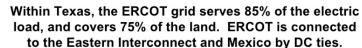
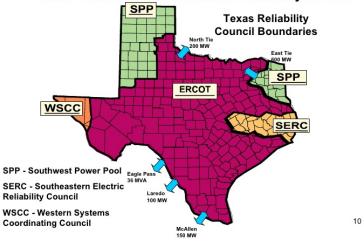
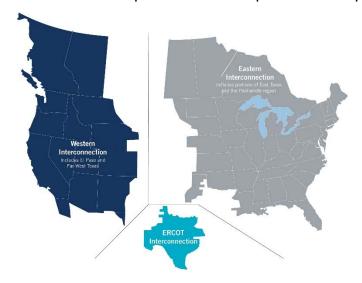
OVERVIEW: The flow of electric power for more than 26 million customers in Texas is managed by the Electric Reliability Council of Texas (ERCOT). This represents about 85% of the state's electric load, including San Antonio as shown below.





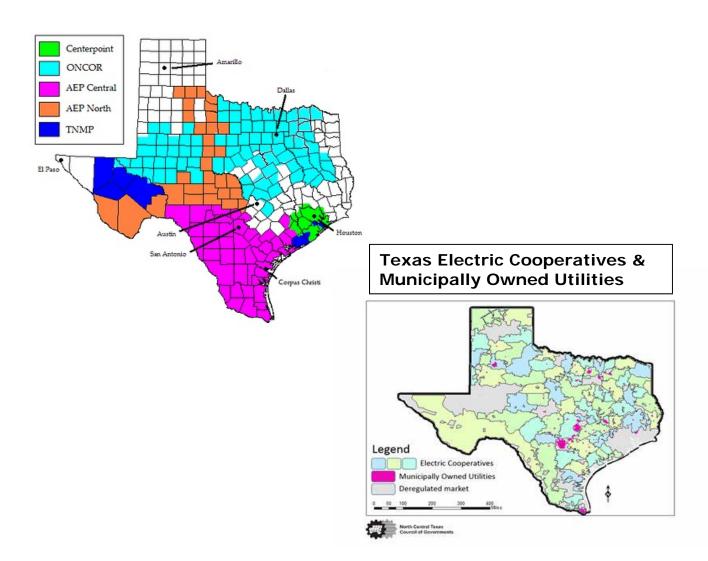
Nationally, ERCOT is one of several councils that manage the flow of electricity in the transmission systems. It is tied to other national and international grids but only for minimal amounts of power to be imported or exported.



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There are several types of entities that serve Texas's electrical needs such as not-for-profit municipally owned utilities (MOU), not-for-profit electric cooperatives, and investor owned utilities. CPS Energy is the largest MOU in Texas and has served the San Antonio area for 76 years. A breakdown of the largest deregulated areas shows most of the State is open to competition.

Deregulated Areas of Texas Open to Electric Competition

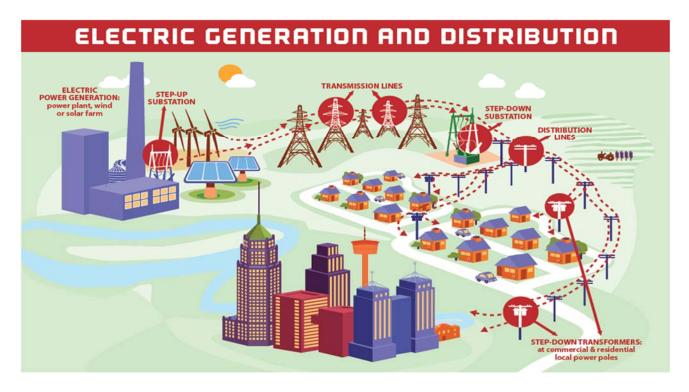


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Responsibilities: ERCOT, a non-profit corporation, is responsible for two things:

- (1) managing the flow of electric power over the transmission grid that transmits electricity to customers; and
- (2) managing the sale of electricity over it under regulation by the Public Utility Commission of Texas (PUC) and the laws of the State of Texas.

Overview of the Electric System:



ERCOT Market Participants: Since 2001, when a competitive retail market design in Texas was created within ERCOT, electricity has been managed under laws adopted by the Legislature and PUC rules. There are several kinds of participants in the market:

- Generators that produce and sell electricity;
- Transmission companies that own and operate the high voltage lines over which the electricity moves across the state;
- **Distribution companies** that own low voltage lines that deliver electricity from the transmission system to our homes across neighborhood utility poles; and

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 Retail Electric Providers (REPs) that buy electricity from generators and sell it to customers, delivering it over the transmission and distribution lines owned by others.

MOUs & CO-OPs: MOUs, like CPS Energy, and Co-ops can participate in each market function if they have the capabilities and choose to do so. This is because in 2001, the law allowed Co-ops and cities that own MOUs to skip participation in the competitive electric market, unless they chose to opt-in.

How the market functions: Every day, ERCOT asks market participants who serve retail customers how much electricity they need to buy. They also ask Generators how much electricity they have to sell and at what price. In this day-ahead market, the transactions are made and the next day the power is delivered to customers. CPS Energy provides retail service to customers and is a generator of power. So, in the day-ahead ERCOT market, CPS Energy commits available generation to serve the amount of electricity needed by our customers, and if there is excess generation available, we sell that power into the ERCOT wholesale market to serve the needs of Texas, which our customers benefit from in terms of revenue.

In the real-time ERCOT market, if Generators have problems delivering the electricity they promised to sell, they must buy that electricity from ERCOT while ERCOT works with other Generators to identify where reserve electricity is available (ancillary services). In addition, for market participants who chose not to buy or sell electricity in the day-ahead market, those with retail customers will buy their electricity and generators will sell their electricity in the real-time market through coordinating the same kind of buy/sell transactions that were done as part of the day-ahead process.

All these daily transactions are settled (reconciled) and payments are made through ERCOT.

A simple way to think of electricity is to imagine that electrons are like marbles and the grid is like a jar. All of the Generators put their marbles in the jar, and each utility takes out the marbles they will need for their customers on a daily basis. ERCOT is responsible for checking that there are enough marbles in the jar, and that those who take marbles pay for them, and those who put marbles in get paid.

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How CPS Energy fits into the ERCOT market: CPS Energy, as a MOU, does not participate in the competitive market at the retail level, so we provide ALL the market services listed above to our customers. We generate electricity, we buy electricity under long term contracts for renewables, we transmit power over our transmission lines, and we deliver it to customers over our distribution grid. We are the retail connection with our customers, providing information, sending bills, taking calls from customers, etc.

We do participate in the ERCOT wholesale market, which means we buy and sell power every day like the other market participants do. As a generator of power and a retail provider to customers, what happens in the wholesale market impacts CPS Energy and ultimately our customers. This allows us to buy and sell power to provide the lowest cost possible and ensure we have sufficient power to meet projected customer needs. Most days, we generate enough power to serve our customers. When our plants are unavailable due to maintenance, we buy power from the ERCOT market to ensure reliable service for our customers.

<u>Participation in the Wholesale Market – Winter Weather Event</u>

CPS Energy generated as much electricity as it could throughout the February winter weather event. Some of our generation units had difficulty due to the extreme weather creating a need to purchase some electricity from the market during the winter weather event. That is one reason being in ERCOT helps us – it gives us a source of electric power when we need it, not just a market into which we can sell excess power when we have it.

Every MOU & Co-op in Texas, most of which are not participants in the Texas competitive retail market, whether they own generation or buy power from other generation companies, is still impacted by wholesale market prices in Texas.

<u>Fuel considerations:</u> While CPS Energy planned for natural gas supply for our power plants and to serve our retail natural gas system, it was necessary to purchase additional natural gas during this event, which we use to fuel our generation units that run on gas and to continue to provide natural gas as an energy source for many customers to heat their homes. We have a lot of natural gas under contract all the time, but the projected demand for gas during the February weather event far exceeded what we could have anticipated across the entire State of Texas. When we purchased this gas, we found that the prices were much higher than the market had ever been.

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We are working to determine how we can pay for this gas without imposing unreasonable demands on our customers. As a statewide issue, this is a difficult problem that a number of utilities across the state are dealing with, including CPS Energy.

<u>Load Shed Requirement:</u> As cold weather descended upon the entire State of Texas in the early morning hours on Monday, February 15, generation forced off the system totaled over 30,000 MW due to equipment challenges caused by the severity of freezing temperatures.

When generation shortfalls happen, the grid must be protected to avoid catastrophic failure of the system. To stabilize the grid, when ordered by ERCOT, CPS Energy, along with other market participants, must take the necessary steps to alleviate the emergency situation and return the ERCOT grid to a more stable state. CPS Energy cuts power to some circuits, or sheds load. The required amount of customer load is defined by ERCOT and will create rolling-type, or controlled, customer outages to try to reduce the length of customer interruptions to a minimum.

During the February 2021 event, ERCOT required as much as **20,000 MW** of load shed across the State at one time, an event which lasted from Monday morning (2/15 at 1:07 am) through Wednesday evening (2/17 at 11:55 pm), a time period just under 72 hours.

This was the highest amount of load shed experienced for the longest period of time in history and five times the largest load shed event previously experienced in ERCOT. This challenged utility systems across the state, including CPS Energy.

Previous Load Shed Events:

- Dec. 22, 1989, extreme cold during morning peak, ERCOT directed utilities to shed 500 MW for 30 minutes
- April 17, 2006, extreme heat during afternoon peak, ERCOT directed utilities to shed 1,000 MW for almost 2 hours
- February 2, 2011, after a major snow and ice storm, the unplanned loss of generation during a period of high demand forced ERCOT to direct utilities to shed 4,000 MW of load for over 7 hours.

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ERCOT Load Shed Table

Transmission Operator	2019 Total Transmission Operator Load (%MW)
AEP Texas Central Company	8.67
Brazos Electric Power Cooperative Inc.	4.96
Brownsville Public Utilities Board	0.37
Bryan Texas Utilities	0.51
CenterPoint Energy Houston Electric LLC	24.85
City of Austin DBA Austin Energy	3.71
City of College Station	0.28
City of Garland	0.79
CPS Energy (San Antonio)	6.79
Denton Municipal Electric	0.48
GEUS (Greenville)	0.15
LCRA Transmission Services Corporation	5.97
Oncor Electric Delivery Company LLC	36.07
Rayburn Country Electric Cooperative Inc. DBA	
Rayburn Electric	1.3
South Texas Electric Cooperative Inc.	2.48
Texas-New Mexico Power Company	2.62
ERCOT Total	100.00

CPS Energy will continue to share helpful information and updates about our operations. We welcome any questions you have. Please send questions to feedback@cpsenergy.com.

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