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PUC PROJECT NO. 56822

INVESTIGATION OF EMERGENCY PREPAREDNESS AND RESPONSE BY UTILITIES IN HOUSTON AND SURROUNDING COMMUNITIES	**§ § § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

AUGUST 30, 2024

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-1:

Provide the following information concerning the last hurricane or major storm drill conducted in 2024:

a. The date the drill was conducted;
b. The category of hurricane drilled and any conditions (e.g., where the hurricane made landfall, date hurricane made landfall, status of infrastructure and vegetation management activities in affected area, aid received vs aid requested from mutual assistance programs, total number of customers in anticipated affected area) used in the drill;
c. A description as to how the drill conducted in 2024 differed materially from the previous annual drill;
d. The identity of all third-party vendors that assisted in either conducting or preparations for the 2024 hurricane drill; The identity of all other electric, water, sewer, or telecommunication utilities that were invited to participate in your 2024 hurricane drill and a description of their participation;
e. The identity of all local government, trade associations, medical and eldercare facilities, community organizations, PGCs, and REPs that were invited to participate in your 2024 hurricane drill and a description of their participation;
f. How performance during the 2024 hurricane drill was measured; and
g. Any feed-back whether internally or externally from a third-party vendor or party invited to participate in the 2024 hurricane drill.

Response No. STAFF 1-1:

a. The drill was conducted on April 23, 2024.
b. The drill simulated a Category 3 hurricane making landfall near Corpus Christi, Texas at 7:00 a.m. on a Monday in July. The following includes damage simulated:
    - Five Transmission lines were out of service with 18 stations locked out;
    - 51% of the total customers in the Corpus District were out of power; and
    - Another 19% of total customers between the Laredo and Rio Grande Valley Districts were out of power.
c. The drill in 2024 did not materially differ from previous drills. The drill focused on preparing employees and testing tools and processes to ensure readiness as in previous drills.
d. No third parties were involved in assisting with the drill preparations, however a third party assisted in the development of the drill framework when AEP Texas first adopted ICS in 2015.

e. The AEP Texas drill did not include participation of other utilities however AEP Texas did participate in the Nueces County Hurricane Drill which included other utilities, local & state government entities, and private industry customers.
    - AEP Texas extended invitations to the following governmental agencies:
        - Texas Department of Emergency Management; and
        - Public Utility Commission of Texas Staff
f. An after-action review was performed after the conclusion of the drill to evaluate the results as compared to the objectives of the drill.
g. An after-action report documented the feedback and action items from internal personnel that participated in the drill.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-2:

Do you ever seek participation of your customers during a hurricane drill? If yes, please provide a description of their level of involvement.

Response No. STAFF 1-2:

Customer -specific scenarios are included as part of the drill. However, AEP Texas did not seek participation from customers during the drill.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-3:

Are actual events and conditions experienced during a previous hurricane or storm used in the next year's hurricane or major storm drill? If yes:

a. How long would an actual storm be used to set the conditions for future hurricane drills?
b. What hurricanes and major storms were used to set the conditions for the 2024 hurricane drill?

Response No. STAFF 1-3:

Yes. AEP Texas uses historical storm data to model the drill.

a. AEP Texas uses damage data for previous storms to create realistic scenarios to test in hurricane drills each year. The use of a particular storm will depend on the objectives of the drill.

b. Information from Hurricane Hanna (2020) with adjustments was used in creating conditions for the 2024 Hurricane Drill.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-4:

Please identify any electric, water, sewer, or telecommunication utilities that invited you to participate in their 2024 hurricane or major storm drill.

Response No. STAFF 1-4:

Please refer to the response to STAFF 1-1(e).

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-5:

Please identify all resources, internal or external, used for weather or storm tracking purposes before July 8,2024.

Response No. STAFF 1-5:

AEP employs a full-time Meteorologist to monitor weather daily and compare any weather threats to known weather conditions that may impact the Transmission or Distribution Grid. AEP Texas also subscribes to Storm Geo which is an external weather service that provides weather threat notices to AEP Texas, which includes Hurricane tracking and projections. Additionally, AEP Texas also utilizes weather data provided by the Texas Division of Emergency Management (TDEM)and the National Oceanic and Atmospheric Administration (NOAA).

Please refer to pages 18-21 of AEP Texas' Emergency Operations Plan for additional details about weather tracking. (53385_415_1201499.PDF (texas.gov))

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-6:

How many days before projected landfall do you start tracking storms that could affect or disrupt operations within your service area?

Response No. STAFF 1-6:

AEP Texas begins to monitor disturbances once it is determined that the storm has a potential track to enter the Gulf of Mexico or any disturbances that organizes in the Gulf of Mexico.

AEP Texas started tracking the storm system that eventually became Hurricane Beryl on Sunday, June 30, which was eight days before it made landfall.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-7:

How many days before projected landfall did you start tracking the storm eventually named Hurricane Beryl?

Response No. STAFF 1-7:

AEP Texas started tracking the storm system that eventually became Hurricane Beryl on Sunday, June 30, which was eight days before it made landfall.

Prepared By: Mark Baker Title: Director Distribution Engineering

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-8:

Do you check the functionality or performance of your outage tracker as part of your regular storm preparation procedures?

Response No. STAFF 1-8:

Yes.

Prepared By: Matt Gerick Title: Dir. Customer Experience

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AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-9:

How far in advance of landfall did you initiate requests for mutual assistance?

Response No. STAFF 1-9:

AEP Texas began engaging other resources, including other AEP sister companies and mutual assistance partners, on July 3, 2024, in anticipation of Hurricane Beryl's landfall.

AEP Texas's mutual assistance program consists of a combination of sources to secure external resources/crews. During an event, external resources/crews are secured from either one of the six AEP sister company or from pre-negotiated contracts with 125 mutual assistance Business Partners, or finally from the three Regional Mutual Assistance Groups. Resources/Crews are secured from the closest source in proximity to the impacted areas.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-10:

Provide information as to how restoration efforts are prioritized, and resources are allocated following a hurricane or major storm. For purposes of this question, please provide how these prioritizations and allocation guidelines were used in practice during your response to Hurricane Beryl.

Response No. STAFF 1-10:

AEP Texas follows criteria as outlined in its Emergency Operations Plan (EOP) in efforts to prioritize resources for customer restoration. The investigation and mitigation of hazardous conditions has the highest priority. Next are essential services/critical customers. Following that, the priority in the restoration effort would be restoring the largest number of customers served from one isolating device. The Planning Section will establish the priority order in which assessed outages are worked.

The following guidelines are recommended to assist in setting priorities. The order may vary, depending on the specific needs to the outage situation at hand.

Based on Safety
Investigation and mitigation of hazardous conditions with the emphasis on electrical hazards such as downed wires or broken poles.

Based on Essential Services (As collaboratively determined by community leaders and AEP Texas)

- Hospitals, institutions, and health support facilities.
- Fire, Law enforcement and essential governmental agencies
- Water and Sewage treatment facilities
- Perishable food processors
- Media communication centers
- FAA Navigational Facilities
- Other institutions whose operation are essential to the safety, health and welfare of the community

Based on circuits (Number of Customers involved)

- Transmission circuits that could result in cascading station outages
- Sub transmission circuits that could result in cascading station outages

- Sub transmission circuits that result in station outages
- Stations
- Distribution Feeder circuits
- Distribution three phase branch circuits
- Two phase and single phase laterals
- Secondary/ Services
- Street lighting

The AEP Texas Outage Management System, along with other applications, compiles the customer outages into Outage Orders where information on the predicted device and other customer specific information is noted. The essential service customers are grouped into categories through a reporting system that can be viewed and exported by our Planning Section, Data Analyst Group. The Data Analyst Group will confirm the outage status of the essential service customers and create a report listing any Critical Natural Gas sites, and the highest priority customers (i.e., Hospitals, Nursing Homes, and End Stage Renal Facilities). The list is sent to the Operations Section, Branch Directors to incorporate into their restoration work. In the following days of the event, the Data Analyst Group includes all the critical customers that are still out of power and performs the same actions of confirming outage status and routing lists to Operation Section, Branch Directors until all critical customers are restored.

Prepared By: Adrian Uresti Title: Distribution Dispatch Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-11:

Describe the procedures during an emergency for handling complaints and for communicating with the public; the media; customers; the commission; the Office of Public Utility Counsel (OPUC); local and state governmental entities, officials, and emergency operations centers, the reliability coordinator for your Company' s power region; and critical load customers directly served by the entity.

Response No. STAFF 1-11:

As discussed in the AEP Texas' Emergency Operations Plan, Communication Plan in Section II, the overall electric operations provides several important functions during an emergency event. Generally, AEP Texas has divided the communication plan into three phases: Pre-Event, During an Event, and Post Event. Pre-Event refers to potential, upcoming events in AEP Texas' service territory. During the event refers to AEP Texas' strategy after an event has occurred. Post-Event refers to AEP Texas' efforts after the event is no longer active. The phases and activities are described below.

Pre-Event

When possible, before an event occurs, the Company activates its Central Emergency Organization and the overall electric operations and begins to coordinate event response and communication needs. Meetings begin to start preparing for the event. The overall electric operations provide information on event preparedness and receives feedback from the field and works with appropriate parties to resolve any pre-event issues.

AEP Texas begins posting general storm or event-related safety messages five to nine days before the anticipated event on social media. Live and pre-recorded television and radio interviews take place with local media and traditional news releases are distributed within the predicted-to-be-a AEP Texas proactively reaches out to the Public Utility Commission, elected officials, statewide leaders, local governments, and critical load customers.

A website feature called Storm Tracker is activated. Storm Tracker posts an emergency alert banner at the top of the company's website homepage listing relevant, event-related information to offer end-users general safety information.

During the Event

During the event, the Company continues to hold meetings to prepare and coordinate the response effort and begin restoration efforts if and where possible. The overall electric operations provides

initial information on event damage and/or outages and receives feedback from the field and works with appropriate parties to resolve issues. Additionally, the overall electric operations coordinates with Community Affairs Managers, Customer Services and Field Media Coordinator to provide detailed local restoration information to be communicated to state and local elected officials, county emergency coordinators, and critical load customers. The overall electric operations identifies other issues - including safety - that may require special emphasis in communications, assists Community Affairs and Corporate Communications with arrangements for media interviews at restoration work sites, staging areas or AEP facilities, plus other opportunities to highlight the restoration effort, receive feedback from field and work with appropriate parties to resolve issues. Overall electric operations coordinates with AEP Texas Regulatory Services to inform the Commission of the event in accordance with regulatory requirements. They provide restoration information throughout the duration of the event and strive to keep the Commission informed as the event transpires. Additionally, AEP Texas Regulatory Services is primarily responsible for communicating with the Office of Public Utility Counsel (OPUC) and the Commission's Consumer Protection Division as necessary. AEP Texas Regulatory Services responds to inquiries from OPUC throughout the emergency with information such as the areas impacts and the number of outages.

AEP Texas releases, at a minimum, daily weather notices and updates during the duration of the storm offering event-related information such as number of customer outages and their locations, estimated times of restoration, and safety messages. These updates, also known as One Voice communications, are posted to AEPTexas.com, social media channels, as well as distributed via traditional news releases to media in the affected area. The One Voice is shared with all AEP Texas employees and serve as a communications tool for External Affairs managers, call center agents, and social media representatives.

Additional safety messages or event-related assets are posted three-to-four times daily on social media.

Post-Event

After the event has occurred, the overall electric operations continues necessary activities as a result of the event. Overall electric operations holds meetings and provides information on event damage, outages, restoration estimates, number of employees and outside crews working. Internal and external communications continue as needed.

Once all storm or event activity is complete, the company typically thanks and acknowledges customers and mutual aid individuals through traditional and non-traditional advertising.

The following table generally describes the communications responsibilities. Concerns or complaints are initially addressed by the responsible party, but if escalation is necessary, the responsible party will inform their ICS Branch Chief Officer, which can elevate the concern to the Incident Management Team.

Communications Responsibilities – Overview

Responsible Party	Work Locations	Communications Channels	Primary Audiences
Central Emergency Organization	Overall Electric Operations	Ongoing emergency operations, face-to-face meetings, conference calls, radio, other electronic means	All AEP Texas groups with communication responsibilities shown in this table
Corporate Communications	Overall Electric Operations, Home Office, Austin State Office (and storm recovery sites if resources permit)	Communications Strategy, Coordination and Message Development – Phone, teleconference, email, text messaging or PIN, internet, intranet (and face-to-face media interviews as resources permit), social media	All AEP Texas groups with communication responsibilities shown in this table, as well as the news media, customers, and the general public
Community Affairs	Storm recovery sites, staging areas, local emergency operations centers, local officials' offices	Primary Media Relations (Field) – Face-to-face, phone, teleconference, detailed restoration information for local officials, media interviews	Local elected officials, county emergency coordinators, Red Cross/relief agencies, critical load customers, customers, news media, and the general public
Governmental Affairs	Austin State Office	Phone, face-to-face, updates / summaries	Legislators, staff, governor, and other state/federal elected officials
Regulatory Services	Home Office, assisted by Austin State Office (and at State Operations Center)	Phone, teleconference, face-to-face, updates / summaries	Regulators, state Division of Emergency Management (State Operations Center)
President/COO and External Affairs VP	Home Office, Austin State Office, Overall Electric Operations, and storm recovery sites as needed	Phone, face-to-face, media interviews as needed	Key state officials, state Division of Emergency Management, customers / public and news media

Customer Solutions Centers	Call centers (Corpus Christi, Shreveport and other AEP sites)	Phone (first-person, automated and up-front recorded messages)	Customers / public
Customer Services	Offices / field	Phone, face-to-face	Key accounts, critical load customers
Competitive Retailer Relations	Offices	Phone, face-to-face	Retail Electric Providers (REPs)
T&D Field Employees	All service centers, staging areas and storm recovery sites	Face-to-face	Customers / public and news media, Energy Delivery senior management
Regional Environmental Coordinators	Storm recovery sites, service centers, Home Office	Phone, face-to-face, updates / summaries	Environmental regulatory agencies

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-12:

Does your company use an operating condition system? If yes, define each level of the operating condition system and actions taken at each level. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

Response No. STAFF 1-12:

No. AEP Texas does not use daily operating condition system. However, AEP Texas does use Emergency Event Levels as outlined in Staff 1-12 Attachment 1.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

8. Emergency Event Levels

Enterprise event levels provide a common framework and description to communicate the severity or impact of an impending, active, or transpired emergency and the management organization required to respond to the emergency.

Scope:
An all-hazards response plan utilizing the ERP structure. The table below describes event characteristics and levels of severity as a decision support tool for the opcos. This table does not capture all possible hazard scenarios.

Purpose:
Event levels are a FEMA standard established to assist with response and external stakeholder understanding of severity.
Creates a standard to assist communicating the scope, complexity, level of damage or concern with an event.
Assists with determining the response organization required to manage the event.
Easily understood event significance
The items within the table are guidelines as we cannot come up with every scenario to address and the operating companies vary in customer numbers, geographic size, and threats.

Action required based on event level table:

1. Storm coordinator with opco leadership; Section 10 of ERP playbook; page 24

   "Storm Coordinator of the impacted Operating Company(s) will contact their leadership and brief them on the situation. Together they will determine the event level and select the Incident Commander (IC). The IC activates the required IMT during the initial notification call. Guidelines on which Incident Management Team (IMT) roles should be activated are shown below, but different roles can be activated based on the situation. Each member of the IMT then assumes their respective roles, establishes their respective units, and assigns staff roles as needed."

2. Call Enterprise Resilience on duty phone to notify activation, IC assigned and level of event.
3. Utilize Role Activation table (needs to be named in ERP playbook) to decide IMT roles to activate. Section 10 of ERP playbook; page 24.

Considerations

The table below contains guidelines for event level determination and is not all-inclusive. Factors such as operating company customer counts, employee headcount, geographic size, political/regulatory environment, threat profile, etc. can affect an event's severity or complexity.

Consider that conditions, which on their own are not impactful however when occurring simultaneously are more impactful and require a higher level of a coordinated response.

Circumstances that should be considered when determining event level:

Actual or predicted outage numbers.

- Significant localized damage
- Priority or sensitive customers impacted in a multiday restoration.
- Restoration efforts hampered or delayed by external variable(s) beyond operating company control. For example: limited resource availability, spotty/unavailable cell and or radio coverage, limited or no access to area because of flooding, vegetation debris, icy conditions, etc.
- Number of customers impacted by area, district, or operating company.
- Estimated length of restoration.
- Outages or the threat of outages impacting an area or facility that is hosting a public event with national attention. For example, RNC, Hall of Fame Game/Festivities, other similar sporting events, poll/voting locations, etc.

Any type of event requiring a high degree of communication and/or coordination internal or external to an operating company.

Impact(s) to AEP business processes that could impact OpCo functions such as:

- Loss of personnel (including unsafe working conditions requiring employees to work remotely, work stoppage/labor strike)
- Loss of facility with impact to employee health, safety, or productivity
- Communication, application, technology, or other system disruptions (e.g., vital software, hardware, infrastructure)
- Ability to communicate with customers and other external stakeholders
- Ability to monitor, operate, or repair the distribution system
- Other business unit(s) experiencing issues that result in actual or potential impacts to the operating company.

All Hazards Emergency Event Level		
Event Level / Category	**Characteristics**	**Condition Guidelines**
Level 5 / Minor	**A common condition that does not disrupt daily business operations.** Common, day-to-day issues that do not adversely impact company functions are typically addressed through normal operating processes. If incidents occur, they are small, isolated, impact a small number of customers or company operations, are short in duration, and result in little to no expectation of escalation. There is little to no media interest.	**Business Impacts:** Process(es) and/or Application(s) **will be restored** within agreed upon Recovery Time Objective and work-around(s) are **minimal** and do not disrupt OpCo or interdependent process(es). **Well managed with day to day established processes.**
Level 4 / Moderate	**A condition, active or transpired, that has the potential to limit the ability to meet customer demand, cause damage to company assets, or disrupt business processes.** Response strategies can be addressed with normally available resources. Resources handling the response are mainly local and may need to move within a region or department. The issue can be addressed in a time frame that does not significantly disrupt normal processes. There could be media interest. If not addressed appropriately the issue could escalate. May consider activation of an emergency management plan.	**Business Impacts:** Process(es) and/or Application(s) will be **likely be restored** within agreed upon Recovery Time Objective and workaround(s) are **minimal** and do not disrupt OpCo or dependent process(es). **Well managed with day-to-day processes, may require additional support and necessitate communicating regular situational updates within operating company.**
Level 3 / Major	**A condition that decreases the ability to meet customer demand or carry out critical business processes.** Potential events include credible threats or incidents that have damaged or have	**Business Impacts:** Process(es) and/or Application(s) **will not be restored** within agreed upon Recovery Time Objective, Business **Continuity Plan(s) are activated,** and work-around(s) are **implemented.** Impacts to interdependent processes are **likely.**

All Hazards Emergency Event Level		
Event Level / Category	**Characteristics**	**Condition Guidelines**
	the potential to damage company assets, systems, or the environment. The event can impact multiple business operations or processes. Resources may need to move across regions or departments. Normal processes may not be able to address the response. Requires activation of an emergency management plan. This event could result in increased media attention and negative coverage.	***Hazard/Business Impacts:*** ***Safety/Physical Security/Environmental*** • *Isolated acts by an assailant (e.g., active shooter, detonation of explosive device)* • *Threat against AEP or People, if notified by AEP Physical Security.* • *Negative customer sentiment or civil unrest leading to potential worker safety issues.* • *Public safety incidents such as hazardous material spills or releases, industrial accidents, train derailments, structure fires impacting AEP's ability to respond.* ***Actual or Predicted customer outage numbers: ** See additional consideration above table.*** • *Up to 5% of customers out at peak or time of determining event level.* ***Pre-Event Planning*** • *Pre-event planning for a public event where lack of electric service or ability for operating company personnel to respond is impeded. Delayed response or loss of electric service could significantly harm operating company reputation. Events such as the Football Hall of Fame festivities, Republic/Democratic National Convention, major sporting event, etc.* ***Reputation*** • *Actions that are likely to cause extremely negative public perception that could potentially damage operating company's reputation or credibility. May include regulatory or legislative scrutiny.* ***Cyber*** • *Cyber activity threat or potential threat requiring a heightened sense of awareness and communication.*
Level 2 / Severe	**A confirmed, active, or transpired condition resulting in significant damage to or loss of company infrastructure or ability to perform critical business processes.** The duration or	**Business Impacts:** Process(es) and/or Application(s) **will not be restored** within agreed upon Recovery Time Objective, **Business Continuity Plan(s) activated,** work-around(s) are **implemented** but are becoming unsustainable**,** and **likely** impacting other elements of the event level description (e.g., CX, Reputational, Financial). Impacts to interdependent processes.

All Hazards Emergency Event Level		
Event Level / Category	**Characteristics**	**Condition Guidelines**
	severity of the event significantly impacts customers, stakeholders, or company reputation. It is highly probable that additional internal and external resources will be required. Requires activation of an emergency management plan. Significant negative media coverage should be expected. Likely regulatory or legislative scrutiny.	***Hazard/Business Impacts:*** ***Safety/Physical Security/Environmental*** • *Multiple independent attacks (e.g., active shooter, detonation of explosive device)* • *Negative customer sentiment or civil unrest leading to likely worker safety issues.* • *Unsafe working conditions result in employee injuries and possible fatalities.* • *Public safety incidents such as hazardous material spills or releases, industrial accidents, train derailments, structure fires impacting AEP's ability to respond.* ***Actual or Predicted customer outage numbers: ** See additional consideration above table.*** • *Up to 20% of customers out at peak or time of determining event level.* ***Reputation*** • *Actions that are likely to cause extremely negative public perception that could potentially damage operating company's reputation or credibility and has gained or ongoing media attention. May include regulatory or legislative scrutiny.* **Cyber** • *Cyber activity with minimal impact on ability to manage outage restoration, communication.*
Level 1 / Catastrophic	**A condition that is extremely disruptive to a wide range of operational and business processes both within AEP and the communities it serves.** The company cannot meet customer expectations, has lost operation or control of critical infrastructure or systems, and may not be able to maintain business operations. A large number of customers, whole communities, or entire regions can be impacted. Available resources are typically insufficient to adequately address the response. Requires activation of emergency management plan Will involve national media coverage and investigation. Certain regulatory or legislative scrutiny.	**Business Impacts:** Process(es) and/or Application(s) **will not be restored** within agreed upon Recovery Time Objective **Business Continuity Plan(s) activated**, work-around(s) are **implemented** but are breaking down, and **is** impacting other elements of the event level description (e.g., CX, Reputational, Financial). Impacts to interdependent processes.

All Hazards Emergency Event Level		
Event Level / Category	**Characteristics**	**Condition Guidelines**
		Hazard/Business Impacts: ***Safety/Physical Security/Environmental*** • *Unsafe working conditions result in employee fatalities.* • *Extensive and coordinated attacks (e.g., active shooter, detonation of explosive devices)* • *Negative customer sentiment or civil unrest leading to significant worker safety issues.* • *Public safety incidents such as hazardous material spills or releases, industrial accidents, train derailments, structure fires impacting AEP's ability to respond.* ***Actual or Predicted customer outage numbers: ** See additional consideration above table.*** • *Greater than 20% of customers out at peak or time of determining event level.* ***Reputation*** • *Actions that are likely to cause extremely negative public perception that could potentially damage operating company's reputation or credibility and has gained national media attention. May include regulatory or legislative scrutiny.* ***Cyber*** • *Cyber activity impacting control of system equip, applications and or communications.*

Event Category	Weather Event Type	Expected Restoration Duration	Number of Customers Affected	Number of Outage Cases
V	Isolated T-Storm Wind gusts > 40 MPH	4-12 hrs.	>5% in service center	D: Above avg volume T: 1-3
IV	Isolated to widespread T-Storms Sustained winds > 40 MPH	12-24 hrs.	2.5-10% of district affected	D: Increased volume of outage cases T: 4-5
III	Multiple bands or widespread T-Storms Sustained winds > 60 MPH Ice accumulation up to 1/2" Wet snow accumulation 3-5"	24-48 hrs.	5-20% of district affected	D: Large volume of outage cases T: >=6

Event Category	Weather Event Type	Expected Restoration Duration	Number of Customers Affected	Number of Outage Cases
II	Ice accumulation > 1/2" Wet snow accumulation 5-10" Winds up to 75 MPH	3-6 days	20-60% of district or 10%-50% of OpCo affected	D: Significant volume of outage cases T: >=6
I	Ice accumulation > 3/4" Wet snow accumulation > 10" Winds > 75 MPH	>7 days	>40% of OpCo affected	D: Significant volume of outage cases T: >=6

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-13:

Explain the system and tools used to manage all emergency response assignments. Your response should include management of mutual assistance and contract personnel and consider needed food and lodging facilities.

Response No. STAFF 1-13:

AEP Texas uses a suite of ARCOS (Automated Roster Callout System) products to manage a storm. A description of each system in the suite is explained below:

Resource Assist

- Import rosters for external personnel/crews
- Ability to electronically request resources from contracting partners.
- Ability to electronically receive confirmation of resource s allocated, location allocation.

Crew Manager:

- Roster verification during On Boarding
- Assignment of crews to impacted areas including staging sites.
- Tracking and automatic notification of hotel and lodging arrangements.
- Reporting of FTE counts used for Food management.
- Overall Resource Tracking

Assessment:

- Assigning Assessors to perform damage assessment.
- Assessment data gathered using mobile device.
- Visibility into extent of damage

Work Bench

- Electronic Work Packets assigned to construction or tree crews.
- Electronic completion of Work Packets
- Reporting of Restoration Status or Progress

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-14:

How far in advance of the May 2024 Derecho and Hurricane Beryl did you initiate emergency preparations? Describe the timeframes for the preparation work in anticipation of emergency operations plan activation. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

Response No. STAFF 1-14:

The May 2024 Derecho did not impact AEP Texas.

AEP Texas started preparations as stated in the response to Staff 1-7, which was 8 days before landfall with the tracking of Beryl as cited in AEP Texas' Emergency Operations Plan (EOP), Section V (Identifying Weather-related Hazards). The timeline for AEP Texas' preparation work is described in the response to Staff 1-15. As described in response to Staff 1-15, all pre-event processes were initiated starting with the activation of AEP Texas' ICS Level 1 on July 3rd. Sections covered in AEP Texas' EOP for pre-event preparations are section II, III, IV, V, and VI.

Prepared By: Mark Baker Title: Director Distribution Engineering

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-15:

Please provide a timeline of your Company's response to the May 2024 Derecho and Hurricane *Beryl.*

Response No. STAFF 1-15:

The May 2024 Derecho did not impact AEP Texas.

On Wednesday, July 3rd, AEP Texas activated its Incident Command Structure (ICS) in preparation for a hurricane AEP Texas thought could impact the Rio Grande Valley and Corpus Christi areas of its service territory. AEP Texas uses the ICS organizational approach to be more aligned with state and local emergency responders.

That same Wednesday, AEP Texas began communicating with the public in English and Spanish, sharing information on hurricane preparedness and letting them know AEP Texas was making preparations. AEP Texas notified the Commission and state and local leaders of its efforts and reached out to its communities to ensure AEP Texas had the latest information on cooling centers and updated critical customer lists. AEP Texas also proactively reached out to large industrial customers along the coast to confirm contact information was updated.

During this time, AEP Texas was actively engaged in requesting additional resources through mutual assistance and ensuring it had enough material available to respond to an event. AEP Texas confirmed availability and location of previously identified staging sites for crews and materials to activate as needed.

On Sunday, July 7th resources began arriving at the Richard M. Borchard Regional Fairgrounds in Robstown, just west of Corpus Christi. This location served as the central check-in site for AEP Texas. AEP Texas secured more than 4,500 resources to respond to Hurricane Beryl, and more than 2,700 were checked in and ready to respond the day before landfall.

After the storm made landfall, during the early morning hours on Monday, and as soon as it was safe for responders, AEP Texas' crews began assessing the damage while restoring service to impacted communities. After initial assessments, AEP Texas determined it could release some resources to other utilities whose systems were also affected by Beryl. The most impacted areas in

AEP Texas' territory were Port Lavaca, El Campo and Bay City including surrounding communities. At peak, AEP Texas had approximately 35,500 outages on its system.

AEP Texas shared Estimated Times of Restoration (ETR) with its customers by Monday evening. AEP Texas continued to update the ETR and further refine them down to specific neighborhoods throughout the event.

By the end of the next day, AEP Texas restored power to about 75% of customers and by Wednesday night, 92% of customers had their power restored.

On Thursday night, July 11th over 97% of the customers affected by Hurricane Beryl and could receive service, had been restored.

Prepared By: Mark Baker Title: Director Distribution Engineering

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-16:

Please detail the extent and duration of outages experienced by your customers during and in the aftermath of the May 2024 Derecho and Hurricane Beryl. Include the total number of customers affected; minimum, maximum, and average hours of service interruptions; and maximum and average time to service restoration in your response.

Response No. STAFF 1-16:

The May 2024 Derecho did not impact AEP Texas.

The data represents the customer outages in the five(5) counties directly impacted by Hurricane Beryl.

Hurricane Beryl

Area Impacted:	Corpus Christi District	
Storm Event Start Date/Time:	7/8/2024	1:00
Storm Event End Date/Time:	7/12/2024	19:00
Total Customers Impacted During Storm:	28,853	
Average Duration Hours for Restore (Total Outage Duration/Number of Outages)	33.5 Hours	
Minimum Duration Hours for Restore	0.72 Hours	
Maximum Duration Hours for Restore	155.6 Hours	
	Restored - 7/14/2024 13:19	

Prepared By: Adrian Uresti Title: Distribution Dispatching Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-17:

Provide the following information concerning your service territory:

a. Identify the geographic areas that experienced the highest number of outages and longest duration of outage due to the May 2024 Derecho. Your response should identify the neighborhood, city, zip code, and county if possible.
b. Identify the geographic areas that experienced the highest number of outages and longest duration of outage due to the Hurricane Beryl. Your response should identify the neighborhood, city, zip code, and county if possible.
c. Identify or describe the factors that contributed to the areas identified in response to subparts (a) and (b) as being particularly vulnerable.

Response No. STAFF 1-17:

The May 2024 Derecho did not impact AEP Texas.

Below is a table illustrating geographic zones in the Company's service area that experienced the highest number of outages and longest duration of outages due to Hurricane Beryl. Factors that contributed to the vulnerability in these geographic zones include:

- Proximity to the coast and particularly to Hurricane Beryl's landfall location.
- Rural terrain and access difficulty with flooding conditions.
- Interruption of the cellular communication network.

County	City	Zip Code
CALHOUN	PORT LAVACA	77979
COLORADO	ALLEYTON	78934
	COLUMBUS	78934
	EAGLE LAKE	77434
	GARWOOD	77442
	NADA	77460
JACKSON	EDNA	77957
	GANADO	77962
	PALACIOS	77465
MATAGORDA	BAY CITY	77414
	BLESSING	77419
	MARKHAM	77456
	MATAGORDA	77457
	MIDFIELD	77458
	PALACIOS	77465
	WADSWORTH	77483
WHARTON	EL CAMPO	77437
	LOUISE	77455

Prepared By: Adrian Uresti Title: Distribution Dispatching Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-18:

Describe any challenges in restoring operations your Company encountered due to the May 2024 Derecho or Hurricane Beryl.

Response No. STAFF 1-18:

The May 2024 Derecho did not impact AEP Texas.

Please see the response to Staff 1-50 for the response associated with Hurricane Beryl.

Prepared By: Tom Cardenas Title: Manger Distribution System

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-19:

Please provide a copy of the after-action reports or provide a date by when the action reports will be completed for the May 2024 Derecho and Hurricane Beryl.

Response No. STAFF 1-19:

The May 2024 Derecho did not impact AEP Texas.

The after-action report for Hurricane Beryl will be completed in September 2024 and will be provided when available.

Prepared By: Mark Baker Title: Director Distribution Engineering

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-20:

Please provide any additional information and describe any concerns that may be helpful to this investigation.

Response No. STAFF 1-20:

No additional information.

Prepared By: Tom Cardenas Title: Manger Distribution System

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-21:

Provide the following information concerning the communication strategy and policy in place before July 8, 2024:

a. What consideration is given to local governments, community organizations, and other electric, water, sewer, and telecommunication utilities concerning your communication strategy after a hurricane or major storm in your service territory?
b. Describe any augmentation to staffing at call centers or help desks that would occur in advance of or after a hurricane or major storm entered your service territory.
c. For transmission and distribution utilities, please describe how your company coordinates communication to end-use customers with retail electric providers.

Response No. STAFF 1-21:

a. AEP Texas provides communication outreach by email, social media and physical presence at local governments Emergency Operating Centers pre-event, during an event and post a major storm event.

b. Pre-storm meetings are held with Call Center Managers, supervisors, and support staff to discuss potential outage levels. This helps determine if the local call center can handle anticipated call volume, or if one, or more, of AEP's other five centers will need to assist. Storm calls will continue throughout the duration of the storm to address fluctuations in call volume to ensure appropriate coverage. AEP also leverages a High Volume Call Answering IVR system to allow customers to report their outages. AEP Texas designates dedicated AEP Social Media agents for the duration of the storm to respond to customer inquiries and service-related posts and comments.

c. AEP Texas provides outreach to Retail Electric Providers by sending weather notices to the ERCOT RMS List serve. In addition, the Competitive Retailer Relations hotline and Account Executives are available for further questions or escalations.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-22:

Describe your communication strategy with the public before, during, and after the May 2024 Derecho and Hurricane Beryl and by what means these communications were conducted.

Response No. STAFF 1-22:

The May 2024 Derecho did not impact AEP Texas.

The communication strategy and related Emergency Operations Plan sections are discussed in the response to Question No. Staff 1-11, and the timeline of events for Hurricane Beryl is summarized below.

Pre-Event

Tuesday, July 2nd –

- A news release is posted to AEPTexas.com alerting customers to prepare for the hurricane's landfall somewhere along the Texas Gulf Coast
- A social media video is posted encouraging customers to build an emergency kit.

Wednesday, July 3rd –

- Telephone calls to elected officials, statewide leaders, local governments, and critical load customers of our storm preparation.
- Communication by telephone or text to PUCT Chair, Executive Director, and Commission Staff letting them know that ICS was activated.
- The July 2 news release is posted to social media.
- Strom Trackers is activated on AEPTexas.com sharing information about storm monitoring and safety.

Friday, July 5th –

- Weather notices discussing our preparation posted on our AEP Texas website, posted to social media channels, shared on Storm Tracker, and emailed to Retail Electric Providers.
- Communication by email were sent to the predicted impacted area EOCs, which included the following counties: Calhoun County, Victoria County, Goliad County, Jackson County, Wharton County, and Matagorda County EOCs.

- Social media posts encourage customers who rely on electricity for lifesaving or life-supporting medical equipment make a plan to prepare for the possibility of prolonged power outages and remind customers to stay away from downed power lines.
- Communication by telephone, texts, and emails to TDEM, statewide leaders and elected officials of our preparation

Saturday, July 6th –

- Weather notices discussing our preparation posted on our AEP Texas website, social media channels, Storm Tracker, and emailed to Retail Electric Providers and critical load customers.
- Social media posts remind customers about generator safety; company shares latest updates from the National Hurricane Center.
- Communication by email was sent to the predicted impacted area EOCs, which included the following counties: Calhoun County, Victoria County, Goliad County, Jackson County, Wharton County, and Matagorda County EOC
- Communication by telephone, texts, and emails to TDEM, statewide leaders and elected officials of our preparation

Sunday, July 7th –

- Weather notices discussing our preparation posted on our AEP Texas website, social media channels, Storm Tracker and emailed to Retail Electric Providers and critical load customers.
- Videos featuring the AEP Texas staging area and check-in center featuring mutual aid crews in Robstown, Texas, and drive footage of the hundreds of bucket trucks are posted to social media.
- Communication by email was sent to the potential impacted area EOCs, which included the following counties: Calhoun County, Victoria County, Goliad County, Jackson County, Wharton County, and Matagorda County EOC
- Physical presence at the following Emergency Operating Centers: Victoria County and Calhoun County
- Communication by telephone, texts, and emails to TDEM, statewide leaders and elected officials of our preparation

During the Event

Monday, July 8th through Friday, July 12th –

- Weather notices discussing our storm restoration and estimated times of restoration posted on website, social media channels, Storm Tracker, and emailed to Retail Electric Providers and critical load customers.

h. Social media posts feature photographs and/or video featuring the following: Broken utility poles and damaged electrical facilities; flooding near and around our electrical facilities and equipment; downed power lines; restoration work taking place in water; restoration work taking place at night; crews restoring electric service and cleaning up storm damage on rural roads and residential streets.
   - Communication by email were sent to impacted area EOC, which included the following counties: Calhoun County, Victoria County, Jackson County, Wharton County, and Matagorda County EOC
   - Physical presence at Emergency Operating Centers: Matagorda County, El Campo EOC, Colorado County and Matagorda EOC
   - Communication by telephone, texts, and emails to TDEM, statewide leaders and elected officials of our restoration efforts and ETRs

Post Event

After Friday, July 12th

- Communication by telephone and face-to-face regarding demobilization of Staging sites and vegetation debris discussions with impacted local governments.
- Final weather notice is posted at AEPTexas.com, social media channels, and Storm Tracker.
- Video posted to social media shows community outpouring of support to mutual aid crews.
- Social media post encourages customers to use TDEM's Individual State of Texas Assessment Tool (iSTAT) to report damage.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-23:

Please provide any available data regarding customer feedback you received in response to your service restoration efforts during and in the aftermath of Hurricane *Beryl.*

Response No. STAFF 1-23:

AEP Texas reviewed survey data responses for Contact Center, Reputation and Digital surveys for the period from July 8, 2024, through August 14, 2024, during and after Hurricane Beryl. There were approximately 600 Contact Center surveys sent to the impacted service area and 13 of the 78 responses mentioned Hurricane Beryl. There were approximately 1,160 reputational surveys sent to the impacted service area and 7 of the 58 responses mentioned Hurricane Beryl. In summary, out of 1,760 surveys sent to the impacted area, AEP Texas received a total of 20 customer comments (13 Contact Center (CC) and 7 (RS) Reputation) in response to service restoration efforts during and in the aftermath of Hurricane Beryl.

Customers from the surveys responded that they were generally pleased with the restoration efforts with 75% praised AEP Texas for a job well done, but where they did show dissatisfaction was with their perception that maintenance is lacking and with some opportunity to improve communication. The main themes were:

Praise for a job well done (75% of all responses)

Perception of maintenance of lines could prevent outages/damage (10% of all responses)

Opportunity to improve communications (10% of all responses)

In addition, AEP Texas did receive comments and feedback, shown below, from our social media Facebook page.

"Thank You front liners, you're the real Heroes. Be safe out there."

"Thanks so much for the dedicated and professional response by AEP linesman, admin, engineering, management, contract, and so many more personnel to restore the Texas power grid. It is truly appreciated! Please everyone stay safe."

"Thank you all these gentlemen going out in this weather to help restore power. I pray for them. Thank you to my son-in-law and grandson for being there and working tirelessly with these guys."

"Thank you for your service. God bless and keep you safe! Amen.

"Prayers for our first responders."

"Prayers to all my brothers in the energy industry!! Takes a lot of sacrifice to be away from your families to keep the lights on for others! Y'all stay safe out there.

"From a South Texas Coastal Bend Resident, thank you all sooooo much! <3"

"Gotta love the linemen. Thank you <3<3<3"

"May they all have SAFE JOURNEY & BE SAFE WHILE HERE. THANK YOU AN I KNOW YOUR FAMILIES ARE PRAYING FOR YOUR SAFE RETURN AS WE ARE ALSO PRAYER FOR YOU. THANK YOU-THANK YOU- THANK YOU"

"That's awesome! Thanks AEP employees!!! You are so appreciated!"

"Thank to all the lineman and women. Thank you for what you do."

"Thank you. I'm an Ohio girl who moved to Texas."

"AEP STRONG! Safe journey to all you on route. God bless your journey. #safetyfirst"

"Yeppers seen a long convoy coming in on 77. Thank you guys!!"

"While CC dodged this, it was quite an amazing site to see all the AEP trucks, disaster recovery tractor trailers lined up and ready to serve. Thank you all for leaving your families to come here and be ready for whatever the storm dealt."
"Thank u to all the lineman. It's super hott and humid plus they have on their equipment up in the air.. doing a dangerous job. U are greatly appreciated"

"Thank you all. So glad we don't need you here in Corpus, but hoping you are heading for Houston and surrounding areas when the winds subside. "

"Thanks so much for the dedicated and professional response by AEP linesman, admin, engineering, management, contract and so many more personnel to restore the Texas power grid. It is truly appreciated! Please everyone stay safe."

"Linetec crews are ready to go! Grateful to work for a company who supports AEP's efforts to restore power."

"Thank you to each and every person, you all are amazing "

"Y'all take care , the lineman were our heroes after Harvey "

"Thank you AEP for restoring power!"

"Thank You AEP for the early preparations (preventive measures and readiness)!"

"Thank you all these gentlemen going out in this weather to help restore power. I pray for them. Thank you to my son n law and grandson for being there and working tirelessly with these guys."

"Such a comfort to see those big trucks and know the people in them are there to help. Prayers for them , God bless them. Prayers for everyone involved "

"Yes a very big thank you for your hard work, putting yourself in the line of danger to restore the electricity to thousands of homes."

"Thank you so much AEP & other electric company linemen who are working so hard to restore power after the hurricane came through here. God's blessings & protection on you all."

"Our gratitude and thanks to the crews on the job in El Campo. Fast response and incredibly hard work does not go unappreciated by seniors like us. Just wanted these workers to hear a big thank you."

"Thank you AEP you have always been and will be #1 in my books. Thank you for your hard work and God bless each and every one of you "

"Thank you men and women that are in this terrible heat to restore our power and make us all comfortable again you are truly appreciated. May God bless you all's and your family always."

"A big thanks to all who endlessly worked in this heat to restore power. We love and greatly appreciate you all! "

"There are so many companies out there assisting in many ways coming from all over. Thank you to each and every person for their part. "

Thank you to all the linemen working and giving it your all to restore all our electricity. I pray God's safety & blessings on you all

"So grateful for all these dedicated AEP employees working to get our power back in Bay City!"

"God continue to allow these AEP workers to restore all power to everyone that lost theirs because of the hurricane. Keep them all safe God in your name and if you see them working tell them thank you because they're risking their lives to restore power for everyone and leaving their families behind to get the job done!! "

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-24:

What steps are being taken to improve coordination and communication with local governments, medical and eldercare facilities, community organizations, trade associations, and other similar organizations for future significant weather events?

Response No. STAFF 1-24:

AEP Texas is facilitating discussions to review, compare and confirm critical loads with the local governments in its service area. There are continued discussions with the REPs to request up-to-date customer information. In addition, AEP Texas has begun discussions with the Texas Assisted Living Association regarding the critical load list and communications.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-25:

What steps are being taken to improve coordination and communication with other electric, water, sewer, and telecommunication utilities for future significant weather events?

Response No. STAFF 1-25:

AEP Texas has operational discussions and meetings to review and update its contact lists with its local governments.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-26:

Provide the following information concerning call centers and help desks used by your company before July 8, 2024:

a. How many people work in call centers or help desks?
b. Of these people, please provide the percentage of these employees that are full-time employees (FTE), contracted labor, or temporary/seasonal workers.
c. What is the target wait time or response time for calls?
d. What is the target resolution time for calls?
e. Provide a detailed description of company-specific training provided to call center and help desk operators concerning major outages and major weather events including, but not limited to, hurricanes and high wind events.
f. What is the maximum call volume for the call centers of help desks that were available and in operation during or in the aftermath of Hurricane Beryl?

Response No. STAFF 1-26:

a. AEP Call Centers – 510 full time, 4 part time, and 113 contractor/outsourcers
b. AEP Call Centers - 78.3% full time, 0.5% part time, and 21.2% contractor
c. 90 second Average Speed of Answer (ASA) goal
d. 330 seconds for all call types, outage calls are average 280 seconds
e. As part of their initial core training, agents are trained to handle outage calls and how to create corresponding outage tickets based on hazard (e.g., line down, fire) vs. non-hazard.
f. Agents handled calls – Assuming 50% of all available agents available at 280 seconds per call – 3,820 Calls an Hour

   High Volume Call Answering IVR can take 100 calls per second (Allows customers to create an outage ticket)

   Internal IVR – 80k /hr (Allows customers to create outage ticket)

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-27:

Provide the daily average and peak call volume to your call centers or help desks during or in the aftermath of Hurricane Beryl. For purposes of this question, please provide responses for each day from July 8, 2024, through the date power was restored to at least 99% of the customers in the service territory in the Impacted Area.

Response No. STAFF 1-27:

Customer Operation Center call volume data from July 8th to 12th.

Date	Call Volume
July 8th	13,209
July 9th	7,218
July 10th	5,210
July 11th	3,895
July 12th	2,849

Average = 6,440
Peak = 13,029

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-28:

Describe how you communicated and shared information on recovery resources and updates with local and state leaders as well as your customers during leading up to, during, and in the aftermath of Hurricane Beryl.

Response No. STAFF 1-28:

AEP Texas provided outreach by email and had representation at local and state Emergency Operating Centers. AEP Texas also had representatives giving restoration status updates on the daily Texas Energy Reliability Council coordination calls. In addition, weather notices discussing AEP Texas' preparation and storm restoration ETRs were posted on AEP Texas' website, social media, and emailed to Retail Electric Providers.

The initial communication was by telephone to elected officials and statewide leaders to inform them that AEP Texas was taking the necessary actions to prepare for the hurricane. The proceeding weather notices informing of storm preparation activities, restoration efforts and ETRs were sent by texts.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-29:

Please indicate whether calls incoming to your call centers, help desks, or priority call desks are recorded, and if so, provide your retention schedule for the captured calls.

Response No. STAFF 1-29:

All AEP Texas Customer Operation Center calls are recorded and retained for four years.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-30:

If calls incoming to your priority call desks are not recorded, please indicate if incoming calls are logged or otherwise tracked. If tracked or logged, please provide a copy of all logged or otherwise tracked calls to the priority call desk during or in the aftermath of Hurricane Beryl.

Response No. STAFF 1-30:

Not applicable – all calls are recorded.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-31:

Please provide an audio copy and transcript of any pre-recorded messages related to either the May 2024 Derecho or Hurricane Beryl used by your call centers or help desks and the date these messages were utilized.

Response No. STAFF 1-31:

The May 2024 Derecho did not impact AEP Texas.

Hurricane Beryl Pre-Recorded Message Transcript:
This recording was made Tuesday, July 9th at 2:50 PM. AEP Texas is aware of and responding to outages affecting customers in your area. Outages caused by severe weather are affecting a large number of customers throughout your service area. At this time, damage assessment is ongoing and restoration times cannot be estimated yet. Information will be updated as it becomes available. For the most up-to-date information regarding year outage, log on to aeptexas.com from your computer or mobile device. We appreciate your patience and thank you for calling. To report your outage using our automated outage reporting system, please remain on the line.

Please see Staff 1-31 Attachments 1 fir the audio copy of the pre-recorded message.

Staff 1-31 Attachment 1 is provided electronically on the PUC Interchange.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-32:

Provide the following information concerning the outage tracker in use on July 8, 2024

a. The date the outage tracker was rolled out to customers.
b. The last date the software underpinning the outage tracker was updated.
c. whether the outage tracker was functioning during the May 2024 Derecho and Hurricane Beryl as intended or provide an explanation as to why not.
d. Whether the outage tracker was mobile-friendly;
e. the languages supported by the outage tracker;
f. Whether the outage tracker captured circuit-specific or meter-specific information or both.
g. Whether the outage tracker was cloud-based or operated through an on- premise server?
h. The maximum number of simultaneous users the outage tracker was designed to accommodate.
i. Whether you had internal facing redundancies/contingencies for outage tracking, and if so if these redundancies/contingencies were utilized during your response to Hurricane Beryl.
j. The date of the last stress or load test of the outage tracker.

Response No. STAFF 1-32:

a. July 2016
b. AEP is currently on StormCenter 4 which is the original version rolled out to AEP customers. Kubra maintains StormCenter 4 for AEP. Our most recent maintenance update was Monday 8/12/2024.
c. The May 2024 Derecho did not impact AEP Texas. The outage tracker was functional during Hurricane Beryl.
d. The outage tracker does function on mobile devices. Some features may have less functionality.
e. The current language supported is English only.
f. The current outage tracker does not support circuit specific information. The outage tracker does consolidate meter specific information to display outage information but does not display meter level information.
g. The Outage Tracker is cloud based.
h. The outage tracker is support by Amazon Web Services, our current deployment has supported at least 2.5 MM concurrent users.
i. AEP does not maintain a redundant or secondary customer Outage Tracker.
j. July 8, 2024

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-33:

Provide daily total and peak numbers of users accessing your outage tracker in the greater Houston area during each day of the May 2024 Derecho event.

Response No. STAFF 1-33:

The May 2024 Derecho did not impact AEP Texas.

Prepared By: Matt Gerick Title: Dir. Customer Experience

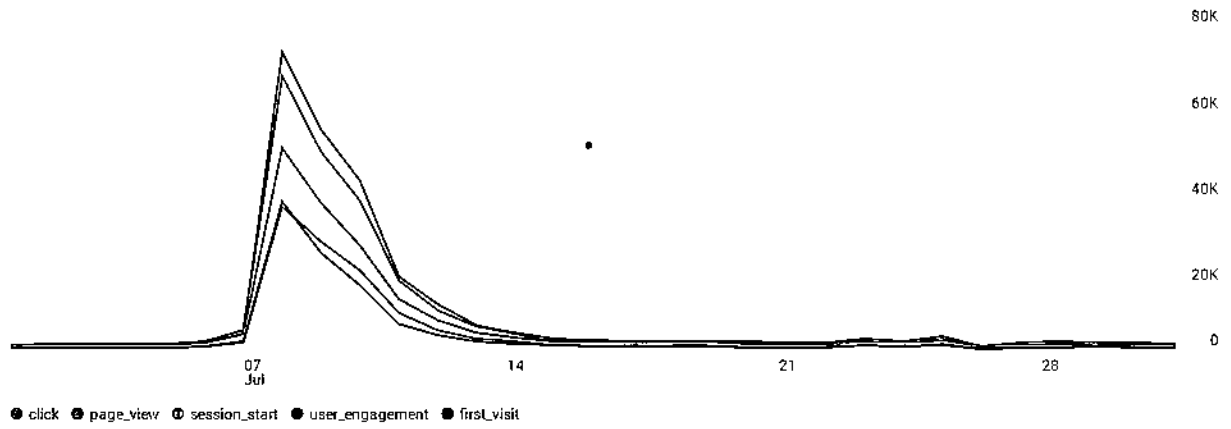
PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-34:

Provide the daily total and peak number of users accessing your outage tracker in the Impacted Area starting from July 8 through the date service was restored to 100% of your service territory.

Response No. STAFF 1-34:



Legend

click – Customer interaction on the map where they've clicked on something on the map for more information

Page_View – Is where the person hit's the map, views in and leaves.

Session_Start – Hits the map and then uses some of the resource frames on the left.

User_Engagement – User spends time on the map, more than just one click and interacts with the map

First_Visit – Unique first customer visits

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-35:

Describe any processes or policies adopted by your company as contingencies to inform customers about service outages and estimated restoration times in the event the outage tracker is offline.

Response No. STAFF 1-35:

AEP employs several parallel services to share outage information with its customers. Customers have the option to sign up for email and text outage alerts providing either real time or near real time updates as they become available. The same information is available to customers on www.aeptexas.com website and by using the AEP Texas Mobile App. Customers also have the option of calling and receiving the same information through AEP's IVR systems or as a last resort, speaking to a Call Center Agent.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-36:

Please indicate if the processes or policies described in your response to Staff 1-35 were utilized during either the May 2024 Derecho event or in the aftermath of Hurricane Beryl. If they were, please identify the dates the identified processes and policies were activated.

Response No. STAFF 1-36:

The May 2024 Derecho did not impact AEP Texas.

AEP's Outage Maps were 100% functional during Hurricane Beryl, as well as all services described in the response to Staff 1-35 are operational 24/7 at AEP and were fully available and in use during the event.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-37:

Please provide a breakdown of smart meters currently in service for each county in your service territory that was included within the Impacted Area. In providing a response to this question, please provide both raw numbers and answers as a percentage of total customers in each county.

Response No. STAFF 1-37:

COUNTY	AMI COUNT	NON-AMI COUNT	METER COUNT	PERCENT AMI
ARANSAS	22,201	2	2,2203	99.9
BOWIE	629	0	629	100
CALHOUN	8,097	47	8,144	99.4
CAMERON	95,734	66	95,800	99.9
COLORADO	5,681	8	5,689	99.8
DEWITT	2,173	6	2,179	99.7
GOLIAD	3,046	7	3,053	99.7
GREGG	10,531	12	10,543	99.8
HIDALGO	24,0657	87	24,0744	99.9
JACKSON	4,846	0	4,846	100
KENEDY	97	4	101	96
KLEBERG	12,981	10	12,991	99.9
MATAGORDA	16,485	25	16,510	99.8
REFUGIO	4,718	2	4,720	99.9
SAN PATRICIO	34,158	59	34,217	99.8
SHELBY	2,960	0	2,960	100
VICTORIA	32,183	30	32,213	99.9
WEBB	102,599	43	102,642	99.9
WHARTON	5,844	6	5,850	99.8
WILLACY	5,836	13	5,849	99.7

Prepared By: Jerry Young

Title: Advanced Meter Infrastructure Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-38:

Provide the date and method (e.g., email, phone call, text message) you initially contacted local governments in the Impacted Area.

Response No. STAFF 1-38:

On July 3rd, AEP Texas began communication to elected officials and local governments by telephone and texts of the predicted landfall of Hurricane Beryl and AEP Texas' storm preparation. On July 5th, 6th, and 7th, an email or text communication was sent to the predicted landfall elected officials and local governments, which included Calhoun County, Victoria County, Goliad County, Jackson County, Wharton County, and Matagorda County Emergency Operating Centers. On July 7th, physical presence was made at Victoria County and Calhoun County Emergency Operation Centers. On July 8th, physical presence was made at Matagorda County and El Campo Emergency Operating Centers.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-39:

Describe what processes, if any, you had in place on or before July 8, 2024, to contact medical and eldercare facilities or critical infrastructure (e.g., police stations, firehouses, TV stations) in advance of a hurricane or major storm. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

Response No. STAFF 1-39:

AEP Texas provides weather notices regarding preparation activities and safety advisories by email to local and state Emergency Operating Centers. In addition, the weather notices were posted on our website, social media and emailed to Retail Electric Providers. According to the Communication Plan Section II on page 11 in AEP Texas' Emergency Operations Plan (EOP), during a pre-event, Corporate Communications provides information to its customers and the public. Corporate Communications distributes weather notices on event preparedness and the activation of the Central Emergency Command Center. Corporate Communications also posts event preparedness messages on AEPTexas.com (Storms & Outages page and/or news releases), as well as posts messages on Facebook, LinkedIn, and X. Corporate Communications uses and promotes this internet site as a primary source of current information. In the Communication Plan Section II on page 8 of the AEP Texas' EOP, the overall electric operations coordinates with Community Affairs Managers, Customer Services and Field Media Coordinator to provide detailed local restoration information to be communicated to state and local elected officials, county emergency coordinators, and critical load customers.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-40:

If your company has a process to contact critical care facilities, provide the date and method (e.g., email, phone call, text message) you initially contacted medical facilities, eldercare facilities, or critical infrastructure (e.g., police stations, firehouses, TV stations) in advance of Hurricane Beryl.

Response No. STAFF 1-40:

AEP Texas utilizes multiple methods to contact critical load customers, which includes outreach by email, telephone and/or physical representation at local and state Emergency Operating Centers (EOCs). In addition, weather notices discussing AEP Texas' preparation and storm restoration were posted on AEP Texas' website, social media, and emailed to Retail Electric Providers. On July 3rd, initial phone calls were made to predicted landfall local governments and critical loads. On July 5th, a weather notice was emailed to predicted landfall area EOCs and a market notice was sent to the Retail Electric Providers.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-41:

Please describe how you communicate and with what frequency you communicate with critical care and at-risk customers about service outages and restoration efforts.

Response No. STAFF 1-41:

AEP Texas utilizes multiple methods to contact critical care customers and communicate storm restoration efforts and ETRs on a daily basis, which includes outreach by email through their REP, AEPTexas.com website, social media, and physical representation at local and state Emergency Operating Centers.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-42:

For ERCOT-located utilities, please describe any communication with interconnected power generation companies regarding their operational status during Hurricane Beryl.

Response No. STAFF 1-42:

Please see Staff 1-42 Attachment 1 for generation communication with AEP Texas' transmission dispatch from July 7th to 14th.

Prepared By: Matt Gerick Title: Dir. Customer Experience

ispatch Op ati g Lo - SCCO-ERCOT
Thursday, ug 15 2024

GENERATION PLANT LOG **Case#: 1397120** **Eve t ID:** ***State:***

Date Out 07/14/2024 23:55 *Date In* 07/14/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arra gements:

Event Log

07/14/2024 00:05

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Co tact Name**	**Comme ts**
1248	Cotton WF	Matthew RWE	Derate has been lifted - 200 MW capability

GENERATION PLANT LOG **Case#: 1397026** **Event ID:** ***State:***

Date Out 07/13/2024 23:55 *Date In* 07/13/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arra gements:

Event Log

07/13/2024 00:05

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
0215	Stella WF	Mckayla	Site entered derate for a total MW cap of 174MW
0608	Blue Summit	Damian Nextera	Feeder 42 tripped and restored. Bad reactor, reactor bypassed
0919	Algodon WF	Matthew RWE	Loss Pme trip, loss of 4 mvar capability
1359	Hydra Bess	Daniel (Engle)	Ercot approved MW testing (200 MW output and 200 MW charge) - no issues
1623	Bruning Breeze	Matthew RWE	Site derate over - 213 MW HSL

GENERATION PLANT LOG **Case#: 1396804** **Event ID:** ***State:***

Date Out 07/12/2024 23:55 *Date In* 07/12/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arra gements:

Event Log

07/12/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
0906	Nueces Bay	Koby Johnson	Reactive testing, units 7,8,9. Advised to stay within 138kv - 144.9 KV.
1220	Nueces Bay	Michael	Reactive testing cancelled. Began seeing contingency loss of Nueces Bay - Lon Hill 138 overloading Nueces Bay – Morris Street 138 due to excessive MVARs and unavailable CAPs in the area to support.

1025	Hydra Bess	Jess	Reactive testing HE's 12-16 104.5 MVAR lagging to 70.6 MVAR leading, study ran saw no issues, gave approval at 1036

GENERATION PLANT LOG **Case#: 1396595** **Event ID:** ***State:***

Date Out 07/11/2024 23:55 *Date In* 07/11/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arrangements:

Event Log

07/11/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
0612	Inertia	Johnathan	Loss of comms - inquired about MW output of site (176 MW)
0631	Engle	Jess	AVR Testing request @ 0700 approved 345 - 360KV
0717	Engle	Jess	AVR Testing request update: bump up to 361 KV, preferably 364 KV, 361 KV approved
0909	Nueces Bay	Koby	Reactive mod 25 testing out of units 7,8,9 requested Voltage assitance
0845	Inertia	Sky	Regained Comms
1040	Las Majadas	Harm	Cap bank 1 available
1543	Formosa	Trey	G15 cb closed, AVR back in service

GENERATION PLANT LOG **Case#: 1396237** **Event ID:** ***State:***

Date Out 07/10/2024 23:55 *Date In* 07/10/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arrangements:

Event Log

07/10/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
0745	Prairie WF (Crawfish)	Matt	Prairie wind or Crawfish WF, RTU is down. They have requested to contact us every 15 min for Generation output value
0759	Los Majadas	Brian	Loss 93.3 MVAR
0933	Chapman Ranch	Aaron	Telemetry outage at 1000 for 10min
1146	Los Mijadas	Hann	Increased MVAR capability to 75.75
1245	Los Mirasoles	Carlos	Decrease of 26.7 MVAR

GENERATION PLANT LOG **Case#: 1395838** **Event ID:** ***State:***

Date Out 07/09/2024 23:55 *Date In* 07/09/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arrangements:

Event Log

07/09/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
1248	Reos Del Sol	Will	Lost comm working to restore, personnel on site if needed
1514	Bruening Breeze	Mark	Unitss A and B derated to each 99HSL 87HSL
1525	Stella	Steve	36MW derate extended till 1800 7/10/24
2214	Seadrift Airco	David	Site will be starting 2.2MW pump.

GENERATION PLANT LOG **Case#: 1395279** **Event ID:** ***State:***

Date Out 07/08/2024 23:55 *Date In* 07/08/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arrangements:

Event Log

07/08/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
1046	Formosa	Paul	Gen #3 online
1758	Stella	Makayla	Site derated to 165MW HSL.
2218	Formosa	Jeff	G1 CB closed, AVR in auto, PSS/PFR are on.

GENERATION PLANT LOG **Case#: 1395163** **Event ID:** ***State:***

Date Out 07/07/2024 23:55 *Date In* 07/07/2024 23:55

Comments: GENERATION PLANT LOG

Information:

Operating Arrangements:

Event Log

07/07/2024 23:55

	TxCC & TxN GEN PLANT LOG		
Time	**Gen Plant**	**Contact Name**	**Comments**
0545	Nebula, Vancourt	Joe	Placed in hurricane mode
0846	LV1	Chris	Opening feeder 1A
0940	Cheinere	David	Reports they wiill remain in operation through the storm

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-43:

Please state whether you have a service restoration plan regarding service outages caused by extreme or emergency weather events. If you do, please provide a copy of that plan(s). Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

Response No. STAFF 1-43:

Yes. For weather related events please refer to section VI A of AEP Texas' EOP and for hurricane related events, please refer section VI E of AEP Texas' EOP.

This information is also described in parts in the response to Staff 1-10.

Prepared By: Steven Beaty Title: Regulatory Analysis & Case Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-44:

Please describe the procedures followed for customer restoration of service, including prioritization criteria and timelines for restoration or service. Please note if these policies may lead to quicker restoration of service for an area of your service territory relative to the others and why.

Response No. STAFF 1-44:

For a major weather event storm response, system outages caused by the weather event are identified via AEP automated monitoring systems and AEP system operators. The extent of the outages are evaluated to determine affected areas, company assets, customer outages, and public hazards.

Field assessments are performed on transmission lines, substations, and distribution lines based on priority in affected areas to identify damage that needs to be repaired on and address any hazards to the public.

In parallel with field assessments, transmission and distribution construction resources repair damaged facilities (transmission lines, substations, and distribution lines) based on priority to restore customer outages in affected areas.

- For weather events such as hurricanes and tropical storms, internal and external assessment and construction personnel are pre-staged to respond to impacted areas.

Updates to the public and affected customers about the status of restoration efforts, estimated restoration times, and safety information are provided daily.

Customer outage restoration efforts are prioritized based on:

- **Critical Infrastructure**: Transmission lines affected that are critical for grid stability and for bringing power back into affected areas are given the highest priority. This will prevent load shedding events and allow power to be distributed to restore customer outages.
- **Critical Facilities-** High priority is given to restoring services to critical facilities like hospitals, emergency services, water treatment plants, and public safety facilities.
- **High volume/density areas-** Areas with a high concentration and highest number of affected customers are prioritized to restore service to as many people as quickly as possible.

The restoration timeline of a weather event will vary depending on severity and damage of the weather event. Timelines for a major weather event restoration are below:

- **0-24 hours:** Initial assessment, ensuring safety including identifying hazards, and beginning repair of critical infrastructure and restoring critical facilities.
- **24-48 hours:** Focus on restoring power to high volume/density areas, critical facilities, and major distribution lines serving impacted areas.
- **48-72 hours:** Continue to focus on restoring power to high volume/density areas.
- **3-5 days:** Continue working on restoring power to distribution lines and begin addressing individual customer outages who can take service.
- **5+ days:** Complete restoration of remaining areas, address any complex issues, and handle any ongoing customer-specific problems.

Prepared By: Tom Cardenas — Title: Manager Distribution System

Prepared By: Jeff Stracener — Title: VP Distribution Operations

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-45:

Please describe and explain any changes or modifications made to your service restoration plan(s) during and in the aftermath of the May 2024 Derecho or Hurricane Beryl.

Response No. STAFF 1-45:

The May 2024 Derecho did not impact AEP Texas.

AEP Texas executed its service restoration plan, which had been thoroughly trained and practiced by employees. The plan proved effective for Hurricane Beryl, and no modifications were necessary.

Prepared By: Tom Cardenas Title: Manger Distribution System

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-46:

Please provide a county-by-county summary of date on which and number of damage assessment, vegetation, and linemen crews that you deployed to assess and begin service restoration efforts after Hurricane Beryl made landfall in the Impacted Area.

Response No. STAFF 1-46:

Location / Resource	7/8/20 24	7/9/20 24	7/10/20 24	7/11/20 24	7/12/20 24	7/13/20 24	7/14/20 24	7/15/20 24
El Campo	**1494**	**1036**	**878**	**662**	**670**	**437**	**207**	**96**
Assessor	277	223	223	63	63	31	31	1
Line	978	574	456	400	408	269	104	43
Vegetation	239	239	199	199	199	137	72	52
Bay City	**1677**	**1201**	**1058**	**811**	**774**	**526**	**410**	**452**
Assessor	364	261	261	84	84	16	16	42
Line	1061	684	556	483	446	297	251	247
Vegetation	252	256	241	244	244	213	143	163
Grand Total	**3171**	**2237**	**1936**	**1473**	**1444**	**963**	**617**	**548**

Prepared By: Patrick Rackley

Title: Continuous Improvement Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-47:

Please provide a county-by-county summary of the percentage of your customers that did not have service due to outages caused by Hurricane Beryl for each day from the day Hurricane Beryl made landfall in the Impacted Area to when service was fully restored to your customers.

Response No. STAFF 1-47:

Outage counts by operating areas are the following:

County	Day	Outage Count Start of Day	Percent CI
CALHOUN 7,814 Customers	8-Jul	2,334	29.9%
	9-Jul	10	0.1%
	10-Jul	9	0.1%
	11-Jul	0	0.0%
	12-Jul	0	0.0%
	13-Jul	0	0.0%
COLORADO 5,508 Customers	8-Jul	3,802	69.0%
	9-Jul	1,065	19.3%
	10-Jul	411	7.5%
	11-Jul	129	2.3%
	12-Jul	8	0.1%
	13-Jul	0	0.0%
JACKSON 4,616 Customers	8-Jul	2,322	50.3%
	9-Jul	0	0.0%
	10-Jul	0	0.0%
	11-Jul	0	0.0%
	12-Jul	0	0.0%
	13-Jul	0	0.0%
MATAGORDA 16,021 Customers	8-Jul	11,680	72.9%
	9-Jul	9,397	58.7%
	10-Jul	3,990	24.9%

	11-Jul	1,935	12.1%
	12-Jul	709	4.4%
	13-Jul	25	0.2%
	14-Jul	17	0.1%
WHARTON **5,775 Customers**	8-Jul	5,775	100.0%
	9-Jul	4,433	76.8%
	10-Jul	1,166	20.2%
	11-Jul	163	2.8%
	12-Jul	8	0.1%
	13-Jul	0	0.0%

Prepared By: Adrian Uresti Title: Distribution Dispatch Manager

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-48:

Please describe how calls received by your call centers during and after Hurricane Beryl were incorporated in your service restoration workflow and processes.

Response No. STAFF 1-48:

Agents will create outage tickets with a categorization (hazard vs. non-hazard). Volume and categorization are inputs into Distribution Dispatch Center restoration efforts.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-49:

Please describe your coordination efforts with local, state, and federal agencies, as well as any other stakeholders regarding service restoration before, during, and after Hurricane Beryl. Please provide details of any formal agreements or understandings with these parties.

Response No. STAFF 1-49:

AEP Texas works with all stakeholders including local, state, and federal agencies on storm preparation and restoration efforts before, during and after a storm. There are no formal agreements regarding service restoration efforts before, during and after a storm. There is an understanding of a partnership between AEP Texas and the communities we serve to deliver electric service reliably and safely to our customers.

Prepared By: Matt Gerick Title: Dir. Customer Experience

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-50:

Excluding the need to clear significant volumes of vegetation, please identify and described any major challenges you experienced during the process of restoring service to your customers before, during, and after Hurricane Beryl and any solutions implemented to address those challenges.

Response No. STAFF 1-50:

During the first two days of restoration efforts following Hurricane Beryl's landfall, communication proved difficult due to a lack of cellular service in the El Campo and Bay City AEP Texas service areas. This disruption made it difficult for field employees to report on the extent of the damage, ongoing repairs, and for leadership to relay new information. Solutions implemented to alleviate communication issues experienced were:

i. Utilization of the AEP radio system that remained operational and was used extensively for communication with field teams.
j. Communication trailers equipped with Starlink satellites were deployed to staging sites in the El Campo and Bay City area. These trailers provided Wi-Fi calling and internet access at the staging sites that enable field employees in areas without cellular service to go to communicate more effectively with those who lacked radio systems.

Cellular communications steadily improved each day thereafter, eliminating previous communication barriers.

Another challenge AEP Texas faced during the restoration efforts was accessing damaged areas for repairs. This included reaching transmission and distribution lines in low-lying, flood-prone areas and navigating distribution lines located in customers' backyards without alleyways for truck access. To address these accessibility issues, the following solutions were implemented:

k. Use of track equipment fitted with bucket and digger derrick attachments to repair transmission and distribution lines in standing water or muddy conditions.
l. Small track backyard machines, fitted with bucket and digger derrick attachments, were used to reach, and repair facilities in customer backyards.
m. Vacuum trucks with 300-foot hose extensions were employed to access hard-to-reach sites that digger derrick trucks could not reach, allowing for the excavation of holes for new poles needed for repairs.

Prepared By: Tom Cardenas Title: Manger Distribution System

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-51:

Please describe any lessons learned about restoring service to customers during Hurricane Beryl and how what you learned will inform restoration efforts in the future.

Response No. STAFF 1-51:

AEP Texas is still compiling the after-action review and will implement changes based on that review.

Prepared By: Mark Baker Title: Director Distribution Engineering

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-52:

Does your utility employ the National Incident Management System? If yes, please provide the date on which your utility starting using NIMS as its framework for managing emergency event response.

Response No. STAFF 1-52:

Yes, AEP Texas adopted the National Incident Management System for its Emergency Preparedness and Response in 2015.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-53:

Are your emergency response personnel trained in Incident Command System processes? If not, please describe any training your emergency event management personnel have received and how they interact with local and state officials and other utilities.

Response No. STAFF 1-53:

Yes, AEP Texas requires anyone in the top two tiers of the ICS Organization (structure) to complete ICS-100 & 200 and ICS-700 & 800. Additionally, all members of the Liaison Organization are required to take ICS-100 & 200 and ICS 700 and 800.

Prepared By: Robert De Leon Title: Dir Distribution Region Operations

PUC PROJECT NO. 56822

AEP TEXAS INC.'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Question No. STAFF 1-54:

Please explain your process for evaluating and replacing distribution poles. Please include an explanation for the following in your response:

a. How frequently this evaluation is conducted;
b. What criteria you utilize for this evaluation; and
c. When you decide to replace the distribution pole.

Response No. STAFF 1-54:

AEP Texas inspects its wood distribution poles on a 10-year cycle. AEP Texas uses criteria laid out in what is referred to as Spec 125 to evaluate the pole and decide if the pole needs to be treated, reinforced, or replaced. AEP Texas uses a third party to conduct the pole inspections. There are four aspects to the inspection: (1) above groundline, (2) below groundline, (2a) external decay and (2b) internal decay. Poles with insufficient sound wood externally are reported as rejects and replaced, as are poles with insufficient sound wood internally. For more specifics on the specifications used see Staff 1-54 Attachment 1.

Prepared By: Jeff Stracener Title: VP Distribution Region Operations

Spec 125
September 21, 2023

AMERICAN ELECTRIC POWER
Specifications for
Inspection, Groundline Treatment & Reinforcement of Standing Wood Poles

1. SCOPE

1.1 This specification applies to material, equipment, and services purchased by American Electric Power (AEP) Procurement Services for the AEP Operating Companies and delivered to locations within the AEP service territories.

1.2 These requirements apply to the above and below groundline inspection and groundline treatment of standing wood poles in AEP service territories.

1.3 AEP operating units shall furnish the Contractor with electronic map data including the listing of poles that meet the inspection criteria.

2. DEFINITIONS

2.1 "AEP Representative" shall mean the AEP or Operating Company Personnel directly involved with and responsible for the administration and / or implementation of the Pole Inspection and Treatment Program.

2.2 "Contractor" shall mean any contractor or agent of a contractor who seeks to provide electrical distribution services to AEP.

2.3 "Treatment Materials" shall mean any EPA and AEP approved treatment chemicals (pesticides and preservatives) listed in Attachment "A".

2.4 "Reported" means that the inspection data results (findings) shall be recorded on the inspection spread sheet and/or electronic recording medium.

3. CONTRACTOR RESPONSIBILITIES

3.1 Contractor shall furnish all qualified supervision, labor, tools, equipment, materials and training necessary or required for the described work. All supervisors or inspectors furnished by the contractor shall be experienced and trained for at least three months in the skill of pole and associated facilities inspection to include safety requirements. Evidence of previous experience and training and the ability to pass a written test, may be required by AEP.

3.2 Pesticide applicator licenses are required by law and copies of the certificates shall be supplied to the AEP representative. All treatment material shall be used for its intended use and applied according to manufacturer's specifications. Contractor shall submit product labels and MSDS information for all materials applied. Contractor shall comply with OSHA and all governmental laws and regulations.

3.3 Contractors should attempt to notify property owner or residents if entering gates, digging in yards, going through fields or any other potentially disruptive activity. Contractor shall provide their own location to store preservatives and other materials. Storage areas are to be kept in good condition.

3.4 Contractor shall supply all necessary treatment materials. External treatment materials applied shall consist of paste and wraps. Internal treatment materials applied shall consist of liquid and granular material.

(A) Contractor shall keep a record of the product batch numbers used for a period of one (1) year.

(B) Contractor shall apply treatment material according to the manufacturer's specifications. As the treating solution contains a pesticide, particular care must be taken to avoid spillage. Any trace of solution spilled on the ground during treatment or in the transport and filling of apparatus shall be cleaned up.

(C) Contractor shall follow the manufacturer's instructions for pesticide storage, disposal and container disposal.

(D) A copy of the Contractor's safety program and spill procedures shall be sent to the AEP representative.

3.5 "Underground location requests", such as "Call Before You Dig" are the responsibility of the contractor.

3.6 All required documents from the contractor shall be provided prior to beginning any work.

4. POLE AND FACILITIES INSPECTION

4.1 This program shall be performed such that every pole meeting the in-service criteria described below shall be inspected and maintained as required on a ten year cycle based on the initial pole treatment types (i.e., CCA, Penta, and Creosote):

4.1.1 Poles in service 15 years and longer (10 years for coastal areas of Texas) treated with Penta, Creosote, DCOI and Copper Naphthenate.

4.1.2 Poles in service 20 years and longer treated with CCA.

4.1.3 Any pole designated for inspection that is less than 15 years old (10 years for coastal areas of Texas) with any treatment type shall only be given a visual inspection and reported.

4.2 All poles designated for inspection and/or treatment shall be given a visual inspection and sounded with a hammer to determine the condition of the pole before excavating for the groundline inspection.

4.3 Above Groundline Inspection

4.3.1 Each pole designated for inspection shall be examined visually from groundline to top of the pole for the following conditions: woodpecker holes, cracks, splintered or crushed wood or decay and damage due to lightning. If the pole is a reject due to readily apparent excessive damage by one of the above conditions, the pole shall be reported as a "Visual Reject", with no treatment being given. "Visual Reject" poles shall be sound and bored to determine priority for replacement.

(A) Visual inspection of the pole and facilities on the pole shall be made to determine if there are or broken guys, anchors, crossarms, braces, hardware, conductors, insulators, fittings, and / or broken or loose ground wires, leaning poles or other damaged equipment. Observed defects as well as clotheslines and hunting stands attached to poles shall be reported. Contractor is to immediately notify AEP of any imminent hazardous conditions at the time of inspection that may endanger life or property, or potentially cause an outage.

4.3.2 **All poles designate**d for inspections that are set in pavement or poles that cannot be easily excavated around shall be sounded with a hammer and bored.

4.3.3 "Sound & Bore" poles shall be visually inspected above ground, sounded with a hammer from groundline to 8 feet above and a test boring made (at groundline) at a 45 degree angle to the center of the pole with a 3/8" bit to detect decay. If the pole is found to have no internal decay it is to be recorded as Sound & Bore. If internal decay is present, a second boring shall be done approximately 180 degrees from the first boring to determine the extent of the decay. If decay is excessive an additional boring may be needed (maximum of 3 borings). A shell thickness gauge shall be used in determining the amount of sound wood remaining (see Attachment B). If sufficient sound wood remains in the pole to provide the necessary strength, it shall be treated per section 5.2, if it is practical and possible to do so considering the environment surrounding the pole. Poles not meeting this condition shall be reported as rejected.

(A) All holes shall be plugged with tight fitting pressure treated wooden dowels two inches in length and 7/16" in diameter or approved plastic plugs. Plugs shall be driven in to within 1/8" with the pole surface. Plugged holes shall be marked with chalk.

4.3.4 If a pole is designated for inspection, but cannot be bored due to obstructions, it shall be given a visual inspection and be reported as a "Visual Inspection" pole.

4.3.5 Pole number tags that are missing or not legible shall be re-installed per the AEP Distribution Standard (D.S. 11-A), refer to attachment "C". AEP label tags shall also be installed on all AEP owned poles without an existing ownership tag. The AEP representative shall supply these tags to the Contractor. AEP Identification tags shall not be installed on foreign-owned poles.

4.4 Below Groundline Inspection

4.4.1 All poles with underground primary risers shall not be dug and inspected below ground.

4.4.2 Poles with secondary underground risers or any other type of underground facilities shall be dug, inspected and treated unless there are so many that the poles cannot be adequately treated. Underground riser poles not dug shall be sounded and bored and internally or fumigant treated if appropriate (see section 4.3.3). All other poles that pass the above groundline inspection shall be excavated for a condition based inspection where possible.

4.4.3 A condition based maintenance inspection includes the removal of a minimum of one shovel full of soil (approximately 10" wide by 6" to 8" in depth) at the base of

the pole. The exposed area of the pole shall be visually inspected for external decay and bored at a 45 degree angle to the center of the pole with a 3/8" bit to determine if internal decay is present. If no decay is present the hole shall be backfilled with no treatment applied. If external decay and/or internal decay are present, the pole shall be fully excavated where possible per section 4.4.4. During this process, safety precautions shall be taken in handling the ground wires, underground cables, conduits etc.

4.4.4 All poles that exhibit external and/or internal decay as a result of the condition based maintenance inspection shall be excavated to a minimum of 18" below the groundline (low side). The width of the hole around the pole shall provide a minimum clearance of 6" at the bottom of the hole and 12" at the groundline. Landscaping such as shrubs and flowers shall not be disturbed without property owner permission, and this condition (shall be) reported if unable to proceed. For excavations in lawns or gardens, tarpaulins shall be provided to keep the surrounding area as clean as possible and the turf around the pole shall be carefully cut and neatly replaced after the hole has been backfilled.

4.4.5 External decay inspection:

(A) No prods, bars, or picks shall be used to determine the extent of decay. All poles shall be carefully examined by sounding the pole from bottom of the hole to 1 foot above groundline.

(B) The surface to be treated shall be brushed clean with a wire brush or shell scraper. All loose, rotted wood is to be removed from the treating zone and all overhanging, loose wood is to be removed to at least 6" above groundline. No good or sound wood shall be removed from the pole. All loose chips and decayed pieces shall be removed from the hole and the surrounding area and properly disposed of.

(C) The portion of sound wood remaining shall be determined (see Attachment B), and if sufficient sound wood remains in the pole to provide the necessary strength, it shall be treated per section 5.1. Poles not meeting this condition shall be reported as rejects. The original pole circumference (of the decay area) may be obtained by adding the measurements of the pole circumference directly above and below the decay area and dividing by two.

4.4.6 Internal decay inspection:

(A) The minimum number of borings shall be 2 for standard distribution poles spaced at 180 degrees, and 3 for larger (54 inch circumference or greater) poles spaced at 120 degrees around the pole.

(B) If decay is excessive additional borings shall be taken as necessary to determine the location and extent of the decay.

(C) A shell thickness gauge shall be used in determining the amount of sound wood remaining. If sufficient sound wood remains in the pole to provide the necessary strength, it shall be treated per section 5.2, if it is practical and possible to do so considering the environment surrounding the pole. Poles not meeting this condition shall be reported as rejects.

(D) All holes shall be plugged with tight fitting pressure treated wooden dowels two inches in length and 7/16" in diameter or approved plastic plugs. Plugs shall be driven in to within 1/8" with the pole surface. Plugged holes shall be marked with chalk or other means acceptable to AEP.

4.4.7 On poles with push braces, each pole shall be inspected and treated as a separate pole. On stubbed poles, the stub shall be ground line inspected and treated instead of the groundline portion of the original pole.

4.4.8 Previously reinforced poles shall not be excavated. Pole borings shall be made per section 5.3.2 or 5.3.3 and section 5.3.4 to determine the average shell thickness. Poles meeting the minimum shell thickness requirements shall receive internal treatment or be fumigated as per section 5.2. Any of these poles not meeting the minimum shell thickness requirements shall be rejected and identified for replacement with no treatment applied.

4.4.9 Poles with internal decay and a minimum average shell thickness of 1 inch or less shall be reported as Priority Reject Poles. Poles with external decay with 50% or less of the original circumference remaining shall be reported as Priority Reject Poles (see Attachment B).

5. POLE TREATMENT

5.1 External Treatment

5.1.1 External treatment materials applied shall consist of paste or wraps. Refer to Attachment "A" for treatment material approved by AEP.

5.1.2 Treatment shall be directly applied on the surface of the pole and over a total length of 21" commencing at 3" above the groundline and extending to 18" below groundline. The materials shall be applied in accordance with the manufacturer's recommendations. A bandage of polyethylene coated craft paper shall be placed around the pole where treatment was applied. The bandage shall extend from 4" above ground to 18" below ground and be stapled to the pole. In yards, parks and pastures, where animals or the public has regular contact, the preservative shall not be put above ground.

5.1.3 Care shall be used to prevent treatment material from being applied on cable surfaces and safety precautions shall be taken when digging near attachments such as ground wires or underground electric or phone cables. Contractor shall be responsible for damage incurred.

5.1.4 A high strength taping material (padlock tape) shall be applied on top of the bandage of externally treated poles, as designated by Owner.

5.1.5 Poles shall not be treated if they are within 10 feet of any stream, pond, open water or well and shall be reported (as such).

5.2 Internal Treatment

5.2.1 Internal treatment materials applied shall consist of liquid and granular material. Refer to Attachment "A" for treatment material approved by AEP.

5.2.2 Poles with internal decay and voids larger than 1" in diameter shall be internally treated. Internal treatment price is for the treatment labor and material cost only. The treatment material shall be pumped into the bottom inspection hole in the decay or void area specified in section 4.4.5 until it flows out the next higher hole. This hole shall be plugged and additional preservative pumped into the cavity until it flows out the next higher hole; this procedure is continued until the cavity is filled (a pressure of 50 psi shall be applied) or a maximum of two gallons is injected. If treatment material has not flowed out the top hole, a maximum of one gallon shall be pumped into this top hole. All holes that have not been previously plugged shall be plugged at this time. When necessary, similar methods shall be used in treating enclosed decay pockets.

5.2.3 Poles with internal decay pockets less than 1" in diameter shall be fumigated.

(A) Poles to be fumed shall be drilled at a steep angle (45 degrees or more) downward into the pole taking care not to allow the bit to intersect deep checks or to extend through the opposite side of the pole. Bore holes shall be 3/4" to 7/8" in diameter per the treatment product label and 15" in length. Poles with a circumference of 32" or less shall be drilled at three locations and those greater than 32" shall be drilled at four locations. The first hole should be at ground line and succeeding holes in a spiral pattern approximately 6" higher and rotated 90 degrees from the next lower hole for applications requiring four holes and 120 degrees for applications requiring three holes. Inject equal amounts of fumigant into all holes using a total of one (1) pint per pole on the average. All holes shall be sealed using the appropriately sized plugs that would typically be 7/8" or 15/16" by 3" treated wood dowels or plastic plugs.

5.3 Reinforcement

AEP owned poles identified as groundline "rejects" because of insufficient shell thickness at groundline shall be examined above ground for reinforcement candidates using the following procedures.

5.3.1 A visual check shall be made to determine if there are any obvious physical conditions that may prevent the pole from being reinforced. This would include rock conditions, unsuitable terrain conditions and any other local Company directives as regards URD risers, etc. Should one or more of these conditions be present the pole shall be recorded as a non-reinforceable below ground reject.

5.3.2 A 3/8" auger bit shall be used to bore the pole at approximately 15" above grade and a shell gauge used to determine the average shell thickness (a 2" minimum shell is required for pole to be reinforced). A minimum of 3 borings per pole, spaced at 120 degrees around the pole, shall be taken with at least 4" vertical separations up or down between holes. Additional borings may be taken if necessary to determine the average shell thickness. Poles without an average 2" shell thickness at approximately 15" above grade shall be examined according to paragraph 5.3.3.

5.3.3 NOTE: The requirements of this paragraph only apply if the requirements of section 5.3.2 cannot be met. A 3/8" auger bit shall be used to bore the pole at approximately 26" above grade and a shell gauge shall be used to determine the average shell thickness (2" minimum is required for pole to be reinforced). A minimum of 3 borings per pole, spaced at 120 degrees around the pole, shall be

taken with at least 4" vertical separations up or down between holes. Additional borings may be taken if necessary to determine the average shell thickness.

5.3.4 A 3/8" auger bit shall be used to bore the pole at approximately 54" above grade and a shell gauge shall be used to determine the average shell thickness (4" minimum is required for a pole to be reinforced). A minimum of 3 borings per pole, spaced at 120 degrees around the pole shall be taken with at least 4" vertical separations up or down between holes. Additional borings may be taken if necessary to determine the average shell thickness.

5.3.5 All bored holes are to be plugged with treated wooden dowels or approved plastic plugs. If the pole is a candidate for reinforcing (meeting the requirements of either section 5.3.2 or 5.3.3 and section 5.3.4), the pole is to be treated externally as required by this specification. Reinforcement candidates shall be noted on the inspection report. The cost of inspecting for reinforcement candidates shall be included in the bid rates. No adders are to be written in on the bid proposal.

5.3.6 All rejected poles identified for reinforcement that have internal voids shall also be internally treated with a copper naphthenate in oil solution at a 2% copper as metal rate. At least nine (9) 3/8" diameter holes (which include previously bored inspection holes as appropriate) shall be bored to the center of the pole starting from groundline in a spiral fashion to a height of approximately 4 feet. The internal treatment shall be applied to all holes bored with a minimum of 50-PSI pressure. The treatment material shall be pumped into the bottom hole until it is noticed at the next higher hole. The initial hole is then plugged and additional preservative pumped into the cavity until it is noticed at the next higher hole. This procedure is followed until the cavity is filled. All holes shall be plugged with tight fitting pressure treated wooden dowels or plastic plugs.

6. BACKFILL

6.1 After external treatment, all poles shall be solidly backfilled. Rocks or stones shall not be placed directly against the bandage. The ground wires should be handled in such a way that the connection integrity to the ground rod is well maintained and no mechanical damage is done to the ground wires during this refill process. The soil shall be replaced in 6" layers and solidly tamped before adding the next layer. Care shall be used to prevent the tamping tool from striking the bandage. A layer of soil shall be placed against the pole all the way up to a point 3" above the groundline. Any excess soil shall be cleaned up, and the finished job shall have a mound of soil extending at least 3" above the groundline to allow for further settling. On lawns the backfill soil is to be carefully tamped and all turf to be carefully replaced to match its original location. Excess excavated soil shall be removed from the surrounding lawn. Backfill shall not to be placed above the wrapping paper or padlock tape.

7. MARKING AND RECORDING

7.1 Poles inspected/treated shall be marked to indicate the date of inspection and type of treatment if any. Markers shall be specified by AEP and placed 3" below the pole number for easy recognition. All rejected poles shall be tagged with a square (approximately 2") aluminum tag and reported. Reject poles that are a candidate for reinforcement, including priority reinforcements, shall be marked with an additional square

(approximately 2") yellow tag. Priority poles being designated for replacement shall be marked with a red tag with white arrow pointing up or down to the area on the pole causing it to be a "priority pole". All reinforcement and replacement "priority poles" shall be reported to the AEP representative within 24 hours. AEP distribution personnel responsible for program oversight shall confirm these or other local tagging and notification requirements with the contractor.

8. QUALITY CONTROL

8.1 The Contractor's work should be checked every week or two by the AEP representative and the inspector's supervisors. Approximately 3% of the previously inspected and/or treated poles shall be reinspected. The re-inspection for full excavation poles shall consist of re-excavating, removing the paper wrap and treatment materials. These poles shall be completely reinspected and retreated. If any serious errors are discovered, all the work between spot checks shall be reinspected and/or retreated at no cost to the Owner.

9. INSPECTION RECORDS

9.1 Contractor shall keep complete records during the course of the inspection and treatment of poles. These records are to be maintained by Contractor for a period of at least one (1) year. The minimum information required shall be provided in electronic data reports such as excel spreadsheet files per sample files provided to the Contractor. Weekly completion report files and YTD Summary files shall be forwarded to the AEP representative via email. Monthly completion reports shall be provided utilizing File Transfer Protocol (FTP) with formatting requirements provided to the Contractor. The requirements for the FTP data are defined in the documents "AEP Pole Inspect Format" and "AEP Pole Reinforcement Format". Data must be provided on the FTP site or through an AEP interface and must meet the approved data format. The cost for acquiring this data electronically, including the cost of handheld devices and data input, shall be included in the bid proposal rates. No adders shall be accepted for this work. This required information includes the following:

- Pole number and location
- Pole vintage date (estimated if unknown per records)
- Pole class and length (estimated if unknown per records)
- Species of wood & original treatment
- Pole manufacturer
- Date and type of re-treatment of previously retreated poles
- Equivalent ground line circumference
- Condition of pole above ground line
- Condition of facilities on pole and attachments
- Sketch showing decay areas of pole (not for hand-held)
- Broken, loose, or damaged Ground wire
- Batch number of materials used

9.2 The following defects, as a minimum, must be identified within all electronic data reports. These electronic reports shall be in a format such as excel spreadsheet files.

- Broken, tilted, or split cross arm and/or brace
- Broken conductor strand
- Broken/missing ground wire molding

- Broken/missing guy guard
- Broken insulator
- Lightning damage
- Leaking oil
- Slack or Broken guy
- Broken or damaged cutout
- Cutout fuse blown
- Fire damage
- Broken ground wire and/or loose ground connection
- Identification No. missing
- Damaged/blown lightning arrester
- Loose hardware
- Pulled/damaged anchor
- Unauthorized attachment (i.e, clotheslines and deer stands attached to the pole)
- Leaning poles (more than 10 degrees from the vertical)
- Conductor/wire/service drop too low – safety concern (i.e, within the inspector's reach from the ground)

9.3 All pole inspection report files shall be numbered sequentially, with the AEP map number or other agreed upon file nomenclature such as week ending date. In addition, the Contractor shall indicate what was done to each pole within the electronic report file. Suggested codes for actions taken and/or determinations made are as follows:

- T- Treated Pole (groundline, internally, or fumigated)
- X- Rejected Pole
- V- Visually Inspected Pole
- SB- Sound & Bore Pole
- CM- Condition Based Maintenance Inspection
- XR- Reinforce Candidate
- XX- Priority Rejected Pole

10. POLE GROUND WIRE & GROUND WIRE REPAIRS

10.1 Pole ground wires shall not to be pulled away from the pole to apply treatment products. Preservative treatment (with paper) shall be applied over the ground wire. See section 5.1 for external treatments. If Contractor damages the ground wire during the inspection and treatment process, Contractor shall be responsible for that ground wire repair at their expense.

10.2 Contractor shall have properly instructed employees performing ground wire repairs and shall have all tools and safety equipment to perform this work. The ground wire repair work shall include repairs to/or replacement of broken or missing ground wire (found during the inspection) from the ground line up to 7' height on the pole using AEP supplied materials. Refer to AEP Distribution Standard (D.S. 65), attachment "D" and note 1. Notes 2-6 of AEP Distribution Standard (D.S. 65), attachment "D" do not apply to contractor's scope of work. Ground wire repairs shall begin on the ground rod side of the open ground point.

10.3 Evidence of vandalism of the ground wire shall be reported to the AEP representative promptly.

11. ADDITIONAL INFORMATION

11.3 The Contractor shall have their company identification sign on each of their vehicles. It is strongly recommended that Contractors provide their employees with personal photo identification.

11.4 Electronic invoices shall be submitted weekly via the AEP invoicing system; the distribution internet based invoicing system. Invoices shall be submitted by complete map section, unless other arrangements are made with the AEP representative. Each invoice is to reference the AEP map number(s), the sequential report number(s), and week ending date for which it covers. A field-marked copy of the map section or other electronic tracking documentation shall accompany the invoice. Separate invoices shall be submitted for each AEP Operating Company. All invoices shall be submitted to the appropriate AEP representative.

11.5 Contractors shall report their locations daily or weekly, as requested, to AEP local area inspectors.

11.6 The AEP representative shall be immediately notified of any customer complaints or any damages to customer or Company facilities so that arrangements for any necessary repairs can be made in a timely manner

11.7 Exemptions to this specification are allowed under certain conditions outlined in Specification 125-E (See Attachment E). This exemption must be signed off by an Operating Company Vice President or higher and renewed annually, as long as conditions for the expemption persist.

Prepared by:

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Approved by:

W. Ross McCorcle, P.E.

Spec 125
September 21, 2023

MATERIALS APPROVED FOR GROUNDLINE TREATMENT OF STANDING WOOD POLES			
	Material		Manufacturer
External Treatment Products	**Cu-Bor**		**Copper Care Wood Preservatives, Inc (Osmose)**
	CuRap 22		**Genics**
Internal Fumigant Treatment Products	**Liquid**	**Wood Fume**	**Osmose**
		L Fume 33	**Poles, Inc.**
		SMDC-Fume	**Copper Care Wood Preservatives, Inc (Osmose)**
	Granular	**DuraFume II**	**Osmose**
		Super-Fume	**Copper Care Wood Preservatives, Inc (Osmose)**
		UltraFume	**PoleCare Inc.**
Internal Liquid Void Treatment Products	**Liquid**	**Hollow Heart CB**	**Osmose**
		Cu-Nap Concentrate	**Copper Care Wood Preservatives, Inc (Osmose)**
		QNAP8	**Nisus**

Attachment "A"

Spec 125
September 21, 2023

Table 1
MINIMUM ALLOWABLE DIMENSIONS OF
REMAINING SOUND WOOD WITH EXTERNAL DECAY

ORIGINAL CIRCUMFERENCE (INCH)	MINIMUM CIRCUMFERENCE (INCH)		
	REJECT		PRIORITY REJECT 50% LOSS OF STRENGTH
	NESC RULE 250B*	NESC RULE 250C**	
20	17.5	18.2	10.0
21	18.3	19.1	10.5
22	19.2	20.0	11.0
23	20.1	20.9	11.5
24	21.0	21.8	12.0
25	21.8	22.7	12.5
26	22.7	23.6	13.0
27	23.6	24.5	13.5
28	24.5	25.4	14.0
29	25.3	26.3	14.5
30	26.2	27.3	15.0
31	27.1	28.2	15.5
32	28.0	29.1	16.0
33	28.8	30.0	16.5
34	29.7	30.9	17.0
35	30.6	31.8	17.5
36	31.4	32.7	18.0
37	32.3	33.6	18.5
38	33.2	34.5	19.0
39	34.1	35.4	19.5
40	34.9	36.3	20.0
41	35.8	37.3	20.5
42	36.7	38.2	21.0
43	37.6	39.1	21.5
44	38.4	40.0	22.0
45	39.3	40.9	22.5
46	40.2	41.8	23.0
47	41.1	42.7	23.5
48	41.9	43.6	24.0
49	42.8	44.5	24.5
50	43.7	45.4	25.0
51	44.6	46.3	25.5
52	45.4	47.2	26.0
53	46.3	48.2	26.5
54	47.2	49.1	27.0
55	48.0	50.0	27.5
56	48.9	50.9	28.0
57	49.8	51.8	28.5
58	50.7	52.7	29.0
59	51.5	53.6	29.5
60	52.4	54.5	30.0

*BASED ON 2/3 INITIAL STRENGTH
**BASED ON 3/4 INITIAL STRENGTH

NESC LOADINGS
(FOR THE INSPECTION AND TREATMENT
OF STANDING WOOD POLES)

NESC RULE 250B ☼

1. ANY POLE NOT MEETING THE HEIGHT AND CONDUCTOR REQUIREMENTS STATED IN RULE 250C & D.

NESC RULE 250C & D ☼

1. ANY POLE OVER 60 FEET IN HEIGHT ABOVE GRADE.
2. ANY POLE WITH CONDUCTOR 60 FEET IN HEIGHT ABOVE GRADE, AT ANY PORTION OF THE CONDUCTOR SPAN LENGTH.

☼ POLE HEIGHT (ABOVE GRADE) CAN BE ESTIMATED BY TAKING POLE LENGTH (FROM MAP DATA) AND SUBTRACTING 10% PLUS 2 FEET (BELOW GRADE PORTION).

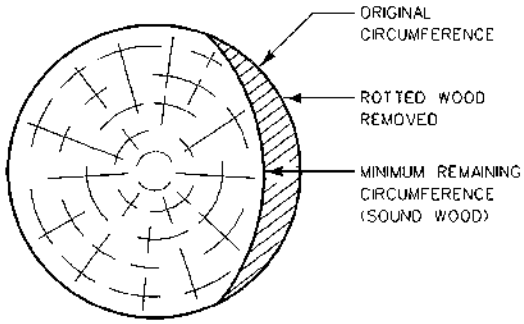


FIGURE A

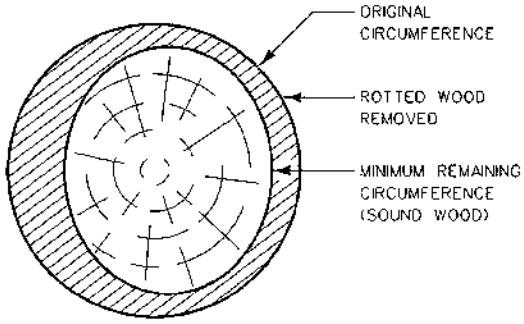


FIGURE B

Attachment "B"

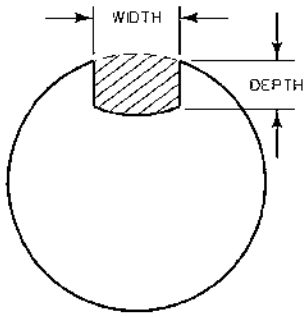


FIGURE C

TABLE II
ALLOWANCE FOR EXTERNAL POCKETS
NESC RULE 250B (BASED ON 2/3 INITIAL STRENGTH)

CIRCUMFERENCE OF POLE (INCH)	WIDTH OF POCKET IN INCHES																													
	1					2					3					4					5					6				
	DEPTH OF POCKET IN INCHES																													
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
21 TO 25																														
26 TO 30																														
31 TO 35																														
36 TO 40																														
41 TO 45																														
46 TO 50																														
51 TO 55																														
56 TO 60																														

PASS

FAIL

TABLE III
ALLOWANCE FOR EXTERNAL POCKETS
NESC RULE 250 C & D ¾ INITIAL STRENGTH)

CIRCUMFERENCE OF POLE (INCH)	WIDTH OF POCKET IN INCHES																													
	1					2					3					4					5					6				
	DEPTH OF POCKET IN INCHES																													
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
21 TO 25																														
26 TO 30																														
31 TO 35																														
36 TO 40																														
41 TO 45																														
46 TO 50																														
51 TO 55																														
56 TO 60																														

PASS

FAIL

Attachment "B"

TABLE IV

MINIMUM ALLOWABLE SHELL THICKNESS OF WOOD POLES DUE TO HEART ROT

MINIMUM THICKNESS OF SHELL (INCH)	CIRCUMFERENCE OF POLE (INCH)	
	NESC RULE 250B (BASED ON 2/3 INITIAL STRENGTH)	~~NESC RULE 250C & D~~ (BASED ON 3/4 INITIAL STRENGTH)
1.5	20.0 - 30.0	20.0 - 25.0
2.0	31.0 40.0	26.0 33.0
2.5	41.0 50.0	34.0 42.0
3.0	51.0 - 60.0	43.0 - 50.0
3.5	61.0- 70.0	51.0 60.0

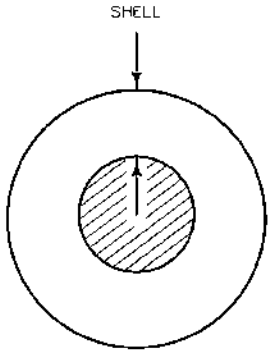


FIGURE D

TABLE V
MINIMUM SHELL AND MAXIMUM DIAMETER ALLOWANCE FOR ENCLOSED POCKETS

CIRCUMFERENCE OF POLE (INCH)	SHELL (S) (INCH)	NESC RULE 250B (BASED ON 2/3 INITIAL STRENGTH) DIAMETER (D) (INCH)	NESC RULE 250C & D (BASED ON 3/4 INITIAL STRENGTH) DIAMETER (D) (INCH)
20 TO 29	1.5	4	3.5
	2	3.5	3.5
	2.5	3	3
	3	2.5	2.5
	3.5	2	2
30 TO 60	1.5	3.5	2
	2	4.5	2.5
	2.5	6	3.5
	3	5.5	4
	3.5	5	4.5

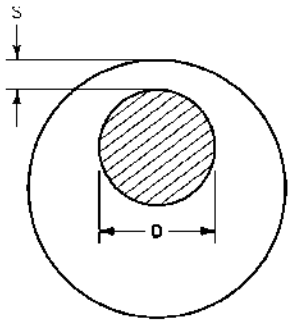


FIGURE E

Attachment "B"

AMERICAN ELECTRIC POWER COMPANY
DISTRIBUTION STANDARDS

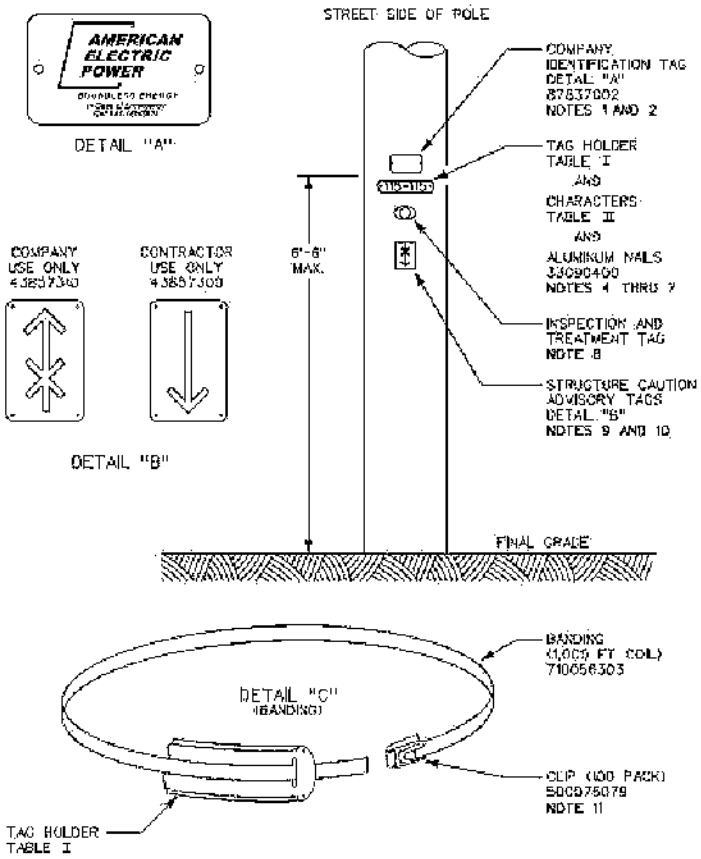


TABLE I

ITEM NO.	HOLDER LENGTH (INCHES) NOTE 3
87835980	8 ½
87835985	9 ½
87835990	10 ½
87836260	12 ½

TABLE II
HORIZONTAL POLYETHYLENE CHARACTERS
BLACK ON YELLOW
1 INCH HEIGHT

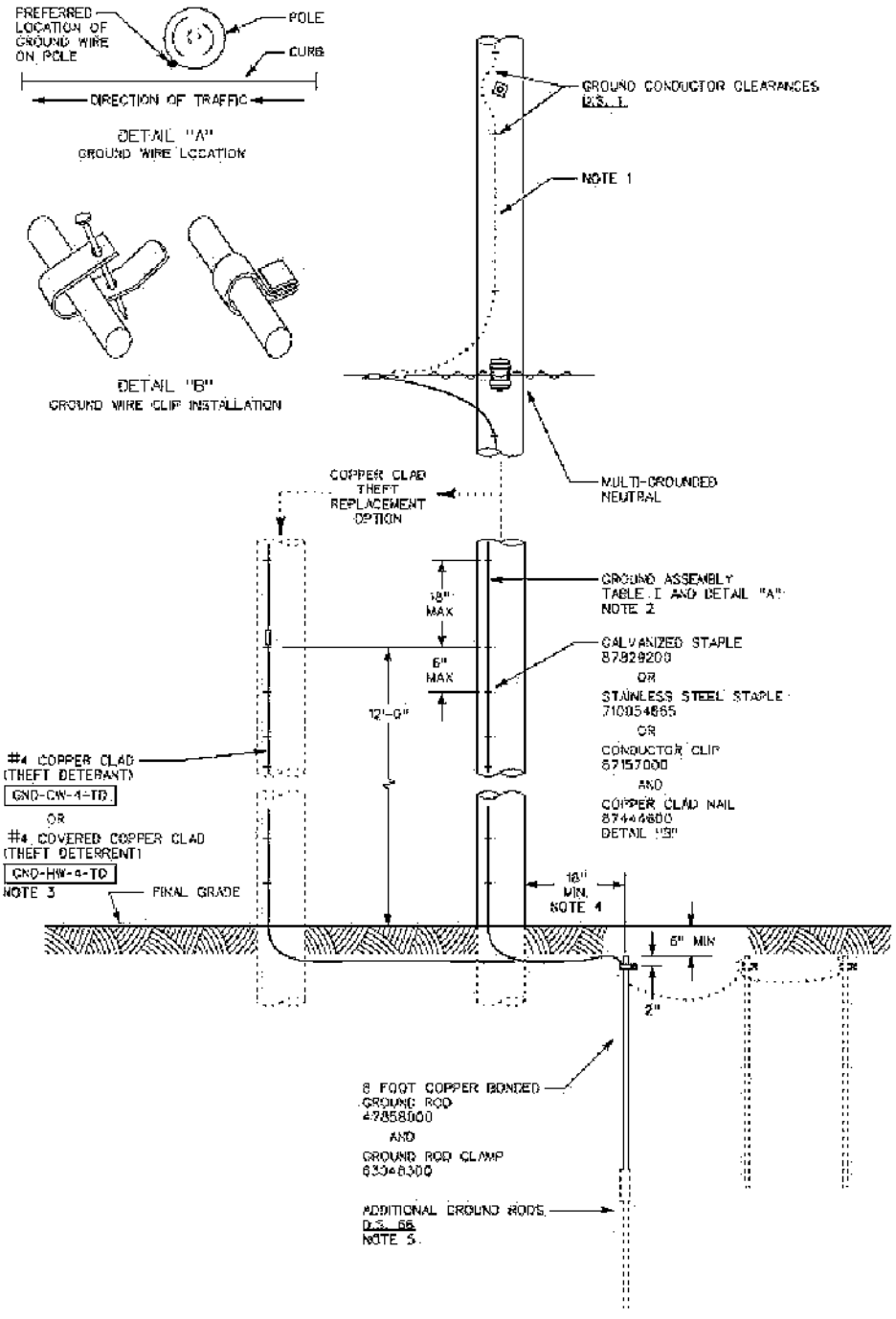
ITEM NO.	CHARACTER
87447005	0
87447105	1
87447205	2
87447305	3
87447405	4
87447505	5
87447605	6
87447705	7
87447805	8
87447905	9
87756304	DASH
87756404	BLANK
87432605	A
87432705	B
87432805	C
87432905	D
87433005	E
87433105	F
87433205	G
87433305	H
87433405	I
87433505	J
87433605	K
87433705	L
87433805	M
87433905	N
87434005	O
87434105	P
87434205	Q
87434305	R
87434405	S
87434505	T
87434605	U
87434705	V
87434805	W
87434905	X
87435105	Y
87435205	Z

NOTES:

1. COMPANY IDENTIFICATION TAGS SHALL ONLY BE INSTALLED ON COMPANY OWNED POLES.
2. ONLY POLE NUMBERS SHALL BE USED TO IDENTIFY AEP CONTACTS ON FOREIGN OWNED POLES; AEP COMPANY IDENTIFICATION TAG SHALL NOT BE USED TO IDENTIFY CONTACT ON FOREIGN POLES.
3. TAG HOLDERS SHOWN IN TABLE I ACCOMMODATE ONE CHARACTER PER INCH.
4. CRIMP BOTH ENDS OF ALUMINUM HOLDER AFTER CHARACTERS ARE INSTALLED.
5. IN AREAS WITH GRID NUMBERS, INSTALL GRID TAG 43857700 (OHIO) OR 43857714 (TEXAS).
6. TAGS SHALL BE SECURED TO STEEL POLES BY BANDING (DETAIL C) OR SEALING COMPOUND TAPE (63094000).
7. TAGS SHALL BE SECURED TO DUCTILE IRON OR COMPOSITE POLES WITH SELF-TAPPING SCREWS (356909).
8. STANDING WOOD POLES THAT ARE INSPECTED OR TREATED SHALL BE MARKED TO INDICATE DATE AND TYPE OF TREATMENT.
9. POLE ADVISORY TAGS SHALL ONLY BE INSTALLED BY CONTRACTORS OR COMPANY PERSONNEL WHEN THE CONDITION OF THE FACILITIES WARRANTS FOLLOW-UP EVALUATION AND/OR REPAIR.
10. UPON INSTALLATION, THE ARROW SHALL POINT IN THE DIRECTION OF THE HAZARD.
11. INSERT FIRST END INTO CLIP AND BEND BACK APPROXIMATELY ½" (AS SHOWN). INSERT SECOND END AND PULL BANDING UNTIL TIGHT; THE CLIP IS SELF LOCKING AND NO FURTHER ACTION IS REQUIRED.

Attachment "C"

AMERICAN ELECTRIC POWER COMPANY
DISTRIBUTION STANDARDS



GROUND ROD AND GROUND CONDUCTOR INSTALLATION

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Attachment "D"

AMERICAN ELECTRIC POWER COMPANY
DISTRIBUTION STANDARDS

TABLE I
MINIMUM GROUNDING CONDUCTOR

SIZE (AWG)	DESCRIPTION	ITEM NO.	CONSTRUCTION UNIT NOTE 6
#4	BARE COPPER SOFT DRAWN	87843600	GND-CR-4
	BARE COPPER CLAD SOLID	87843700	GND-CW-4
	COVERED COPPER CLAD SOLID	900068936	GND-HW-4
#2 *	BARE COPPER SOFT DRAWN	87840100	GND-CR-2

* FOR USE ON SPECIAL APPLICATIONS OR LARGE NEUTRAL SIZES AS DEFINED IN NESC RULE 9302.

TABLE II
#4 GROUND EXTENSION COPPER CONDUCTORS

SIZE (AWG)	DESCRIPTION	ITEM NO.	CONSTRUCTION UNIT NOTES 1 AND 6
#4	BARE	87843600	GND-EE-4 ☆
	COVERED	710056872	GND-EN-4 ⌖
	INSULATED	990018513	GND-EE-4I ☆

☆ 5 FT. LENGTH TO EXTEND GROUND TO GUY.
⌖ 10 FT. LENGTH TO EXTEND GROUND TO CROSSARM OR NEUTRAL TO MESSENGER FOR SPACER CABLE.

NOTES:

1. WHEN THE POLE GROUND CONDUCTOR IS EXTENDED SIGNIFICANTLY (MORE THAN 12") ABOVE THE NEUTRAL, USE THE INSULATED GROUND EXTENSION CONDUCTOR (990018513) WHICH HAS A BIL OF 350 kV. BARE GROUND EXTENSION CONDUCTOR IS ACCEPTABLE WHEN CONNECTING TO GROUNDED EQUIPMENT (E.G. RECLOSERS, CAPACITORS, ETC.).
2. NESC 096C REQUIRES THAT MULTI-GROUNDED NEUTRAL SHALL HAVE AT LEAST FOUR GROUND (ROD) CONNECTIONS IN EACH MILE OF LINE EXCLUSIVE OF GROUND (ROD) CONNECTIONS AT CUSTOMERS' SERVICE EQUIPMENT.
3. WHERE PRACTICAL, ITS ACCEPTABLE TO EXTEND THE COPPER CLAD CONDUCTOR TO THE SYSTEM NEUTRAL.
4. IN PAVED AREAS, REMOVE MINIMAL AMOUNT OF PAVEMENT ADJACENT TO POLE TO PROVIDE ADEQUATE SPACING TO MAKE INSTALLATION. DRIVE GROUND ROD AT A 45° ANGLE INTO UNDISTURBED EARTH.
5. RESISTANCE OF INDIVIDUAL GROUND LOCATIONS SHOULD BE LOWERED TO PRACTICAL VALUES. ADDITIONAL GROUND RODS MAY BE DRIVEN TO LOWER GROUND RESISTANCE; HOWEVER, NO MORE THAN THREE GROUND RODS ARE TO BE INSTALLED AT ANY SINGLE LOCATION. REFER TO D.S. 68.
6. THE CONSTRUCTION UNITS INCLUDE THE CONDUCTOR STAPLES AND GROUND ROD TO CONSTRUCT ASSEMBLY AS SHOWN.

GROUND ROD AND GROUND CONDUCTOR INSTALLATION

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Attachment "D"