

A utility pole with power lines against a cloudy sky. The pole is dark and vertical, with several horizontal cross-arms. Power lines are strung across the sky, which is filled with soft, grey clouds. The overall tone is muted and professional.

# ERCOT Overview & Emergency Procedures

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# ERCOT Normal Operations

- ERCOT manages the flow of power on the grid 24/7, similar to an air traffic controller, and responds to changing system conditions.
- Under normal conditions, market participants bring generation online, and ERCOT selects the most efficient generation to meet varying customer demand. This process occurs every five minutes.
- ERCOT monitors the flow of power on the system and makes adjustments so that the grid is not overloaded.
- ERCOT keeps the level of online generation higher than the expected demand to cover expected variability between supply and demand. This extra generation is known as operating reserves.

# ERCOT Emergency Procedures

- When electric supply and demand cannot be balanced with normal procedures, ERCOT begins emergency operations using three levels of Energy Emergency Alerts, or EEAs.
- Each level provides access to resources only available during emergency conditions, and allows ERCOT to use these resources to protect the reliability of the electric system and prevent an uncontrolled system-wide outage.
- ERCOT currently has around 2,300 MW of additional capacity available from these resources when it enters emergency conditions.
  - 1 MW is enough to power about 200 Texas homes during the hot summer months

# Energy Emergency Alert Detail



## LEVEL ONE

*If operating reserves drop below 2,300 MW and are not expected to recover within 30 minutes:*

**Bring all available generation online and release any unused reserves; increase other generation supplies and use demand response to lower electric demand, including:**

*Imports from neighboring electric grids, if available: up to 1,220 MW*

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*Switchable generation that can serve multiple electric grids, if available: up to 434 MW*

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*Emergency Response Service (some commercial/small industrial customers who are paid to reduce their power within 30 minutes during emergencies): 820 MW*



## LEVEL TWO

*If operating reserves drop below 1,750 MW and are not expected to recover within 30 minutes:*

**Request energy conservation from public (if not already in effect): MW vary**

**Reduce power by deploying remaining demand response programs, including:**

*Deploy operating reserves carried by Load Resources (some large industrial customers who are paid to reduce their power): 898 MW*

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*Load management programs from transmission companies: 270 MW*

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*Voltage reduction by transmission companies: 100-200 MW*

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*Deploy remaining Emergency Response Service (other commercial/small industrial customers who are paid to reduce their power within 10 minutes during emergencies): 820 MW*



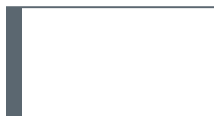
## LEVEL THREE

*If operating reserves drop below 1,375 MW, ERCOT moves into level 3. If operating reserves drop below 1,000 MW and are not expected to recover within 30 minutes and/or the grid's frequency level cannot be maintained at 60 Hz:*

**As a last resort, instruct transmission companies to reduce demand on the electric system; typically in the form of controlled outages**

# What are Controlled Outages?

- Electric service interruptions ordered by ERCOT but implemented by utilities
- Used as a last resort to reduce electric demand and prevent an uncontrolled system-wide outage
- Used to bring operating reserves back to a safe level and maintain system frequency
- Each utility is responsible for deciding how to decrease demand in their area
- ERCOT has initiated system-wide controlled outages four times in the history of the organization, including during the February winter storm



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