

WELCOME

Judith Talavera, AEP Texas President & COO



GROWTH IN THE AEP TEXAS TERRITORY

Chad Burnett, AEP Texas VP Finance & Regulatory





AEP Texas Service Territory

- AEP Texas is the fastest growing utility¹ in the fastest growing state² in the nation.
- Size of Service Territory: 97,000 square miles (larger than 40 US states)
- AEP Texas also has the largest coastal access in the state.
- Laredo, TX now the top port city in the US³.
- Port of Corpus Christi is the fastest growing major port over the last decade³.
- AEP Texas serves portions of the Permian and Eagle Ford shale plays.

1,132,000
954,000
157,000
25
12,000

Major Industries Served

- Petroleum Products
- Chemical Manufacturing
- Oil & Gas Extraction
- Pipeline Transportation
- Primary Metal Manufacturing
- Data Centers





¹ Based on reported GWh sales from utilities Annual 10-K filing with SEC.

² Texas leads the nation in number of jobs added and population increase since before the pandemic.

³ Forbes, Dec 30, 2023 "Top 10 Fastest Growing Ports in United States Over the Last Decade" Ken Roberts.

Texas Has a Competitive Advantage

FERC vs ERCOT Transmission Planning Process

Load (6-12 months)

Generation (6-24 months)

Transmission (3-6 years)

Source: ERCOT

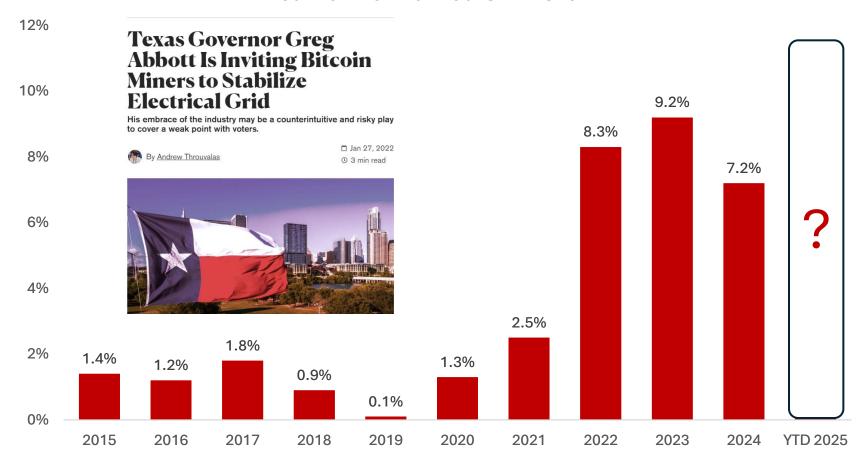


Texas has a competitive advantage to attract new businesses and industries to our diversified economy over other FERC jurisdiction RTOs.



Are We Slowing Down?

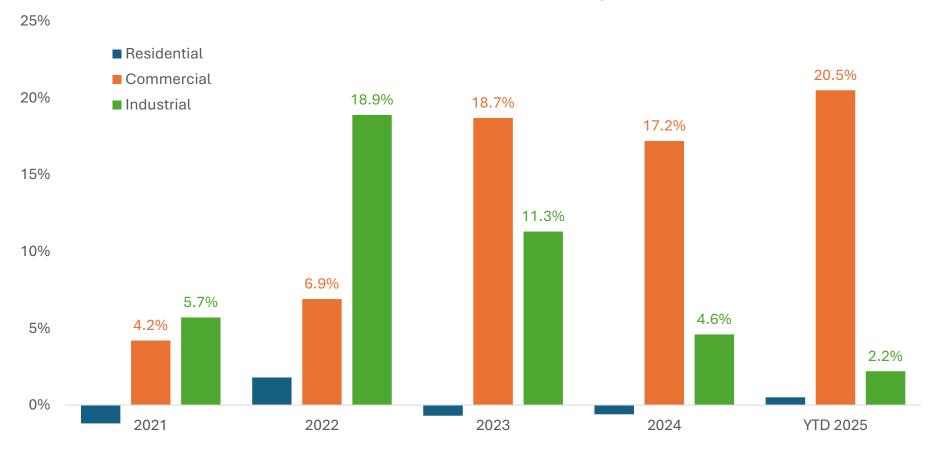
Weather Normalized GWh Growth





Primarily in Commercial and Industrial

AEP Texas Normalized Growth by Class





Fun With Numbers (Update)

Last Year

~ 7,500 MW

All-time Peak Demand

~ 11 500 M/M

+ Signed LOAs w/ Customers ~ 11,500 MW

+ Customers Requesting LOAs ~ 9,800 MW

Potential Load by 2035

~ 28,800 MW

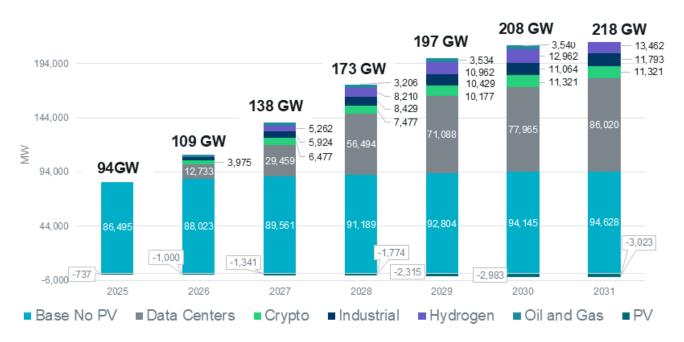


This Year



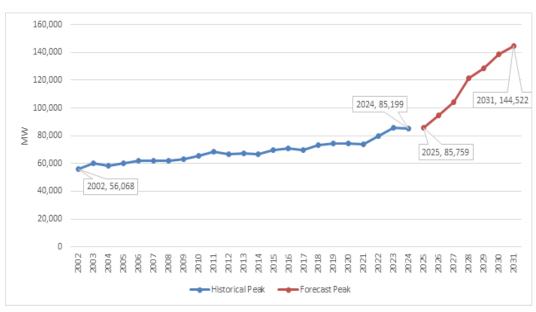
Load Growth Across ERCOT

TSP Provided Peak Demand Forecast



	2025	2026	2027	2028	2029	2030	2031
Data Centers	3,717	12,733	29,459	56,494	71,088	77,965	86,020
Crypto	1,868	3,975	6,477	7,477	10,177	11,321	11,321
Industrial	973	2,757	5,924	8,429	10,429	11,064	11,793
Hydrogen	5	357	5,262	8,210	10,962	12,962	13,462
Oil and Gas	1,334	2,186	2,851	3,206	3,534	3,540	3,606
PV	-737	-1,000	-1,341	-1,774	-2,315	-2,983	-3,023

ERCOT Adjusted Peak Demand Forecast

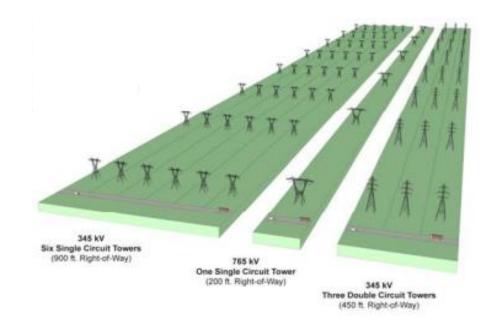


ERCOT is projected to nearly double its load by the end of the decade.



Time to Upgrade – Benefits of 765 kV System

- 765 kV transmission is a proven technology. AEP has built, owned, and operated 765 kV transmission lines in PJM for over 50 years.
- One 765 kV line can carry the equivalent power of six 345 kV lines or three double-circuit 345 kV lines.
- 765 kV system is significantly more efficient, which reduces losses on the system and requires less generation to serve the same demand.
- Significantly smaller Right-of-Way required to deliver the same amount of electricity with a 765 kV system (less disruptive to Texas landowners).
- This could result in a <u>faster process</u> (regulatory efficiency) than the traditional 345 kV approach.
- Lower capital cost per MW-mile for 765 kV system compared to 345 kV.
- Less sensitive to specific location of generating facilities to operate efficiently.
- With six conductors per phase, 765 kV lines significantly <u>reduce the risk</u> of thermal overload that exists with lower voltage lines.





Positioned to Extend the Texas Miracle



Public Utility Commission of Texas

1701 N. Congress, P.O. Box 13326, Austin, TX 78701

News Release April 24, 2025 Contact: Ellie Breed Media@PUC.Texas.Gov

PUCT Approves Plan for the First Extra High Voltage Transmission Lines in ERCOT Region

New Lines to Transport Power to the Energy-Rich Permian Basin

AUSTIN, Texas - In a landmark decision, the Public Utility Commission of Texas (PUCT) today approved a plan to build the Electric Reliability Council of Texas (ERCOT) region's first extra high voltage transmission lines to meet the Permian Basin's rapidly growing power needs.

"The PUCT is fully committed to building an ERCOT grid that will serve Texans reliably for decades to come," PUCT Chairman Thomas Gleeson said. "Extra high voltage lines are more efficient and strengthen reliability. Because each line can carry more power, fewer lines are necessary to serve the needs of the Permian Basin Region, meaning less disruption to Texas landowners, natural habitats, and landscapes. Our priority now is ensuring utilities execute these projects quickly and at the lowest possible cost to Texas consumers."

House Bill 5066, passed by the Texas Legislature in 2023 and signed into law by Gov. Greg Abbott, required the PUCT to approve an electric reliability plan for the Permian Basin region to support the on-going expansion and electrification of Texas' oil and gas industry and the growing electricity needs of West Texas communities. That plan was approved in Oct. 2024. The next step was determining whether to build it out with new, more efficient extra high voltage (765 kilovolts) transmission lines or the standard 345-kilovolt transmission lines currently in use throughout the ERCOT grid.

The Permian Basin reliability plan is the first step in a <u>broader effort mandated by the Legislature and Gov. Abbott</u> to evaluate transmission and distribution systems across the ERCOT grid and identify where improvements are needed to support the state's rapid growth and ensure long-term electric reliability.

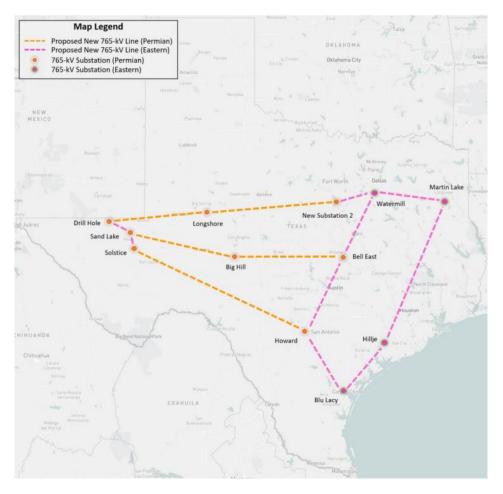
The PUCT's approval of the Permian Basin reliability plan follows a full analysis of the costs, equipment supply chains, and project completion timelines of both voltage options. Additionally, the PUCT and ERCOT hosted six workshops to gather input from members of the public, equipment manufacturers, and the transmission service providers (TSP) who will build and operate the new lines.

"The PUCT is fully committed to building an ERCOT grid that will serve Texans reliably for decades to come".

The Permian Basin reliability plan is the first step in a broader effort mandated by the Legislature and Gov. Abbott to evaluate transmission and distribution systems across the ERCOT grid and identify where improvements are needed to support the state's rapid growth and ensure long-term electric reliability.



Texas 765 kV STEP (Strategic Transmission Expansion Plan)



- On April 24, 2025, the Commission approved the first 765 kV lines to meet the growing electricity needs of the Permian Basin with the goal of having the 3 lines in-service by 2030.
- As part of the 2024 Regional Transmission Plan (RTP), ERCOT identified the 765 kV STEP plan to provide an extra high voltage backbone that would address the growth and reliability needs of the state.
- In July 2025, AEP Texas, Oncor, CenterPoint, and CPS Energy submitted the Eastern Backbone Project of the 765 kV STEP for approval through the ERCOT Regional Planning Group (RPG) process.



Key Updates from 89th Legislative Session (2025)

- **SB 6** provides structure to large load interconnection process. Includes minimum requirements to connect new large loads and provisions to ensure new loads are paying their fair share of transmission costs.
- **HB 143, HB 144, SB 1789 & HB 145** combined are a suite of bills to address wildfire risk in Texas. They address inspections, maintenance reports, and a requirement by utilities to develop a Wildfire Mitigation Plan that must be approved by the Commission.
- **SB 1664** includes new reporting requirements for utilities to provide increased transparency for rate adjustments.
- **HB 5247** provides certain ERCOT utilities the opportunity to consolidate six existing recovery filings into a single annual filing.









REGULATORY UPDATES

Jennifer Frederick, Director Regulatory



TOPICS:

- 1. System Resiliency Plan
- Application for Approval of a Single Unified Tracking Mechanism (UTM)
- 3. Rulemakings
- 4. CCNs



System Resiliency Plan (Docket No. 57057)

Resiliency Measure(s)	Estimated Capital Costs	Estimated O&M
Measure 1: Distribution Feeder Hardening (Rebuild)	\$81.1 million	\$6.1 million
Measure 2: Lateral Hardening (Rebuild)	\$150.1 million	\$11.3 million
Measure 3: Crossing Upgrades	\$6.9 million	\$0.5 million
Measure 4: Resiliency Vegetation Trimming	N/A	\$32.3 million
Measure 5: Wildfire Mitigation – Vegetation Intelligence	N/A	\$4.2 million
Measure 5: Wildfire Mitigation – Supervisory Control And Distribution Automation (SCADA) Expansion (Limited to Substations in Wildfire Mitigation Zones (WMZ))	\$13.87 million	\$0.07 million
Measure 5: Wildfire Mitigation – Drone Technology (Limited to WMZ North and WMZ West as Detailed in Response to Staff 1-13)	\$8.09 million	\$3.09 million



Application for Approval of a Single Unified Tracking Mechanism (Docket 58315)

- Requests approval of the following:
 - Proposed Rider DCRF
 - Proposed Rider TCRF
 - Proposed Open Access Transmission Tariff (OATT)



Monthly Rates Report to the PUC

			Central			*North
Class	Charges	Unit	Cur	rent Charge	Cur	rent Charge
	Customer Charge	per Customer per Month	\$	1.27	\$	1.27
Residential	Metering Charge	per Meter per Month	\$	1.97	\$	1.97
	Volumetric Charge	per kWh	\$	0.061	\$	0.059
Average Residential Customer Bill (500 k	Wh)	Per Month	\$	33.40	\$	32.74
Average Residential Customer Bill (1,000	kWh)	Per Month	\$	63.59	\$	62.26
Average Residential Customer Bill (2,000	kWh)	Per Month	\$	123.97	\$	121.31
	Customer Charge	per Customer per Month	\$	1.45	\$	1.45
1 ,	Metering Charge	per Meter per Month	\$	4.21	\$	4.21
	Volumetric Charge	per kWh	\$	0.045	\$	0.043
	Customer Charge	per Customer per Month	\$	2.28	\$	2.28
	Metering Charge	per Meter per Month	\$	19.72	\$	19.72
Secondary > 10 kW 4CP	Volumetric Charge's	per kWh	\$	0.000733	\$	0.000733
	Dist Demand Charge's	per Distribution kW	\$	8.177570	\$	7.926116
	Trans Demand Charge's	per 4CP	\$	5.467657	\$	5.467657
Secondary > 10 NCP	Customer Charge	per Customer per Month	\$	2.28	\$	2.28
	Metering Charge	per Meter per Month	\$	19.72	\$	19.72
	Volumetric Charge's	per kWh	\$	0.000733	\$	0.000733
	Dist Demand Charge's	per Billing kW	\$	8.177570	\$	7.926116
	Trans Demand Charge's	per NCP	\$	4.375157	\$	4.375157

^{**}Charges do not include % of revenue factor based charges. However, they were incorporated into the Average Residential Customer Bill examples.



Rulemakings

- Project No. 57743: Review of Energy Efficiency Rules
- Project No. 56789: Transmission and Distribution Wildfire Mitigation Plans and Self-Insurance Plans
- Project No. 57928: Electric Service Emergency Operations Plans









RESILIENCY

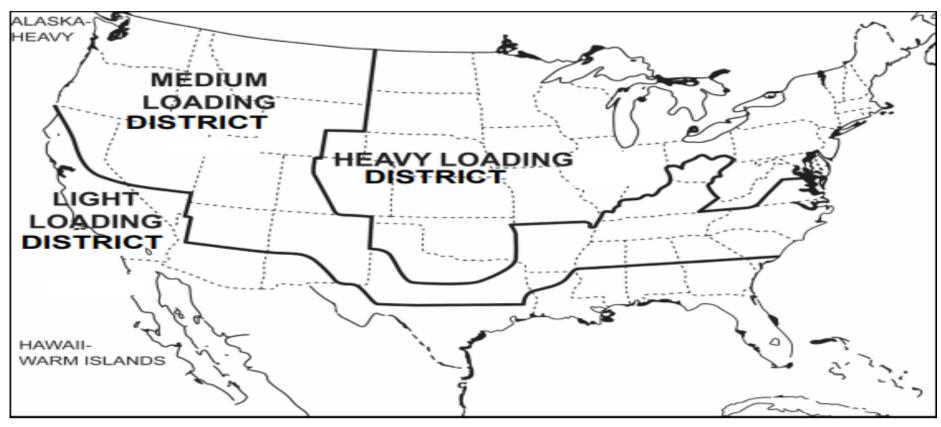
Mark Baker, Director Distribution Engineering



Resiliency Plans at AEP Texas

- Our current Resiliency Journey started in 2014 following super storm Sandy.
- In 2014, AEP made a commitment to our customers to build an electrical system that was more resilient, one that would rise above the minimum required design standards of the National Electric Safety Code (NESC).
- AEP Texas started designing structures with Heavy or Light ice loadings and applying higher wind speeds to the entire pole.

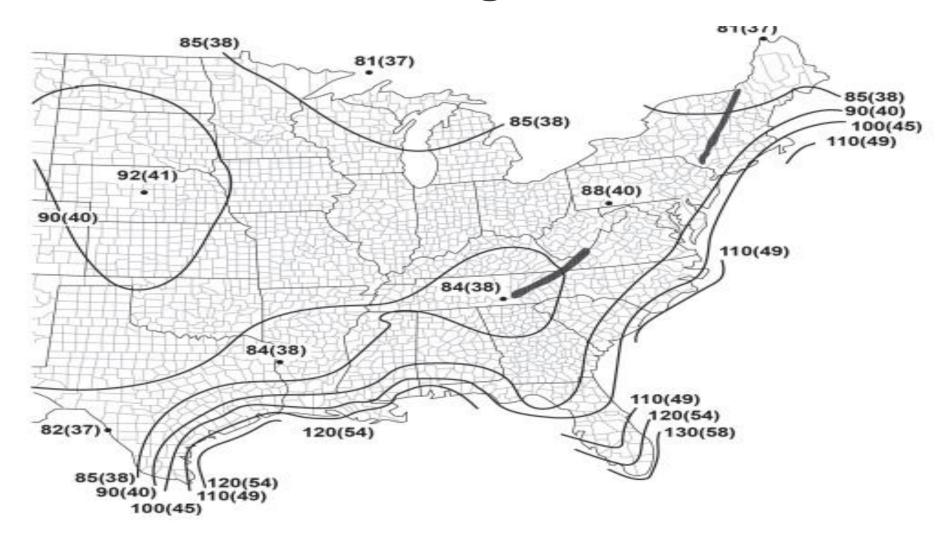
NESC ICE Loading



The Warm Island Loading District includes American Samoa, Guam, Hawaii, Puerto Rico, Virgin Islands, and other islands located from latitude 25 degrees south through 25 degrees north.

Figure 250-1—General loading map of United States with respect to

NESC Wind Loading



Texas advancement in Resiliency

- In 2023 the Texas Legislature passed HB2555 which encouraged electric utilities to file Resiliency Plans to the Texas Public Utility Commission to prevent, withstand, mitigate or more promptly recover from resiliency events.
- AEP Texas currently has a plan before the Commission to rebuild approximately 433 miles of power lines, replacing approximately 16,000 structures over 3 years.
- The plan also includes additional vegetation management on 218 Distribution feeders and the use of technologies to mitigate wildfires.
- This acceleration of our Resiliency efforts will be an additional investment of approximately \$310M over the next 3 years. Estimated impact of \$1.45/month for average residential customer.

Bay City poles surviving Beryl



Ongoing commitment to Resiliency







OUTAGE MAPPING UPDATES

Omar Lopez, Director Corporate Communications



Texas Utilities Outage Map Requirements

Deadline: June 1, 2025

- Each utility must maintain an accurate and publicly available online outage tracker or outage map on its website.
- An online outage tracker or outage map must contain a map of the utility's distribution service territory that identifies:

	Location	of	the	outage.
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- ☐ The date and time the outage was reported or otherwise identified.
- □ An estimated restoration time.
- ☐ The general status of the restoration effort.
- ☐ The date and time the outage and restoration status information was most recently updated.
- ☐ Must be available in English and Spanish.



THREE Important Requirements!

- 1. If a utility's outage map is scheduled to be taken offline or may otherwise become unavailable due to maintenance or upgrades, the utility must post details of the scheduled activity on its website and provide notice of the scheduled activity to the commission's Consumer Protection and Critical Infrastructure Security and Risk Management divisions no later than seven days prior to the scheduled activity.
- 2. An outage tracker or outage map must provide or link to information that indicates the different methods a customer may use to report an outage or hazardous condition and provide or link to information on how a customer may request to receive updates on the status of outages and outage restoration efforts.
- 3. The outage tracker or outage map must include at least one digital means for a customer to report an outage to the utility.







Test Results

Discussing Results with the Customer After the Test

1. Troubleshooting:

If the instantaneous KW check indicates potential issues, discuss findings and possible implications for the customer's home.

2. Review Findings:

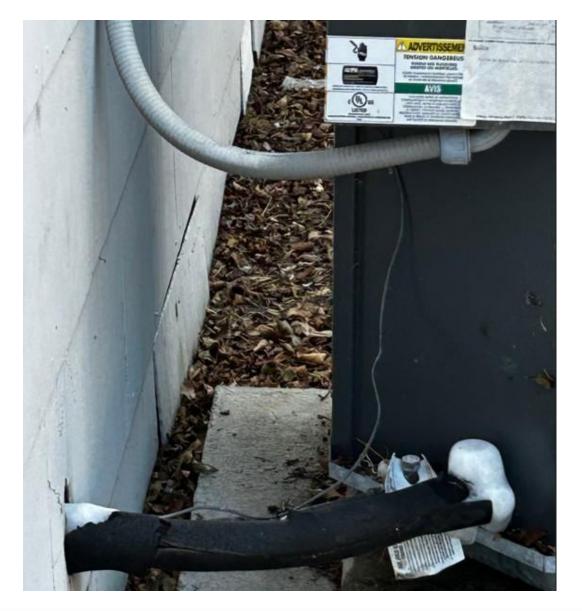
Summarize the results of the meter test, highlighting any discrepancies or issues identified during the checks.

3. Answer Questions:

Address any questions the customer may have regarding the results or their electric usage.

4. Documentation:

Provide the customer with a copy of the results, either by leaving a printed summary or sending it via text.



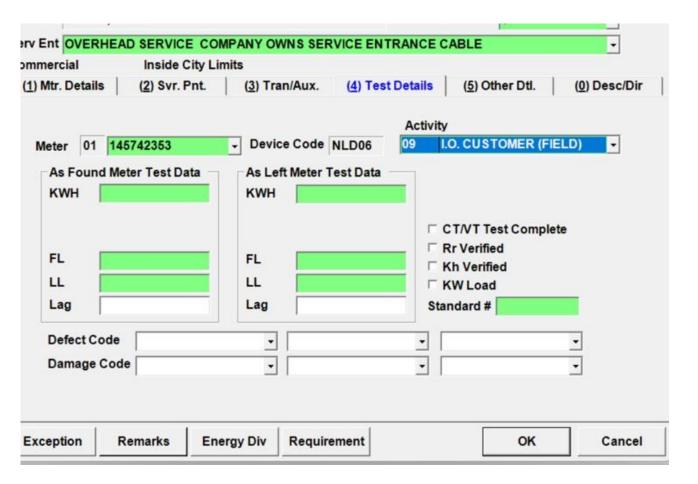


Test Results

Discussing Results with the Customer After the Test

1. Post Results:

Document the test results in the Spectrum system under the IO MTEST INSTR (IO 26) and FT MTR SC (MAMWAS DT 05) orders for compliance and future reference.















AEP Texas services area is approximately 97,000 square miles 44,609 of distribution lines

Five Districts

Abilene - Corpus Christi – Laredo -RGV San Angelo

Responsible for the delivery of electrical power to the consumers





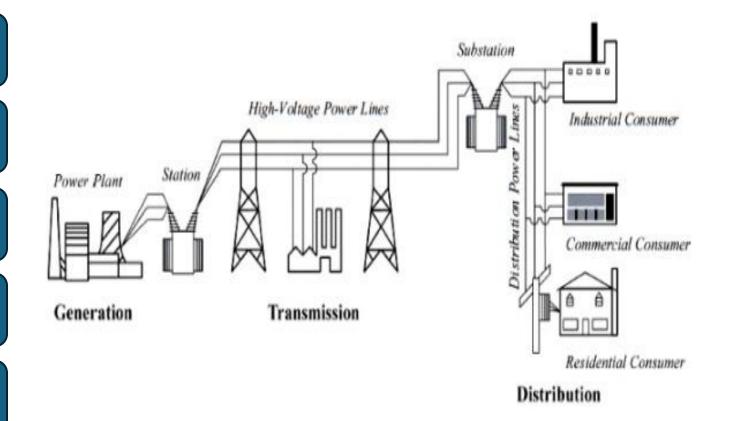
Generation

Transmission System

Substation

Distribution System

Consumer







Service Department

- First Responders
- Trouble Calls
- Maintenance Request
- Site Visits
- Connect & Disconnect Service
- Work alone
- Problem Solve
- Frequent interactions with customers





Construction Department

- Set poles
- Run New Spans of wire
- Install equipment to provide service
- Provide Power Restoration
- Establish new service for customers or upgrade to existing service to accommodate future growth
- Line Mechanics go to school for 4 years before they graduate
- Line Mechanics continue to learn with all the new technology







EARLY FAULT DETECTION

SYSTEM
Presenter(s):

Lawerence Garza

Jeff Edgemon





A System that uses radio-frequency (RF) sensors and advanced analytics to monitor power line conditions to detect potential failures before they cause outages or wildfires.



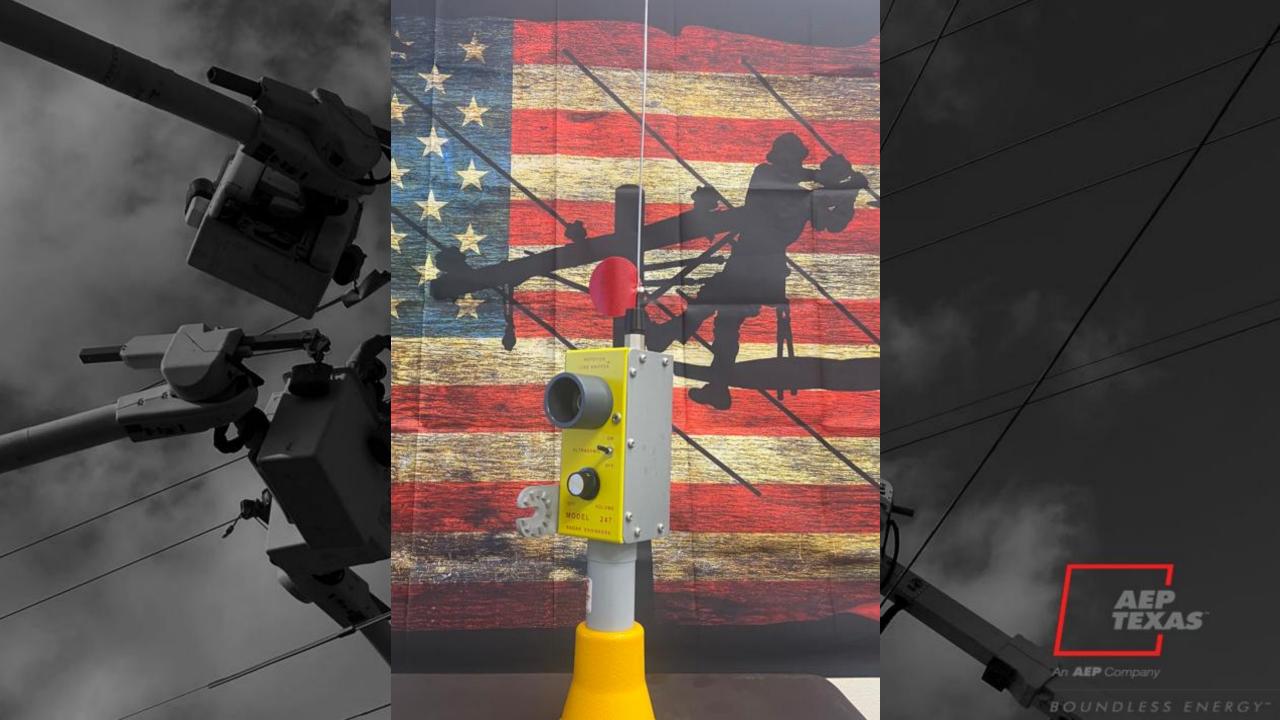


An AEP Company

BOUNDLESS ENERGY"



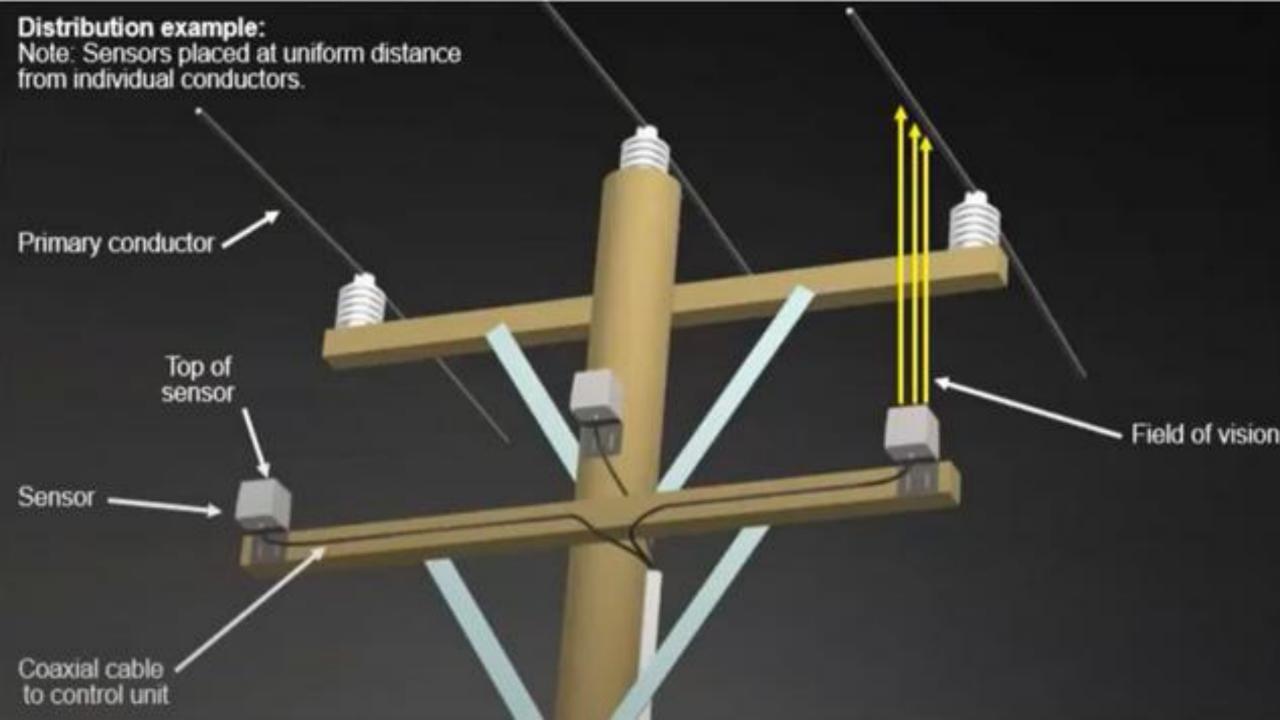


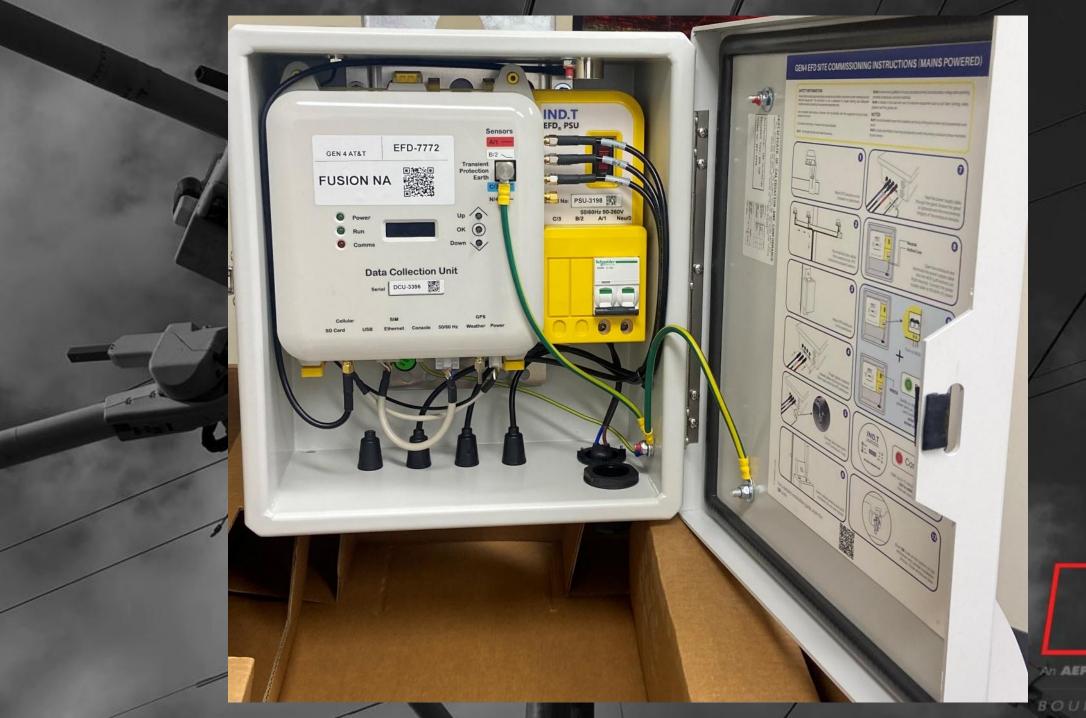


Early Fault Detection System INTELLEGENT NETWORK DIAGNOSTIC TECHNOLOGY (IND. T)

BOUNDLESS ENERGY









An AEP Company

BOUNDLESS ENERGY"







AEP Texas Asset Condition Intelligence Program

Patrick Rackley- AEP Texas Continuous Improvement Manager

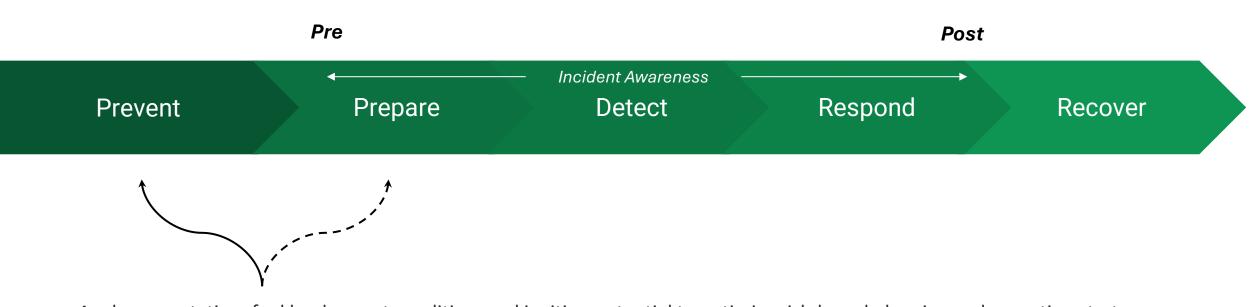
Vegetation Risks

Fuelscape

UAS / Machine Learning / AI



Where we focus when it comes to planning

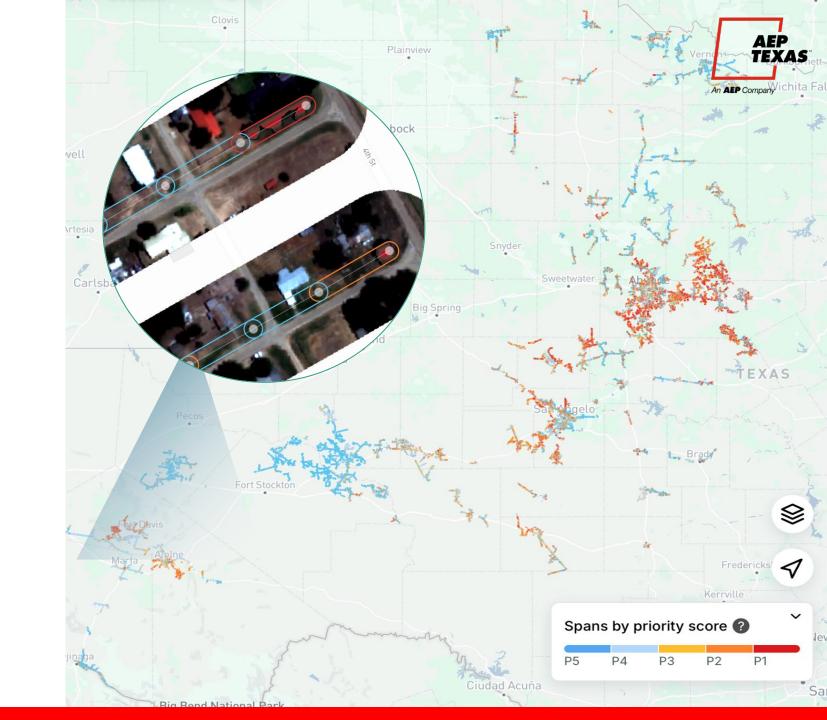


Analyze vegetation, fuel loads, asset condition, and ignition potential to optimize risk-based planning and execution strategy.

Current status:

Analyzed ~10,000 miles of vegetation intelligence in 2025

Team is actively working vegetation on prioritized spans



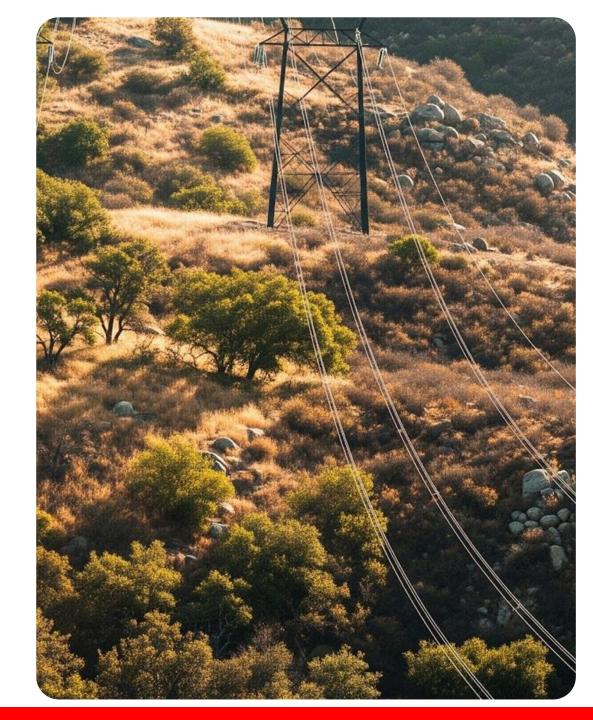
Classify risk at the span and tree level







Fuel ignition and spread risk intelligence





Modeling across 10k miles of line addresses key questions



Spark probability

What is the probability of vegetation or asset related spark?



Ignition probability

Once a spark is caused, what is the probability of that spark igniting nearby vegetation?

We think of this as "in ROW" fuel conditions



Spread potential

Once an ignition happens, what avenues does the fire have to spread?

We think of this as "outside ROW" fuel conditions

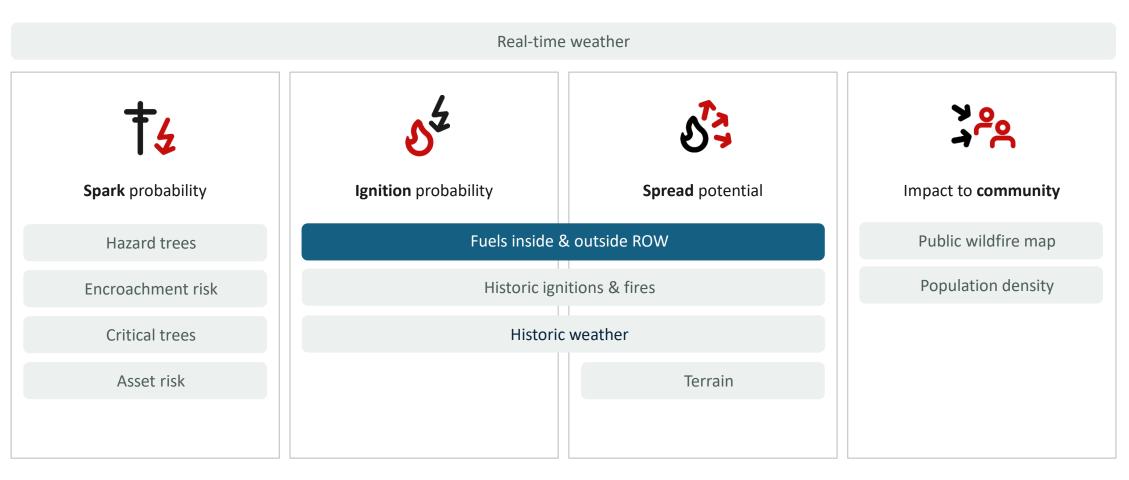


Impact to **community**

Once a fire spreads, how likely is it to have a significant impact on nearby communities?



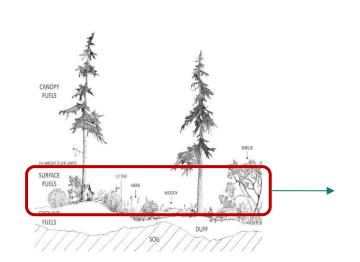
Fuel modeling informs ignition and spread probability, intensified by weather





Scientifically proven fuel classes to drive operations

Surface Fuels Classification

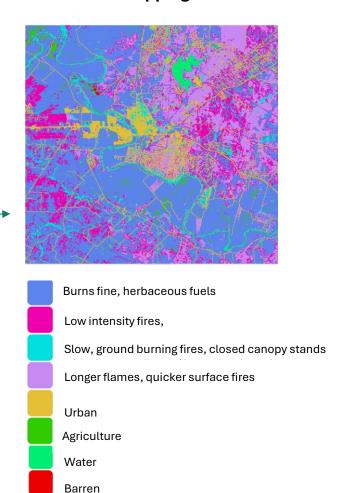


Ignition & Spread Risk

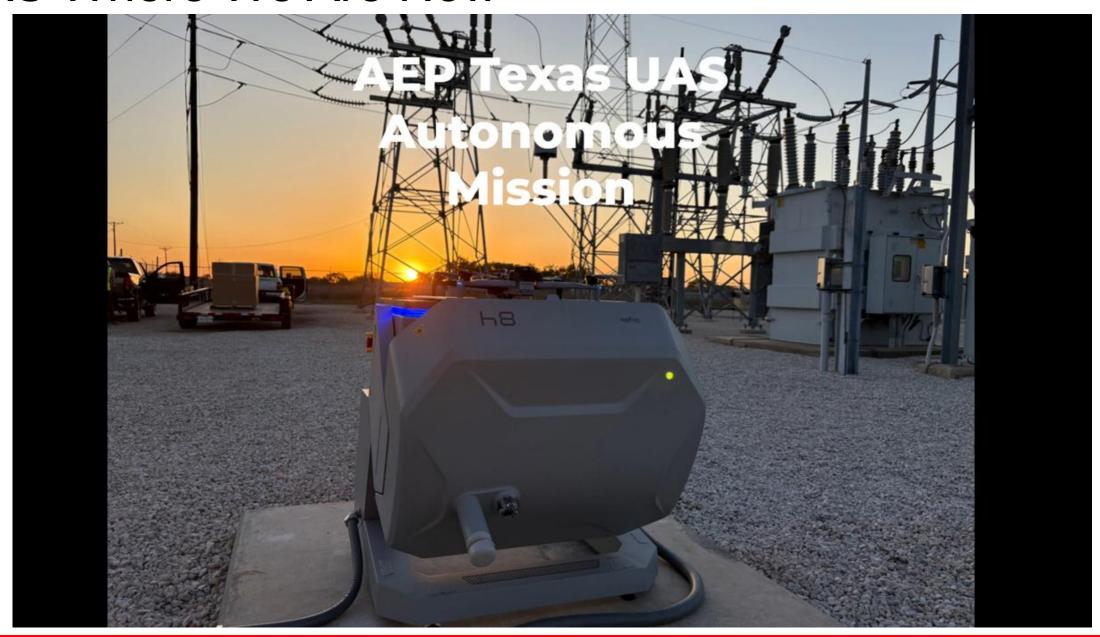
Fuel Class	Ignition Risk	Spread Risk
Grass	High	High
Shrub	Medium	High
Timber-Litter	Medium	Medium
Timber–Understory	Low	Low
Slash-Blowdown	Low	Low
Nonburnable	None	None

14 classifications of land cover, each with their own established and well studied fire risk

Fire Mapping



UAS Where We Are Now



Sentaero Dock Operations



Seamless Integration

Military grade docking station crafted to seamlessly integrate the Sentaero®

Maximum Efficiency

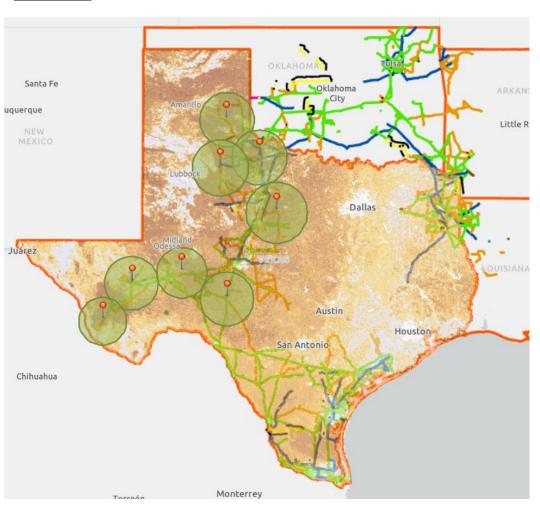
Smart charging, battery management, internal temperature control, & seamless data offload capabilities

On-Edge Processing

Eliminate wasted time and unnecessary costs spent processing in the cloud. Acquire and analyze on dock.



Locations



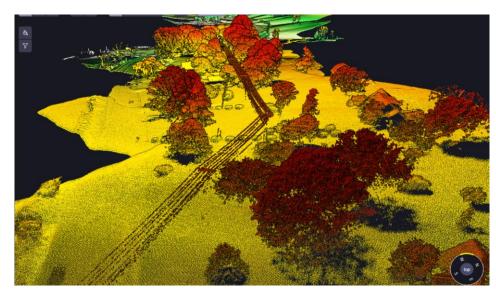
Distribution and Transmission

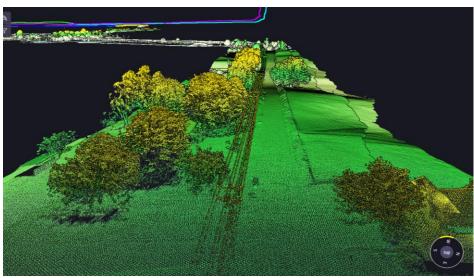


Acquire: Fly & collect asset data

Analyze: Identify system defects (HOW?)

Act: Mitigate identified issues





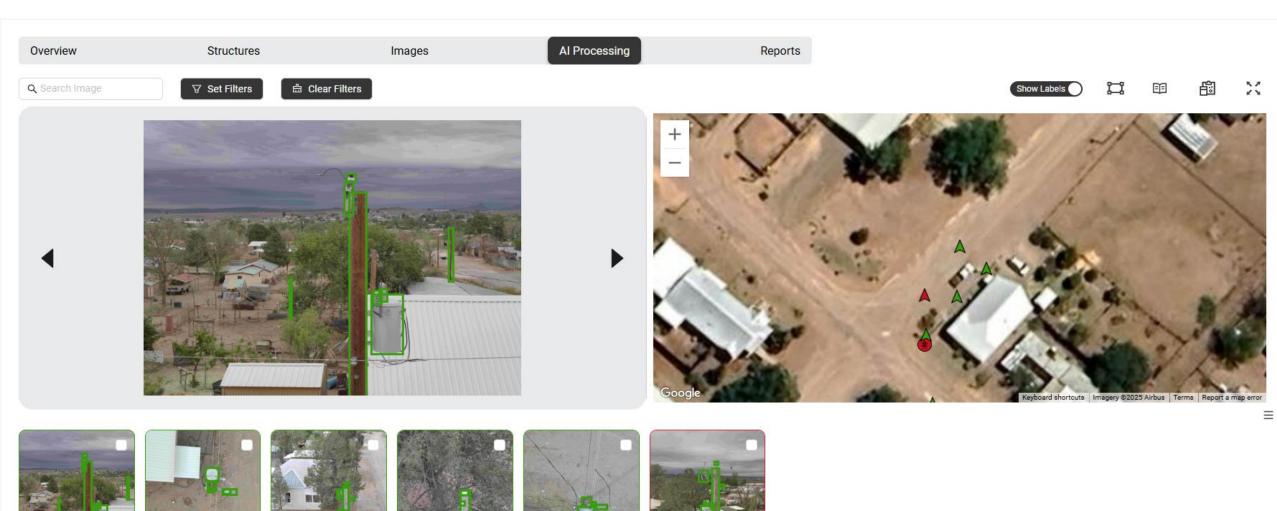
Asset Condition Detection

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R40EA0...2466.jpg





R40EA0...2474.jpg

R40EA0...2472.jpg

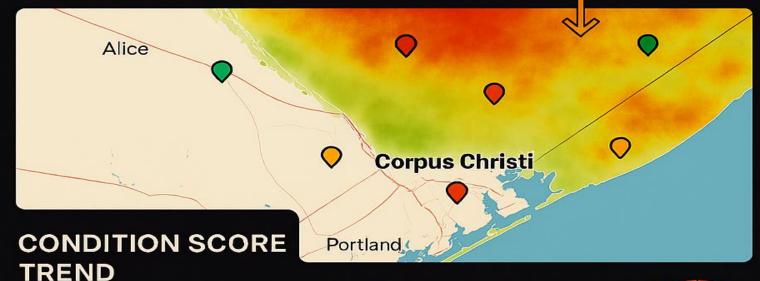
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ASSET CONDITION INTELLIGENCE

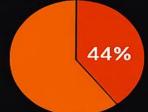
VEGETATION INTELLIGENCE

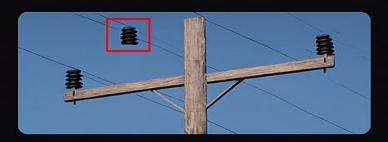
- Proximity
- Pensity
- Species risk



- Flammability
- Continuity
- Slope
 Condition Distribution







Asset 458680566646

Vegetation Proximity Score **7.6**

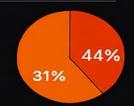
Fuelscape Score

5.8

Asset Health Condition Score

8.3

CONDITION SCORE TREND



Predictive Alerts

- Vegetation growth near asset
- High cond.
- Conditions conducive to fire

High cond:



TECHNOLOGY & SERVICE CENTER TOUR

Patrick Rackley, Continuous Improvement Manager Jeff Edgemon, Distribution System Supervisor Jesse Vasquez, Distribution System Supervisor Lawrence Garza, Line Mechanic A Isaac Hughes, Service Mechanic A





DER UPDATES

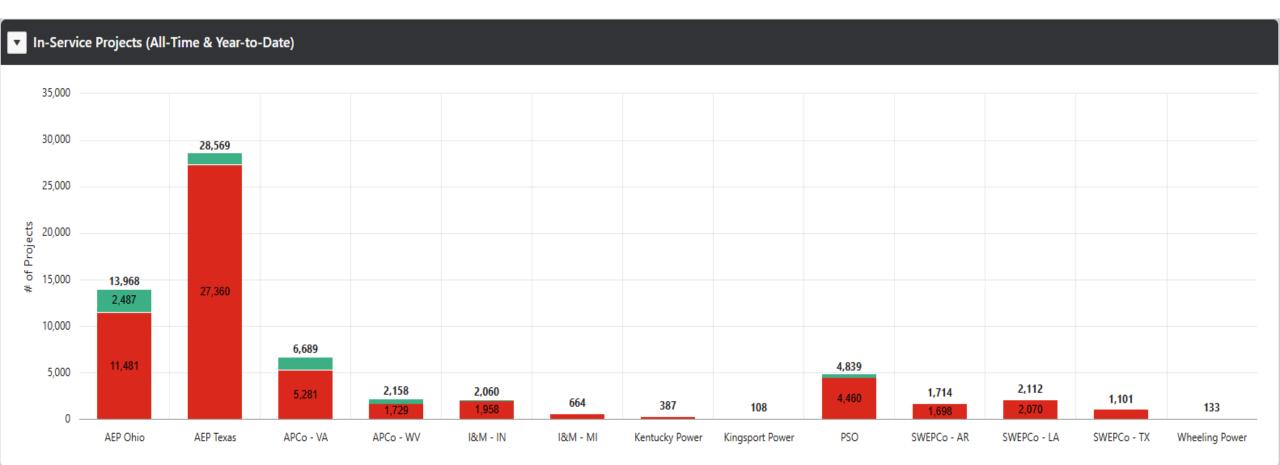
David Vignes, P.E., Alt Energy Resource Manager Rosalba Epps, Alt Energy Resource Coordinator Teri Garcia, Alt Energy Resource Coordinator Roel Pena, Engineer Principle



Agenda

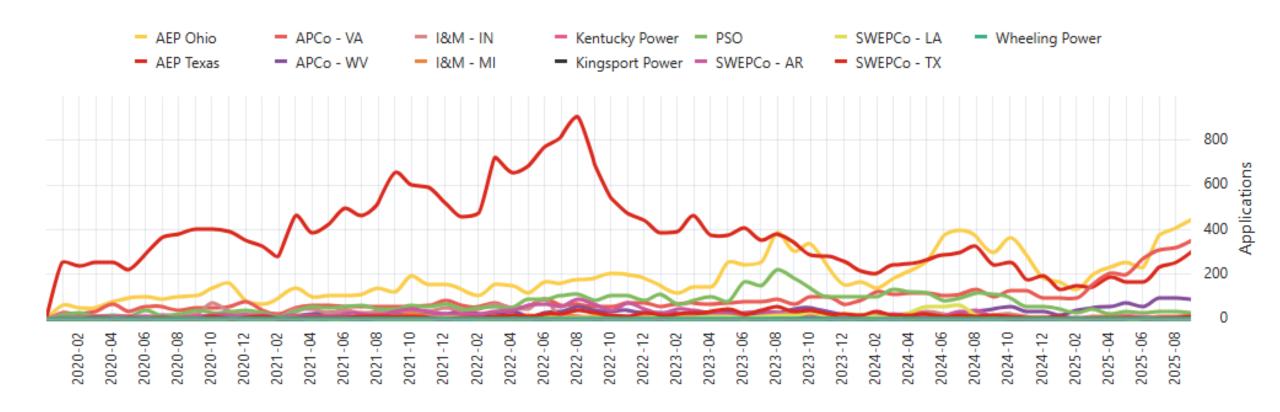


In-Service Projects (Total)

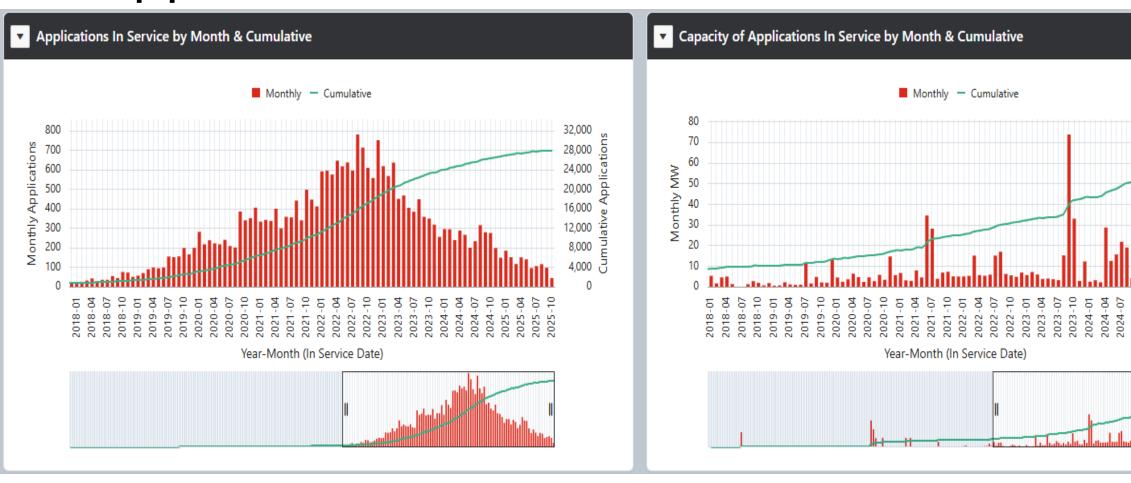


Applications Received by OpCo

Monthly Applications Received by OpCo



Applications In Service – AEP TX



1,200

1,050

750

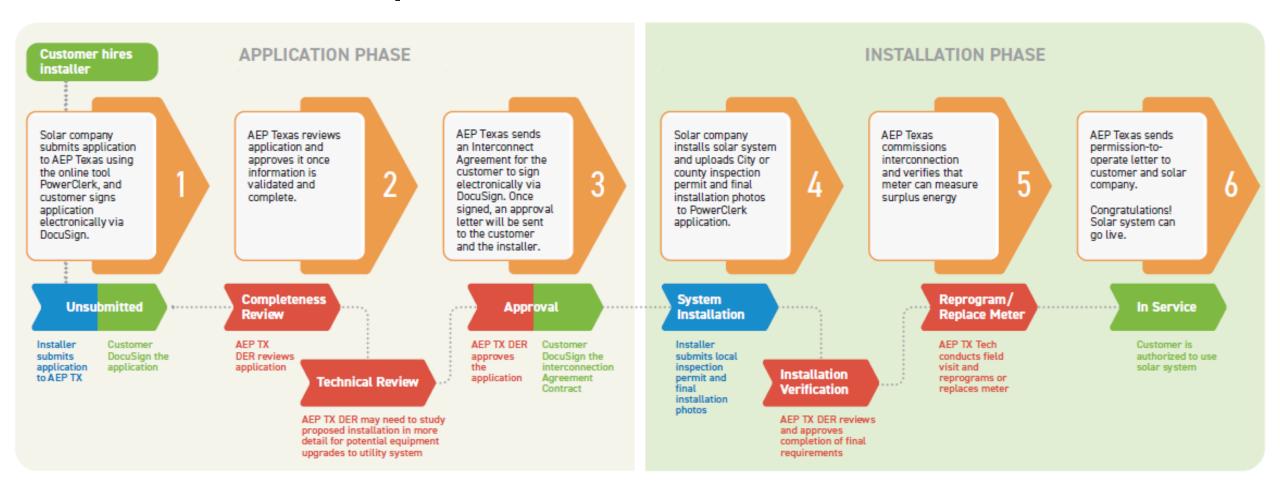
600 Vigan 200 Cumulativ

150

In Service Capacity by Fuel Type



Process Map



Large Projects vs Small Projects

Large projects

- Greater than 500 kW
- Requires an electrical impact study
- Batteries, Solar Farms, Large Industrial

Small projects

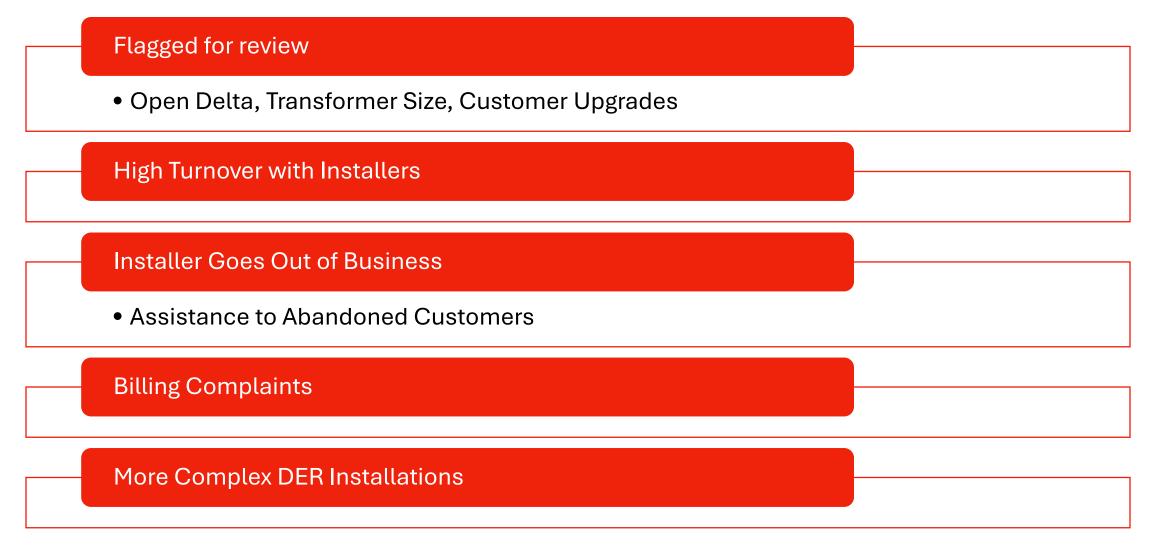
- Less than 500 kW
- Electrical Study typically not required
- Residential, Small Commercial

Large Projects





Small Projects - Challenges



Small Projects Self-Installing DER Customers

How are these systems identified:

- Utility Field Techs during routine maintenance visit to the premise
- Reverse rotation reported by the AMI meter, Revenue Protection Report
- REP advises customer to contact the Utility

Customers are not aware of the Utility DER Interconnection Application Process

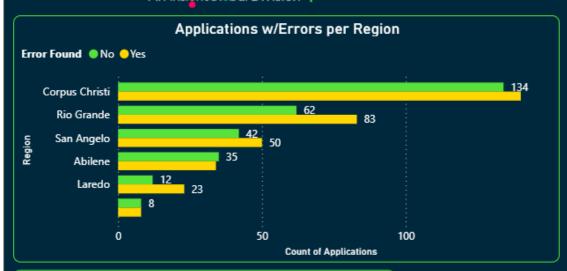
Customer has no means to isolate the DER System

• Installation of AC Disconnects presents an extra cost to customer, not considered at the time of installation.

Customer is told their system would not feedback into the grid

Customer refuses to comply with the Utility DER Interconnection Process

Uncooperative Customers







Contact Information

- Website
 - www.aeptexas.com/solar
- Email
 - der_aeptexas@aep.com
- DER Direct Phone Number
 - 361-881-5333

Additional Information

- www.aeptexas.com/solar
 - Solar Brochure
- www.aeptexas.com/business/builders/
 - Meter and Service Guide
 - Customer information packet
- TIIR Technical Interconnection and Interoperability
 - www.aep.com/derrequirements





REVENUE PROTECTION

Carrie Guajardo, AMI Analytics & Support Supervisor David Garcia, Revenue Protection Coordinator Sr.



About Us

Carrie Guajardo, AEP Texas AMI Analytics & Support Supervisor

Oversees team of four Analysts and three Revenue Protection

Coordinators

David Garcia, AEP Texas Revenue Protection Coordinator Covers Rio Grande Valley & Corpus Christi areas 32 years of experience



AMI Analytics



AMI Analytics

- Team of five reviews meter data daily for:
 - Equipment malfunctions
 - Installation errors
 - Communications issues
 - Potential tampering
- Data indicating potential tampering:
 - Table 13 Report (load side voltage on disconnected meters)
 - Lost-Normal Report (meters losing/regaining connection at certain intervals)
 - Excessive Momentaries Report (meters losing connection multiple times throughout the day)
 - Gyrbox report (meters indicating reverse rotation has occurred)
- Data is passed off to Revenue Protection Coordinators for review



Tampering Example – Table 13

4	Α	В	С	D	Е	F	G	Н	I	J	К	L	
1 MET	ERNO	▼ PREMISE	▼ SERVLOC	▼ READINGDATE ▼	ENDPOINTID 💌	SUBAREA -1	PHASE_A_VOL' *	PHASE_C_VOLT *	INSTANTANEO 🕶	INSTANTANEO *	Notes		
2				5/11/2025 22:46	318816	161	245.7188	0.0938	5.3438	5.3438	Made IO12 on 05/08/25 DG		
3				5/11/2025 22:45	1314022	161	244.2188	0.0938	0	0	Made IO12 on 05/12/25 DG		
4				5/11/2025 22:46	328774	161	242.2969	0.0938	0	0	Made IO12 on 05/12/25 DG		
5				5/11/2025 22:46	1301783	162	121.6719	245.8125	0	0	Made IO12 on 05/08/25 DG		
6				5/11/2025 22:45	1591992	168	245.9375	0.0938	0	0	N/A		
7				5/11/2025 22:46	1664892	169	242.2031	244.5	0	0	Made IO12 on 05/2/25 DG		
8				5/11/2025 22:46	1878806	175	246.5938	122.8125	0	0	Made IO12 on 05/2/25 DG		
9				5/11/2025 22:46	2759941	177	250.5938	0	0	0	breakers are off		
10				5/11/2025 22:46	1740811	177	125.4375	241.7969	0	0	backfeed		
11				5/11/2025 22:45	2760059	177	247.4063	0	0	0	N/A		
12				5/11/2025 22:45	2796942	177	250.75	0	0	0	locked gates/broke 3 locks		
13				5/11/2025 22:46	1689335	177	125.2656	245.4688	0	0	back feed		
14				5/11/2025 22:46	1499925	177	248.3438	249.3281	0	0	N/A		
15				5/11/2025 22:45	1638272	178	246.7969	0.1094	0.5938	0.5938	N/A		
16				5/11/2025 22:45	1935565	180	249.2969	0.1094	8.125	8.125	issued an io-12		
17				5/11/2025 22:45	1840544	199	245.2344	0.0938	0	0	Made IO12 on 05/08/25 DG	was on r	epor
18				5/11/2025 22:45	1839199	201	243.6094	0.1094	0.0938	0.0938	N/A		
19				5/11/2025 22:45	2045527	201	249.2344	0.1094	0.1719	0.1719	N/A		
20				5/11/2025 22:45	1551373	202	246.1563	0.0938	0	0	N/A		
20													

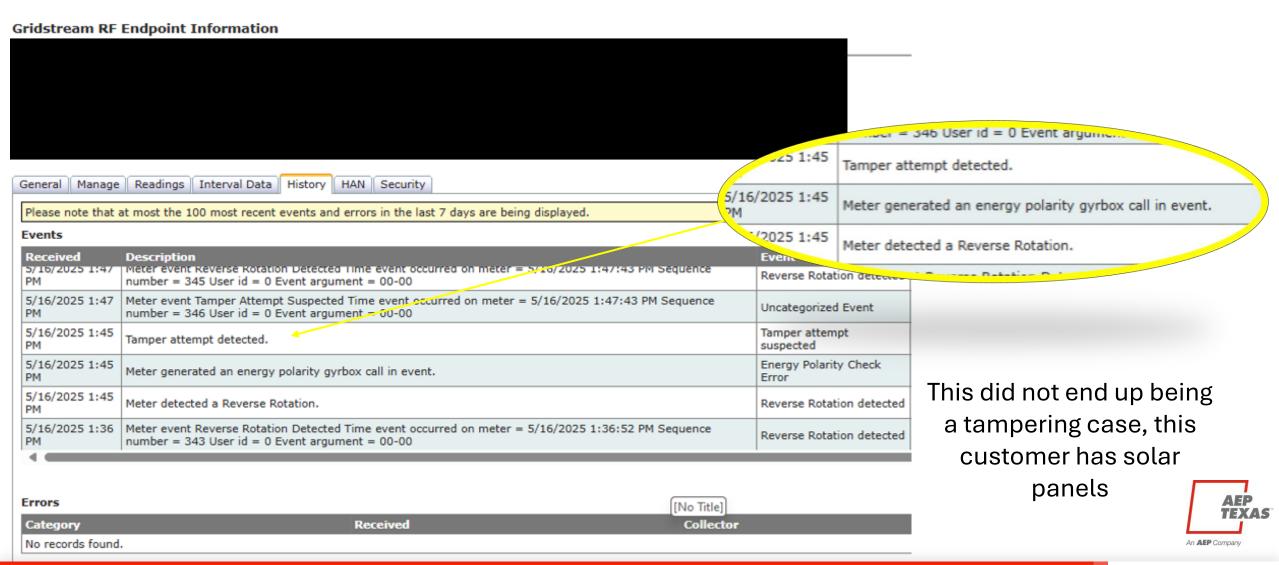
NOTE CD 205

NOTE DESCRIPTION

TAMPERING FOUND AT THE LOCATION, CUSTOMER REMOPVED THE METER INNER SEAL AND OPENED THE AMI METER..TAMPERING FEES TO FOLLOW DO NOT REMOVE TAMPERING SWITCH HOLD...REVPRO



Tampering Example – Command Center



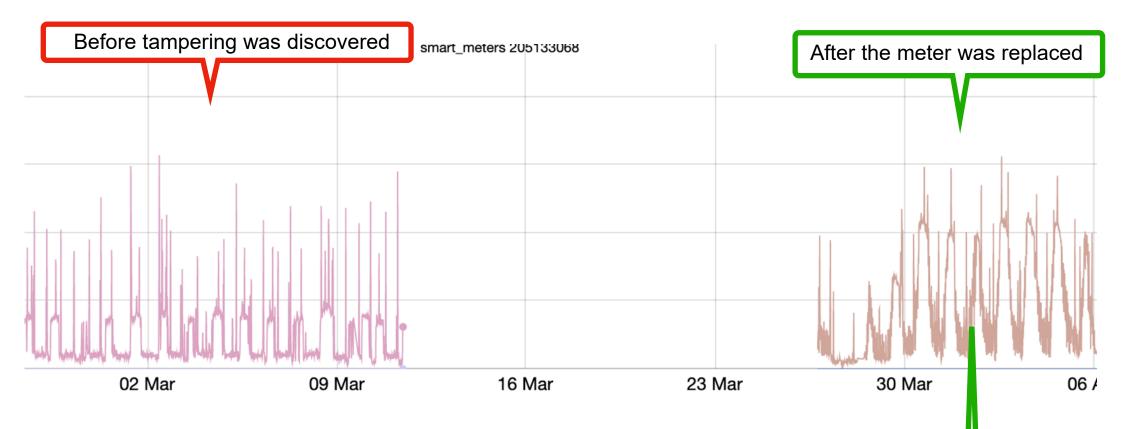
What's Next in Analytics - Sensewaves

- Al Platform of individual and aggregated meter data
 - Operational in RGV area, currently expanding to other four districts
 - Currently used for reliability, planning and meter investigations
 - Gathering test cases for tampering investigations





Test Case Example - Jumpers



Jumper installations are more permanent than magnet installations. Identification of such installations can for example rely on two processes:

- Unexpected correlation between voltage and energy usage
- Unexpected entry usage patterns

After the meter was replaced: higher consumption on average, higher "mid-day plateau"

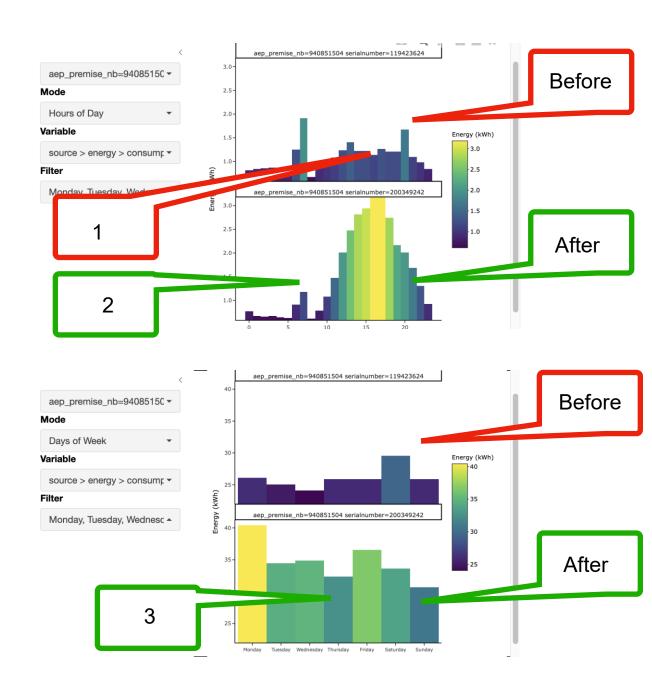
At the top right, the typical before/after daily profile (from 00:00 to 23:00).

One possible signature of jumpers is a "shaved" energy usage pattern, where the daily trend is interrupted and remains stable at a low usage for mid-day hours. (1)

We can see that after the meter was replaced, usage corresponds to a much more common daily pattern. (2)

The graphs to the bottom right show kWh per weekday.

We can see the overall consumption increase after meter replacement. (3)



What's Next in Analytics - Drones

- AEP Texas & Skydio
 - FAA has granted AEP Texas
 BVLOS waiver for drone use
 - Currently piloting drones to identify damage and/or determine cause of fault
 - Plans for 10 docking stations across our footprint
 - Potential for use in tampering investigations in future
 - Capture views beyond locked gates/obscured equipment
 - Option to avoid aggressive customers





Revenue Protection

How we find tampering from the data provided



Energy Diversion Order Process

- Data is reviewed to search for possible reason for event that is not related to tampering
- IO12 orders are created after the meter/account has been researched in Command Center, and tampering cannot be ruled out
- To bill an account for tampering, the following steps are required:
 - Completed IO12 order
 - Photos to document the tampering
 - Correction of tampering while at location
- A typical work week for a RevPro is work 2 days out in the field and the rest of the workdays are spent researching and billing accounts. Currently the local field personnel conduct a lot of our field investigations.

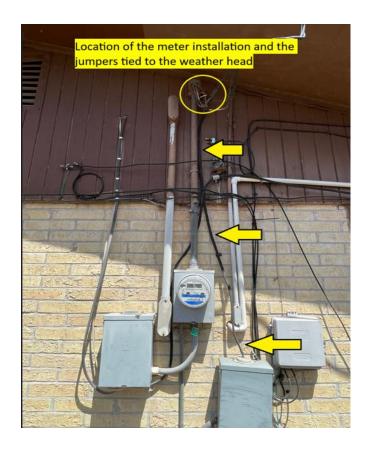


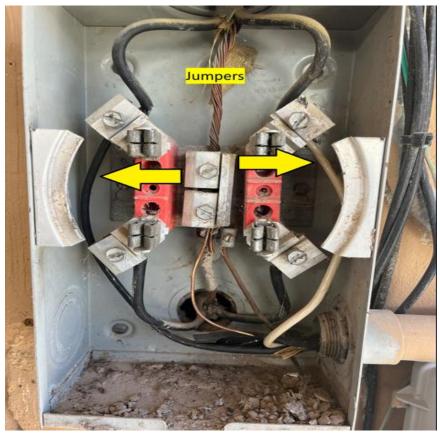
Table 13 – Load Side Voltage with Open Switch

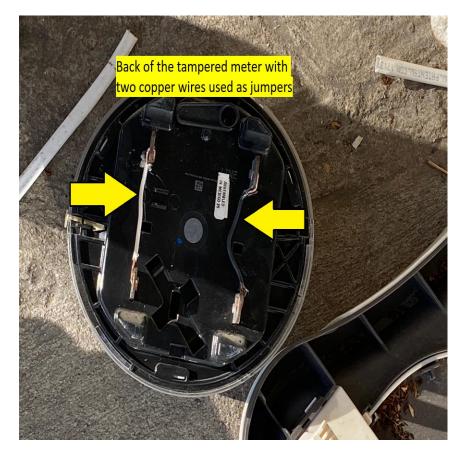
 5/22/2025 22:46	1226081	168	241.9531	0.0938	0	0 Made Io12 on 05/23/25 DG
5/22/2025 22:46	1664892	169	241.1406	243.2969	0	0 back feed order # 942335840 DG
5/22/2025 22:46	1503229	174	235.6719	235.7188	0	0 Made IO12 on 05/22/25 DG
5/22/2025 22:45	2760059	177	244.5781	0	0	0 N/A
5/22/2025 22:45	2796942	177	248.9219	0	0	0 locked gates/broke 3 locks
5/22/2025 22:46	1499925	177	246.0625	246.7188	0	0 N/A
5/22/2025 22:45	1689335	177	126.2813	242.8125	0	0 back feed
5/22/2025 22:46	1740811	177	125.0156	239.8906	0	0 N/A
5/22/2025 22:45	2759941	177	253.9219	0	0	0 breakers are off
5/22/2025 22:45	2759988	177	237.3438	0	0	0 N/A
5/22/2025 22:46	1638272	178	245.375	0.1094	0.6406	0.6406 N/A
5/22/2025 22:46	1381102	179	246.0469	0.0938	12.5156	12.5156 N/A
5/22/2025 22:45	1935565	180	246.375	0.1094	17.7188	17.7188 issued an io-12
5/22/2025 22:45	2045527	201	244.1406	0.1094	0.1406	0.1406 N/A
5/22/2025 22:46	2309989	201	239.7813	0	0	0 N/A
5/22/2025 22:45	1551373	202	245.3906	0.0938	0	0 N/A



Example – Jumpers found from Table 13









Example – Upside Down Meter from Gyrbox



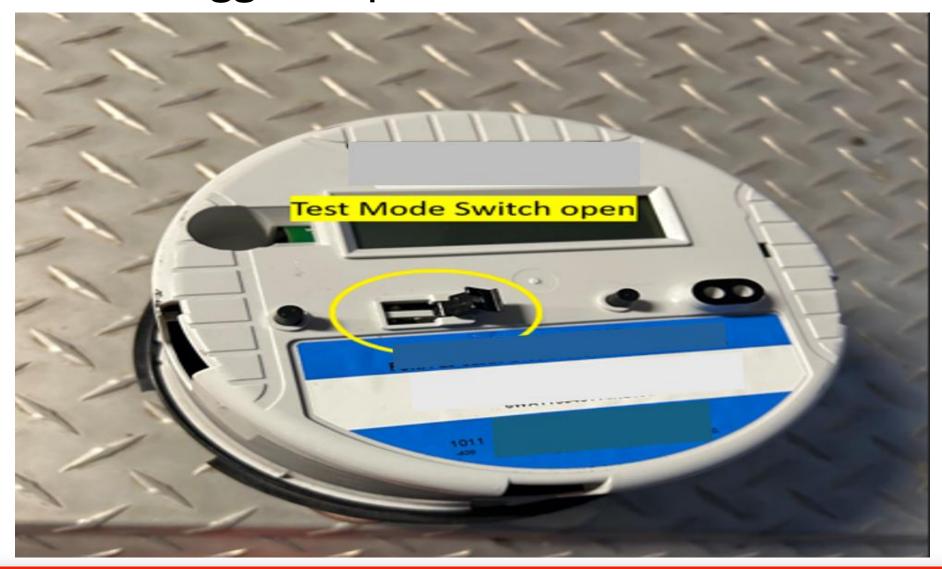


Testmode Report – Test Mode Switch Activated

PROTECTED V	/IEW Be careful—files from	the Internet can co	ontain viruses. Unless yo	u need to edit, it's safer	to stay in Protected	View. Enable Editing			
~	$\times \checkmark f_x$ Publish	ned							
A	В	C	D	E	F	G H	1	J	K
shed	4/20/2025 1:00:00 PM		0.3780	239.8578	0	0 15 Minute	OK	-300	
shed	4/20/2025 1:15:00 PM		0	240.5689	0	0 15 Minute	OK	-300	
shed	4/20/2025 1:30:00 PM		0	241.0667	0	0 15 Minute	OK	-300	
shed	4/20/2025 1:45:00 PM		0	241.7067	0	0 15 Minute	OK	-300	
shed	4/20/2025 2:00:00 PM		0	241.4222	0	0 15 Minute	OK	-300	
shed	4/20/2025 2:15:00 PM		0	240.9244	0	0 15 Minute	OK	-300	
shed	4/20/2025 2:30:00 PM		0	240.9244	0	0 15 Minute	OK	-300	
shed	4/20/2025 2:45:00 PM		0.5844	240.2133	0	0 15 Minute	OK	-300	
shed	4/20/2025 3:00:00 PM		1.1490	237.5822	0	0 15 Minute	ОК	-300	
shed	4/20/2025 3:15:00 PM		0	240.7111	0	0 15 Minute	OK	-300	
shed	4/20/2025 3:30:00 PM		0	241.3511	0	0 15 Minute	OK	-300	
shed	4/20/2025 3:45:00 PM		0.2322	241.9911	0	0 15 Minute	OK	-300	
shed	4/20/2025 4:00:00 PM		1.7232	238.2933	0	0 15 Minute	oĸ	-300	
shed	4/20/2025 4:15:00 PM		0.8286	239.5733	0	0 15 Minute	ОК	-300	
shed	4/20/2025 4:30:00 PM		0.8220	239.0756	0	0 15 Minute	OK	-300	
shed	4/20/2025 4:45:00 PM		0.6924	240.64	0	0 15 Minute	ок	-300	
shed	4/20/2025 5:00:00 PM		0.8142	240.2133	0	0 15 Minute	ок	-300	
shed	4/20/2025 5:15:00 PM		0.6588	240.64	0	0 15 Minute	OK	-300	
shed	4/20/2025 5:30:00 PM		0.6354	240,9956	0	0 15 Minute	ОК	-300	
shed	4/20/2025 5:45:00 PM		0.4866	241.28	0	0 15 Minute	Test data	-300	
shed	4/20/2025 6:00:00 PM		0.0642	242.7022	0	0 15 Minute	ОК	-300	
shed	4/20/2025 6:15:00 PM		1.3044	240.1422	0	0 15 Minute	OK	-300	
shed	4/20/2025 6:30:00 PM		1.3128	239.2889	0	0 15 Minute	OK	-300	
shed	4/20/2025 6:45:00 PM		1.2546	239.5733	0	0 15 Minute	ОК	-300	
shed	4/20/2025 7:00:00 PM		1.2372	239.7156	0	0 15 Minute	OK	-300	
shed	4/20/2025 7:15:00 PM		1.3236	239.5022	0	0 15 Minute	OK	-300	
shed	4/20/2025 7:30:00 PM		1.2456	239.7867	0	0 15 Minute	OK	-300	
shed	4/20/2025 7:45:00 PM		1.3794	239.36	0	0 15 Minute	OK	-300	
			1.0704	200.00		0 10 11111010			



Test Mode Trigger Reported to Command Center





Daily AMI Outage Report

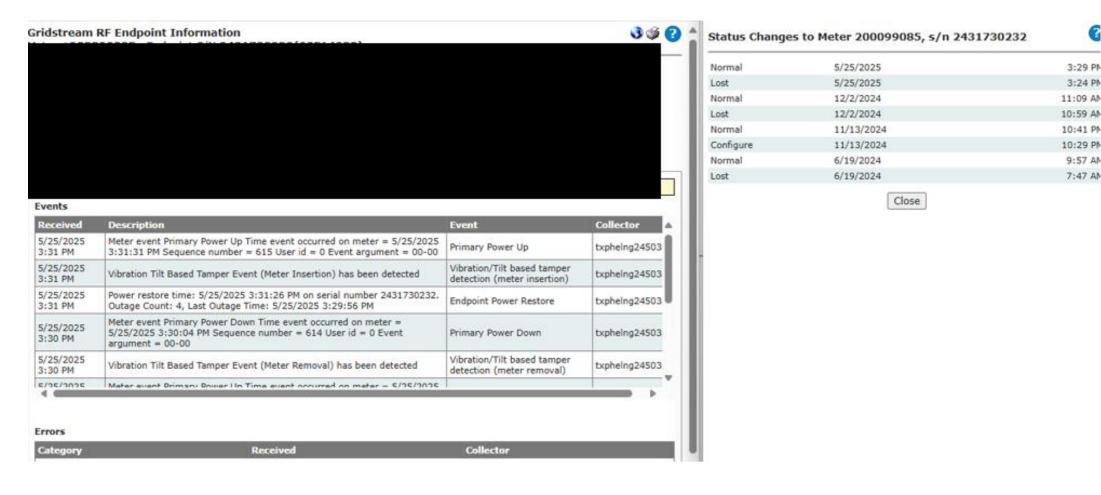
Daily AMI outage report is designed to report any AMI meter that had an outage but came back to normal without a trouble ticket

1051591	May 25, 2025 9:29:00 PM	3		Abilene	Hamlin :
1051691	May 25, 2025 9:29:00 PM	2		Abilene	Hamlin :
1050511	May 25, 2025 6 40:00 PM	2		Abilene	Hamlin :
1051421	May 25, 2025 9:29:00 PM	7		Abilene	Hamlin :
1053541	May 25, 2025 11:28:00 PM	0		Abilene	Abilene :
051431	May 25, 2025 9:29:00 PM	3		Abilene	Hamlin :
051221	May 25, 2025 8:53:00 PM	119		Abilene	Stamford :
046261	May 25, 2025 4:24:00 AM	15) Laredo	Del Rio :
046251	May 25, 2025 3:50:00 AM	5		Laredo	Del Rio
051451	May 25, 2025 9:29:00 PM	7		Abilene	Hamlin
050081	May 25, 2025 3:28:00 PM	1		Rio Grande Valley	Weslaco
052821	May 25, 2025 10:56:00 PM	155		Abilene	Abilene
045591	May 25, 2025 12:39:00 AM	190) Laredo	Del Rio
1049661	May 25, 2025 11:30:00 AM	28 200200700 7000070	4400 G GETOR OT GILL, PRINCERE, PRINCESON	Abilene	Abilene :



Daily AMI Outage Report

What Command Center shows:

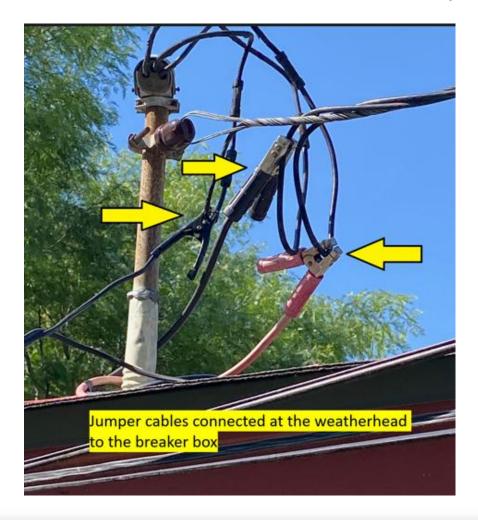




Commonly Found Tampering – Jumpers

Jumpers are often installed after the AMI meter has been disconnected for non-payment

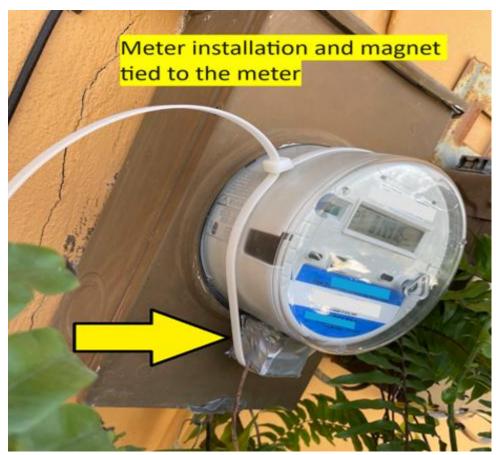






Newer Type of Tampering – Earth Magnet













INSPECTIONS & PERMITS

City of Corpus Christi:

Yvette Dodd-Wallace, Asst. Director Building Inspection

Frank Garza, Sr. Electrical Inspector

AEP Texas: Deedee Hall, Market Specialist





Understanding Permitting & Inspection Before Energizing a Structure



Purpose of This Presentation



Ensure safety and compliance before energizing electrical systems.



Clarify permitting requirements for new and existing structures.



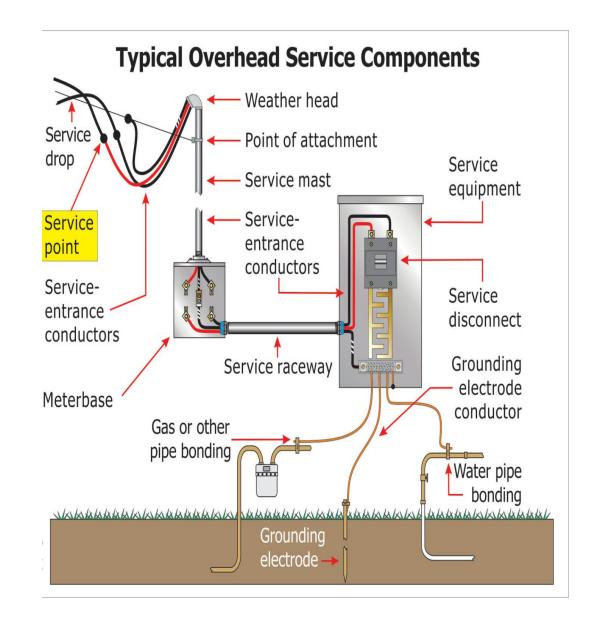
Improve communication between contractors, customers, and inspectors.

Understanding Electrical Service Components

Overhead Service: delivers electricity to a building through wires connected above ground on utility poles.

Underground Service: delivers electricity through cables buried beneath the ground in protective conduit.

Both methods serve the same purpose; safely connecting utility power to a building's electrical system.



Overhead



Weather head



Mast



Meter service equipment



Main disconnect



Sub-panel





• Conduit

Expansion joint

Meter service equipment

Main disconnect

Sub panel



When Permits and Inspections Are Required

New Construction

- A new structure is being built.
- · A new electrical service is being added.
- Temporary power is requested.
- · A meter is being set for the first time.

Existing Structures

- Installation of an automatic transfer switch for generators.
- · Addition of photovoltaic (solar) systems.
- Upgrading electrical panels or equipment.
- Power has been off for 6 months or longer.
- AEP (American Electric Power) requests inspection.

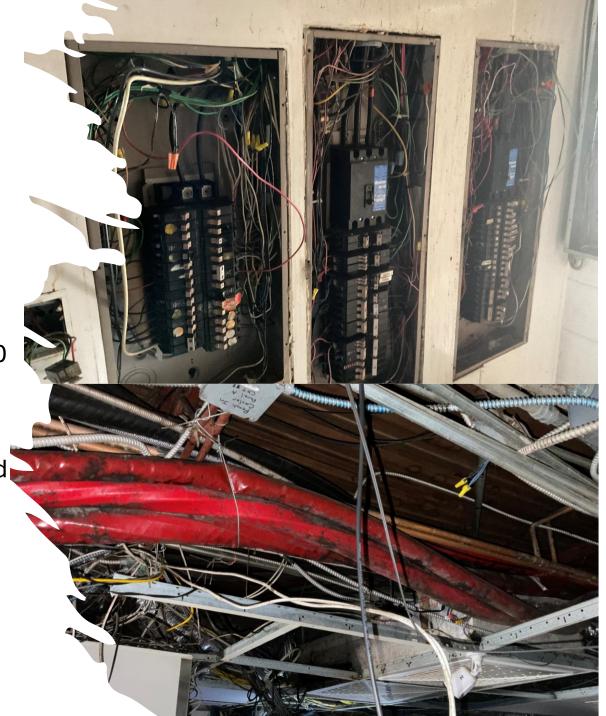


Safety is our Highest Priority!

- For Customers: The inspection of the service equipment, main disconnect, sub-panel, wiring integrity, and verifying installations meet code is key to fire risk mitigation.
- For Contractors: Verify proper licensing and technical quality.
- For the Service Itself: Protect the electrical grid from shorts and outages.
- For the Community: Ensure compliance and accountability.

Inspections-After a Fire

In 2021, the United States Fire Administration (USFA) estimated about 24,200 residential building electrical fires in the U.S., resulting in 295 deaths, 900 injuries and over \$1.2 billion in property loss.





Example of Unsafe Work

Issue: Work performed without a permit caused a major short in the system.

Impact: Power disruption, equipment damage, and safety hazards.

Reminder: When in doubt, call us out!



Property Address

Purpose

#1 Temporary Power

#2 Final Meter Set

#3 Temporary Disconnect

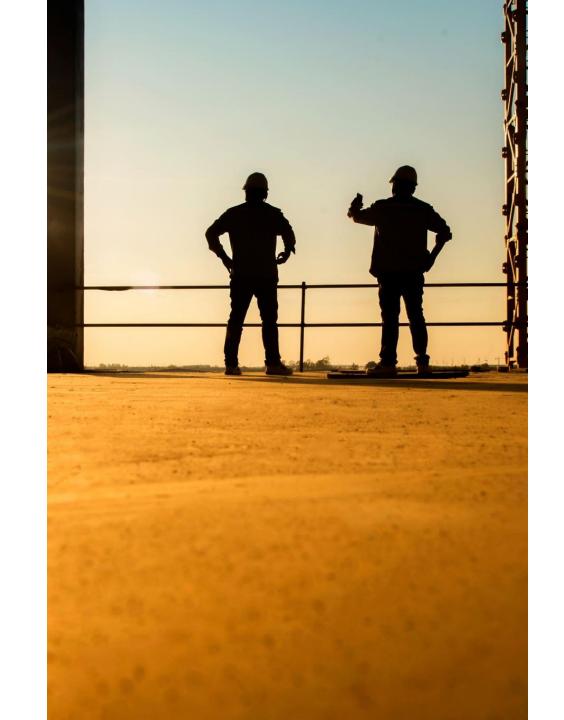
#4 Upgrades/Generators/Solar)

Permit Number

ESID (Electric Service Identifier)

Teamwork and Community Accountability

- Protect customers through proper permitting and inspection.
- Support contractors through licensing and technical guidance.
- Safeguard the grid from costly and dangerous outages.
- Build a culture of accountability and trust within our community.



Your partnership keeps our community safe and powered responsibly.

Contact Information: Development Services
Department (DSD) – Building Division 361-8263240

Yvette Wallace, Assistant Director-YvetteDo@cctexas.com

William Wittliff, Deputy Building Official-William W@cctexas.com

Frank Garza, Senior Electrical Inspector-FrankG2@cctexas.com

2025 CR SURVEY RESULTS

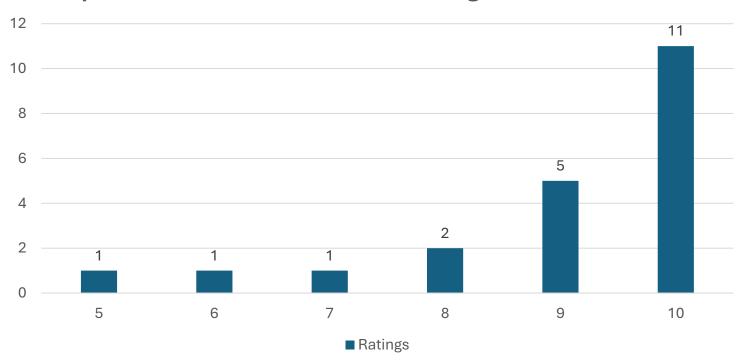
Melinda Earnest, CRR Account Executive Toney Gutierrez, CRR Account Executive



- ❖ Data collection began on August 11th and concluded August 22nd
- Encouraged Comments and Honest Feedback
- Participation 2025 Survey 21 Respondents
 - 2024 Survey 13 Respondents
 - > 2023 Survey 13 Respondents
 - > 2022 Survey 20 Respondents



Overall, how would you rate the general performance of AEP Texas? - Average = 9.00





Is there anything AEP Texas could do to better to meet your needs?

Comply with the tariff and send meter reads within the 3 business day window. We have had multiple instances where meter reads are being sent after 3 business days which has major implications for our business.

Aside from RMTTF and ERCOT Market training, AEP unfortunately does not have a significant contributing role in the market forums.

Frankly, AEPs retail market advocacy / participation / contribution is minimal, at best. AEP should reevaluate it's ERCOT retail market advocacy strategy to determine if AEP wishes to return to a key contributor position



What is the one thing AEP Texas can do to improve your experience with us?

Comply with the tariff and send meter reads within the 3 business days window. We have had multiple instances where meter reads are being sent after 3 business days which has major implications for our business.

Consistency of accurate market notices when system issues develop

Conduct a review of the features provided by other Utilities on their portals to ensure consistency. For instance, consider including the customer's name on the portal if we are the ROR.

Always on top of technology, client engagement and customer satisfaction.

On the portal, under premise information, is it possible to display the customer's name when we are listed as the rep of record.

Send timely
market
notices any
time there's
a
transaction
processing
issue.



Is there anything the AEP Texas Market Specialists could do to provide better service?

Sometimes the Market Specialists get confused about market rules, but we rely on our Account Rep in those cases.

All is good & The experience is great.

No improvement needed, I do hope the MS team knows we usually have to verify MVO requests with the customer.







