayers achieved through city representation in rate cases far exceeds the cost of such representation.

As described in the glossary that follows, electric utilities also can avail themselves of a number of regulatory mechanisms allowing them to increase rates on an interim basis between major base rate cases.

GAS RATE REGULATION AT THE TEXAS RAILROAD COMMISSION

The gas utility process is broadly similar to how electric rates are set. The Railroad Commission approves natural gas utility base rates in unincorporated areas of the state. Cities with original jurisdiction have responsibility for approving rates inside their city limits. The Railroad Commission becomes involved in setting rates within cities when the utility timely appeals a municipal rate ordinance, or for those cities that have chosen to surrender their original jurisdiction authority. As with electric utilities, the state's major gas utilities make their initial rate filings at the city and state levels simultaneously.

Both the PUC and the Railroad Commission examine utility expenses and revenues as part of their determinations of reasonable rates. By law, gas and electric utilities both are entitled to rates that provide opportunities to earn reasonable rates of return on invested capital after all reasonable and necessary expenses are covered. However, with gas utility ratemaking the actual commodity cost of natural gas is passed through to customers without any additional markup.

As with the case of rate regulation of electric rates, gas utilities also can avail themselves of various regulatory mechanisms allowing for rate increases on an interim basis. One such mechanism, the Gas Reliability Infrastructure Program, allows for annual increases without any contemporaneous regulatory review.

SYSTEM-WIDE BASE RATE CASES IN FIVE STEPS

1. An electric utility operating with the ERCOT region or a gas utility operating anywhere in the state files notice with a municipality of its intent to change systemwide base rates. Because systemwide rates encompass areas both inside and outside municipal jurisdictions, the electric or gas utility also files such notice with the relevant state agency — either the PUC for electric rates or the RRC for gas rates.
2. The city council determines whether to accept, modify or reject the rate request within its local jurisdiction. If the city rejects the increase, or awards less than the company requested, the city then defends that local decision by becoming an intervening party in the state-level rate case.
3. The PUC or Railroad Commission holds a hearing on the electric or gas utility rate request. The state agency must then reach a decision on whether and how much rate relief is merited. The agency has 185 days to make a decision from the time an application is filed.
4. All parties may request rehearing from the PUC or Railroad Commission.
5. Parties may also appeal final agency decisions to a state district court in Austin.

**ELECTRIC AND GAS RATE
REGULATION IN TEXAS**

A GLOSSARY OF TERMS

ABOVE THE LINE

Revenue and expenses considered allowable for ratemaking purposes.

ACCUMULATED DEFERRED FEDERAL INCOME TAX

(ADFIT) An adjustment to rate base reflecting timing differences in federal taxes for book and ratemaking purposes. **See Rate**

Base, Book Value

ADVANCED METER CHARGE

A charge assessed to recover transmission and distribution utility charges for Advanced Metering Systems, to the extent that they are not recovered in a utility's standard metering charge. **See Advanced Metering System, Transmission and Distribution Utility.**

ADVANCED METERING SYSTEM

(AMS) A system of technologically advanced "smart meters" with digital communications capabilities, and that can process and confirm energy consumption directly through a Transmission and Distribution Utility. **See also Smart Meter, Transition and Distribution Utility.**

AFFILIATE

Any corporation or other entity which owns a portion of a utility's stock, or otherwise exercises control over the utility.

AGGREGATION

Bundling of multiple customers or loads to achieve economies of scale in energy markets.

ALLOCATION

The apportionment of rate base, revenue and expenses among classes of consumers, distribution systems, or business enterprises.

ALTERNATING CURRENT

(AC) Current that reverses its flow periodically. Electric utilities in the United States generate and distribute AC electricity to residential and business consumers.

AMORTIZATION

The action or process of gradually writing off the initial cost of an asset.

ANCILLARY SERVICES

Services provided by Resource Entities that ERCOT acquires to maintain system reliability minute-by-minute, 365 days per year. Load Serving Entities may self-schedule ancillary services or have them purchased on their behalf by ERCOT. ERCOT typically procures Ancillary Services in the Day-Ahead Market, although they sometimes become available in market closer to the Real-Time Market. **See also Day Ahead Market, Real-Time Market.**

AVERCH-JOHNSON EFFECT

The tendency of regulated companies to engage in excessive amounts of capital investments in order to expand profits. This includes the potential for unnecessarily high investments in equipment, and an incentive to engage in activities that could be competitively provided. The name comes from the authors of a 1962 journal article in the *American Economic Review*. Excessive capital accumulation under rate-of-return regulation is informally known as gold plating. **See Gold plating, Rate of Return.**

AVOIDED COST

A cost not incurred if a particular activity is not performed.

BASE CHARGE

A charge assessed during each billing cycle without regard to the customer's demand or energy consumption.

BASE LOAD GENERATION

Electricity generating units that are most economically run for extended hours. Typical base load units include coal-fired and nuclear-fueled steam generators.

BASE RATE (GAS)

The utility's rates exclusive of the purchased gas adjustment clause.

BASE RATE (ELECTRIC)

A fixed kilowatt hour charge for electricity consumed that is independent of other charges and/or adjustments.

BELOW THE LINE

Revenue and expenses not allowable for ratemaking purposes.

BLACKOUT

The complete cessation of electricity delivery to customers.

BLACK START

Restoration of systemwide power after a systemwide blackout. **See Blackout.**

BOOK (COST)

The amount at which property or assets are recorded in a company's accounts without deducting depreciation, amortization, or various other items. **See also depreciation, amortization.**

BRITISH THERMAL UNIT

(BTU) A measure of the heat content, a BTU is the quantity of heat required to raise the temperature of one pound of liquid water by 1 degree Fahrenheit at the temperature that water has its greatest density. **See mmBTU.**

BROWNOUT

Voltage or frequency reductions to some or all parts of an electric grid.

BUDGET BILLING

A mechanism in which customer usage for a year is estimated, and monthly bills are established at a uniform level. The utility revisits actual consumption one or more times per year, and adjusts the monthly payment to recover any shortfall or refund excess collection.

CAPACITY

The ability to generate, transport, process, or utilize power. In ERCOT, capacity generally is expressed in megawatts or gigawatts. **See gigawatts, megawatts.**

CAPACITY, DEMAND AND RESERVES REPORT

(CDR) A biannual report from ERCOT containing a multi-year forecast of summer and winter peak electricity demand and expected generation resources, along with the calculation of Planning Reserve Margins. **See Seasonal Assessment of Resource Adequacy and Planning Reserve Margin.**

CAPACITY FACTOR

The ratio of total energy produced by a generator for a specified period to the maximum it could have produced if it had run at full capacity through the entire period, expressed as a percent.

CAPACITY MARKET

An organizational structure for deregulated wholesale energy markets under which generators receive payments for maintaining available capacity of generation resources in addition to compensation for energy delivery. Under a capacity market, the more generation capacity generation companies make available to the market, the more money the generation company receives. Under a capacity market design, regulators set capacity targets. Moreover, under a capacity market, investment capital is recovered through capacity payments. This is in contrast to an "Energy-Only Market," wherein investment capital is recovered through excess energy payments. **See also Energy-Only Market.**

CAPITAL STRUCTURE

The proportion of debt and equity each used to support a utility's rate base. **See Rate Base.**

CCF

One hundred cubic feet.

CERTIFICATE OF CONVENIENCE AND NECESSITY

(CCN) A formal determination by the Public Utility Commission that a proposed resource, typically a transmission line, is needed to serve the public interest. It does not imply a determination that the costs incurred to acquire or build the resource are reasonable.

CIRCUIT

A wire conducting electricity from one point to another. At the distribution level, multiple customers may be served by a single circuit running from a local substation or transformer. At the transmission level, the term “circuit” may describe a pathway along which energy is transported or the number of conductors strung along that pathway.

CITY GATE

In gas ratemaking, the central point in the distribution system where gas is stepped down from the high-pressure transmission line to the lower-pressure distribution lines. Normally, a meter is attached to the city gate, and the gas transferred through the city gate is charged at a rate referred to as the city gate rate.

CITY GATE RATE

In gas ratemaking, the rate charged at the city gate. **See City Gate.**

COGENERATION

A method of producing power in conjunction with providing process heat to an industry, or space and/or water heat to buildings.

COMPETITIVE RENEWABLE ENERGY ZONE

(CREZ) A geographical zone with boundaries set by the Public Utility Commission of Texas identifying areas with significant potential for renewable energy resources. Establishing CREZ accelerated transmission planning and construction to serve wind generators. Senate Bill 20, adopted by the Texas Legislature in 2005, established the CREZ system in Texas.

COMPETITIVE TRANSITION CHARGE

(CTC) Bill charges associated with the transition to retail electric deregulation.

CONGESTION REVENUE RIGHTS

(CRR) Rights acquired by ERCOT market participants that serve as financial hedges against the extra grid costs that can accrue due to power line congestion. As per ERCOT: “A Congestion Revenue Right is a financial instrument that results in a charge or a payment to the owner, when the ERCOT transmission grid is congested in the Day Ahead Market” or in Real Time. **See also Day-Ahead Market.**

CONSTRUCTION WORK IN PROGRESS

(CWIP) An allowance to rate base for funds committed to construction of assets which will be placed in utility service at a future date.

CONTRIBUTIONS IN AID TO CONSTRUCTION

(CIAC) A non-refundable contribution in either cash or property to fund new plant additions or expanded service. Generally, the plant funded as CIAC does not become part of the utility's rate base on which the utility is permitted to earn a rate of return.

COST OF CAPITAL

The weighted average of the cost of various sources of capital, generally consisting of outstanding securities such as mortgage debt, preferred and preference stock, common stock and retained earnings.

COST OF EQUITY

The cost to a company of borrowing money through equity capital. The sum of capital from retained earnings and the issuance of stocks.

COST OF SERVICE

Regulators use a cost of service approach to determine a fair price for electric service, by which the aggregate costs for providing each class of service (residential, commercial, and industrial) are determined. Prices are set to recover those costs, plus a reasonable return on the invested capital portion of those costs, and allocated based on the sales made to each class.

COST OF SERVICE ADJUSTMENT

(COSA) A rate adjustment for gas utilities that allows rates to vary according to the utility's investment and operating expenses without a statement of intent filing. However, unlike a Gas Reliability Infrastructure rate adjustment, a COSA provides for some prudence review. **See Gas Reliability Infrastructure Program, Prudence Review and Statement of Intent.**

CUSTOMER CLASS

A collection of customers sharing common usage or interconnection characteristics. Common customer classes include residential, small commercial and industrial. All customers within a class are typically charged the same rates, although some classes may be broken down into subclasses based on the nature of their loads.

DAY-AHEAD MARKET

(DAM) A voluntary, financially-binding forward market for energy, Ancillary Services and Congestion Revenue Rights that matches willing buyers and sellers, and that is subject to network security and other constraints. **See also Ancillary Services, Congestion Revenue Rights and Real-Time Market.**

DC TIE

A high voltage direct current transmission line that permits a controlled flow of energy while also functionally isolating the independent alternating current frequencies of each side. Several DC ties connect ERCOT with outside grids in the United States and Mexico.

DEBT RATIO

Total debt divided by total assets.

DECLINING BLOCK RATE

A form of rate design in which blocks of energy usage have declining prices as the amount of usage increases.

DECOUPLING

Policies designed to separate utility profits from total electric or gas sales. Decoupling policies can financially benefit rate regulated monopolies by providing a predictable and stable revenue stream as consumer usage declines. Decoupling sometimes is pursued in conjunction with energy efficiency goals. However, under decoupling policies, incremental energy costs for end-use customers increase as their consumption decreases.

DEFERRED TAXES

Federal Income taxes which are deferred to a future date.

DEMAND

The rate at which electric energy is delivered to or by a system at a given instant, or averaged over a designated period, usually expressed in kilowatts (kW) or megawatts (MW). **See Kilowatts and Megawatts.**

DEMAND CHARGE

A charge based on the rate at which electric energy is delivered to or by a system at a given instant, or averaged over a designated period, during the billing cycle.

DEMAND RESPONSE

The ability of electricity customers to voluntarily curb their electric consumption at the direction of the power grid operator, in response to market prices or pursuant to other kinds of programs.

DE NOVO

A type of appeal in which the lower-court record is not used to review the case. Rather, the case is retried, as if the parties had come to the appellate court originally.

DEPRECIATION

The loss of value of assets, such as buildings and transmission lines, owing to age and wear.

DIRECT CURRENT

(DC) An electric current that flows in one direction, with a steady magnitude.

DISTRIBUTED ENERGY RESOURCES

(DER) Any resource or activity at or near customer loads that generates energy or reduces energy consumption. Distributed energy resources include customer-site generation, such as solar photovoltaic systems and emergency backup generators, as well as energy efficiency and controllable loads. Sometimes referred to as Demand-Side Resources.

DISTRIBUTED GENERATION

Any electricity generator located at or near customer loads. Distributed generation usually refers to customer-sited generation, such as solar photovoltaic systems, but may include utility-owned generation placed within the distribution system.

DISTRIBUTION COST RECOVERY FACTOR

(DCRF) An annual rate filing that allows transmission and distribution electric utilities to recover investments in distribution facilities by increasing rates. Such investments include distribution lines to homes, substations, transformers, and meters. This is in contrast to investments in the broader transmission network characterized by larger lines that may connect one part of the statewide grid to another.

DISTRIBUTION (GAS)

The enterprise of selling natural gas to the burner tip customer.

DISTRIBUTION (ELECTRIC)

That portion of the electric system used to distribute energy to customers. The distribution system is usually distinguished from the transmission system on the basis of voltage and function.

ELECTRICITY CONGESTION

The quality of a line segment on the ERCOT grid that has become potentially overloaded with electric power. Overloading can cause a wire to retain heat, stretch and come in contact with other wires or structures. This can lead to shorts, reduced system integrity and possible wire breakage.

ELECTRIC COOPERATIVE

(Co-op) Electric cooperatives are member-owned utilities and controlled by a member-elected board. Most co-ops were formed in the years following the Great Depression, to extend electric service to remote areas.

ELECTRIC DEREGULATION

A restructured electricity market under which electric customers can choose among competitive service providers. Within Texas, both retail and wholesale electric providers within the ERCOT service territory compete for customers, while Transmission Service Providers remain regulated by the Public Utility Commission.

ELECTRICITY FACTS LABEL

Information in a standardized format that summarizes the price, contract terms, fuel sources, and environmental impact associated with an electricity product in areas of Texas with retail electric deregulation.

ELECTRIC RELIABILITY COUNCIL OF TEXAS

(ERCOT) A quasi-governmental non-profit corporation that oversees the state power grid. The organization also has responsibility for settling transactions in the state's wholesale spot market for electricity. The term "ERCOT" also can be used to describe the geographical footprint for retail electric deregulation in Texas, or to describe the state's wholesale electricity market. See also electric deregulation.

ELECTRIC SERVICE IDENTIFIER

(ESI ID) An identifier that the electric industry uses in areas of Texas with retail electric deregulation that uniquely identifies each home or business receiving electricity service. Typically, an ESI ID is a 17 or 22-digit number.

EMBEDDED

A fixed capital cost, such as interest on debt or dividends on preferred stock. This is distinguished from variable capital costs.

EMERGENCY RESPONSE SERVICE

(ERS) Electricity service to electricity users that — as per advance agreement with those users — can be curtailed to avoid a system-wide outage. Customers providing ERS receive payment for curtailing power usage.

ENERGY

A unit of demand consumed over a period of time. Energy is expressed in watt-time units, in which the time units are usually one hour. An appliance placing one kilowatt of demand (1 kW) on the system for one hour will consume one kilowatt-hour (1 kWh) of energy.

See Demand, Kilowatt and Megawatt.

ENERGY CHARGE

A charge based on the electric energy (kWh) consumed.

ENERGY EFFICIENCY

Programs aimed at reducing energy use by devices and systems, but without affecting the services provided by those devices and systems. Such programs typically depend upon improved technology to achieve the same level of productive output with less energy.

ENERGY EFFICIENCY COST RECOVERY FACTOR

A charge assessed to recover a TDU's costs for energy efficiency programs and that is approved by the Public Utility Commission of Texas.

ENERGY EMERGENCY ALERT

(EEA) An alert called by ERCOT when operating reserves drop below a predetermined megawatt level or system frequency cannot be maintained above certain levels and durations. There are three levels of EEA, depending on the amount of operating reserves available to meet the electric demand on the system. **See Operating Reserves.**

ENERGY-ONLY MARKET

An organizational structure for deregulated wholesale electricity markets under which generators receive market payments only for the energy they produce. Investment capital is recovered through excess energy payments in energy-only markets. This is in contrast to a "Capacity Market," wherein investment capital is recovered through capacity payments. Texas operates a modified Energy-Only Market. **See also Capacity Market.**

ENVIRONS

In gas and electric ratemaking, the area surrounding an incorporated city, but lying outside its territorial boundary.

FEDERAL ENERGY REGULATORY COMMISSION

(FERC) A federal agency that regulates interstate transmission of natural gas, oil and electricity. FERC monitors energy markets and conducts market abuse investigations. **See also North American Reliability Corporation.**

FIXED CHARGE

Any fee or charge that does not vary with consumption. **See also Variable Rate Plan.**

FIXED COST

An accounting term meant to denote costs that do not vary within a certain period of time, usually one year. These typically are interest and depreciation expenses.

FLAT RATE

A rate design with a uniform price for all levels of consumption. **See Variable Rate Plan.**

FOUR COINCIDENT PEAKS

(4CP) The 15-min intervals of highest demand on the ERCOT system during each of the four summer months of June, July, August, and September. ERCOT assigns transmission system costs to distribution utilities by averaging electricity demand during 4CP intervals. By reducing load during 4CP events, a commercial electricity customer potentially can save on transmission costs during the following year. **See Peak Load.**

FREQUENCY

The cycles per second of an alternating current electric system. The ERCOT system and most other North American power grids are designed to operate at 60 cycles per second. This is expressed in "Hertz," as in "60 Hz." In order to avoid outages, all generators connected to such a system must synchronize the cycles of their own equipment to that of system overall. **See also Hertz.**

GAS RELIABILITY INFRASTRUCTURE PROGRAM

(GRIP) A program, authorized by Texas law, under which monopoly gas utilities increase rates on an interim basis, and without making a more traditional Statement of Intent filing that includes a prudence review. Gas utilities can file for a GRIP adjustment, also known as an Interim Rate Adjustment, once per year to recover costs associated with new infrastructure investments. GRIP charges are reconciled when the gas utility files a complete rate case. **See also Prudence Review, Interim Rate Adjustment, Statement of Intent.**

GAS UTILITY REGULATORY ACT

(GURA) Title 3, Subtitle A, of the Texas Utilities Code that governs gas utility regulation.

GENERATION

Any equipment or device that supplies energy to the electric system. Generation is often classified by fuel source (i.e., nuclear, coal, gas, solar, and so on) or by operational or economic characteristics.

GIGAWATT

(GW) A unit of electricity approximately equivalent to that required to power 200,000 homes during a hot summer day. A gigawatt equals 1,000 megawatts. **See Kilowatt and Megawatt.**

GOLD PLATING

Excessive capital accumulation under rate-of-return regulation. **See Averch-Johnson Effect.**

GRID

The electric system as a whole or as a reference to the non-generation portion of the electric system.

GROSS RECEIPTS TAX REIMBURSEMENT

A fee assessed to recover the miscellaneous gross receipts tax imposed on retail electric providers operating in an incorporated city or town having a population of more than 1,000.

HERTZ

(Hz) A unit of frequency of one cycle per second.

HIGH SYSTEMWIDE OFFER CAP

(HCAP) A price cap on certain wholesale energy offers in the ERCOT power market. ERCOT enforces either the HCAP or Low Systemwide Offer Cap, depending upon market conditions. In 2022, the HCAP was set at \$5,000 per megawatt hour. **See Low Systemwide Offer Cap.**

INDEPENDENT MARKET MONITOR

(IMM) Established by a 2005 Texas statute, the ERCOT Independent Market Monitor is charged with identifying potential design inefficiencies in the ERCOT market and improper manipulation by power traders. The IMM reports to the Public Utility Commission of Texas.

INDEPENDENT POWER PRODUCER

A power plant is owned by an entity other than an electric utility.

INDEPENDENT SYSTEM OPERATOR

(ISO) An organization independent of any market participant that coordinates, controls, and monitors the operation of the electrical power system, usually within a single state, but sometimes encompassing multiple states. Regional Transmission Organizations typically perform the same functions as ISOs but cover a larger geographic area.

INTERCONNECTION AGREEMENT

An agreement that sets forth the contractual conditions under which a utility and a customer agree that one or more facilities may be interconnected with the utility's system.

INTERIM RATE

Rates which are allowed to be charged by a utility, subject to refund, to allow the utility to recover various costs pending the outcome of a rate proceeding.

INTERIM RATE ADJUSTMENT

(IRA or GRIP) An interim adjustment to gas utility rates to reflect changes in investment without a statement of intent filing. In Texas, Interim Rate Adjustments typically refer to Gas Reliability Infrastructure Program filings. **See Gas Reliability Infrastructure Program, Statement of Intent.**

INTERVENOR

An individual, group, or institution that is officially involved in a rate case.

INVESTOR-OWNED UTILITY

(IOU) A privately owned electric utility owned by shareholders.

KILOWATT

(KW) A kilowatt is equal to 1,000 watts.

KILOWATT-HOUR

(KWh) A kilowatt-hour is equal to 1,000 watt-hours.

LINE LOSSES

Energy lost during the transmission of electricity. The amount of this loss typically stands in direct proportion to the length of the transmission line, although voltage also is a factor. **See Voltage.**

LOAD

The combined demand for electricity placed on a system. The term is sometimes used in a generalized sense to simply denote the aggregate of customer energy use on a system. In a more specific sense, it can denote the customer demand at a specific point in time.

LOAD FACTOR

The ratio of average load of customer, customer class, or system to peak load during a specific period of time. Load Factor is expressed as a percentage.

LOAD RESOURCE

(LR) An electric energy-consuming entity that can adjust usage as Demand Response or as a load capable of providing Ancillary Services. **See also Ancillary Services, Demand Response.**

LOAD SERVING ENTITY

(LSE) An entity that provides electric service to individual and wholesale customers. Inside ERCOT, LSEs include Retail Electric Providers and Non-Opt-In Entities. **See Load, Non Opt-in Entity and Retail Electric Provider.**

LOAD SHAPE

The distribution of usage across the day and year, reflecting the amount of power used in low-cost periods versus high-cost periods.

LOAD ZONE

A geographical grouping of loads in ERCOT that provides a regionalized price to deliver electricity to that group of loads. Load Serving Entities are settled on the Load Zone price, which is a weighted average of Locational Marginal Prices in that zone. There are 13 Load Zones in ERCOT: four Competitive Load Zones, four Non Opt-In Entity Load Zones and five Load Zones corresponding to DC ties that link ERCOT to other grids. **See also Competitive Load Zone, Load Serving Entity, Locational Marginal Pricing, Non Opt-In Entity and DC Tie.**

LOCATIONAL MARGINAL PRICING

(LMP) Also known as “nodal” pricing, a system whereby prices are set for generation resources at five-minute intervals at thousands of separate geographical points, or nodes.

Locational marginal pricing is a way for wholesale electric energy prices to reflect the value of electric energy at different locations, accounting for the patterns of load, generation, and the physical limits of the transmission system. **See also Nodal.**

LONG-RUN MARGINAL COSTS

The long-run cost of producing the next unit of electricity. Long-Run Marginal Costs includes the cost of a new power plant, additional transmission and distribution, reserves, marginal losses, and administrative and environmental costs.

LOW SYSTEMWIDE OFFER CAP

(LCAP) A cap on certain wholesale energy offers within the ERCOT administered power market. ERCOT enforces either the LCAP or High Systemwide Offer Cap, depending upon market conditions. In 2022, the LCAP was set at \$2,000/MWh. **See also High Systemwide Offer Cap and Megawatt Hour.**

MARGINAL COST

The cost of augmenting output.

MARKET CLEARING PRICE

The price at which supply and demand are in balance with respect to a particular commodity at a particular time.

MCF

One thousand cubic feet.

MEGAWATT

(MW) A megawatt is equal to one million watts or 1,000 kilowatts. **See Kilowatt.**

MEGAWATT-HOUR

(MWh) A megawatt-hour is equal to one million watt-hours or 1,000 kilowatt-hours. **See Kilowatt, Kilowatt Hour.**

MERCHANT POWER PLANT

A power plant owned by an entity other than a regulated utility that sells power in a competitive market.

METER

A meter is a device that measures your electricity or gas usage.

MICROGRID

A localized grouping of electricity sources and loads that normally operates in a synchronous fashion with a centralized grid, but which can disconnect from the grid and function autonomously.

MILL

A measurement of monetary value typical to some energy pricing calculations, a mill equals 1/1,000 of a U.S. dollar or 1/10 of one cent.

MMBTU

One Million British Thermal Units.
See British Thermal Units.

MUNICIPALLY OWNED UTILITY

(MOU) A utility owned by a municipal government and operated under control of a elected body. In the ERCOT market, MOUs operate as Non Opt-In Entities.

NET METERING

A rate design allowing a customer with distributed generation such as solar photovoltaic systems to receive a bill credit for energy injected into the electric system.

NODAL

Also known as “locational marginal pricing” pricing, a system whereby prices are set for generation resources at five-minute intervals at thousands of separate geographical points, or nodes. Nodal pricing is a way for wholesale electric energy prices to reflect the value of electric energy at different locations, accounting for the patterns of load, generation, and the physical limits of the transmission system.

See Locational Marginal Pricing.

NODAL PROTOCOL

Rules adopted by the ERCOT board governing the Locational Marginal Pricing market. ERCOT’s Nodal Protocols include a detailed process for assessment and adoption of Nodal Protocol Revision Requests. **See Locational Marginal Pricing and Nodal Protocol Revision Request.**

NODAL PROTOCOL REVISION REQUEST

(NPRR) A request to make additions, edits, deletions, revisions, or clarifications to the Nodal Protocols. **See Nodal Protocol.**

NON OPT-IN ENTITY

(NOIE) An entity within the ERCOT region that provides energy to the public and has not opted into the competitive retail market. NOIEs typically refer to electric co-operatives or municipally owned utilities.

NORTH AMERICAN RELIABILITY CORPORATION

(NERC) An organization that sets standards for the reliable operation and planning of electric systems nationwide, and enforces compliance with those standards. NERC draws its membership from the industry. Market segments represented within NERC include investor-owned utilities, rural electric cooperatives, power marketers and end-use customers. **See Federal Energy Regulatory Commission.**

NOTICE OF VIOLATION

(NOV) A notification that documents and communicates an alleged violation of an ERCOT protocol.

NUCLEAR DECOMMISSIONING FEE

A transmission and distribution utility charge to recover expenses for decommissioning of nuclear generating sites. **See Transmission and Distribution Utility.**

OFF-PEAK

The period of time when customer demand on a system is not peaking. During periods of off-peak electricity demand, system costs are generally lower and system reliability generally is not at risk.

ON-PEAK

The period of time when customer demand is higher than normal. During on-peak periods, system costs are higher than average and reliability issues may be present.

OPERATING RESERVE DEMAND CURVE

(ORDC) An automated system employed by ERCOT to calculate payment adders directed to generators. The ORDC works in conjunction with ERCOT's Real-Time Market power auction system. Generators collect ORDC payment adders by successfully offering power into the market during shortage conditions. The ORDC price adders are variable. As real time reserves diminish the size of the ORDC adder increases. **See also Real-Time Market, Reserve Margins and Value of Lost Load.**

OPERATING RESERVES

The amount of additional generating capacity available on the system beyond that needed to ensure system reliability during any given moment calculated in real time. **See also Planning Reserve Margin and Reserve Margin.**

PEAK DEMAND

The amount of load consumption on a system during a moment when that consumption is highest. Peak Demand on the ERCOT system is measured in megawatts. **See also Load, Megawatt.**

PEAKER

A generation unit that can come online or adjust output on short notice and in response to Peak Demand conditions. In Texas, peakers are typically natural gas units. **See also Peak Demand.**

PEAK LOAD

The maximum power demand on a utility system during a period of time. **See Demand, Peak Demand.**

PERFORMANCE-BASED REGULATION

Any form of alternative regulation that ties company earnings to performance metrics set by the regulator, as opposed to strict cost-recovery of invested capital and operating expenses.

PLANNING RESERVE MARGIN

A percentage figure that expresses the excess resource capacity available above forecasted peak demand to cover uncertainties in future peak electricity demand, generator availability and new resource supply. **See Peak Demand.**

PROPOSAL FOR DECISION

A document containing the reasoning behind a decision recommended to an administrative regulatory body, such as the Public Utility Commission or to the Texas Railroad Commission.

PROVIDER OF LAST RESORT

(POLR) A retail electricity provider that has customers assigned to it under certain market conditions, typically because an electricity provider has gone out of business. The Public Utility Commission of Texas sets rates charged for POLR service.

PRUDENCE REVIEW

A comprehensive review of the reasonableness of a utility's investments or expenditures during the period of time the utility made the investments or incurred the expenditures.

PUBLIC UTILITY COMMISSION OF TEXAS

(PUCT) The state agency with primary regulatory authority over electricity matters in Texas. The PUCT also oversees ERCOT.

PUBLIC UTILITY REGULATORY ACT

(PURA) Enacted in 1975 through the adoption of House Bill 819, the Public Utility Regulatory Act established the modern system for electric rate regulation and provided for the creation of the Public Utility Commission of Texas.

PURCHASE POWER AGREEMENT

A contract between two parties, one which generates electricity (the seller) and one which is looking to purchase electricity (the buyer). The PPA defines all of the commercial terms for the sale of electricity between the two parties.

QUALIFIED SCHEDULING ENTITY

(QSE) An entity operating within the ERCOT region that is authorized to submit bids and offers on behalf of Load Serving Entities such as Retail Electric Providers. **See also Resource Entity, Load Serving Entity and Retail Electric Provider.**

RATE BASE

A utility's investment in the system, used to calculate the required monetary return on investment.

RATE CASE

A proceeding, usually before a regulatory commission, involving the rates, revenues, and policies of a public utility.

RATE DESIGN

Specification of prices by customer class that have been calculated to produce the overall revenue requirement.

RATE OF RETURN

Percentage of utility's invested capital, which the utility recovers through its rates. **Also See Return on Investment.**

REAL-TIME MARKET

A wholesale energy market system characterized by the dispatch of generation resources in real time based on economics, resource availability and transmission constraints. **See Day-Ahead Market.**

REGIONAL TRANSMISSION ORGANIZATION

(RTO) An electric power transmission system operator that coordinates and controls a multi-state electric grid. Under federal law, the transfer of electricity between states is considered interstate commerce, and electric grids spanning multiple states are therefore regulated by the Federal Energy Regulatory Commission.

REGULATORY COMPACT

The implicit agreement between a public utility and the government, whereby the utility accepts an obligation to serve customers fairly in return for the governmental pledge to approve and allow rates to compensate the utility fully for costs it incurs to meet its obligation.

REGULATORY LAG

The period required for a utility regulatory authority to consider a rate increase request filed by a utility. Economists generally note that some amount of regulatory lag encourages utility efficiency.

RELIABILITY MUST-RUN

(RMR) A commitment made by the owner of an otherwise non-operating generation resource with cost compensation dictated by the ERCOT Protocols to operate the resource to maintain system reliability. **See also Reliability Unit Commitment.**

RELIABILITY UNIT COMMITMENT

(RUC) An instruction issued by ERCOT to a generation unit to provide additional capacity to assure reliability. Generation units receiving a RUC instruction are compensated at a formulaic rate based on the unit's verifiable costs. **See also Qualified Scheduling Entity and Reliability Must-Run.**

RENEWABLE PORTFOLIO STANDARD

(RPS) A regulatory requirement that utilities meet a specified percentage of their power supply using qualified renewable resources. **See Energy Efficiency Portfolio Standard.**

RESERVE CAPACITY

The amount of capacity that a system must be able to supply, beyond what is required to meet demand, in order to assure reliability when one or more generating units or transmission lines are out of service.

RESERVE MARGIN

The additional generating capacity available on the system beyond that needed to ensure system reliability during a period of peak use. Policy makers typically express reserve margins as numerical percentages. For instance, a reserve margin of 10 percent suggests the availability of 10 percent more power capacity beyond that which is needed to fulfill all consumer needs when their usage is highest.

RESOURCE ADEQUACY

The ability of an electric system to reliably meet the demand for electricity by customers. When resource adequacy requirements are met, customers should expect that the electrical grid will continue to operate reliably – that is, without interruptions. This should be the case even during high heat days, or when power plants are shut down for maintenance.

RESTRUCTURED MARKET

Replacement of the traditional vertically integrated electric utility with some form of competitive market. **See Electric Deregulation.**

RETAIL ELECTRIC PROVIDER

(REP) A retail provider of electricity operating in areas of Texas with retail electric competition. Unlike Transmission and Distribution Utilities, REPs are free of rate regulation.

RETURN ON INVESTMENT

(ROI) Percentage of a utility's invested capital it recovers through its rates.

REVENUE REGULATION

Revenue regulation (also known as “decoupling”) fixes the amount of revenue to be collected and allows the price charged to float up or down between rate cases to compensate for variations in sales volume in order to maintain a set revenue level. The purpose is to allow utilities to recover allowed costs in volumetric prices, independent of sales volumes. **See Volumetric Rates.**

REVENUE REQUIREMENT

The annual revenues that a utility is entitled to collect (as modified by adjustment clauses). It is the sum of operation and maintenance expenses, depreciation, taxes, and a return on rate base. In most contexts, revenue requirement and cost of service are synonymous.

ROLLING BLACKOUT

A controlled cessation of service in a series of circuits to avoid a blackout and to share the burden.

SEASONAL ASSESSMENT OF RESOURCE ADEQUACY

(SARA) An ERCOT-generated report that serves as an early indicator of the risk that the system operator may need to call an Energy Emergency Alert due to having insufficient operating reserves during seasonal peak electric demand periods. The SARA report relies on projected resource capabilities and peak demand forecasts similar to the Capacity Demand Reserves report. However, unlike the CDR, it incorporates scenario analyses of extreme weather, renewable energy performance, and generator outage trends to determine the expected amount of resource capacity available for operating reserves. **See also Capacity, Demand and Reserves Report, Energy Emergency Alert, Peak Demand and Reserve Margin.**

SEASONAL RATE

A rate that is higher during the peak-usage months of the year.

SELF-GENERATION

A generation facility dedicated to serving a particular retail customer, usually located on the customer’s premises.

SMART APPLIANCE

An appliance that is capable of communicating electronically with a customer or utility.

SMART METER

An electric meter with electronics that enable recording of customer usage in short time intervals and two-way communication of data with the utility.

SPINNING RESERVE

Any electric energy resource that a system operator such as ERCOT can call upon within a designated period of time and that may be used to maintain system reliability. Spinning reserves may be in the form of generators, energy storage, or demand response. Spinning reserves typically are designated by how quickly they can be made available, from instantaneously up to some short period of time.

STATEMENT OF INTENT

(SOI) The document required to be filed by a utility with a regulatory authority in order to request a change in rates.

STATE OFFICE OF ADMINISTRATIVE HEARINGS

(SOAH) A state agency that conducts administrative hearings relating to regulatory matters. SOAH issues advisory orders for consideration by the Public Utility Commission of Texas and other state agencies. However, SOAH does not administer rate cases at the Railroad Commission. Instead, those cases are administered by internal hearing examiners at that agency.

STRAIGHT-LINE DEPRECIATION

Depreciation in which the annual depreciation expense is equalled each year over the life of the asset. **See Depreciation.**

SYSTEMWIDE RATES

Rates based upon rate base, revenue, and expense figures of a utility's entire system, rather than a particular incorporated area.

SUSPENSION

Postponement of the effective date of the proposed rate increases accomplished by issuance of an appropriate order or ordinance.

TARIFF

A listing of rates and charges for a utility customer class, as approved by the regulator.

TARIFF RIDER

A special tariff provision that collects a specified cost or refunds a specific consumer credit, usually over a limited period of time.

TDU DELIVERY CHARGES

The total amounts assessed by a Transmission and Distribution Utility for the delivery of electricity to a customer over poles and wires and other TDU facilities not including discretionary charges.

TECHNICAL ADVISORY COMMITTEE

(TAC) An ERCOT stakeholder committee reporting to the ERCOT board of directors.

TEST YEAR

Annual period used to demonstrate a utility's need for a rate increase.

TRANSFORMER

A device that raises or lowers the voltage in an electric system. Electricity coming out of a generator is often stepped up to very high voltages (345 kV or higher) for injection into the transmission system and then repeatedly stepped down to lower voltages as the distribution system fans out to connect to end-use customers. **See Distribution, Transmission System, Voltage.**

TRANSITION CHARGE

A charge assessed to recover a TDU's charges for costs associated with the transition to a restructured or deregulated electricity market. **See Electric Deregulation, Restructured Market.**

TRANSMISSION AND DISTRIBUTION SERVICE PROVIDER

(TDSP) A provider of transmission and distribution services. Often used interchangeably with Transmission and Distribution Utility. **See Transmission and Distribution Utility.**

TRANSMISSION AND DISTRIBUTION UTILITY

(TDU) A regulated electric utility that operates a transmission and distribution system but does not include a municipally owned utility or a cooperative. Also known as "wires companies" or "wires utilities," TDUs are regulated by the Public Utility Commission of Texas.

TRANSMISSION COST RECOVERY FACTOR

(TCRF) A charge from the Transmission and Distribution Utility that covers the incremental cost of changes to the transmission system. Under Texas law, TDUs may seek TCRF changes twice a year, on March 1 and September 1. TCRF charges are reconciled when the TDU files for a complete rate case.

TRANSMISSION SYSTEM

That portion of the electric system designed to carry energy in bulk. The transmission system is operated at the highest voltage of any portion of the system and typically is designed to connect remote generation to local distribution facilities.

USED AND USEFUL

A determination on whether investment in utility infrastructure may be recovered in rate base, such that new rates will enable the utility to recover those costs in the future when that plant will be providing service (i.e., when it will be used and useful). In general, "used" means that the facility is actually providing service, and "useful" means that without the facility, either costs would be higher or the quality of service would be lower.

VALUE OF LOST LOAD

(VoLL) The value of avoiding load-shedding events. ERCOT systems set VoLL on a daily basis at the High Systemwide Offer Cap. The Operating Reserve Demand Curve incorporates the Value of Lost Load. **See also Operating Reserve Demand Curve and High Systemwide Offer Cap.**

VARIABLE COST

Costs that vary with usage or revenue, plus costs over which the utility has some control in the short-run, including fuel, labor, maintenance, insurance, return on equity, and taxes. Variable cost excludes interest and depreciation expense. **See Fixed Costs.**

VARIABLE RATE PLAN

A competitive offering in the Texas deregulated retail electric market with no monthly contract or cancellation fee, but with a kilowatt-hour rate that can vary from month to month.

VERTICALLY INTEGRATED UTILITY

A utility that owns its own generating plants (or procures power to serve all customers), transmission system, and distribution lines, providing all aspects of electric service.

VOLTAGE

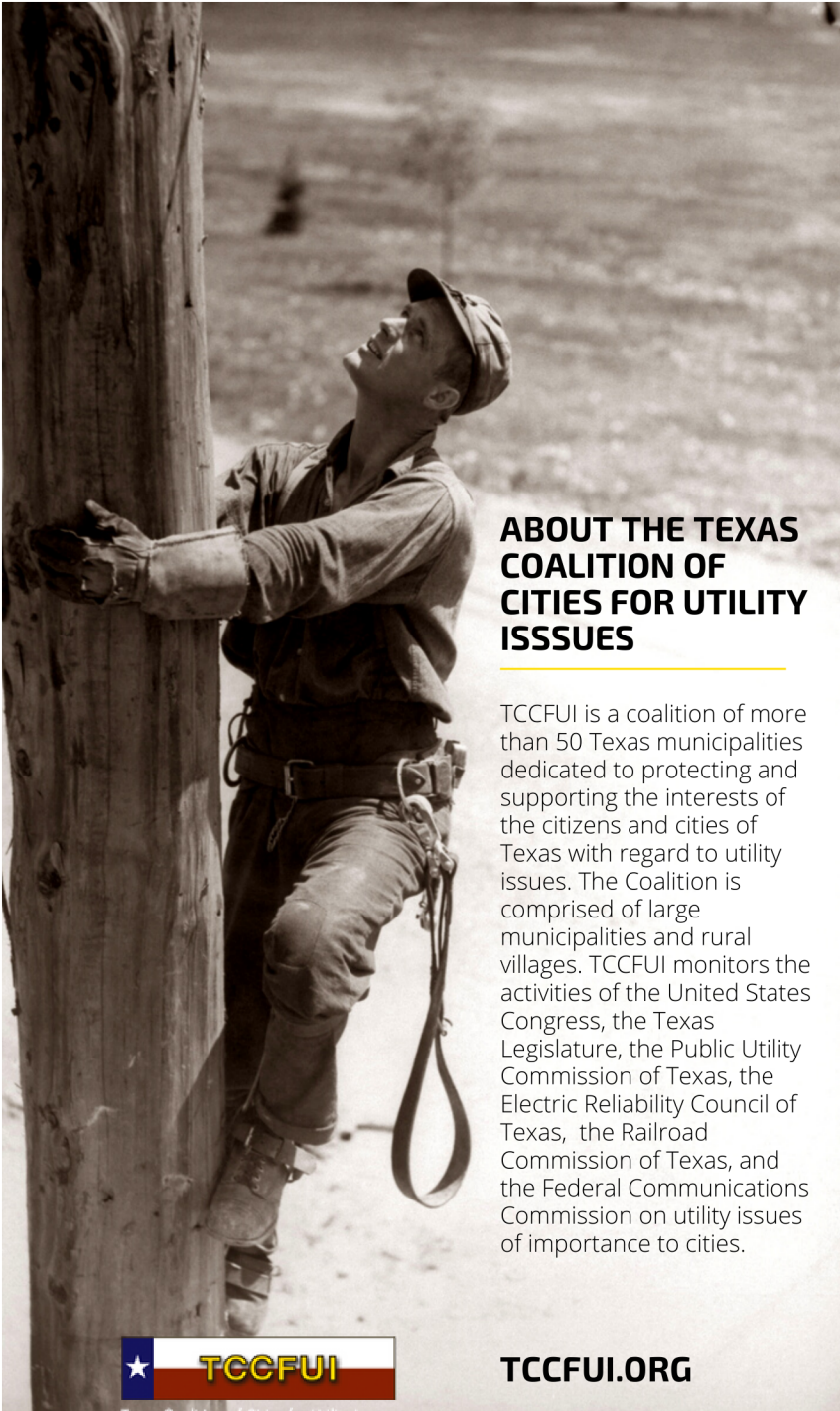
An electromotive force or potential difference expressed in volts. Voltage is the pressure from an electrical circuit's power source that pushes charged electrons enabling them to do work such as illuminating a light.

VOLUMETRIC RATE

A rate or charge for a commodity or service calculated on the basis of the amount or volume actually received by the purchaser. **See Fixed Rate.**

WORKING CAPITAL

Used broadly, the term refers to those rate-base allowances other than the utility plant in service and may include material, fuels, supplies, etc. In the narrower use, it relates to the investor-supplied funds necessary to meet operating expense or going-concern requirements of business.



ABOUT THE TEXAS COALITION OF CITIES FOR UTILITY ISSUES

TCCFUI is a coalition of more than 50 Texas municipalities dedicated to protecting and supporting the interests of the citizens and cities of Texas with regard to utility issues. The Coalition is comprised of large municipalities and rural villages. TCCFUI monitors the activities of the United States Congress, the Texas Legislature, the Public Utility Commission of Texas, the Electric Reliability Council of Texas, the Railroad Commission of Texas, and the Federal Communications Commission on utility issues of importance to cities.



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