

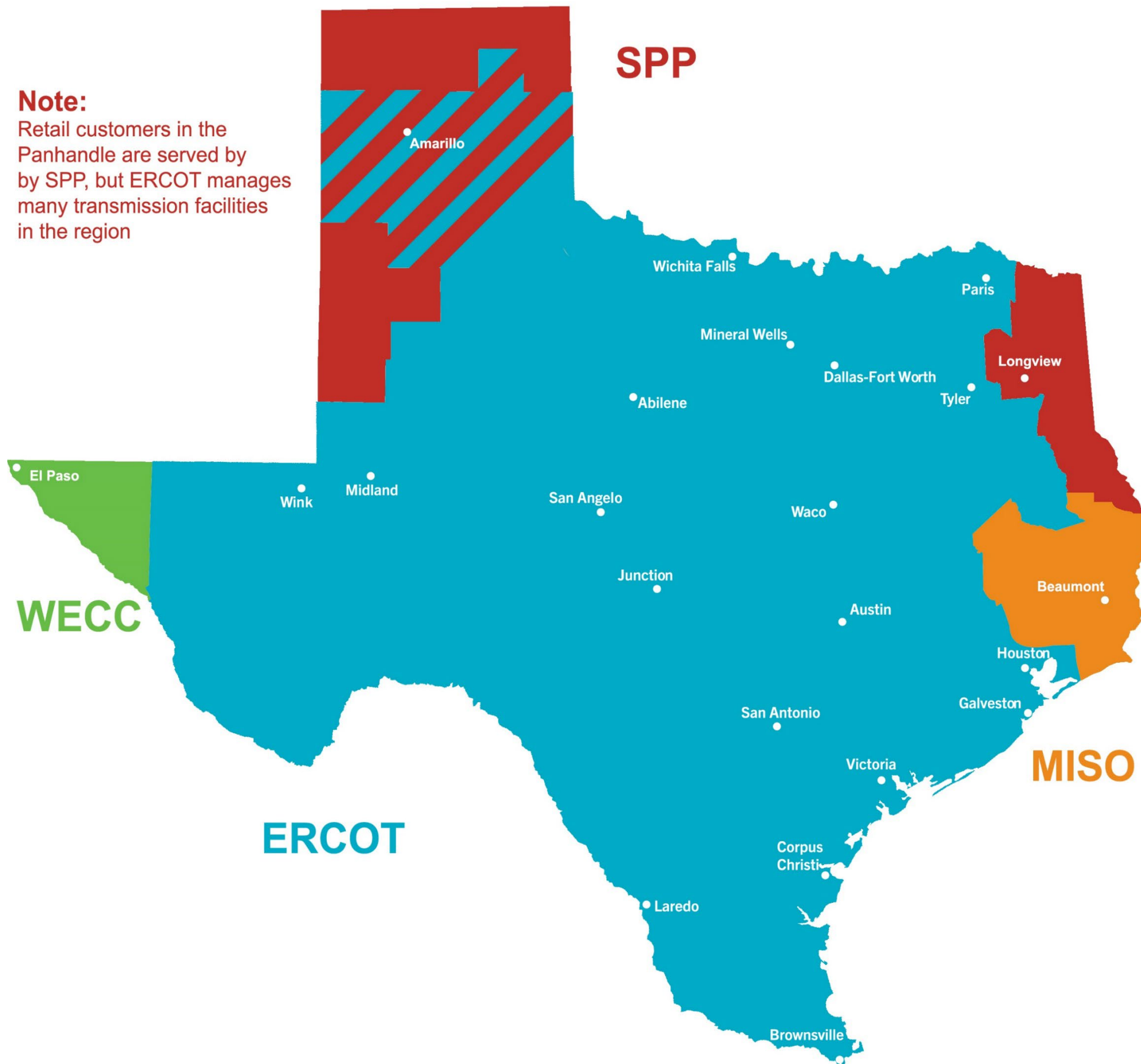


Legislative Staff Briefing on Electric
Industry Summer Preparedness

May 24, 2022

AECT Companies Within ERCOT

Note:
Retail customers in the Panhandle are served by SPP, but ERCOT manages many transmission facilities in the region



Retail Electric Providers



Transmission & Distribution Utilities

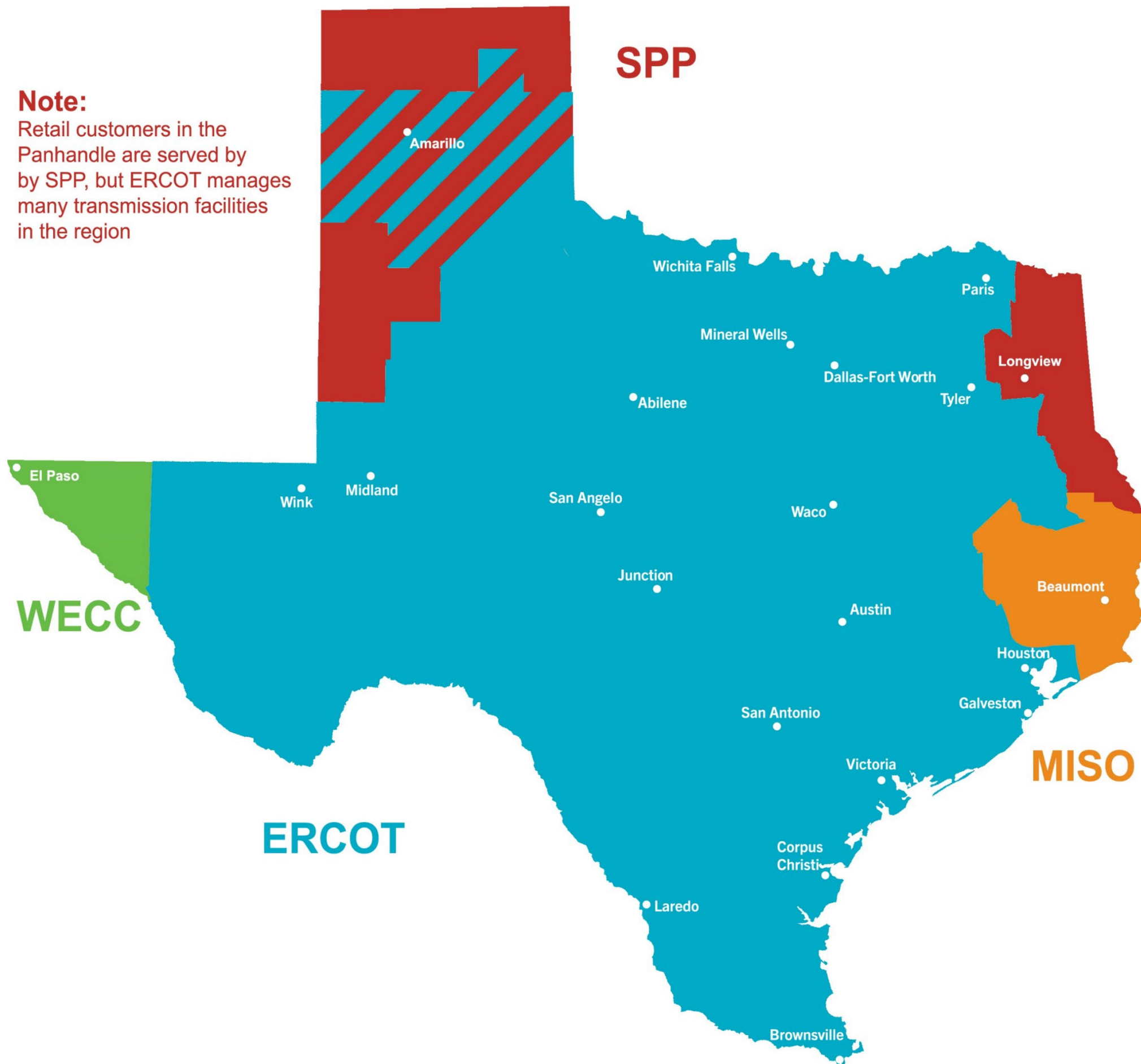


Generation Companies



AECT Utilities Outside of ERCOT

Note:
Retail customers in the Panhandle are served by SPP, but ERCOT manages many transmission facilities in the region



Southwest Power Pool (SPP)



An **AEP** Company

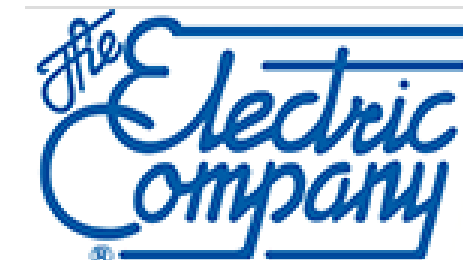
BOUNDLESS ENERGY™



Midcontinent Independent System Operator (MISO)



Western Electricity Coordinating Council (WECC)



El Paso Electric

Agenda

Hurricane Season 2022

Nathan Brownell, CenterPoint Energy

Brittany Chandler, Entergy

Wholesale Market Preparedness

Brent Chaney, Vistra

Summer Preparedness in the Retail Market

Bill Clayton, NRG Energy

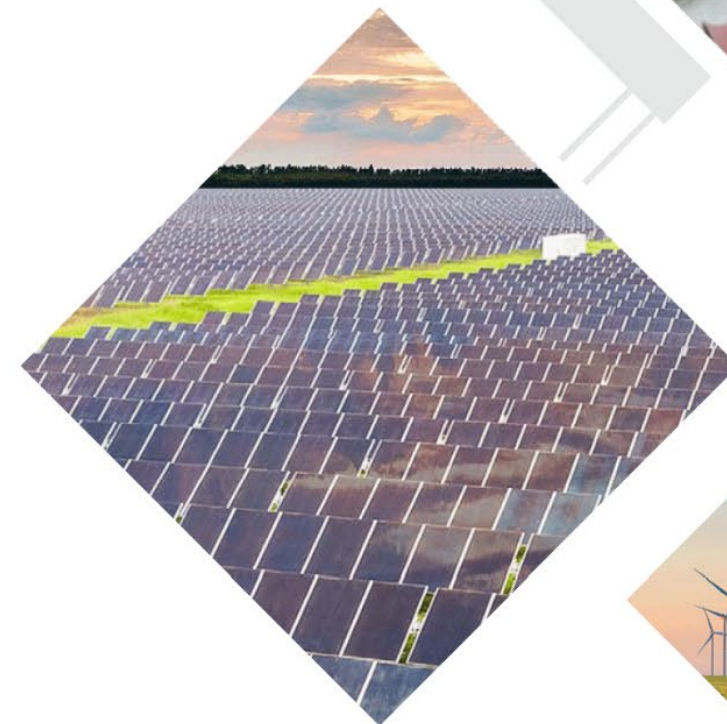
Hurricane Season 2022

Nathan Brownell, CenterPoint Energy
Brittany Chandler, Entergy

Focusing on our core utility businesses

CenterPoint Energy 2022 Hurricane Preparations

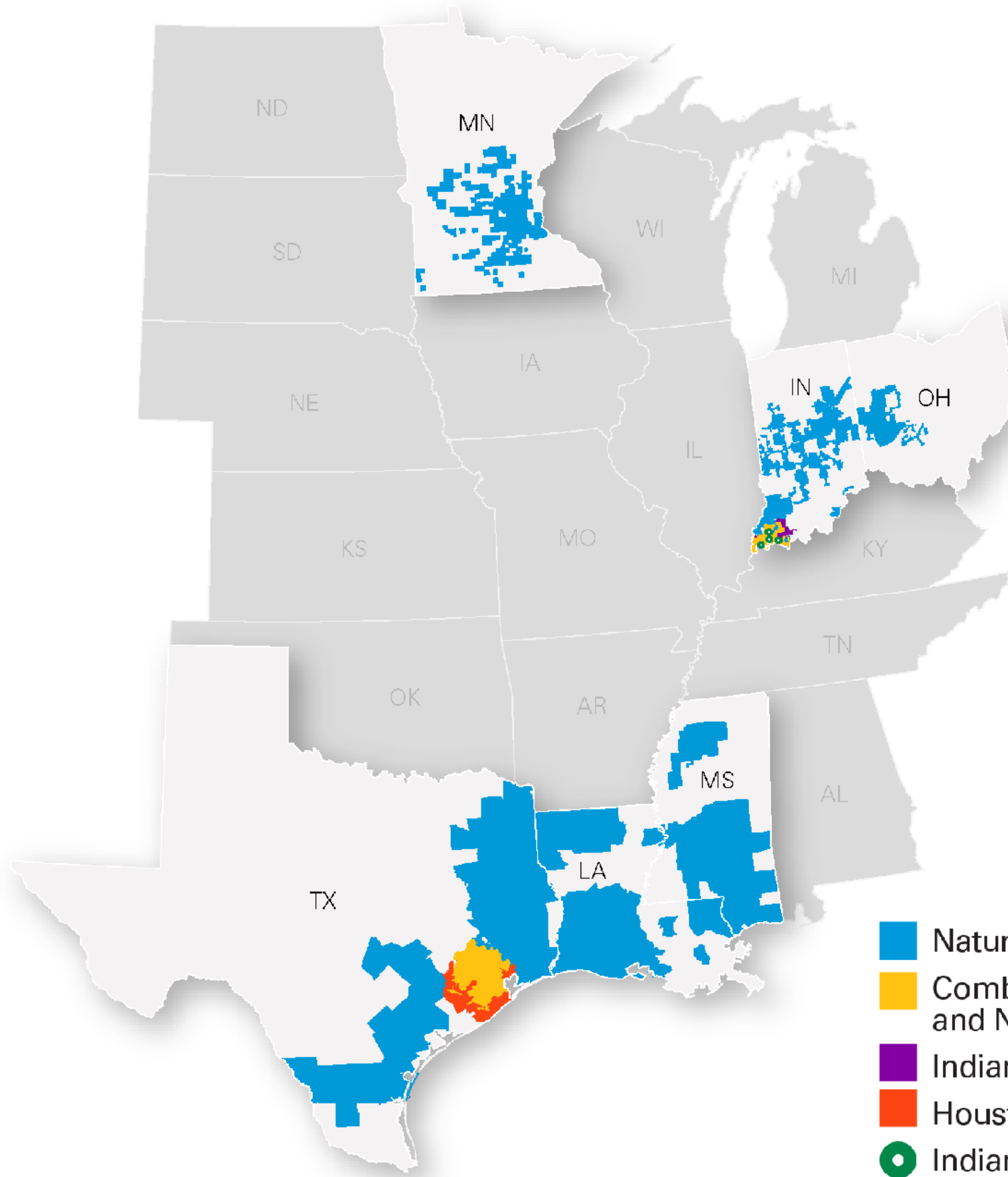
Nathan Brownell



5/24/2022 AECT Presentation



Where We Operate

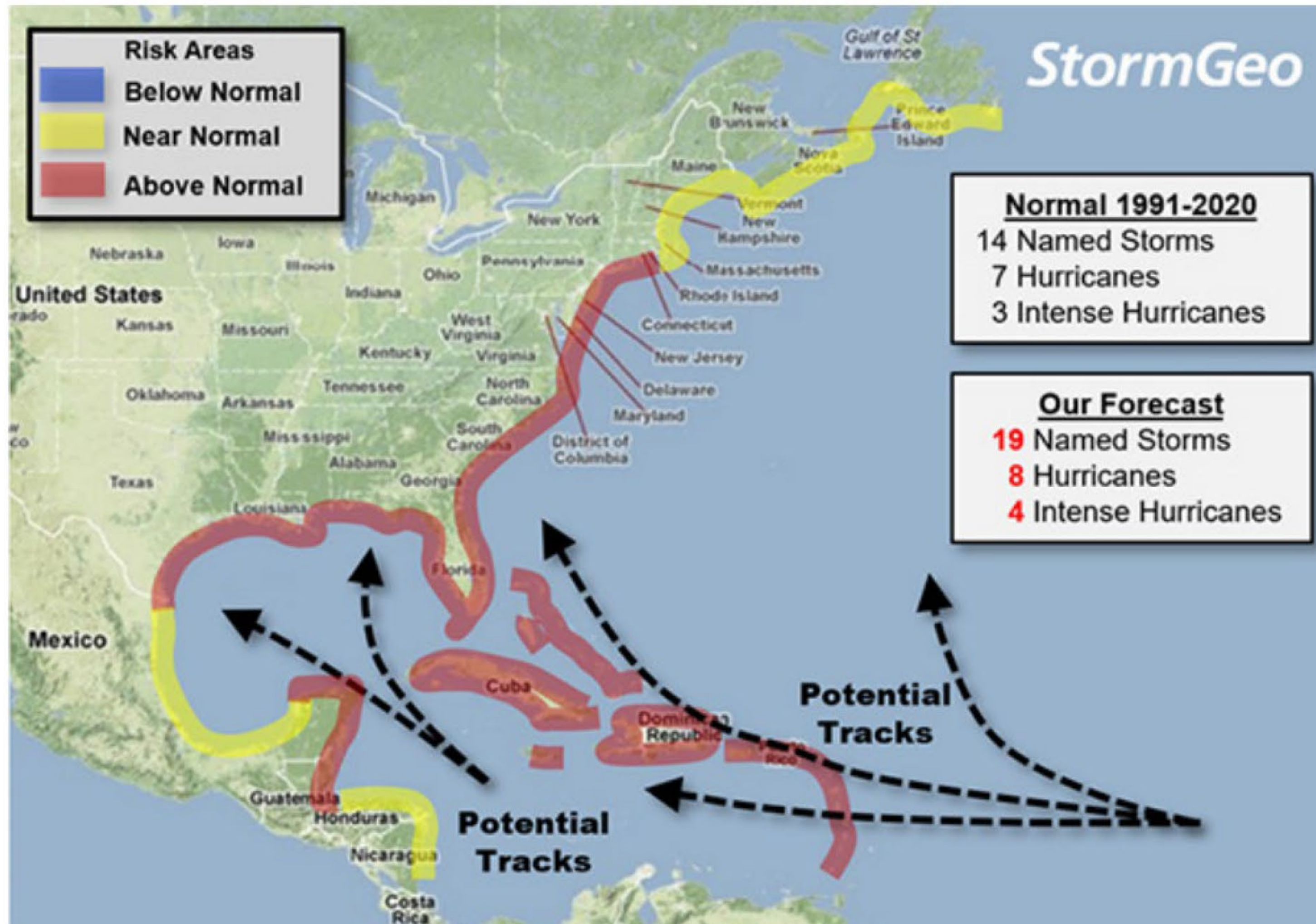


Natural Gas Distribution, Electric Transmission & Distribution and Power Generation

nearly
7 million
gas and electric
metered customers

6
states

2022 Hurricane Season Forecast



2021 Lessons Learned from Hurricane Nicholas

- Cut & Clear process highly effective
- 80% of customers restored within 12hrs
- Utilizing mobile orders increases oversight & efficiency
- Damage Assessment tiers needed to fit storm size & regional needs
- Mobile Command Center helps manage high impact area
- Mutual Aid onboarding was slow & needs updating



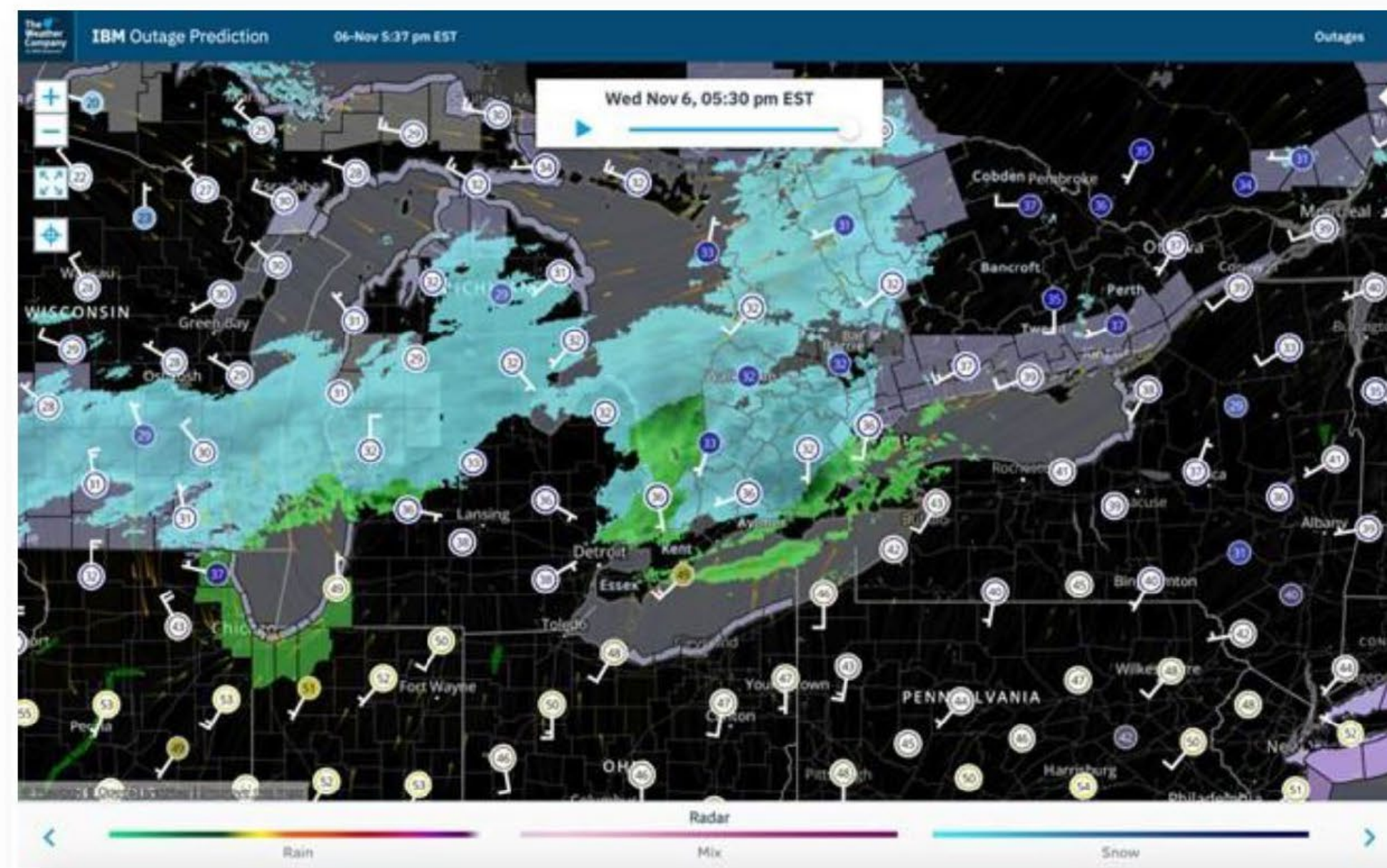
2022 Hurricane Preparations

- June 1st EOP Drill
 - Testing new Damage Assessment process
 - Testing new personnel on ICS & communication paths
 - Situation injects
- June 15th Staging Site
 - Functional Staging Site
 - Review all staging site plans
 - Staging Site team training
 - Testing onboarding crews & restorations



2023+ Hurricane Preparations

- Self Contained Restoration & Staging Sites
 - Lessons learned from COVID
- Weather Prediction Damage Modeling
 - Merge asset data with weather forecasting modeling
- Digital Mutual Assistance
 - Remote onboarding
 - App to communicate with crews
 - Dashboarding resources needs

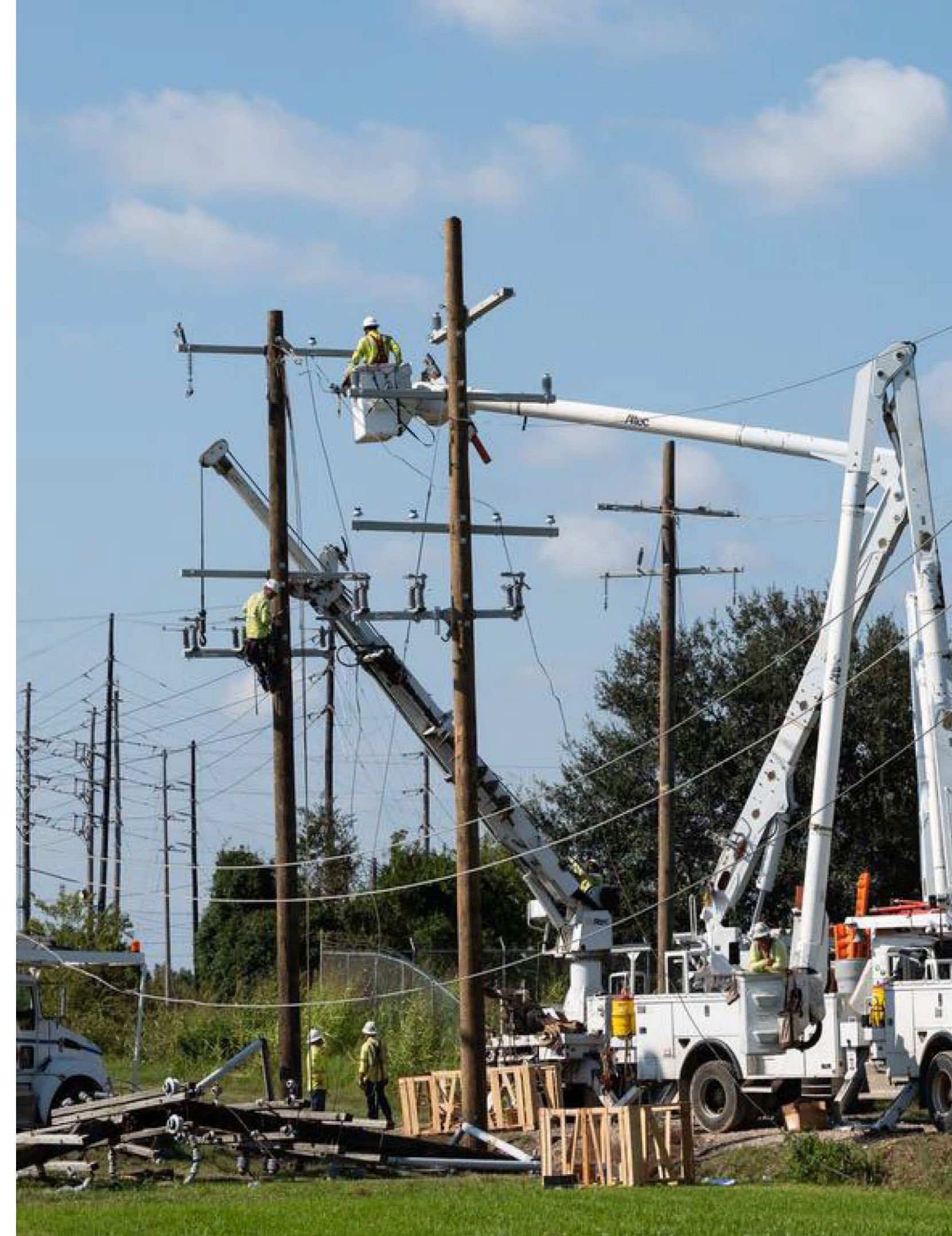




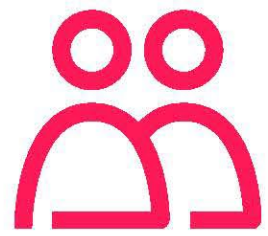
May 24, 2022

Entergy Texas Storm Preparations

Brittany Chandler
Region Manager, Customer Service
TX Deputy Chief Customer Officer (Storm)



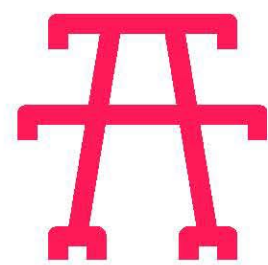
Entergy Texas



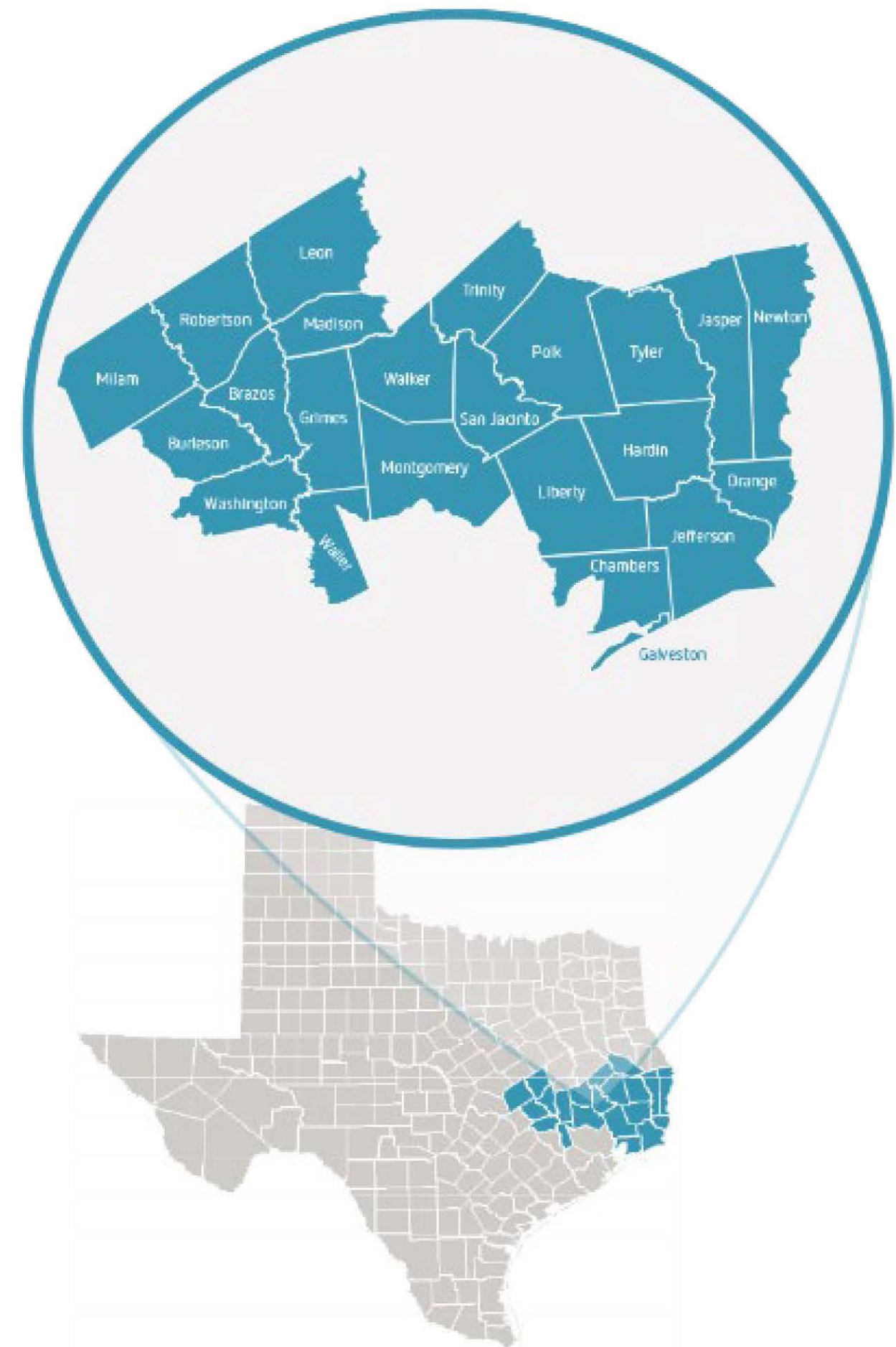
486,000 Customers



27 counties / **15,320** square miles



433,000+ utility distribution poles / **2,700+** miles of transmission lines / **335** substations



01

Strengthening the grid before and after storms

Building a resilient grid is what we do

Enhancing the grid is a year-round effort



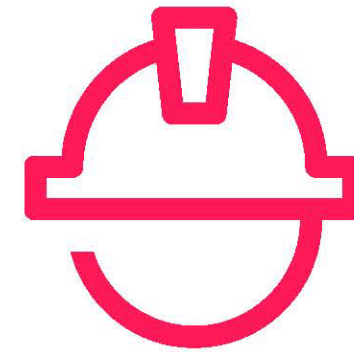
Investments

Investments have been made in upgrading and strengthening our power generation, transmission and distribution systems, including evolving how our facilities are designed, built and maintained; incorporating more aggressive investment strategies; and deploying new technologies.



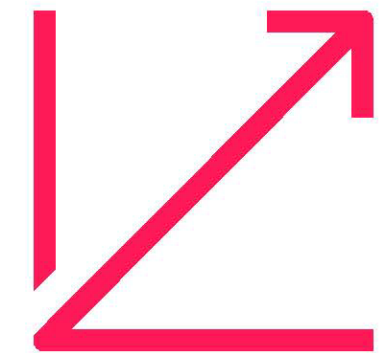
Hardening

Hardening strategies are evaluated from a customer perspective, weighing the benefits of fewer and shorter outages against the high costs of hardening the system that have a large impact on the cost of electricity for our customers.



Reliability work

Planned efforts that span inspection and maintenance, vegetation management, equipment upgrades, and overall efforts that help support the delivery of low-cost, reliable energy.



Resilience

We've identified resilience investments which would help mitigate future storm damage and costs and reduce the number and duration of customer outages after major events.

We know investments in hardened infrastructure perform

Flying debris is often cause for damage

During Hurricane Ida, a section of our transmission system with roughly 380 newly built structures was in the direct path of the storm, and only three of them were damaged – and not by wind, but by flying heavy-duty barge debris.

100%

Section of newly built transmission structures survived Hurricane Ida's 150 mph max sustained winds.

02

Storm preparations 365 days a year

We prepare for the worst of what Mother Nature might bring

Operation Storm Ready

Inspections

Inspections of the grid and our facilities are performed.

Maintenance

We have proactive maintenance plans that we work throughout each year.

Vegetation

Trees and other vegetation are a leading cause of power outages.



Storm Ready

Monitoring weather threats is a 24/7, 365-day-a-year job.

Training

We rely on our continuous cycle of planning, preparation, training and evaluation. (Storm Drill is 5/24/2022)

Industry collaboration

Entergy partners with other utilities in mutual assistance agreements.



03

Weathering any storm, together

When forecasts seem daunting, we stand ready

We ramp up support

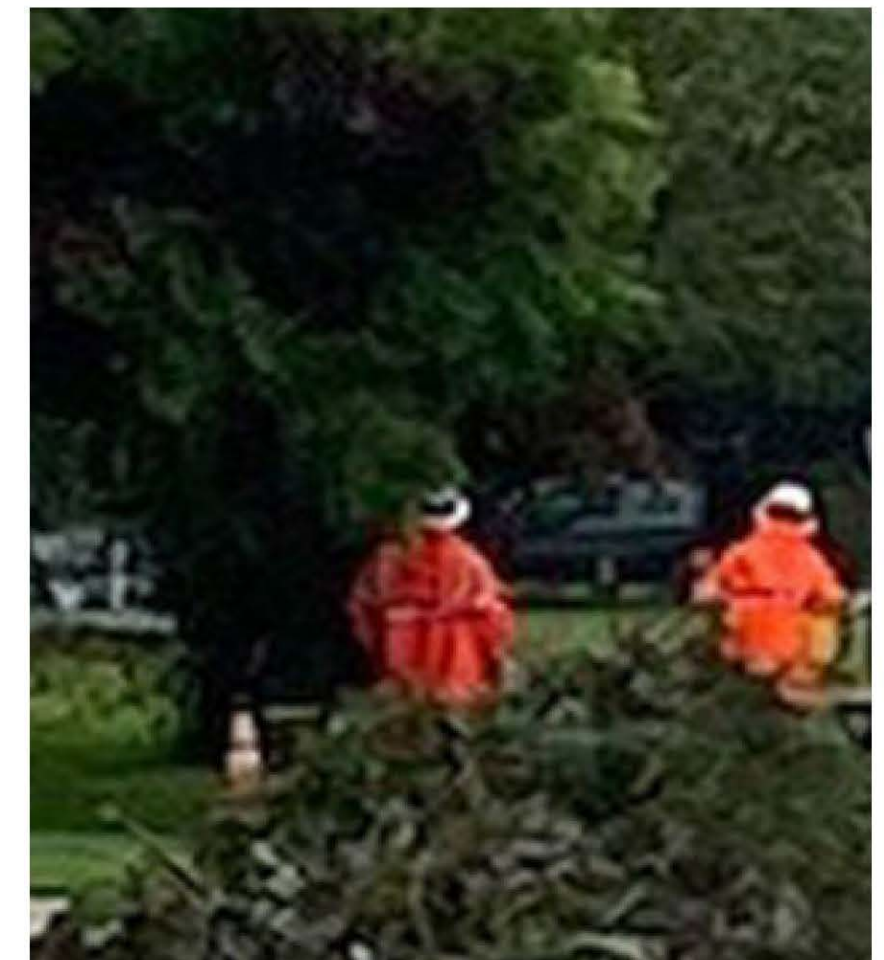
Resources



Logistics

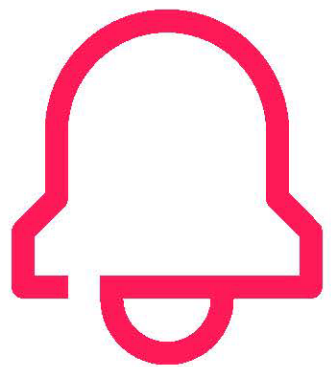


Support



Most important is the safety of those living and working in communities hit by big storms or severe weather.

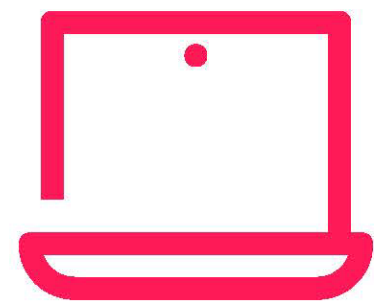
Stay informed throughout a storm



Notifications

- Email
- Text
- Phone

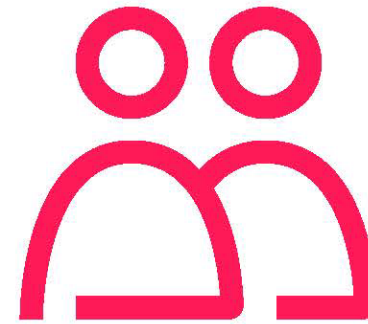
Sign up: [myEntergy.com](https://myentergy.com)



Storm Center

One-stop website for information

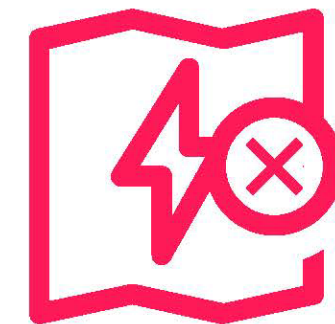
entergystormcenter.com



Social Media

- Twitter
- Facebook
- Flickr
- YouTube

entergy.com/socialmedia

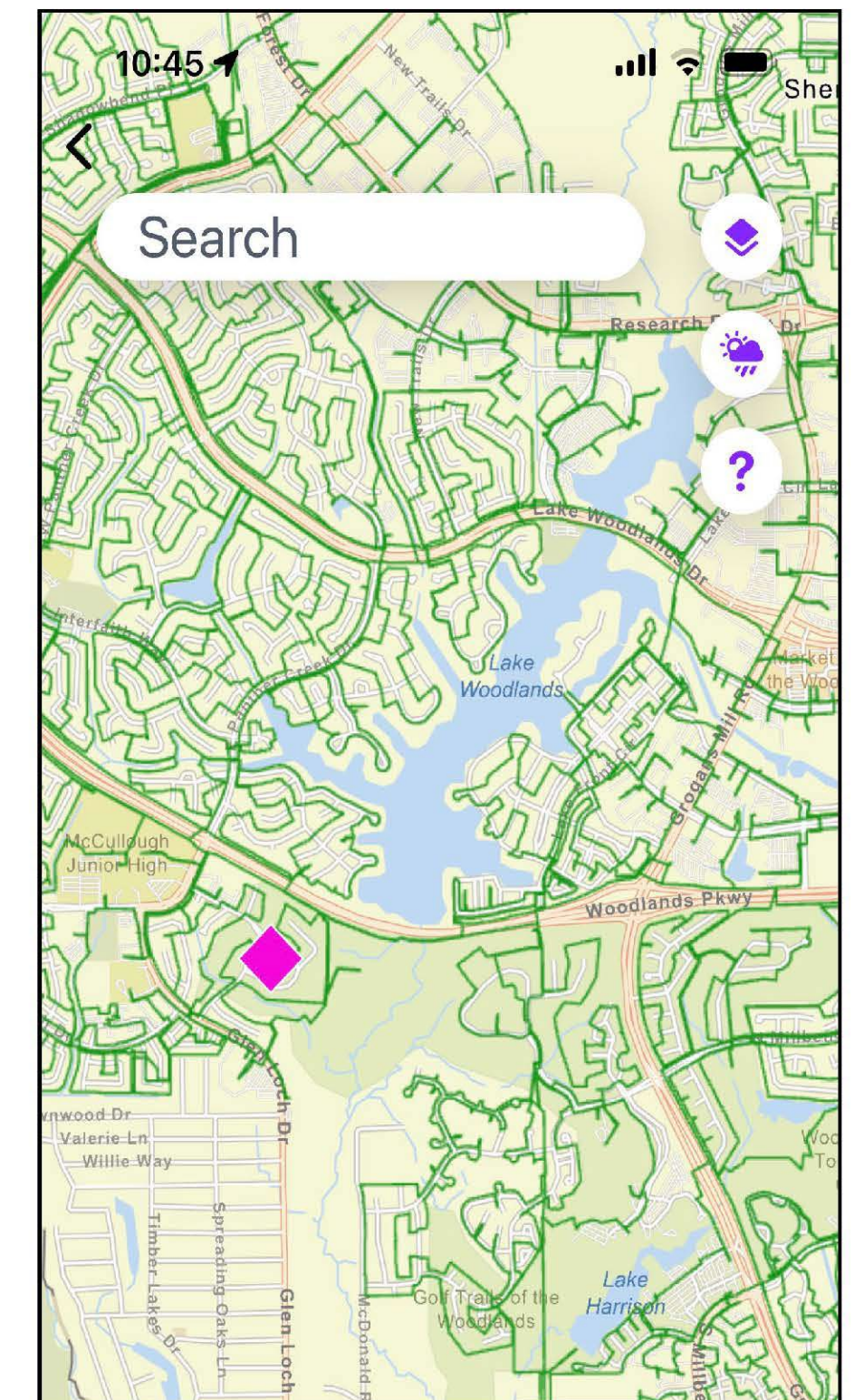
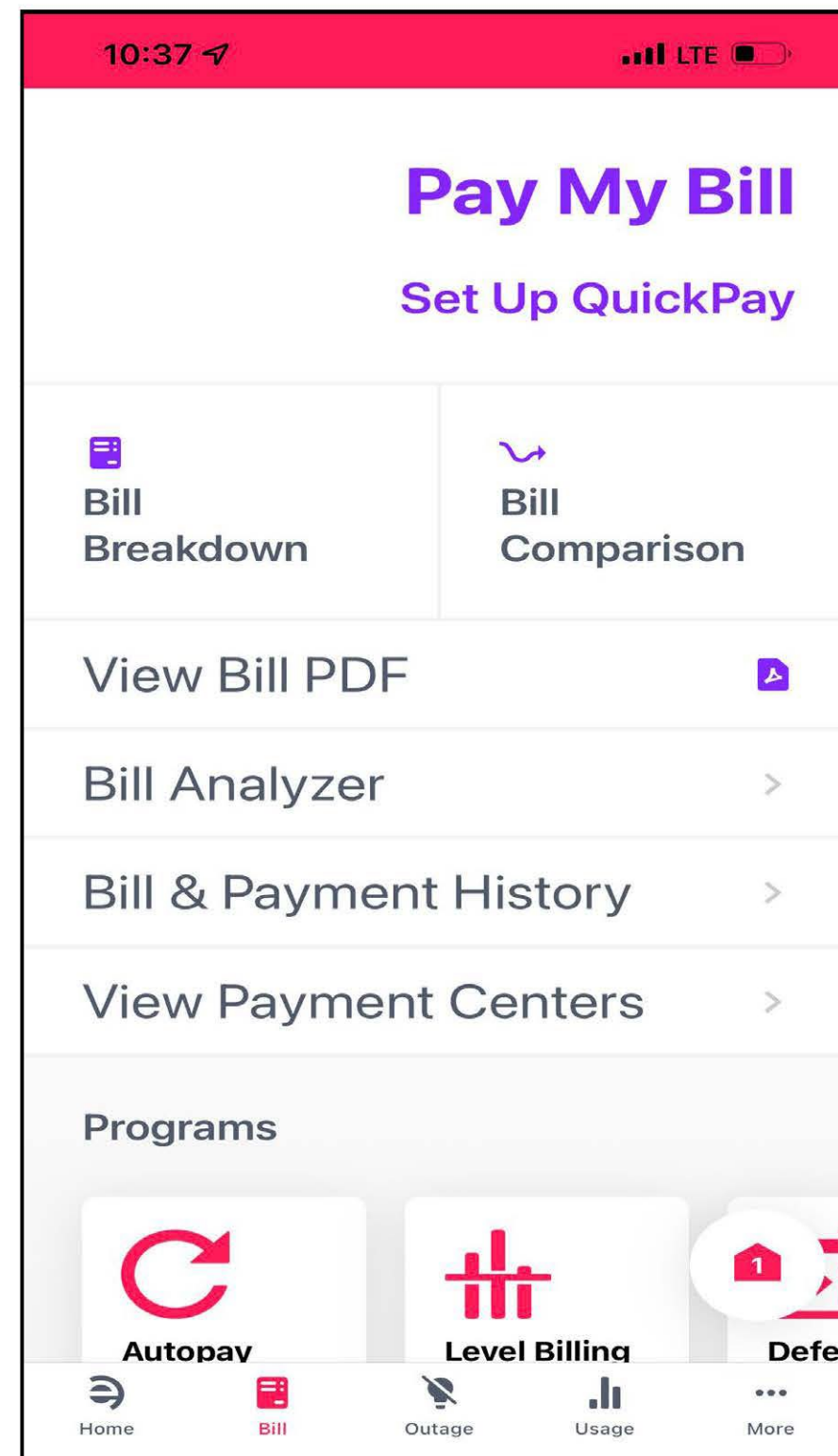
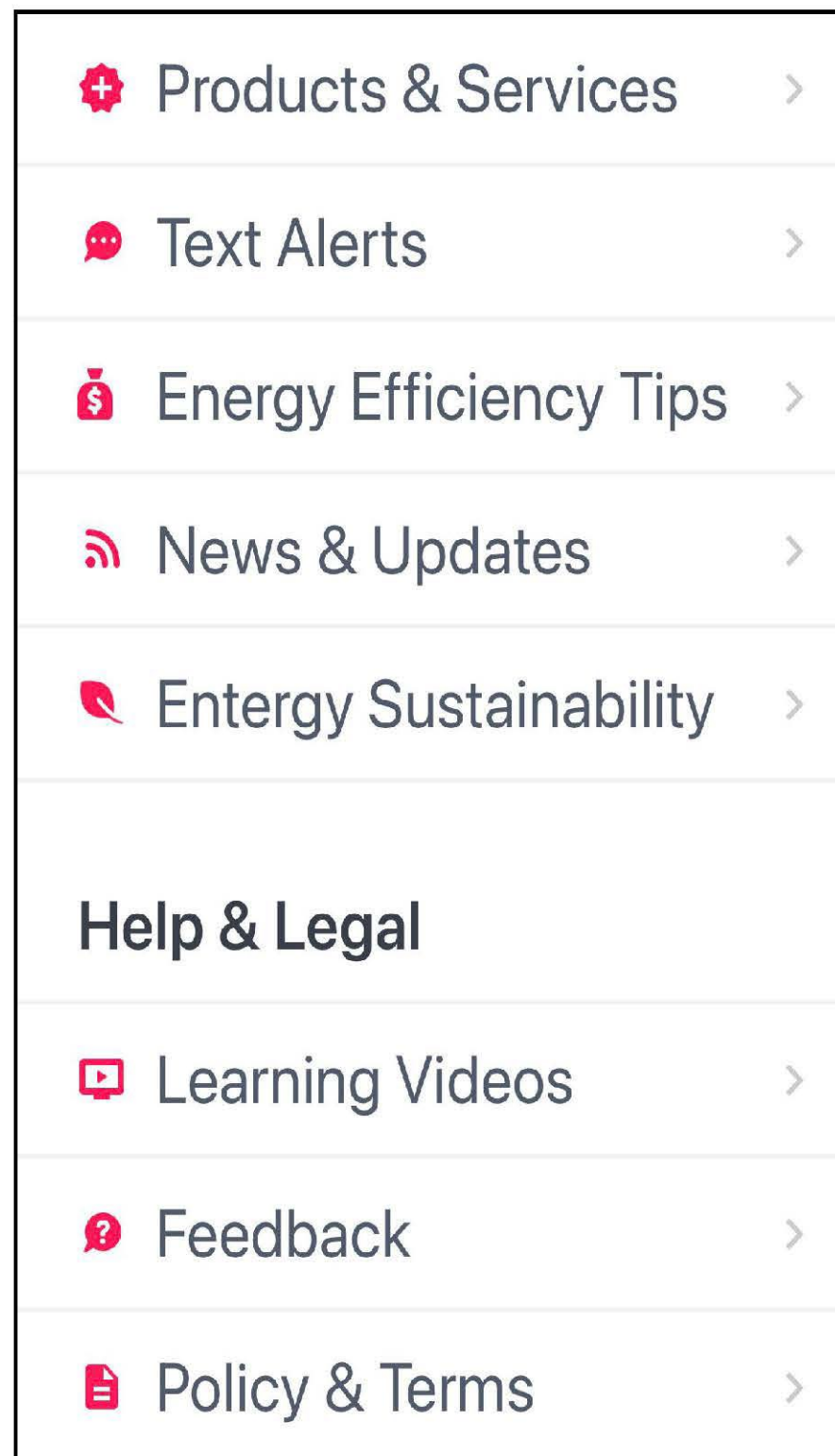


View Outages

The map provides outage and estimated restoration information to customers.

entergy.com/viewoutages

Entergy App



View Outage (Online and App)

The screenshot displays the Entergy outage viewer interface. On the left, a sidebar contains navigation options: LOCATION, AREA, WEATHER, GO TO, and FAVORITES. Below these is a 'LOCATION VIEW' section with a search bar and a note '*Electric Outages Only'. A 'Planned Outages' section is also visible. At the bottom of the sidebar, there are filters for 'Location Status' and 'Power Line Status', along with an 'Opacity: 100%' setting.

The main area shows a map with a red hexagonal marker indicating an outage location. A search bar at the top of the map area contains the text 'Enter your address for more information'. A popup window titled 'Outage Information' is overlaid on the map, providing the following details:

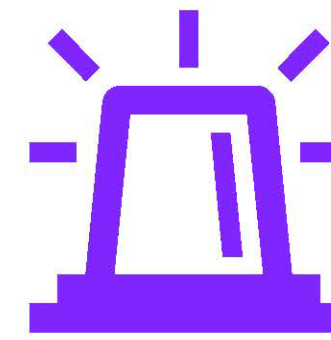
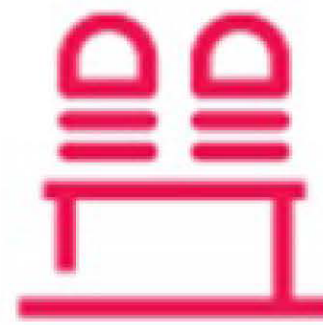
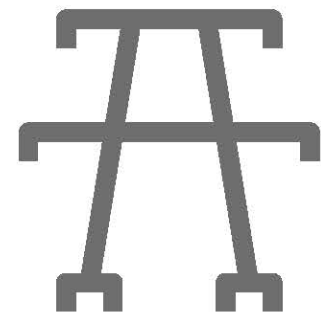
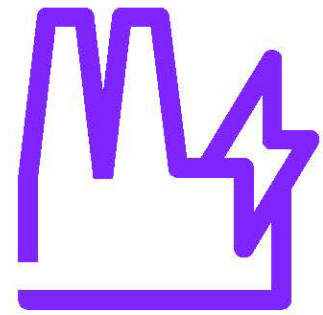
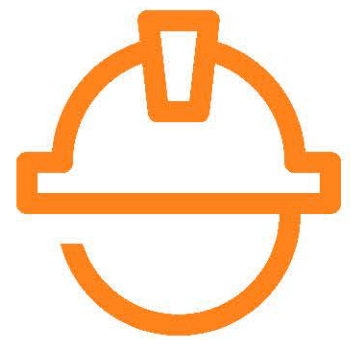
- Outage Information**
- Customers Affected: 69
- Outage Start Time: May 20, 08:41 AM
- Estimated Restoration Time: May 20, 10:30 AM
- Comments: An outage has been reported in your area. Additional information will be provided when available. We apologize for this inconvenience.

04

Restoring power after severe weather strikes

Crews work as quickly as they safely can for our customers

Storm-Restoration Process



Assess Damage

After the storm, Entergy assesses damage to electric equipment to determine corrective actions

Power Plants

Power plants, the primary source of power production, are restored

Transmission Lines

Transmission lines are repaired, delivering power to cities, towns and major industrial facilities

Substations

Substations are brought online; this is where voltage is lowered.

Emergency Services

Power is restored to emergency services, life-support facilities, police and communications networks

Homes & Businesses

Power is restored to areas with the largest number of homes and businesses

Individual Services

Individual services, often the most time-consuming repairs, are restored last

 2021 marked 23 years in a row being recognized by EEI for emergency assistance and recovery

 Received more than 40 awards over those two-plus decades.

Wholesale Market Preparedness

Brent Chaney, Vistra



America's leading integrated energy company

Vistra (NYSE: VST) is a leading, integrated, Fortune 275 retail electricity and power generation company based in Irving, Texas, providing essential resources for customers, commerce, and communities. Vistra combines an innovative, customer-centric approach to retail with safe, reliable, diverse, and efficient power generation. The company brings its products and services to market in 20 states and the District of Columbia, including six of the seven competitive wholesale markets in the U.S. and markets in Canada, as well. Serving nearly 4.3 million residential, commercial, and industrial retail customers with electricity and natural gas, Vistra is one of the largest competitive electricity providers in the country and offers over 50 renewable energy plans. The company is also the largest competitive power generator in the U.S. with a capacity of approximately 39,000 megawatts powered by a diverse portfolio, including natural gas, nuclear, solar, and battery energy storage facilities. In addition, the company is a large purchaser of wind power.

Power Plants*

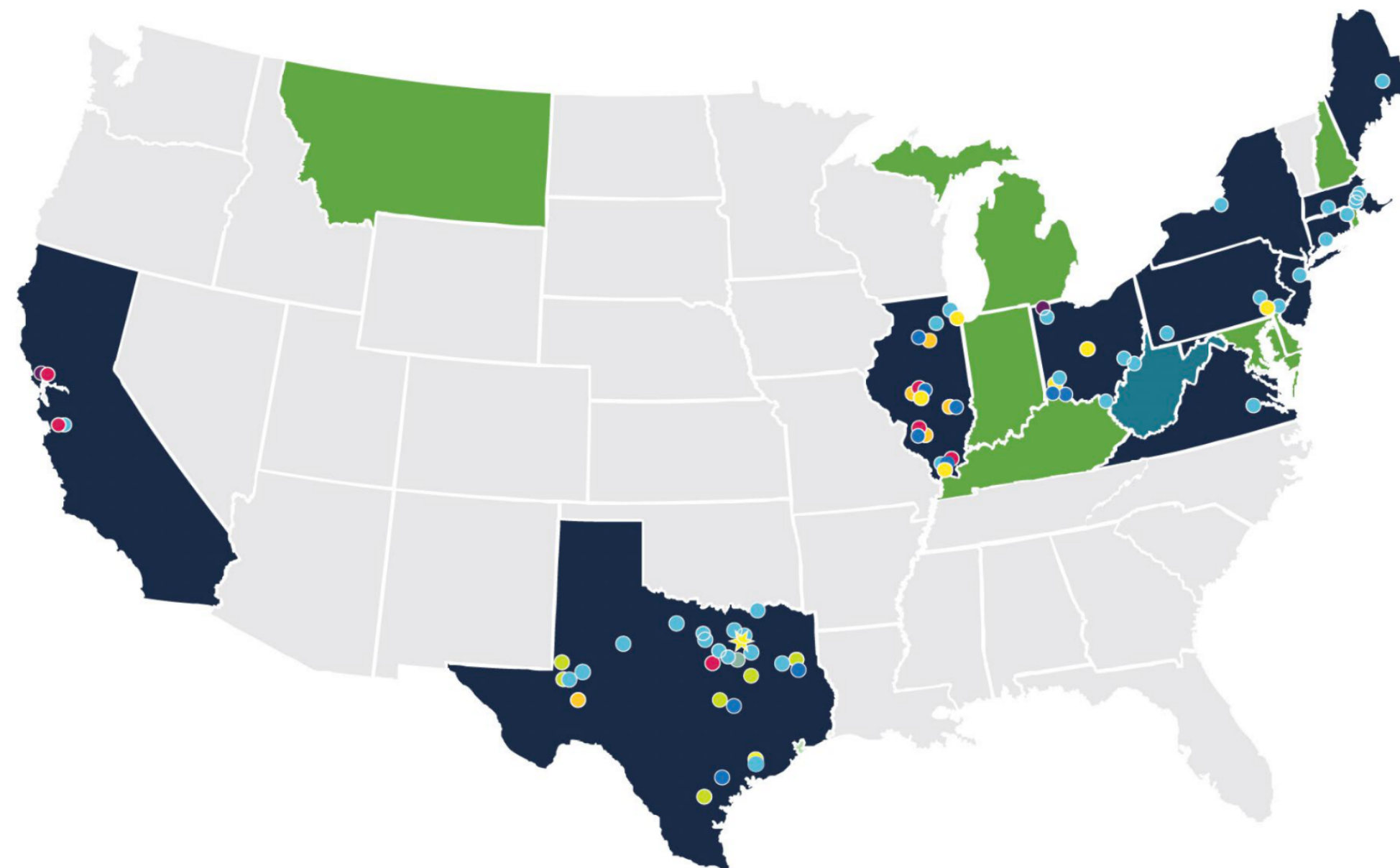
- Natural Gas
- Coal
- Other

Vistra Zero

- Nuclear
- Solar / Batteries
- Solar (under development)
- Batteries (under development)

Operations

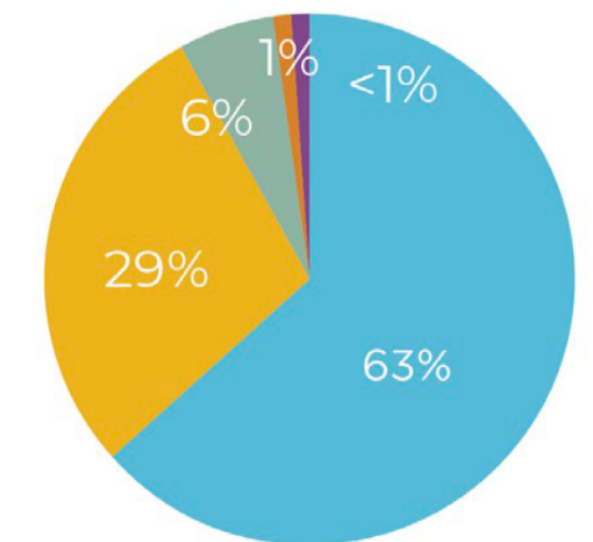
- Retail Operations
- Plant Operations
- Retail and Plant Operations
- Regional Office
- ★ Company Headquarters
- 🇨🇦 Retail Operations



*Note: Does not include plants previously announced to be retired.

~39 GWs Capacity ~174 TWh Generated

Generation by Capacity



■ Gas ■ Coal ■ Nuclear ■ Renewables ■ Other



Nearly 4.3 million
retail customers

across the United States

Combined premier retail and wholesale brands



HOMEFIELD
ENERGY



Luminant

Approximately 39,000 MW
generation capacity

enough to
power
20 million
homes



Retail Offices

Cincinnati, OH
Collinsville, IL
Columbus, OH
Houston, TX

Irving, TX
King of Prussia, PA
Oak Brook, IL



Committed to our customers, our communities,
and to operating our plants safely, reliably, and
in accordance with environmental standards.

www.vistracorp.com

Vistra Zero



From the world's largest battery energy storage facility to miles and miles of solar panels, Vistra Zero is bringing a zero-carbon future to life.

Vistra expects to grow its Vistra Zero portfolio to more than 7,000 MW by 2026.

SOLAR

Andrews Solar Facility
100 MW
Andrews County, TX

Angus Solar Facility
110 MW
Bosque County, TX

Brightside Solar Facility
50 MW
Live Oak County, TX

Emerald Grove Solar Facility
108 MW
Crane County, TX

Forest Grove Solar Facility
200 MW
Henderson County, TX

Oak Hill Solar Facility
200 MW
Rusk County, TX

NUCLEAR

Comanche Peak Nuclear Power Plant
2,300 MW
Somervell County, TX

ENERGY STORAGE

DeCordova Energy Storage Facility
260 MW
Hood County, TX

Edwards Energy Storage Facility
37 MW
Peoria County, IL

Havana Energy Storage Facility
37 MW
Mason County, IL

Joppa Energy Storage Facility
37 MW
Massac County, IL

Moss Landing Energy Storage Facility
750 MW/3,000 MWh
Moss Landing, CA

Oakland Energy Storage Facility
36.25 MW/ 145 MWh
Oakland, CA

SOLAR + ENERGY STORAGE

Baldwin Solar & Energy Storage Facility
68 MW solar; 9 MW battery
Randolph County, IL

Coffeen Solar & Energy Storage Facility
44 MW solar; 6 MW battery
Montgomery County, IL

Duck Creek Solar & Energy Storage Facility
20 MW solar; 3 MW battery
Fulton County, IL

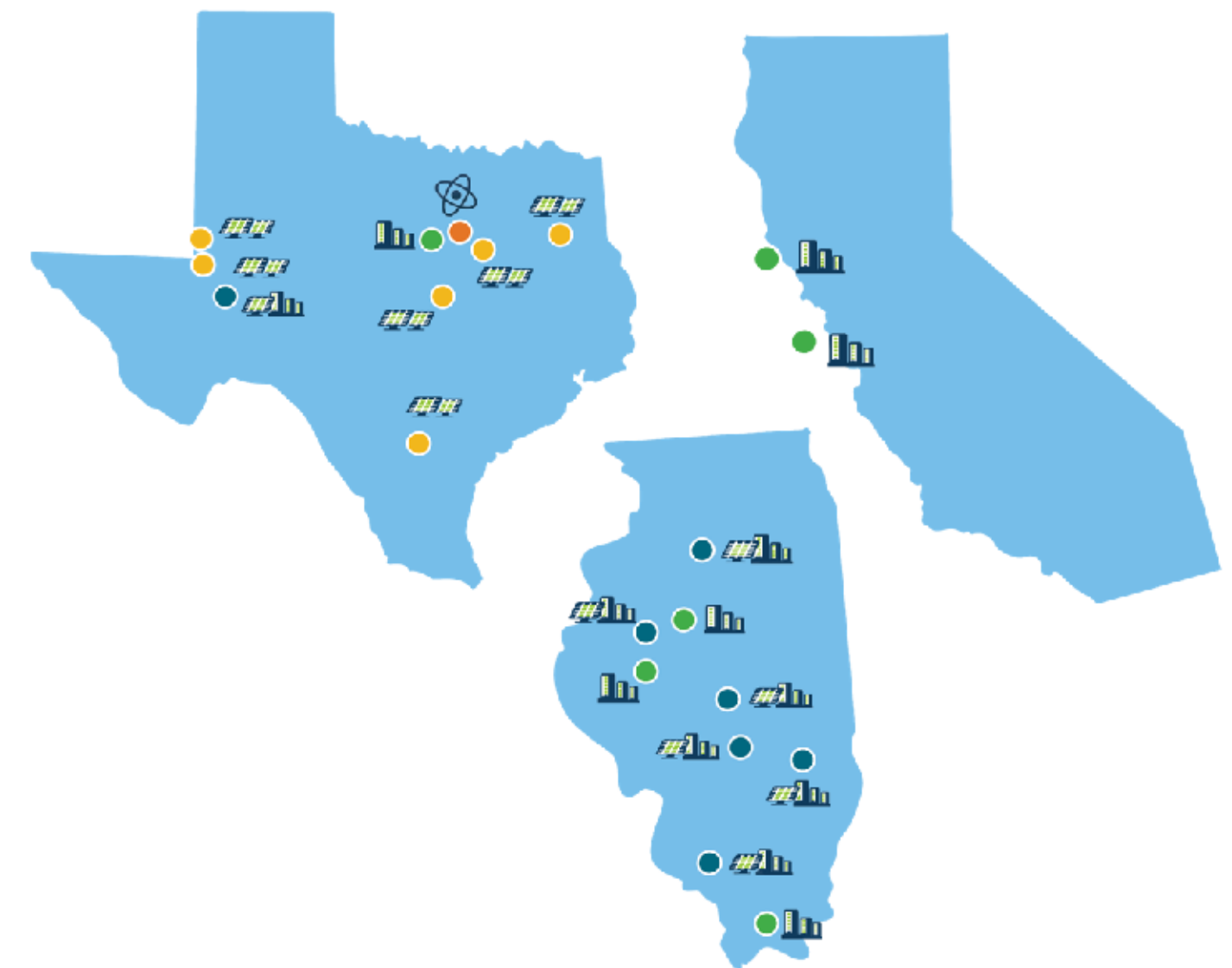
Hennepin Solar & Energy Storage Facility
50 MW solar; 6 MW battery
Putnam County, IL

Kincaid Solar & Energy Storage Facility
60 MW solar; 8 MW battery
Christian County, IL

Newton Solar & Energy Storage Facility
52 MW solar; 7 MW battery
Jasper County, IL

Upton 2 Solar & Energy Storage Facility
180 MW solar; 10 MW/42 MWh battery
Upton County, TX

List includes publicly announced projects under development



Summary of Recent ERCOT Reports

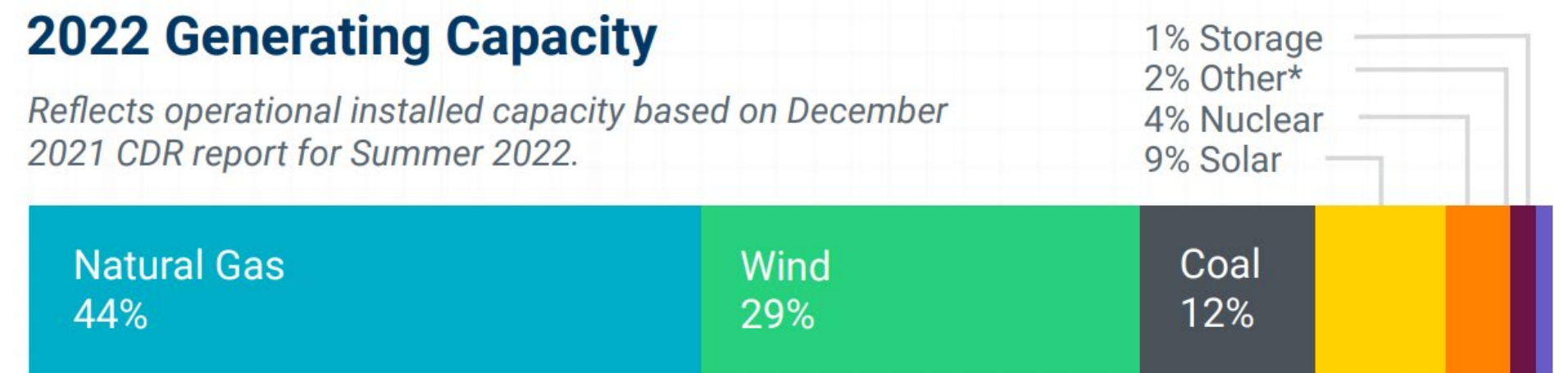
Seasonal Assessment of Resource Adequacy (SARA) Capacity, Demand and Reserves (CDR) Report

- Summer 2022 peak demand of 77,317 MW and resource capacity of 91,392 MW.
- Summer capacity reserve margin of 22.9%. Significantly above previous years.
- Capacity Factors for renewables: 57% for coastal wind, 30% for panhandle wind, 20% for other wind, 81% for solar, and 0% for battery.



2022 Generating Capacity

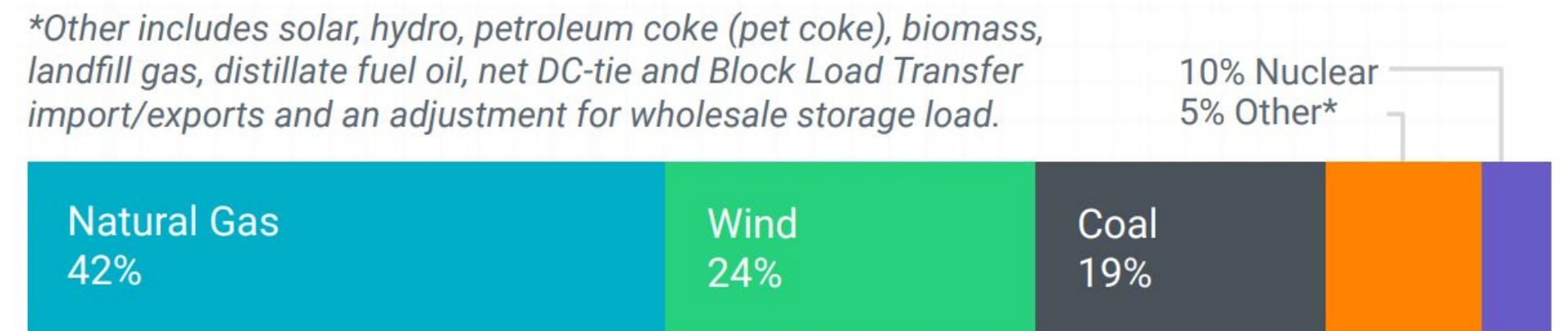
Reflects operational installed capacity based on December 2021 CDR report for Summer 2022.



*Other includes hydro, biomass-fired units and DC tie capacity

2021 Energy Use

*Other includes solar, hydro, petroleum coke (pet coke), biomass, landfill gas, distillate fuel oil, net DC-tie and Block Load Transfer import/exports and an adjustment for wholesale storage load.



393 billion kilowatt-hours of energy were used in 2021, a 2.87 percent decrease compared to 2020.



Generation Preparations for Summer

- Impacts of conservative ERCOT approach
- Difference between preparing for summer compared to winter
- Most seasonal maintenance has been completed
- Planned outage window March to mid-May
- Early extreme heat impact on summer preparedness



Midlothian Power Plant



Summer Preparedness in the Retail Market

Bill Clayton, NRG Energy



Reliant powers, protects and simplifies life by bringing electricity, security and related services to homes and businesses across Texas. Serving customers and the community is at the core of what we do, and the company is recognized nationally for outstanding customer experience. Reliant is part of NRG, a Fortune 500 company that creates value by generating electricity and providing energy solutions to nearly 6 million residential, small business and commercial customers across the U.S. and Canada. NRG's competitive residential electricity business, which includes Reliant, is one of the largest in the country.



➤ Summer and Storm Resources

➤ Innovative Solutions

➤ Year-Round Assistance

Summer and Storm Specific Resources

Summer Communications and Conservation Messages

Messages are sent in English and Spanish on multiple platforms and provide energy usage tips and account management tools to help customers control their usage.

Beat the Heat Program

This summer marks the 17th year that Reliant will provide cooling centers and distribution of portable cooling devices in Corpus Christi, Dallas and Houston to help residents stay cool and combat high heat exposure. Energy agents are also on hand to answer questions about bills and energy assistance options.

Storm Center

Reliant's Storm Center serves as a digital information bank where customers can access a host of helpful information, such as hurricane checklists, instructions on accessing real-time weather updates through their phone, traffic and evacuation routes, and power outage information.



Innovative Customer Solutions

The competitive electric market in Texas is over 20 years old and competition is robust

Retail Electric Providers (REPs) in ERCOT are constantly creating new products and services based on customer demand

Reliant provides product offerings that mitigate summer bill stress, protect customers from price spikes and connect them with causes they care about. Examples include:

Predictable Bill Plus – A flat rate 12-month contract perfect for predictability during the summer months for customers with average levels of usage

Degrees of Difference Program – Our flagship demand response program where customers earn incentives by reducing their usage at peak times. The program involves either automatic (with Smart Thermostat) or manual adjustment to the customer's thermostat, which customers can override at any time

Baby Power/Heart Power – Reliant offers plans to connect our customers to causes they care about. Baby Power includes a donation from Reliant to March of Dimes and Heart Power includes a donation from Reliant to the American Heart Association

"I love how you can get weekly usage and know what your estimated bill is going to be. This way you have better control of your electric bill."



Year-Round Customer Assistance

Energy Management Tools for Our Customers

To help customers manage their usage, we offer weekly email summaries. We also stay in touch with our customers by having 24/7 customer service by phone, social media, app, and chat

Reliant also offers real-time virtual energy consultations with dedicated agents who help the customer identify ways to conserve based on their actual situations

Bill Payment Assistance

Reliant along with all other NRG REPs, provide several bill payment assistance options, including payment extensions, deferred payment plans, average monthly billing, pick your due date, and direct connection to 211

Reliant CARE Program and Additional Payment Assistance. The CARE (Community Assistance by Reliant Energy) program works with nonprofit agencies to assist residential customers, including seniors and low-income families, with paying their Reliant electricity bills. Since 2002, Reliant and its customers have contributed more than \$12 million through the CARE program for Texans who need help with their electricity bills



How to Reach Us



AECT.net



@aectnet



AECT Advocacy

