

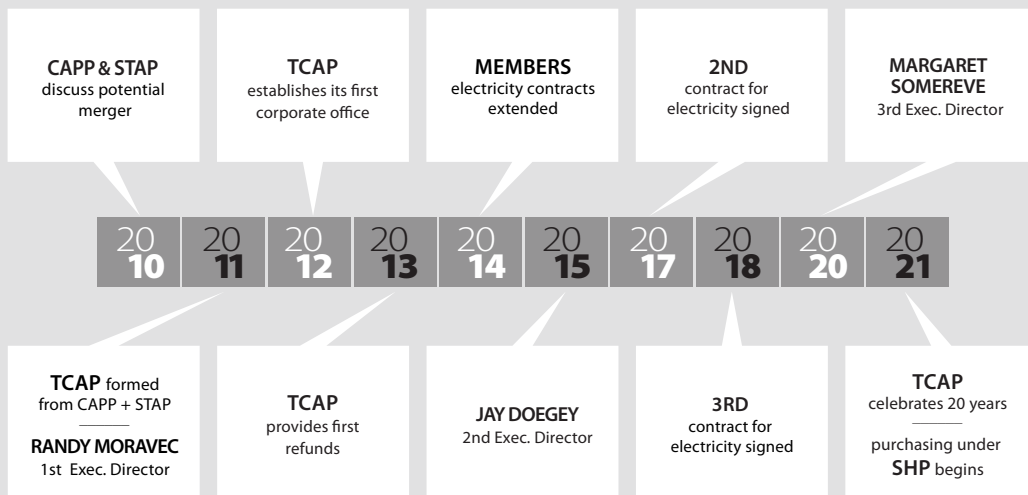
WHAT  
BEING A  
**MEMBER**  
**OF TCAP**  
MEANS  
FOR YOU

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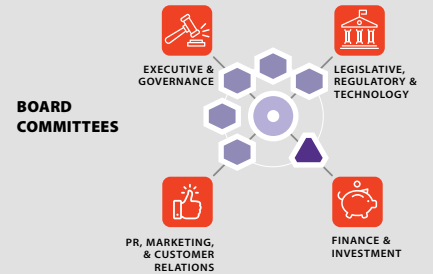
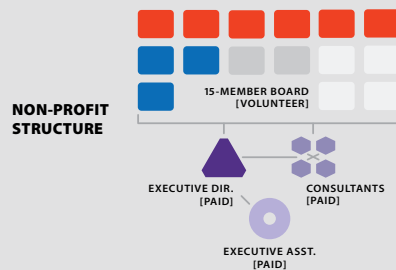
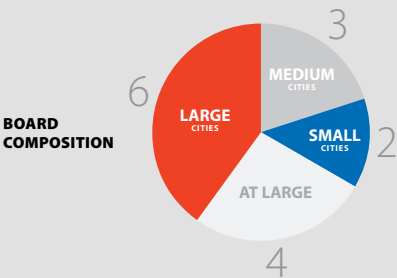
SAVING ON ELECTRICITY  
IS JUST THE START

# It means you're entitled to know a bit about us

Since TCAP's formation in 2001 through the merger of the Cities Aggregation Power Project (CAPP) and South Texas Aggregation Project (STAP), the organization has blossomed and grown to serve over 160+ cities and political subdivisions.



**Board Composition** TCAP is your organization. The 15-member board is elected by the general membership to alternating, two-year terms and comprises representation from large-, medium-, and small-kWh-load cities and at large positions. **Elected Officers** Officers are elected yearly at the Annual Board Meeting. The officers are President, Vice President, Treasurer, and Secretary. **TCAP Staff** Is led by an Executive Director appointed by the TCAP Board of Directors to oversee everyday operations. **Committees** Committee members serve as sounding boards and idea generators whose input enhances the organization's overall effectiveness.



Although not a large or complex organization, there are aspects of the operation about which we choose to be thoroughly transparent. Our complete articles of incorporation and bylaws can be found at [tcaptx.com/aoi](http://tcaptx.com/aoi).



## It means you should expect more

Whether you are a prospective or new member, our purpose here is to provide you with a high-level overview of how TCAP helps cities and political subdivisions combine their purchasing power to get the kind of competitive rates normally available only to Texas' largest cities. Here's what members can expect from participation in TCAP:

- *Complete operational and financial transparency*
- *Engagement with your peers*
- *The ability to run for board positions as well as voting for peers to represent you*
- *A voice in Austin on matters that affect political subdivisions and the energy market*
- *Professional help with any electricity matters and state reporting requirements*
- *Access to consultants whose expertise guides and informs TCAP decision making*
- *Assistance with electricity conservation, backup generation, related services, and energy cost-reduction strategies*
- *Knowing TCAP is your partner in finding savings— not profit*

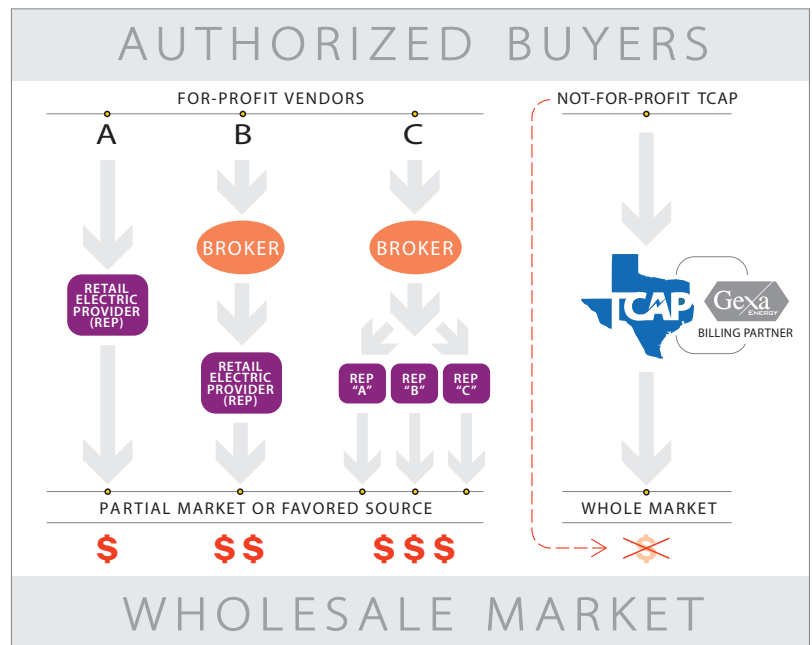
On the following pages we will also share how the Texas deregulated market works, how the power grid works, how demand response works, as well as provide a glossary that explains industry jargon and acronyms.

# It means you have probably dodged a bullet

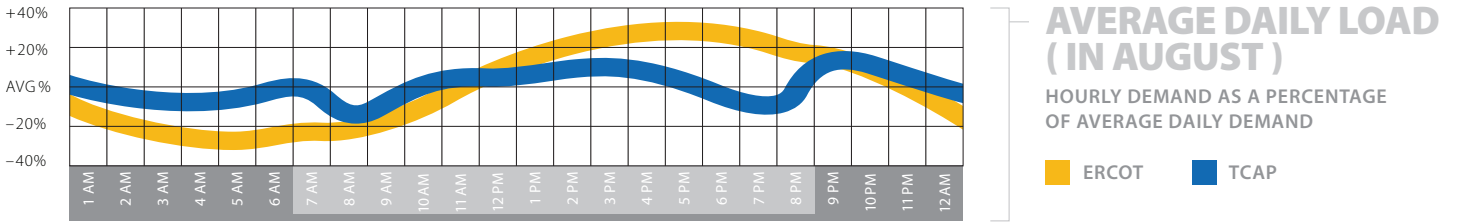
What motivates the for-profits electricity providers to go after you so aggressively? The reason is easy to understand. They would love to have you on board—more so than almost any other potential client—because political subdivisions don’t go out of business. That’s why they’ll do almost anything to get you locked into as long a contract term as possible and why you’ll have so many friendly, for-profit retail electric providers (REPs) and brokers come knocking on your door trying to woo and win you.

This chart may help you better understand the dynamic. In parts of Texas where selling electricity is open to retail competition, Retail Electric Providers (REPs) buy electricity and related services at wholesale, then sell it to you at a profit.

Energy Brokers buy from REPs adding an additional layer of cost. They will often come offering to act as consultants on your behalf, providing “expert advice,” helping you choose a REP, or pushing you to release an RFP to ensure you get “the best deal” from “qualified” REPs. Interestingly, though, they often have under-the-table deals with the very REPs they recommend which is added into the price you pay. They receive an annual fee as a commission for having helped write your RFP and then helping you evaluate the results.



What frustrates us as a not-for-profit that is simply trying to help cities is that these brokers often conceal their fees inside the energy prices they offer, then point to TCAP’s “big” aggregation fees. In truth, their hidden broker fees can be 5-10 times higher than the minimal annual fee we collect that simply enables us to manage our day-to-day operations on behalf of our 160+ political subdivision membership. TCAP goes to the very same wholesale market as do the REPs, but TCAP does not receive any commission or earn a profit.

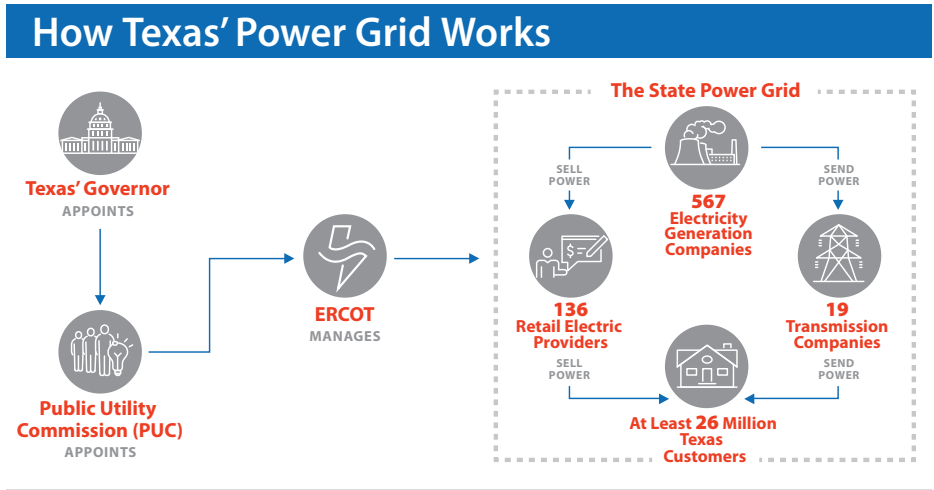


## It means you will be saving money

Two of the simplest concepts behind TCAP’s ability to negotiate advantageous prices for its member are: 1) Just like the big cities, the combined load we negotiate pricing for gives us similar buying clout and, 2) as is clear from the chart above, the times of day when cities have their highest and lowest usages are pretty much the direct opposite of those times of day when the general user market demands the most.

We know this scenario well. For example, TCAP members use more energy in the overnight period when demand is lower as are prices. This is due, in large part, to street lighting and water pumping usage. As an aggregator, TCAP is therefore able to blend its members’ combined load to deliver an overall lower price. Thus TCAP’s aggregate load, political subdivision-centric constituency, and unique contract provisions enable it to offer its members pricing typically unavailable to individual political subdivisions. This, in addition to the fact that TCAP is uniquely allowed to purchase direct in the wholesale market, enables us to compete on a level playing field with larger players.

... and are learning how the system works





## It means you have access to great resources

Gexa is not only TCAP's billing partner, but has also proven to be a valuable resource to its members, providing energy audits at no cost through Gexa Energy Solutions. These audits have benefited several members who have gone on to improve their infrastructure, lighting, building performance, and discovered other efficiencies as well.

Most consumers of electricity search for the best per kWh contract rate. But what's missing from their calculus is the amount of energy they are using—or sometimes squandering—unknowingly.

Gexa is one of the few energy supply companies that helps customers manage both parts of that equation. They help TCAP customers determine best energy savings strategies and work to solve efficiency issues by financing our members' electrical infrastructure upgrades so the investment is paid back rapidly through the savings derived. Benefits Gexa offers to TCAP members include: no initial cash outlay; reduced electricity consumption; maintenance interruptions avoidance; potential tax benefits; and no penalty for early payoff.

Some examples of the ways Gexa has increased efficiencies for TCAP's members and saved their city and political subdivision constituencies money include: **Lighting Upgrades** — LED conversion, BMS integration, occupancy sensors, daylight harvesting; **On-Site Generation** — PV solar, battery storage, capacity management, and automated curtailment; **Building Performance Analytics** — ENERGYSTAR® benchmarking, excess energy usage alerts, facility task management, and equipment monitoring; and **HVAC Upgrades** — boilers and chillers, rooftop units, smart thermostats, BMS installation and calibration, and air handlers.

# It means you might find more savings

TCAP partners with Gexa to offer eligible members the ability to save money by strategically limiting their loads via one of three “Demand Response” programs that help you reduce your “regulated” costs. Gexa will work with you to determine which of these programs will save you the most money on your regulated energy costs, improve your overall operational efficiency, and reduce your greenhouse gas emissions.



## 4CP

4CP stands for 4 Coincident Peak, a program that enables participating members to reduce their transmission and distribution charges for the following year by curtailing load during each of ERCOT’s four 15-minute coincident peak events in June, July, August, and September of the current year. Customers must have interval meters with peak loads in excess of 100 kilowatts.



## EDR

EDR stands for Economic Demand Response, which saves members dollars in the form of bill credits by allowing Gexa to limit their energy consumption during specific periods when real-time market prices are at their very highest. Upon notification of an approaching event, you decide whether or not to participate on a case-by-case basis depending on your situations and needs.



## ERS

ERS stands for Emergency Response Service. This program allows participating members to get paid for standing ready to reduce their load by a pre-defined amount whenever directed by ERCOT to do so. Such demand reduction is mandatory and must be done within 10-30 minutes of ERCOT notification that an emergency exists so that you have time to respond.



### ERCOT & THE DEREGULATED MARKET

In 1999, some years after deregulating the state’s wholesale power system, the Texas Legislature adopted a law that deregulated much of the retail electric system, taking effect in 2002. So, today in Texas we have competition in the electricity wholesale market — that is, between owners of big power plants and among providers of electricity at the retail level. However, the transmission and distribution (wires) system remains regulated.

# It means you get to see real-life case studies



## **See how the partnership between TCAP, the City of Everman, and Gexa resulted in an estimated \$2.2MM in savings by replacing aging water meters and refining processes.**

When the City of Everman realized it was losing millions of gallons of water monthly due to aging mechanical meters and the clumsy and inaccurate process of meter reading that require three employees three days each month to perform. That's when it turned to Gexa Energy Solutions for help. According to Michael Gunderson, Everman City Manager at that time, "Like many small cities with limited resources, some of our processes remained somewhat antiquated." Gexa conducted analyses of both the city's meter reading processes and its overall electric consumption and recommended replacing nearly 2,000 water meters as well as upgrading the existing lighting at its City Hall, Police Station, Fire Station, Library, Annex, and other city-services locations—even offering to provide financing.

City Council approved the project. And the result? Over \$86,000 saved in year one alone: \$65,700 in lost water meter revenue, \$2,700 in meter read savings, \$15,000 in lighting energy savings, and \$2,800 in lighting maintenance savings—an estimated \$2.2MM in savings projected over 20 years.

**“Today we can read our meters in one day in any weather. The labor savings is huge. And with same day readings every month, our data is more accurate, consistent, and we have fewer customer complaints.” — Mike Gunderson, City Manager**

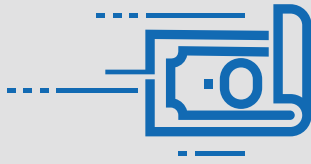
By partnering with Gexa Energy Solutions at TCAP's suggestion, the City of Everman will save for decades to come.



As you can see from the Everman case study, there are often significant ways to save money with TCAP. And as you'll also discover below, there's good reason for prudence. We understand the for-profits have to make money and we don't begrudge them that. After all, this is America and we support free enterprise. But the Texas deregulated market is the Wild West with unscrupulous people out there. Be alert. Get educated.

## CITY A

- ✓ Hires Broker For RFP
- ✓ Contracts For 77Months
- ✓ Overpays by \$1.5M



|                              | Broker  | TCAP   |
|------------------------------|---------|--------|
| Fees                         | .00150  | .00080 |
| \$ / kWh                     | .04109  | .03508 |
| \$ Difference over 77 months | \$ 1.5M | \$ 0   |

**City A** hired a broker to write an RFP for its electricity. They paid the broker a fee of .0015/kWh for the life of the contract. The "winning" price was .039591/kwh for 77 months—or .04109 kWh for the next 6-1/2 years. If the City had chosen TCAP, the price would have been 0.03490 inclusive of TCAP's aggregation. Therefore they're paying, at minimum,\* \$1.5 million dollars more over the term of their contract.

\* *City C may end up paying 0.0003-0.0005/kWh more if they require "more" services than the broker deems "standard." TCAP's aggregation fee is inclusive of all services.*

## CITY B

- ✓ Builds New City Hall
- ✓ Pays To Delete / Add Meters
- ✓ Higher Rate At New Meter

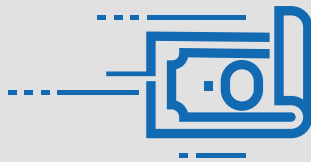


|                             | Broker | TCAP |
|-----------------------------|--------|------|
| Pay to delete old meter     | ✓      | —    |
| Pay to add new meter        | ✓      | —    |
| Higher rate for new service | ✓      | —    |

**City B** procures a multi-year contract through a Retail Energy Provider (REP). The city builds a new, highly energy-efficient City Hall directly across the street from the old one. The contract language requires that the City pay a penalty for deleting the meter at the old City Hall. It also requires them to pay an "add" charge for the meter at the new building. The final bit they failed to notice in the language was that the rate they thought they'd "locked in," but surprise, the new building is billed at a higher rate. TCAP, on the other hand, has no meter add or delete charges, pooling loads across its membership to absorb the financial impact of routine operational changes.

## CITY C

- ✓ Hires Broker For RFP
- ✓ Only Does RFP
- ✓ Pays 5x more for 1 service

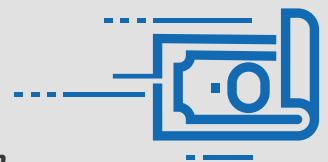


|                           | Broker   | TCAP     |
|---------------------------|----------|----------|
| Write RFP                 | ✓        | ✓        |
| Budget Support            | —        | ✓        |
| Regulatory Reporting Help | —        | ✓        |
| Legislative Lobbying      | —        | ✓        |
| Billing Assistance        | —        | ✓        |
| Adds/Deletes              | —        | ✓        |
| Access Expert Consultants | —        | ✓        |
| Fee                       | \$ .0040 | \$ .0008 |

Based on historic usage, **City C** will pay approximately \$60,000 every year for the broker's provided RFP and presentation of bid results. TCAP's \$0.008 aggregation fee would have cost the City less than \$12,000 per year, including a full spectrum of services and access to TCAP's industry expert consultants—none of which the broker offers.

## CITY D

- ✓ Hires Broker For RFP
- ✓ Contracts for 5-Years
- ✓ Pays 13.6% More Per kWh



|                       | Broker  | TCAP   |
|-----------------------|---------|--------|
| \$ / kWh for a 5-year | .03769  | .03319 |
| \$ Difference         | + 13.6% | 0      |

**City D** will pay 13.6% more for having a broker develop a simple RFP while providing zero additional services. Included in TCAP's aggregation fee (lower than most brokers' fees, is a full spectrum of services as well as access to TCAP's paid, industry expert consultants and help with any electricity matters and state reporting requirements.

A-D are real life case studies. We chose to protect the anonymity of the subjects to protect the identities of our confidential sources.

# It means we will educate and inform you

**AGGREGATOR** An entity that aggregates the load of individual metered site customers to improve market offerings and obtain better prices and services. There are very few aggregators in the market, but many brokers call themselves “aggregators”.

**AMR METER** Automated meter – used for accounts to measure daily and inter-day usage and provide remote transfer of meter data on a real-time basis.

**ANCILLARY SERVICES** Services required to ensure that the interconnected electric system is operated in a reliable manner that provides a satisfactory level of service with acceptable levels of voltage and frequency.

**BILLING DEMAND** A measure of demand for an account that is most often used for billing purposes. Billing demand can adjustments that may result in billing based on a demand that is different than actual metered demand.

**BLOCK ENERGY** An electric purchase structure whereby a buyer/user purchases a wholesale fixed amount of power for a specific time period at a fixed rate to stabilize portions of the electric price. Typically block purchases are used to cover minimum needs over the time period being covered by the block.

**BROKER** Party that sells or arranges the sale of energy commodity and is directly compensated by an energy supplier. A broker is essentially an agent for one or many REPs.

**CAPACITY** Peak measure of instantaneous electric usage. Capacity can refer to the amount of electric generation available, the maximum transfer amount of an electric line, or other such meanings.

**COMBINED CYCLE** The combination of gas turbines and steam turbines in an electric generation plant that employs more than one thermodynamic cycle. Typically the waste heat from gas turbines is used to make steam that drives a steam turbine. This increases energy efficiency of the plant.

**CO OP (OR CO-OP)** A cooperatively member owned utility that typically serves rural customers. Texas’ electric cooperatives serve 2 million homes and businesses in rural and suburban areas of the state.

**CRR** Congestion Revenue Rights (CRRs) are financial instruments that result in a charge or a payment to the owner when the ERCOT transmission grid is congested in the Day Ahead Market (DAM) or the Real-Time market.

**DAM** Day Ahead Market - Matches willing buyers and sellers, subject to network security and other constraints, whereby energy is co-optimized with Ancillary Services and certain CRRs.

**DISTRIBUTION COST** Local utility charges for delivering electricity through the local distribution system (wires) – represents a portion of the total electric gas bill.

**DEMAND** The amount of instantaneous electric power in MW being utilized by customer(s) at any specified point or collection of points on a system.

**DC TIE** Direct Current ties between ERCOT and non-ERCOT electric transmission systems in a non-synchronous manner. DC ties in ERCOT are used to transfer power in and out of the ERCOT grid in a manner that avoids federal regulation.

**ESI ID** (“Easy ID”) Electric Service Identifier- the basic identifier assigned to each Service Delivery Point (meter) used in the registration and settlement systems managed by ERCOT.

**ERCOT** Electric Reliability Council of Texas. A Texas nonprofit corporation that has been certified by the PUCT as the Independent Organization for the ERCOT Region and manages both the power grid and wholesale and retail electric market in the majority of Texas.

**ERS** Emergency Response Service - An emergency service procured by ERCOT from end users used to reduce system demand during an Energy Emergency Alert (EEA) to assist in maintaining or restoring the ERCOT System. Loads bid into the ERS program and, if chosen, are paid to stand ready to reduce demand for agreed periods of time if requested.

**ESCO** Energy Service Company - An ESCO provides services to end users that allow them to reduce energy usage and/or save money on their electric bills through facilities retrofits and industry programs.

**FERC** Federal Energy Regulatory Commission. A US federal agency created to regulate rates, markets and operations of interstate wholesale and retail gas and electricity transactions.

**FORWARD MARKET** Prices of energy today for delivery in the future. Prices available on futures exchanges such as NYMEX.

**FULL REQUIREMENTS** Contract structure whereby supplier provides all usage requirements for a customer for a specific term at an agreed price.

**INDEPENDENT CONSULTANT** Energy consultant who is objective and is compensated directly and solely by the end user and not the supplier.

**IDR METER** Interval Data Recorder - A metering device capable of recording energy in discrete usage intervals and storing that data.

**IOU** Investor owned utility. A for-profit utility company that provides sales and/or transportation of utility services (typically electricity and natural gas) to end users. IOUs are most often monopoly providers that agree to rate regulation as a surrogate for competition.

**KILOWATT (KW)** A measure of usage demand equal to one thousand watts. A metric for measuring the peak electricity flow to a customer meter over a specified period of time and often used as a component of billing.

**KILOWATT HOUR (KWH)** The amount of kilowatts used in one hour. If a customer uses 100 kw an hour for two hours the total kilowatt hours for the two-hour period would be 200 kwh. As with kilowatts, kWh are often used as a component of billing.

**LOAD PROFILE** A representation of the energy usage of a customer or group of customers over time, often showing the demand variation on an hourly or sub-hourly basis. Since the price of energy varies by hour the usage pattern of the customer can be important in determining the cost of power.

**LMP** Locational Marginal Price. See definition of Nodal Market.

**MEGAWATT (MW)** A measure of demand equal to 1000 kW.

**MEGAWATT HOUR (MWH)** A measure of usage equal to 1,000 kWh.

**MIL** A unit of measure for electric rates equal to 0.001 of a U.S. dollar or one tenth of a cent.

**MOU** Municipally Owned Utility - A utility owned, operated, and controlled by a City or similar political subdivision, which is typically governed by a City Council or municipal utility board. In Texas, original jurisdiction over MOU rates resides at the City level but can be appealed to the Texas Public Utility Commission.

**NERC** National Energy Regulatory Commission – Oversees the Regional Transmission Organizations around the country that engage in interstate commerce. Essentially, this includes every state electric grid except ERCOT, Alaska and Hawaii as well as natural gas pipelines and distribution systems that engage in interstate transmission and or sales.

**NODAL MARKET** A nodal market is one that establishes a discrete price of energy (Locational Marginal Price or LMP) at numerous individual nodes of the electric grid based on generator bid prices and modeled flow dynamics of the transmission system. Nodes can

represent generation points, load usage points, or other points as modeled in the software systems used to develop LMP prices.

**NOIE** Non-Opt-In Entity. In ERCOT a NOIE is a utility that has not opted into the retail competition market and is limited to MOUs, Co-ops and River Authorities.

**PEAK DEMAND NCP** The peak usage of a metered electric account over a set period of time. NCP (or Non-Coincident Peak) Demand is the actual highest use of the metered account over a period of time, often monthly.

**PEAK DEMAND 4CP** 4CP (Four Coincident Peak) Demand is an electric account's demand at the point of time of peak usage of the entire electric grid (ERCOT) or TDSP. In ERCOT the 4CP represents the four months of highest system usage of June, July, August and September. The usage for each account is measured during the systemwide peak demand interval for each of these months and averaged to determine a customer's 4CP demand.

**POLR** Provider of Last Resort – Electric supply supplied by PUC designated REPs at PUC approved rates to end users who do not contract with a supplier in the competitive market.

**POWER TO CHOOSE** The official electric choice website of the PUC for residential rates.

**PUC (OR PUCT)** Public Utility Commission of Texas.

**PURA** Public Utility Regulatory Act, Title II, Texas Utilities Code.

**REP** Retail Electric Provider - an Entity that sells electric energy to retail Customers in Texas but does not own or operate generation assets and is not an MOU. REPs were created by the legislation that created retail choice and essentially provide customer service and billing services both for energy and wires services on behalf of TDSPs for retail accounts.

**RTO** Regional Transmission Organization – An aggregated group of TDSPs that are typically well interconnected and use an RTO structure to ensure reliability by operating the RTO as a single entity that can utilize the assets of the member TDSPs. ERCOT is an RTO.

**TAC** Technical Advisory Committee - A committee in the ERCOT governance structure reporting to the Board of Directors

**TDSP** Transmission and Distribution Service Provider - More commonly known as "the wires and poles company." A TDSP is responsible for transmitting electricity across a network of poles, high voltage lines, and transformers, as well as maintaining these items in order to transmit electricity from generation sources to a home or business.



## It means funding advice for energy projects

This is the classic chicken/egg problem. You want to implement projects that help save your city money on energy, but you first need the money to fund the project. Below are some funding sources, including grants and low-interest loans.

**LOANSTAR REVOLVING LOAN PROGRAM** — The Texas LoanSTAR (Saving Taxes and Resources) Revolving Loan finances energy-related, cost-reduced retrofits of facilities. Borrowers receive low-interest loans to help pay for these efforts. Applicants repay the loans from the energy cost savings realized by the projects. Guidelines for project eligibility, fund availability, and project funding and repayment are set forth in the State Comptroller rules. Twice each year, the State Energy Conservation Office (SECO) publishes a Notice of Loan Fund Availability for LoanSTAR loans. <https://comptroller.texas.gov/programs/seco/funding/101918/>.

**EPA GRANTS** — EPA partners with local governments and other eligible entities to protect human health and the environment through a systematic process that awards federal grants that leverage local expertise. Every year, EPA awards a significant portion of its budget in grants to its partners for Comprehensive Environmental Response, Compensation, and Liability Act, Section 104(k), Clean Air Act, Section 103(b)(3), Clean Water Act, Section 104(b)(3), Federal Insecticide,

Fungicide, and Rodenticide Act, Sections 18, 20 and 23, Safe Drinking Water Act, Sections 1442(c) and c(A), Toxic Substances Control Act, Section 10, as amended by Public Law (PL) 106-74.

**GRANTS.GOV** — Managed by the Department of Health and Human Services, Grants.gov is an E-Government initiative operating under the Office of Management and Budget. It provides a common website for federal agencies to post discretionary funding opportunities for grantees to find and apply to them. The Grants.gov system makes it faster, easier, and more cost effective for applicants to electronically interact with federal grant-making agencies.

**TDSP PROVIDERS** — Both Centerpoint and TNMP offer CitySmart Programs providing technical and financial support to help cities overcome barriers to implement energy efficiency improvements. Cash incentives are offered for renovation, new construction, and maintenance projects resulting in reduced energy consumption.