



# Load Zone Price Separation

## Austin Energy and the ERCOT Market

The Electric Reliability Council of Texas (ERCOT) operates the statewide electric grid, balancing the flow of electric power to more than 27 million Texas customers — or about 90% of the state’s electric use. While ERCOT directs the flow of power all across the state, it’s also managing the electric marketplace where generators and utilities buy and sell power. The ERCOT market has a detailed design, with thousands of price point nodes that help determine the cost of providing power.

As an entity that is legally required to participate in the ERCOT market, Austin Energy buys all the electricity to serve customers in its service area from the ERCOT market. Austin Energy also sells the power it produces from its various power plants and solar and wind farms across the state into that market. Because of the design of the ERCOT market, those prices change every five minutes. Austin Energy works 24/7 to maximize the benefits of its generation while managing the energy demand it serves.

## Load Zone Price Separation

Load zone price separation occurs when the price to buy power for Austin Energy’s service area, or load zone, greatly increases while the price for selling power elsewhere in Texas stays lower. The Austin Energy load zone is vulnerable to higher prices due to the limited amount of power we can import and the limited amount of local generation. When there is high demand in the Austin area, transmission lines bringing power in can reach their limit of what they can carry. The ERCOT market recognizes this issue and tries to fix the problem by raising the price of electricity — with the idea that a higher price will incentivize more generation to come online. Other things like local power plant outages, local transmission outages, or even generation and transmission events outside of Austin Energy’s service area can trigger load zone price separation as well.

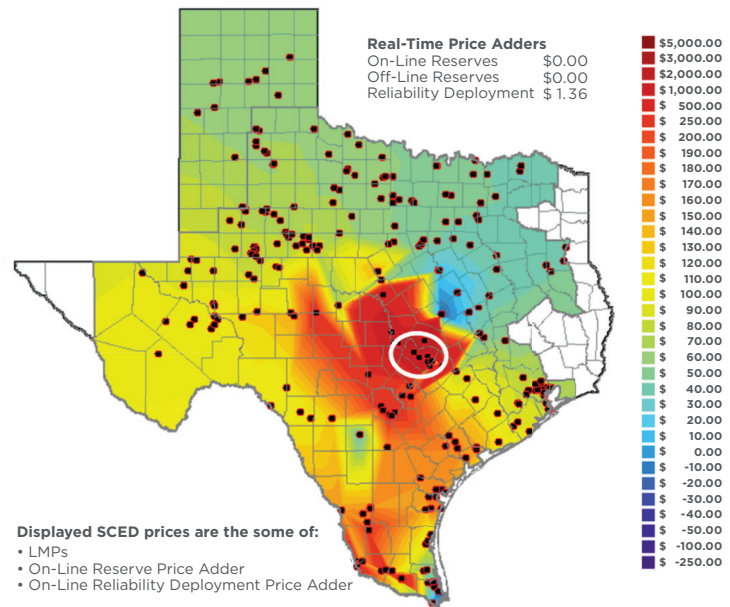
Depending on the number of events and their severity, Austin Energy can end up paying hundreds of millions of dollars more per year to buy power for the Austin area than it earns in

selling power to the ERCOT market. Further, if transmission becomes so congested that Austin Energy cannot physically provide enough power to meet local demand, ERCOT may have no other alternative but to order controlled outages in the Austin Energy service area. As such, load zone price separation presents financial and reliability risk to Austin Energy customers.

## Load Zone Price Separation in Pictures

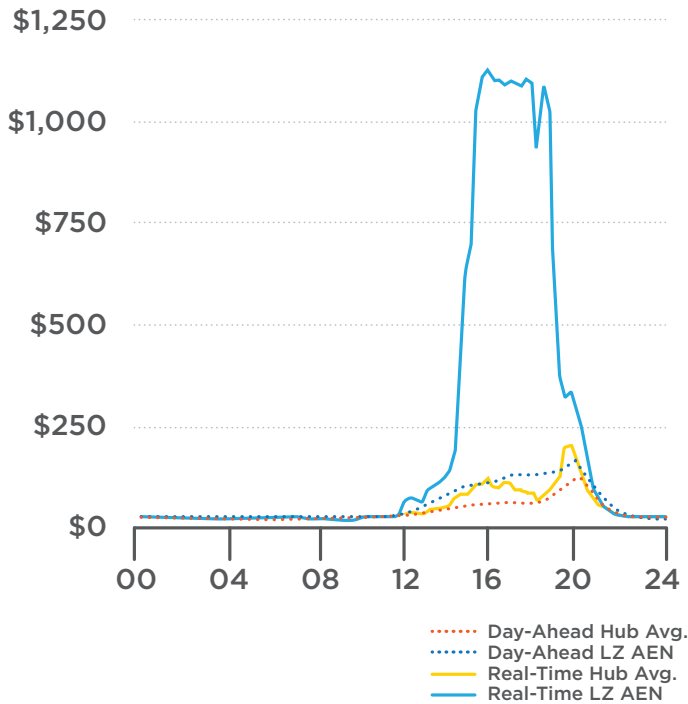
This map from ERCOT’s website shows real-time electricity prices at different nodes across the market on the afternoon of August 21, 2024. The bright red spot over Travis County shows an example of load zone price separation as the local prices were much higher than much of the rest of the state.

ERCOT Real-Time Pricing Heat Map  
5:35 p.m. — Aug 21, 2024



The graph below, also from ERCOT's website, shows the real-time electricity prices over the course of the day on August 21, 2024. The blue line is the price of purchasing power to serve the Austin Energy service territory. The orange line is the average price paid to generators across ERCOT to produce power. This graph shows load zone price separation for several hours, when the blue line is approximately \$1,000 per megawatt-hour (MWh) higher than the orange line. Simply stated, Austin Energy was paying ~\$1,100 per MWh to serve its customers locally, but it was receiving, on average, ~\$100 per MWh to generate electricity across the state to sell into the ERCOT market.

**ERCOT System-Wide Prices**  
Aug. 21, 2024



## Reducing Load Zone Price Separation Risk

As a vertically-integrated utility, Austin Energy plays a role in all aspects of electricity: supply, demand, and the transmission and distribution that connects the two. This means that Austin Energy has several options to help reduce the risk of load zone price separation:

- 1. Demand:** Reduce local demand as much as possible through energy efficiency, demand response and customer-sited solar. Austin Energy is a leader in demand-side management programs and looks to maximize this option whenever possible. Demand-side management alone, however, may not be sufficient to meet the growing load.
- 2. Transmission:** Continue upgrading local transmission equipment to increase the amount of power the system can bring into the Austin area. Austin Energy has a rolling 5-year plan for capital projects related to transmission, which are prioritized based on reliability and growth needs. Note, however, Austin Energy does not have control over transmission outside its service area, so there is a limit to how much it can use this option to solve the problem. Additionally, constructing transmission can be a lengthy process due to state regulatory approval timelines.
- 3. Supply:** Maintain sufficient generation capacity inside the Austin Energy load zone to meet local peak demand that cannot otherwise be served by bringing power into the Austin area. This includes adding additional local generation to keep pace with load growth. Local generation, depending on the type and operating parameters, can produce local emissions or have reliability impacts, so there are tradeoffs with this option as well.

Austin Energy believes in an “all of the above” approach, where we work to mitigate the financial and reliability risks of load zone price separation by taking action in all three ways. Given the growth in local demand and customer sensitivity to increasing utility bills, one of the main objectives of the Resource Generation Plan to 2035 is to reduce load zone price separation using a combination of these options.