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PUC DOCKET NO. 56822

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

TEXAS-NEW MEXICO POWER COMPANY'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

TEXAS-NEW MEXICO POWER COMPANY ("TNMP") files this response to Commission Staff's ("Staff") First Request for Information to Texas New-Mexico Power Company. TNMP's responses to requests for information shall be made by August 30, 2024. This response is therefore timely. All parties may treat the answers as if they were filed under oath.

TNMP files these responses without agreeing to the relevancy of the information sought and without waiving their right to object at the time of the hearing to the admissibility of information produced herein.

Respectfully submitted,

/s/ Scott Seamster

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was filed on the interchange on August 30, 2024.

/s/Scott Seamster
Scott Seamster

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;

e. 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;

f. 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;

g. How performance during the 2024 hurricane drill was measured; and

h. Any feed-back whether internally or externally from a third-party vendor or party invited to participate in the 2024 hurricane drill.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

RESPONSE:

a. TNMP's last hurricane/storm drill was conducted on May 22, 2024.

b. The category of hurricane included in TNMP's 2024 storm drill was a Category 2 storm at landfall (Hurricane Ike). The drill simulated its exact landfall location (greater Houston area), total number of customers in affected area (3 million), date of landfall (September 13, 2008) and all associated damage

estimates, rainfall amounts, and wind speeds as documented during the storm. Mutual assistance was requested as part of this simulation.

c. The 2024 drill was materially different than the 2023 drill in that Hurricane Carla (landfall in 1961 as a Category 5) was used in the 2023 drill. As such, the strength, location, and conditions simulated were materially different, however, the same elements of the Emergency Operations Plan (EOP) and responses were drilled and reinforced.
d. TNMP's drills are all conducted and prepared by TNMP employees. No third-party assistance is utilized.
e. No other electric, water, sewer, or telecommunication utilities were invited to participate.
f. No local government, trade associations, medical and eldercare facilities, community organizations, PGCs, or REPs were invited to TNMP's 2024 drill. Commission Staff was noticed within 30 days prior to TNMP's 2024 drill.
g. Performance was measured in the successful acknowledgement of named individuals within the EOP of their role, mitigation strategies given the provided scenarios, availability or determination of staging sites, successful completions of annual notification to logistics providers and material suppliers, and other various coordination activities as directed by the EOP.
h. 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.
Prepared by:	Keith Nix, Pauline Moore
Sponsored by:	Keith Nix
RESPONSE:	No, TNMP typically does not communicate with customers regarding its hurricane drill.

STAFF 1-3. Are actual events and conditions experienced during a previous hurricane or 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 drills?

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE:

a. Yes, TNMP utilizes data from numerous storms where good data exists, even from storms dating back to the 20th century.
b. See response to STAFF 1-1 b.

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.
Prepared by:	Keith Nix, Pauline Moore
Sponsored by:	Keith Nix
RESPONSE:	TNMP was not invited to any other electric, water, sewer, or telecommunications utilities' hurricane or major storm drills in 2024.

STAFF 1-5. Please identify all resources, internal or external, used for weather or storm tracking purposes before July 8, 2024.

Prepared by: Keith Nix, Chris Gerety

Sponsored by: Keith Nix

RESPONSE: TNMP utilizes publicly available forecasting resources provided by federal entities such as the National Hurricane Center, NOAA, and state agencies (such as the Texas Department of Emergency Management), advisories, and forecasts. TNMP has also subscribed to external services from weather service providers, including DTN (since May 1, 2023) and StormGeo (before May 1, 2023).

STAFF 1-6. How many days before projected landfall do you start tracking storms that could affect or disrupt operations within your service area?

Prepared by: Keith Nix

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: In accordance with page 7 of TNMP's EOP, TNMP begins tracking storms that could affect or disrupt operations within its service area no later than five days prior to estimated landfall.

STAFF 1-7.	How many days before projected landfall did you start tracking the storm eventually named Hurricane Beryl?
Prepared by:	Keith Nix
Sponsored by:	Keith Nix
RESPONSE:	With respect to Hurricane Beryl, TNMP received information and began tracking the storm eight days (June 30, 2024) prior to landfall.

STAFF 1-8. Do you check the functionality or performance of your outage tracker as part of your regular storm preparation procedures?

Prepared by: Keith Nix, Lana Bigford

Sponsored by: Keith Nix

RESPONSE: No, TNMP's outage tracker functionality and performance are monitored constantly as part of normal operations and is assumed functional in drill scenarios.

STAFF 1-9. How far in advance of landfall did you initiate requests for mutual assistance?

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: In accordance with page 7 of TNMP's EOP, mutual assistance requests are typically made after initial landfall and after damage assessments have been completed in order to estimate the amount of necessary resources from both a restoration and vegetation management FTE need. This is done to provide as accurate an assessment during the resource acquisition process so that resources are not depleted across the mutual assistance group artificially, and to ensure that resources will be available to respond to other areas that are in need as the storm progresses through different sections of the country.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE:

Generally, TNMP's priority for restoration is as follows:

1) Transmission/Substations

Note: Industrial customer load should not be re-energized until it has been determined that the Transmission System is stable.

2) Primary Three-Phase Distribution Circuits with Critical Loads
   a. ASOC, Police and Fire departments, Hospitals, Water Supply, and Wastewater Treatment Facilities, etc.
3) Primary Three-phase Distribution Circuits of High Importance
   a. TNMP Facilities, Health Care Facilities, Schools, Large Commercial, Etc.
4) Primary Three-Phase Distribution Circuits with Residential Load
5) Single-Phase Fused Laterals
6) Service Transformers
7) Services

These prioritizations and allocation guidelines were used by local management personnel in allocating both internal and external mutual assistance line resources once circuit outages were experienced during the storm. As part of the EOP, each area within the Gulf Coast region has a list of circuits with assigned personnel responsible for the coordination of restoration efforts that utilize these prioritizations as the guideline. Vegetation Management resources are also deployed as part of the overall restoration efforts. Regarding items #2 & #3, during Hurricane Beryl all restoration efforts were completed in accordance with these prioritizations unless emergency contacts were made from various entities that were experiencing a life-threatening or emergency condition which needed to be remedied immediately if TNMP was capable of doing so.

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.

Prepared by: Keith Nix, Sara Yingling

Sponsored by: Stacy Whitehurst

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: Please see pages 17-21 of TNMP's EOP, which describe the communication procedures used during an emergency. Additionally, TNMP established an email address (hurricane@tnmp.com) for customers to utilize during Hurricane Beryl. TNMP Corporate Communications personnel also monitored various social media platforms for customer communications that needed a response. Customers were also in communication with TNMP personnel via our call center in Albuquerque, New Mexico, as well as individual employees' cell phones in the Gulf Coast. Media contacted TNMP Communications via TNMP's mediarelations@tnmp.com or the Communications Manager's cell phone number. TNMP's Regional Community Liaison, as well as other TNMP employees, met several times per day with local government agencies and emergency organizations. TNMP's Vice President of Regulatory Affairs was in contact with PUCT Staff and Commissioners via email twice per day and was also in contact with the Commission's emergency operations group daily via phone and email throughout the duration of the event.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: No, TNMP does not use an operating conditions system.

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.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: Please see page 23 of TNMP's EOP. Specific employees are assigned to track and manage all emergency response personnel, including mutual assistance and contract personnel. As seen on the attached flow chart from TNMP's EOP, each aspect of response is addressed and assigned to an individual TNMP employee with management and leadership personnel included. TNMP utilizes various tools and means to track and manage resources needed to respond. For example, spreadsheets detailing mutual assistance and contract personnel are maintained and include crew makeups, contact information, equipment inventories, arrival times, lodging locations, and other pertinent information. Regarding restoration efforts, both internal and external damage assessors triage the TNMP system and provide the findings to TNMP Operations personnel who then assign work utilizing TNMP's work management system to mutual assistance, internal, and contract crews. Regarding lodging, TNMP employees enter various contractual discussions and/or agreements with local hotels prior to storm season to notify the facilities that TNMP may be calling to secure a certain number of rooms under an approaching storm scenario to house mutual assistance and contract crews. Regarding site logistics, TNMP has a contract in place with a firm that specializes in rapid emergency response in setting up facilities to feed a large contingent of mutual assistance and internal crews, fuel vehicles, and provide showers/restroom facilities if needed. Regarding staging sites, prior to hurricane season TNMP negotiates contracts and/or has discussions with landowners that may have large parking lot facilities or other areas where large amounts of equipment can be stored and staged during an event. All of these tools were successfully used during Hurricane Beryl.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: With respect to the May 2024 Derecho, TNMP did not initiate emergency preparations due to the forecasted impacts remaining mostly north of TNMP's service territory.

With respect to Hurricane Beryl, TNMP began storm monitoring on June 30, 2024, and began its storm preparation work in accordance with page 7 of TNMP's EOP. TNMP's EOP describes the "Gulf Coast Region's Storm Alert Stages" and the activities associated with preparation work and timelines.

STAFF 1-15. Please provide a timeline of your Company' s response to the May 2024 Derecho and Hurricane Beryl.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

RESPONSE: Regarding the May 2024 Derecho event, TNMP experienced system interruptions across areas of its Gulf Coast facilities that were consistent with interruptions experienced during a typical large thunderstorm event. Initial distribution system impacts were seen at approximately 7:30 PM on May 16, 2024, which required TNMP crews and in-house contract crews to respond and restore outages in the Mainland and Bay Area business units (Friendswood, League City, Texas City, Alvin, La Marque, and Dickinson areas), and then moved later into the evening and into the morning of May 17 to the Brazos business unit (Angleton, West Columbia, Brazoria, and Sweeny areas). Final restoration of all customers occurred on May 17 at approximately 3:00 PM.

Regarding Hurricane Beryl, the response timeline is as follows:

June 30, 2024 – July 4, 2024: Monitoring of weather service has been ongoing since the tropical wave which became Hurricane Beryl was projected to hit the Gulf of Mexico. Original projections show Hurricane Beryl hitting south of TNMP service territory toward Mexico. Worst case scenario is Corpus Christi.

July 4, 2024: Monitoring continues. Slight adjustment eastward begins, hitting south Texas coast but still only as far east as Corpus Christi. Indications through TDEM calls is that AEP has started making preparations based upon Corpus Christi projections. TNMP decides to continue monitoring.

July 5, 2024 (early afternoon): Adjustment east is made again during TDEM call. Beginning to approach TNMP furthest west service territory around West Columbia/Sweeny area. Freeport is projected for landfall now, a little further east than Corpus. TNMP evaluates DTN projections that agree with landfall still just outside of TNMP service territory.

July 5, 2024 (evening): Adjustment further east made again, bringing Brazoria County, West Columbia, Angleton areas into cone. Texas

City/Friendswood still outside of projection according to DTN and NOAA, however local resources are receiving reports of projected wind speed of 100 MPH+ for Texas City. Emergency Operations Manager reaches out to Sr. Management and decides to have an EOP Executive Committee call in accordance with EOP plan at 10:00 PM.

July 5, 2024 (10:00 AM call): EOP Executive Committee meets and discusses forecasts. Decision made to wait until Saturday afternoon call at 1:30 PM to see if forecast becomes more refined. Emergency Operations Manager continues monitoring NOAA and news reports, showing cone shifting eastward and projections of strengthening back to Category 1 at landfall. TNMP facilities now shown in "dirty side" cone all the way up to the Alvin facilities. Will discuss once again at 1:30 PM with refinement of forecast.

July 6, 2024 (1:30 PM call): EOP Executive Committee meets and confirms forecast. Activation of EOP is eminent but still seeing conflicting wind projections and location. Discussion about sending DOC/SOC operators to Lewisville is held but still not seeing winds above 58 MPH so decision is made to hold firm until Sunday call. Assessment of initial available resources internally is made at this time. Identified as local are as follows:

- All Gulf Coast area ETs with the exception of four (three in Bay Area, one in Mainland) are available. Roughly 65 ETs and all STs are ready for work in area.
- External line resources in the form of 15 Gulf Coast contractor crews, 1 Central Texas contractor crew, and 10 – 15 North/West Texas contractor crews will be available to report on Monday.
- Additional TNMP resources are requested and put on notice. Two five-man crews from TNMP North Texas and a single five-man crew from TNMP Central Texas are put on standby. Frontline crews from NTX are also put on standby.
- Vegetation Management not on call but will be contacted for follow-up calls as EOP Executive Committee sees fit.
- Schedule another call for 1:30 PM Sunday.

July 7, 2024 (morning): After seeing new forecast Emergency Operations Manager contacts Director of SOC and decision made to send SOC/DOC operators to Lewisville backup operations site (BSOC transmission and distribution system operators). Plan is executed and Operators leave at 12:00 PM for late evening arrival. Also, Emergency Operations Manager reaches out to NTX & CTX Directors and sends crews down to Gulf Coast for arrival on Sunday night. Storm predicted to arrive at 1:00 AM to 10:00 AM Monday morning, 7/8/24. TNMP notifies mutual assistance resources through SEE that they will most

likely be making requests on Monday morning as proposed by CenterPoint requesting an SEE event be generated for resources.
July 7, 2024 (12:30 PM): Call held with local Gulf Coast Management Team. EOP is officially activated, and all steps are reviewed for 24 hours prior to storm arrival. Steps are completed and it is determined that:

- No mandatory evacuation is taking place in area so employees expected to remain in locations to ride the storm out. No releases are necessary to release employees to evacuate family.
- Confirm resource availability and notify Gulf Coast management that external crews have been released from NTX/CTX for evening arrival.
- Confirm additional line crew compliment of 17 additional crews (approximately 68 additional FTE's) with the ability to call an additional 10 – 15 crews from North Texas contractor crews if needed (confirmed later this evening). Requested arrival time is 3:00 PM Sunday.
- Vegetation Management is on call and projects 17 crews (approximately 51 FTE's) will be on site on Monday. Supplemented 12 existing crews with 5 additional crews.
- Engineering confirms all Distribution Engineers will be available to assess damage. Notified to consider outside damage assessors who can be on site as early as Tuesday afternoon.
- Vehicles have been moved to higher ground and are fueled. Storm stock trailers have been verified and checked for materials.
- 2-way radios have been picked up.
- Logistics have been enabled regarding food and lodging. Hotel rooms are attempted to be procured for at least internal staff as external contractors are mostly local. Any outside resources to this point are notified to acquire their own accommodations.

July 7, 2024 (1:30 PM Executive Committee): Full execution of EOP is authorized and committee is briefed on preparations so far. Agreed that full execution may include Mutual Assistance (MA) although no call for mutual assistance has been made by any member company to this point.

July 7, 2024 (evening): DOC/SOC operators arrive at BSOC in Lewisville and are in "monitor" mode. NTX/CTX crews arrive on site in Gulf Coast and are at hotel locations awaiting orders. VM and contractor resources in area and are ready to be dispatched once storm allows.

July 8, 2024 (early morning): Storm arrives. TNMP loses 60 distribution circuits, 8 transmission circuits. 11:30 AM status call is set up for Executive Committee and local management. SEE call is held at 9:00 AM and additional resources are requested by TNMP (250 line, 150 VM is initial request). External damage assessors are requested (25 FTE's). Request for Tuesday afternoon/Wednesday morning arrival. Five of eight transmission circuits are restored; Brazoria County is bullseye and has three transmission circuits locked out. Restoration and evaluation efforts begin by TNMP personnel and external crews as per EOP.

July 8, 2024 (11:30 AM call held): Resources have started to arrive from contractors and VM. Extensive damage is being found from trees and downed poles. Damage assessment has begun in all areas. Other preparations include the following:

- Confirmation of requested MA resources from SEE. Rosters are starting to arrive.
- Securitization of staging sites (Tanger Outlet mall for staging/fueling area, Texas City FD for Mainland/Bay Area materials yards, Alvin CC for West Columbia/Brazoria County materials yards). Notification to Base Logistics made to deploy to Tanger Outlet Mall and West Columbia Construction Centerwill be ready for dinner to be served on Tuesday evening/Wednesday.
- Material supplier has been notified and is preparing to send additional materials and personnel to operate staging sites.
- Lodging is being secured as rosters arrive. Plan is in full effect.
- No TNMP facilities are ruled to be inoperable. All construction centers are intact and will be used for Operations and Dispatch.
- SOC is also unaffected and stays as primary control center.
- Communications in Brazoria County is severely compromised. Connectivity via cell network and internet is spotty for all customers in area. Satellite phones and two-way radios are now in use.
- BSOC is operational and dispatching for NTX/CTX/WTX.

July 8, 2024 (evening call): All areas are starting to see MA crews arrive and are working. Will work 16-hour days with TNMP trouble crew providing graveyard support during evenings. All TNMP crews are responding and working. VM crews arriving and more requested. Obvious that this will be a VM event primarily and will need crews to clear before line crews can restore service. Decided that twice/day calls will be held at 11:00 AM and 6:00 PM for updates. 5 of the 8 transmission circuits are restored (Texas City area for restoration,

Brazoria County still out but tree issues have been located and waiting to clear).

July 9, 2024 (11:00 AM): Crews are arriving and working. So far all have lodging and will find food on their own until box lunches and the staging site with hot meals is operational on 7/10/24. VM crews arriving and more requests are made. As resources are made available through SEE or direct contact TNMP is taking them as offered. Damage assessment crews arrive and start work in Brazoria County. Additional supervision arrives from TNMP (Field Supervisors from NTX & CTX) to supplement management in Bay Area and Brazos areas. Crews are working. Some restoration has occurred and is under way, many main feeders are closed but numerous laterals remain out and in need of VM work/patrol in all areas.

July 9, 2024 – July 17, 2024: Restoration efforts continued throughout this time period with twice/daily status calls held among response teams (11:00 AM and 6:30 PM calls). Final restoration occurs on 7/17/24 in the late evening with all customers who can receive service being restored.

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.

Prepared by: Kenneth Macune

Sponsored by: Keith Nix

Attachment: STAFF 1-16_PUCT Summary Outage Report - Hurricane Beryl

RESPONSE:

May 2024 Derecho
Total Customers Affected: 595
Maximum Outage/Response Time: 543 minutes
Minimum Outage/Response Time: 37 minutes
Average Outage/Response Time: 188 minutes

Hurricane Beryl
Total Customers Affected: 142,000
Maximum Outage/Response Time: 14,571 minutes
Minimum Outage/Response Time: 13 minutes
Average Outage/Response Time: 3,311 minutes

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.

Prepared by: Kenneth Macune, Pauline Moore

Sponsored by: Keith Nix

RESPONSE:

a. See response to STAFF 1-16. The May 2024 Derecho was not a major outage for TNMP.

b. Severely impacted areas include:
   - City of Brazoria, Brazoria County
   - City of Angleton, Brazoria County
   - City of West Columbia, Brazoria County
   - City of Sweeny, Brazoria County
   - City of Old Ocean, Brazoria County
   - City of Alvin, Brazoria County
   - City of Friendswood, Galveston County
   - City of Dickinson, Galveston County

c. The main contributing factors for the areas identified were wind and vegetation resulting in vegetation encroachment, fallen trees, broken poles, and downed wire. See Response to STAFF 1-18.

STAFF 1-18. Describe any challenges in restoring operations your Company encountered due to the May 2024 Derecho or Hurricane Beryl.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

RESPONSE: Regarding the May 2024 Derecho, there were no out of the ordinary challenges encountered that were different from any other large thunderstorm event.

For Hurricane Beryl, the following challenges were encountered in restoring operations:

- Vegetation encroachments and fallen trees were extremely challenging in both reaching locations where service was interrupted and at the locations where service was interrupted. Beryl was primarily a wind and vegetation event. Downed wire, trees from outside of ROWs or easement corridors were the main contributing factors.
- TNMP experienced approximately 500 broken poles and over 2,700 downed spans of wire as part of the event. Getting to those poles because of ground conditions, vegetation encroachment, and interactions with the public were challenging at times.
- Difficulty in communicating due to lost telecommunications carrier infrastructure made for a large challenge, particularly in the Brazoria County area. Due to a loss of cellular facilities, it was difficult for customers to call in to TNMP's call center. Additionally, it was difficult for TNMP employees to contact one another as well as Mutual Assistance crews via cellular telephone in that area. TNMP was able to deploy handheld two-way radios to help mitigate the issues. Portable satellite telephones were also available if needed to communicate within TNMP. Internet connectivity was also impacted, primarily in Brazoria County.
- Security at both TNMP offices as well as with field crews was also challenging. Because there was no public evacuation notice provided, the majority of TNMP's customers remained at home during the storm and expected service immediately after its passing, not considering the widespread damage. When service did not meet that expectation level, many customers came directly to TNMP offices to demand service and were sometimes very confrontational. TNMP first worked with contracted security services to meet with customers and discuss the situation, but that wasn't effective with many of the more

agitated customers. At that point, TNMP approached local law enforcement and had off-duty officers stationed at the offices on a 24/7 basis, which reduced interactions dramatically. Field personnel were approached by numerous upset customers but, fortunately, employees were able to explain the situation to them which resulted in only a few minor incidents.

- Challenges in interacting with customers and providing information were encountered. Customers reached out through TNMP's call center, social media, and via email contacts (hurricane@tnmp.com) to report service or inquire about restoration. Rumors were persistent about crews not being assigned work, not being responsive, or awaiting work, which were just not accurate due to misunderstandings of the nature of work that needed to be completed. TNMP made best efforts to reach out to customers in bulk (multiple daily updates on its website/outage map page, social media posts, individual customer follow-ups, etc.) but the sheer volume made it difficult. Outage map updates were made in a bulk fashion and provided line crew/vegetation management location updates by town and county which seemed to help with the communication process.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: See response to STAFF 1-16. There is no planned after-action report for the May 2024 Derecho event.

For Hurricane Beryl, after-action reports are in progress with a draft report planned to be available to TNMP by October 15, 2024. Templates have been completed by internal resources and all data will be compiled and sent to a third-party consultant for evaluation and report completion.

STAFF 1-20. Please provide any additional information and describe any concerns that may be helpful to this investigation.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: See response to STAFF 1-16. As has been stated previously, the May 2024 Derecho impacts to TNMP were comparable to a common thunderstorm event and thus TNMP's response was comparable. Adjacent TDSPs were much more heavily impacted which is to be expected under an unexpected storm scenario. TNMP sent crews to adjacent TDSP's for Mutual Assistance for the Derecho event as crews were available to assist.

Lodging for incoming crews was also difficult to obtain at times. Many area hotels were already pre-booked by other utilities before the arrival of TNMP mutual assistance crews. Other hotels did not have power and closed entirely. Hotels that did have power were over-booked and in some cases were "hoarding" rooms for relatives of employees. Some hotels increased normal rates by more than double due to demand. Many crews had to stay a great distance (greater than 25 miles) away from TNMP's service territory just due to availability.

Governmental and Office of Emergency Management meetings were being conducted in some areas that TNMP was not made aware of but was noted as being absent from in the media. Once TNMP became aware of those meetings attendance via remote meeting or in-person meetings was accomplished, and the situation was diffused.

TNMP does not own, lease, or operate any mobile generation at this time and did not deploy or contemplate deploying any during either of these events.

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.

Prepared by: Sara Yingling, Belinda Ready, Andrea Couch, Darcie Valenzuela

Sponsored by: Stacy Whitehurst, Keith Nix

RESPONSE:

a. TNMP was invited to attend local Hurricane Preparedness events by city emergency management teams. TNMP handed out hurricane prep brochures which provided information about how TNMP storm preps and what residents should do before storm season begins. TNMP encouraged and helped customers sign up for our outage alert system. TNMP gave out crank flashlights, raincoats, and cooling towels. TNMP remained in contact with local government and community stakeholders before, during, and after the storm. In accordance with the materials and processes we handed out, etc. etc. TNMP Communications shared on its social media channels and website the various ways that residential and commercial customers should prepare ahead of hurricane season and during hurricane season.

b. Additional after-hours on call-teams were added to provide additional support during storm events.

c. TNMP submits market notices to communicate updates to market participants who then may pass those updates on to their customers.

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.

Prepared by: Sara Yingling

Sponsored by: Stacy Whitehurst

RESPONSE: TNMP posted its first hurricane preparedness press release on May 6, 2024. On June 6, TNMP posted another press release regarding the start of the Atlantic Hurricane Season and how to prepare.

TNMP's communication approach for the May 2024 Derecho is identical to our approach for every storm and included posting on social media on May 31 about several outages in our Gulf Coast service territory and where customers could find updates on the outages.

Regarding Hurricane Beryl, TNMP's communication began on July 6, when a video was reposted with the latest information on Hurricane Beryl from National Hurricane Center.

On July 7, TNMP shared a press release on all of its social media channels regarding activating its Emergency Operations Plan in preparation for Hurricane Beryl. Additionally, TNMP posted two posts on its social media channels regarding internal line crews and external vegetation crews preparing for the hurricane.

During the hurricane, TNMP Communications shared information on every social media channel 2-5 times per day.

Post hurricane, TNMP's communications approach included posting restoration efforts for remaining customers after significant restoration, clean-up efforts, and thanking our communities for supporting us in our restoration efforts.

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.

Prepared by: Sara Yingling, Pauline Moore

Sponsored by: Stacy Whitehurst

Attachment: STAFF 1-23_CONFIDENTIAL Hurricane Beryl Customer Direct Messages

RESPONSE: TNMP received customer feedback via several platforms. Customer feedback was received through comments and direct messages on TNMP's various social media channels, including Twitter/X, Facebook, Instagram, and LinkedIn. Feedback was also received through the hurricane@tnmp.com email address that was created at the beginning of the hurricane event. This email address was used for customers who were unable to reach our customer service number due to external phone carrier issues preventing their call from connecting to our Call Center. Our Call Center received customer feedback through our customer service phone number. TNMP employees also received feedback on their phones. Lastly, customer feedback was also received in-person at its various Gulf Coast service territory offices.

TNMP evaluated the customer feedback and pertinent information received through these various channels and considered such information in carrying out its restoration effort. Specifically, TNMP reviewed each communication and, to the extent feasible and necessary, incorporated the information in its storm response activities in order to effectively and efficiently respond to service interruptions. As discussed with Commission Staff, TNMP is still performing a diligent search for all email communications responsive to this request, which TNMP can produce upon further request. In the interim, TNMP is providing exemplary communications from social media channels that detail the types of information received.

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?

Prepared by: Sara Yingling, Pauline Moore, Andrea Couch, Darcie Valenzuela

Sponsored by: Stacy Whitehurst

RESPONSE: TNMP will continue communication with local emergency management contacts from local municipal and county governments. Any additional communication needed with medical, eldercare, community organizations, and similar organizations is identified and implemented through these meetings for future significant weather events.

TNMP provides a list of critical care customers for retail providers to access through our REP portal.

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?

Prepared by: Keith Nix, Pauline Moore, Darcie Valenzuela

Sponsored by: Keith Nix

RESPONSE: TNMP expects to expand its EOP outreach activities to include more interaction with other utility providers in its operating areas. Outreach will include exchange of emergency contact information for each entity, coordination of resources in response to events, information sharing of critical load locations, existence of any back-up generation at those locations, and all other pertinent information needed during an emergency event. Outreach can be coordinated by TNMP or through local Emergency Management Operations committees organized through municipal, county, or state entities.

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?

Prepared by: Belinda Ready

Sponsored by: Stacy Whitehurst

RESPONSE:

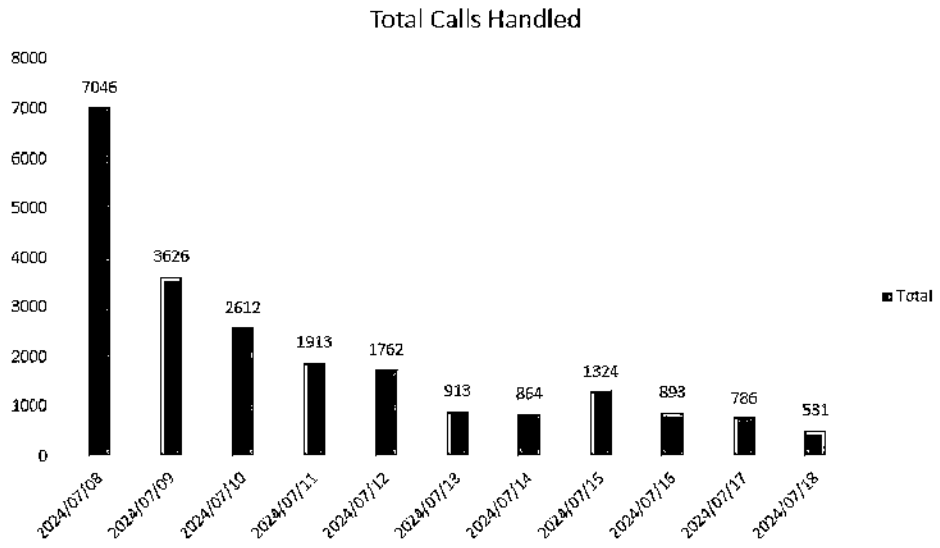
a. 75 people.
b. 100% FTE (87% internal, 13% contracted labor). No seasonal or temporary.
c. 60% of calls answered in 60 seconds.
d. On average, it takes 90 seconds to submit an outage ticket for a customer, which is within target.
e. Agents are notified in advance of potential weather conditions and are expected to keep communication channel open for updates while working and while they are not working. Training regarding call handling and soft skills is provided to agents when employment begins. Employees receive refresher training and coaching through call monitoring.
f. We have 500 ports/lines for customers to utilize to contact us. An automated system notifies us via text if we are close to reaching the limit. We can then increase the number of ports/lines. During the Hurricane Beryl event, ports/lines utilized reached 423.

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.

Prepared by: Belinda Ready

Sponsored by: Stacy Whitehurst

RESPONSE: See table below.



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.

Prepared by: Sara Yingling, Ben Utley, Pauline Moore, Darcie Valenzuela

Sponsored by: Stacy Whitehurst

RESPONSE: TNMP Communications reposted various organizations and cities' posts regarding recovery and debris pick up. The Regional Community Liaison provided daily emails with restoration percentages, remaining outage counts, and linemen and vegetation management crew counts per city. The Regional Community Liaison shared local photos of storm damage to TNMP Communications for social media posts. In addition, the Regional Community Liaison responded to numerous phone calls and texts from local officials.

TNMP Government Relations provided multiple email updates per day to impacted legislators and staff at the congressional and state level as well as to staff in the Governor's office, the Lieutenant Governor's office, and the Speaker's office. These updates included TNMP's latest restoration numbers and resources for constituents. TNMP Government Relations proactively reached out to each impacted legislator's office by phone throughout the process and responded to all questions from legislators. Additionally, TNMP Government Relations staffed an employee at the State Operations Center throughout the restoration process to coordinate restoration efforts with various state agencies.

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.

Prepared by: Belinda Ready

Sponsored by: Stacy Whitehurst

RESPONSE:

Yes, calls are recorded, and the retention period is seven years.

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.

Prepared by: Belinda Ready

Sponsored by: Stacy Whitehurst

Attachment: STAFF 1-30_Hurricane Beryl Call Center Log

RESPONSE: Calls are recorded. Please see attachment STAFF 1-30_Hurricane Beryl Call Center Log.

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.

Prepared by: Belinda Ready

Sponsored by: Stacy Whitehurst

Attachment: STAFF 1-31_Hurricane Beryl Pre-Recorded Messages

RESPONSE:

July 15, 2024 – "Power has been restored to 93% of customers impacted by the hurricane. We are currently working to restore power to small clusters and individual service level outages that are taking significant time and resources to restore. Please report your outage at outagemap.TNMP.com, email hurricane@TNMP.com, or use our automated phone system. Thank you for your patience and understanding as our crews work as safely and quickly as possible to restore your power. Representatives have no additional information."

July 11, 2024 – "We are currently experiencing higher than normal call volumes and you may experience long wait times. For your convenience and faster service, please report your outage using our automated phone system or go to outage map dot TNMP dot com. Representatives do not have additional information to provide. Thank you for your patience as we work as safely and quickly as possible to restore your power."

July 8, 2024 – "Thank you for your patience as we work tirelessly to restore power after Hurricane Beryl. Full restoration is estimated to be Wednesday July 10th. Our crews are working as safely and quickly as possible. The restoration process will be extensive, as Hurricane Beryl caused significant damage to our infrastructure. Our teams will continue working throughout the night and day to bring back power. Your understanding and cooperation is greatly appreciated during this time. Please visit outage map dot TNMP dot com for updates on restoration."

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. Whether the outage tracker was cloud-based or operated through an on premise server?
g. The maximum number of simultaneous users the outage tracker was designed to accommodate.
h. 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.
i. The date of the last stress or load test of the outage tracker.

Prepared by: Chris Gerety, Lana Bigford, Chris Dobard, Vincent Roberts

Sponsored by: Chris Gerety

RESPONSE:

a. The KUBRA Stormcenter 5 went live on March 27, 2023.
b. August 19, 2024. Prior to Hurricane Beryl, June 17, 2024.
c. KUBRA Stormcenter 5 was functioning as designed during Hurricane Beryl. The May 2024 Derecho was a non-event for TNMP.
d. KUBRA Stormcenter 5 is mobile-friendly.
e. English and Spanish.
f. Outage tracker captures both circuit-specific and meter specific information. Outage tracker is cloud-hosted by KUBRA.
g. KUBRA Stormcenter 5 is designed for millions and millions of users to view the map during storms as well as blue sky days.
h. For redundancy, TNMP used our AMI Meter tracking to ensure that outage numbers were correct.
i. March 15, 2023.

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.

Prepared by: Chris Gerety, Lana Bigford, Chris Dobard, Vincent Roberts

Sponsored by: Chris Gerety
RESPONSE:

See response to STAFF 1-16. The May 2024 Derecho was a non-event for TNMP.

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.

Prepared by: Chris Gerety, Lana Bigford, Chris Dobard, Vincent Roberts

Sponsored by: Chris Gerety

RESPONSE:

Date	Number of Views
July 8, 2024	10,188
July 9, 2024	5,606
July 10, 2024	3,340
July 11, 2024	1,730
July 12, 2024	1,213
July 13, 2024	940
July 14, 2024	638
July 15, 2024	493
July 16, 2024	354
July 17, 2024	305
July 18, 2024	178
July 19, 2024	119

The peak number of KUBRA Stormcenter 5 views was on July 8, 2024 with 10,188 views.

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.

Prepared by: Chris Gerety, Lana Bigford, Chris Dobard, Vincent Roberts

Sponsored by: Chris Gerety

RESPONSE: TNMP's contingent process for informing its customers on the number of service outages when the primary process is unavailable is by manually posting and updating messages that state the number of customer outages on the Customer Service Interactive Voice Recorder (IVR) and on its social media sites Facebook, X, and Instagram.

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.

Prepared by: Chris Gerety, Lana Bigford, Chris Dobard, Vincent Roberts

Sponsored by: Chris Gerety

RESPONSE: TNMP did not have to initiate the process described in STAFF 1-35.

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.

Prepared by: Stacy Whitehurst

Sponsored by: Stacy Whitehurst

RESPONSE: See table below.

	TOTAL	AMI METERS	NON-STANDARD	AMI METERS %
BRAZORIA COUNTY	**45,571**	**45,518**	**53**	**99.88%**
Residential Service	38,961	38,945	16	99.96%
Secondary Service Less than 5 kW	2,888	2,888	-	100.00%
Secondary Service Greater than 5kW w/o IDR	3,569	3,569	-	100.00%
Primary Service w/o IDR	23	23	-	100.00%
Lighting Service Roadway VI	93	93	-	100.00%
Secondary Service Greater than 5kW w/IDR	26	-	26	0.00%
Primary Service w/IDR	6	-	6	0.00%
Transmission Service	5	-	5	0.00%
GALVESTON COUNTY	**98,256**	**98,139**	**117**	**99.88%**
Residential Service	88,718	88,687	31	99.97%
Secondary Service Less than 5 kW	3,513	3,513	-	100.00%
Secondary Service Greater than 5kW w/o IDR	5,696	5,696	-	100.00%
Primary Service w/o IDR	35	35	-	100.00%
Lighting Service Roadway VI	208	208	-	100.00%
Secondary Service Greater than 5kW w/IDR	54	-	54	0.00%
Primary Service w/IDR	15	-	15	0.00%
Transmission Service	17	-	17	0.00%
MATAGORDA COUNTY	**28**	**27**	**1**	**96.43%**
Residential Service	24	24	-	100.00%
Secondary Service Less than 5 kW	1	1	-	100.00%
Secondary Service Greater than 5kW w/o IDR	2	2	-	100.00%
Transmission Service	1	-	1	0.00%
TOTAL	**143,855**	**143,684**	**171**	**99.88%**

STAFF 1-38. Provide the date and method (e.g., email, phone call, text message) you initially contacted local governments in the Impacted Area.

Prepared by: Pauline Moore, Darcie Valenzuela

Sponsored by: Keith Nix

RESPONSE: Correspondence with the officials listed in the EOP began by phone call on Sunday, July 7, 2024. Please see responses to STAFF 1-11, 1-21, and 1-28 for contact points. Each one was provided with an update on staged resources, available on standby, and ensured each local contact had the Regional Community Liaison's cell phone number to contact at any time.

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.

Prepared by: Keith Nix, Pauline Moore, Darcie Valenzuela

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: Please see page 17 of TNMP's EOP – F. Public Communications, F. 2. Key Customer Contact – The Regional Community Liaison will notify Government and Key Customers of power restoration status and remain in contact with emergency management teams.

Page 17 of TNMP's EOP– F. Public Communications, F. 3. News Media, Customer, and Call Center Contact – TNMP Communications representatives will respond and proactively reach out to news media to provide information about hurricane preparedness, power restoration updates, and safety information for broadcast and publication.

Pages 34, 47, and 58 of TNMP's EOP – B. Communications, B.1 Contact Cities and Key Customers – Notify government and key customers of hurricane status and remain in contact with emergency management team.

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.

Prepared by: Keith Nix, Pauline Moore, Darcie Valenzuela, Sara Yingling

Sponsored by: Keith Nix

RESPONSE: Please see response to STAFF 1-39. TNMP Communications reached out with a press release to provide information about hurricane preparedness initially on May 6, 2024, and again on June 6 that contained information on the start of the Atlantic hurricane season and how to prepare – please see response to STAFF 1-22. TNMP's Regional Community Liaison reached out to local governments beginning on July 7 via phone calls.

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.

Prepared by: Pauline Moore, Darcie Valenzuela

Sponsored by: Keith Nix

RESPONSE: TNMP's Regional Community Liaison was in constant contact with local government and many TNMP customers beginning at 3:00 am on July 8, 2024 through final restoration. Multiple phone calls were received and responded to each hour from numerous critical care residents and at-risk customers. TNMP's Regional Community Liaison attended the Brazoria County OEM calls daily, updated emergency management teams throughout the Gulf Coast TNMP territory regarding the restoration progress, and recorded and communicated with relevant employees every outage address that was provided.

STAFF 1-42.	For ERCOT-located utilities, please describe any communication with interconnected power generation companies regarding their operational status during Hurricane Beryl.
Prepared by:	Chris Dobard
Sponsored by:	Keith Nix
RESPONSE:	TNMP's Control Center received a phone call from a power generation company in Texas City, TX on July 8, 2024 at 4:14 AM in which they reported that they had tripped off-line due to issues on the customer side of the interconnection and lost approximately 435 megawatts of generation. TNMP had no other communications with an interconnected power generation company during Hurricane Beryl.

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.
Prepared by:	Keith Nix
Sponsored by:	Keith Nix
Attachment:	CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)
RESPONSE:	TNMP's EOP is the document used for service restoration planning efforts caused by extreme or emergency weather events as well as hurricane response. The specific area assignments begin on page 33 and continue for each area through page 84.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: Please see the response to STAFF 1-10 for the procedures followed for customer restoration of service which includes prioritization. TNMP does not include timeline targets in its restoration plans as each event and storm is different and resulting damages can vary which will subsequently vary restoration times. TNMP does not believe that its policies lead to quicker restoration of service for one area relative to others and strives to restore service as quickly as possible in all areas. Geography and terrain are more of a determinant than response policies. For example, urbanized areas of TNMP's service territory (Texas City, Friendswood, League City, etc.) are more developed than other areas of TNMP's service territory (West Columbia, Brazoria, Sweeny, etc.) meaning that those areas have more underground facilities (laterals and service wires primarily). As such, more customers can be restored in those developed areas because of customer density and the prevalence of those underground facilities. When an event occurs, all efforts are made to respond to each area simultaneously to restore customers as quickly as possible.

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.
Prepared by:	Keith Nix
Sponsored by:	Keith Nix
RESPONSE:	As after-action reports have not been finalized yet, TNMP has not yet determined whether any changes or modifications to any service restoration plans are necessary. See also Response to STAFF 1-19.

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.

Prepared by: Pauline Moore, Vincent Herrera, Jason Putnal, Timothy Cool

Sponsored by: Keith Nix

RESPONSE:

Damage Assessment FTEs (excludes internal TNMP personnel):
July 9 – July 10, 2024:
Brazoria County – 16 Assessor Teams (32 FTEs).
Galveston County – 6 Assessor Teams (12 FTEs).

Total of 44 Damage Assessment FTEs throughout the event.

Distribution Line FTEs (excludes internal TNMP personnel):
July 8, 2024: Began assessment in Galveston and Brazoria County as soon as it was safe to do so following Hurricane Beryl.

July 8 – July 9, 2024:
Galveston County (including Alvin) – 353 FTEs
Brazoria County (excluding Alvin) – 177 FTEs

These numbers ramped up during the event (July 8 – July 17, 2024) for a total of 863 Line FTEs spread throughout both counties.

Vegetation Management FTEs: Vegetation Management FTEs were not tracked on a county-by-county basis. Initial request was for 150 VM FTEs made on July 8, 2024 and ramped up during the event (July 8 – July 17) for a total of 761 VM FTEs spread throughout both counties.

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.

Prepared by: Kenneth Macune, Jason Putnal, Lana Bigford

Sponsored by: Keith Nix

RESPONSE:

	Brazoria Co. (% Out)	Galveston Co. (% Out)
July 8, 2024	98%	78%
July 9, 2024	59%	22%
July 10, 2024	46%	14%
July 11, 2024	37%	8%
July 12, 2024	35%	9%
July 13, 2024	27%	6%
July 14, 2024	20%	3%
July 15, 2024	14%	0.8%
July 16, 2024	7%	0.2%
July 17, 2024	3%	
July 18, 2024	0.4%	

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.

Prepared by: Belinda Ready, Pauline Moore, Lana Bigford

Sponsored by: Stacy Whitehurst

RESPONSE: All calls logged are logged into our OMS system.

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.

Prepared by: Ben Utley, Pauline Moore, Darcie Valenzuela

Sponsored by: Stacy Whitehurst

RESPONSE: TNMP notified local governments and customers of hurricane status before the storm and gave daily updates of restoration efforts/progress during and after Hurricane Beryl. TNMP provided restoration percentages, linemen crew counts, vegetation management crew counts, and remaining outage counts per city in daily emails. TNMP attended virtual Brazoria County OEM calls daily to provide TNMP updates. Additionally, see responses to STAFF 1-11, 1-21, 1-28 and 1-38. There are no formal agreements or understandings with these parties other than PUCT rules regarding communications with the PUCT and Staff notifications.

Beginning July 8, 2024, TNMP staffed an employee at the State Operations Center to coordinate restoration efforts with state agencies throughout the restoration process.

TNMP utilized local law enforcement to provide security at local offices and traffic control at the main staging site (Tanger Outlet Mall).

Throughout the event, TNMP also coordinated with state and federal legislative offices to ensure constituents' outages were logged in TNMP's Outage Management System.

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.

Prepared by: Pauline Moore, Jason Putnal

Sponsored by: Keith Nix

RESPONSE: Please see response to STAFF 1-18 regarding any major challenges and response to STAFF 1-19 regarding solutions implemented to address the challenges. The after-action reports are in progress.

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.

Prepared by: Keith Nix, Pauline Moore, Jason Putnal

Sponsored by: Keith Nix

Please see response to STAFF 1-19. After action reports are in progress internally and will also be shared with a third party for evaluation and report completion.

RESPONSE: Initial lessons learned are related to early engagement of Vegetation Management resources (obtain and deploy before line resources), their makeup (procure climbing crews first, then bucket truck-based crews next) and their direct assignment to local line crews early to triage needs on individual circuits.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: TNMP does not employe NIMS at this time.

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.

Prepared by: Keith Nix

Sponsored by: Keith Nix

RESPONSE: TNMP has personnel trained in Incident Command System processes, however, these processes were not employed as part of the response to Hurricane Beryl. TNMP's Executive Committee personnel, local management, and Community Liaisons meet and interact with local and state officials when requested to update those entities on its EOP plans and response. Regarding other utilities, TNMP interacts with members of each of the Mutual Assistance groups at yearly planned meetings where emergency response status and issues are discussed. No direct one-on-one meetings are held, however. TNMP's Vice President of Operations is also a board member of Southeast Electric Exchange's Executive Board and attended EEE's National Response Event tabletop exercise in Washington, D.C. in February of 2024.

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.

Prepared by: Vincent Herrera, Chris Gerety

Sponsored by: Chris Gerety

RESPONSE:

a. All TNMP distribution lines shall be visually inspected by a qualified patrolman experienced with distribution line facilities and construction. Distribution lines are patrolled as part of day-to-day operations or as operating conditions and/or reliability indicators warrant.
b. Condition-based inspections include visual inspections, sounding inspections of poles, and below ground-line inspections.
c. Pole replacement occurs when visual or sounding inspections result in identifying suspected damage, decay, or reduction in strength.

STAFF 1-55.	Please provide your minimum required right-of-way (ROW) width for both 3-phase and single-phase distribution lines.
Prepared by:	Vincent Herrera, Chris Gerety
Sponsored by:	Chris Gerety
RESPONSE:	Three-phase distribution line – 16 feet minimum width plus 5 feet by 20 feet aerial easement. Single-phase distribution line – 10 feet minimum width plus 5 feet by 20 feet aerial easement.

STAFF 1-56. Identify all feeders on your distribution system affected by Hurricane Beryl or the May 2024 Derecho and provide the following for each identified feeder in MS Excel format:

a. The quantity and percentage of each installed pole type (e.g., wood, composite, steel, concrete, other) on the feeder before Hurricane Beryl;

b. The quantity and percentage of pole failures, by pole type, due to Hurricane Beryl;

c. Identify the primary cause of failure for each pole type on the feeder (e.g., trees, branches, wind, or other);

d. Identify the primary point of failure of the poles (e.g., crossarm failure, pole leaning, pole break, or other);

e. NESC construction strength and overload factors the feeder is currently built to;

f. Identify which feeders are in your plans to rebuild to a higher wind loading standard; and

g. Provide an estimate for when identified rebuilds will commence.

Prepared by: Vincent Herrera, Kenneth Macune, Chris Gerety, Jason Putnal

Sponsored by: Chris Gerety

Attachment: STAFF 1-56_Pole Counts and Fails by Feeder by Type

RESPONSE:

a. 99,465 (96.5%) Wood Poles, 22 (< 1%) Steel Poles, 3,523 (3.4%) Concrete Poles, 10 (<1%) Composite
b. 481 wood poles failed. No steel, concrete, or composite poles failed.
c. Pole failures were caused primarily by trees falling into TNMP's facilities.
d. Broken crossarms and wire down were the primary points of failure which were caused by trees falling into TNMP's distribution facilities.
e. All TNMP's distribution facilities were designed and constructed to a minimum NESC Grade C Guidelines at the time of construction.

f. TNMP continues to re-evaluate its construction standards for all its distribution facilities. TNMP has not identified a timeline to upgrade its existing distribution facilities.
g. All circuits have been reconstructed and electric service was restored. TNMP is currently reviewing its current design guidelines for all TNMP's distribution system.

Breakdown of Pole Type and Pole Failure per feeder is shown on attached exhibit.

STAFF 1-57. If your distribution system includes feeders with poles taller than 60-feet above ground level, please provide the following:

a. Identify each feeder that has any number of poles meeting this criteria;

b. Explain the damage experienced on these lines due to either the May 2024 Derecho or Hurricane Beryl; and

c. Explain the design criteria for these types of lines.

Prepared by: Vincent Herrera, Jason Putnal

Sponsored by: Chris Gerety

RESPONSE:

a. TNMP Circuits containing poles greater than 60 feet above ground:

Angleton Substation, Circuit 1155
Angleton Substation, Circuit 1242
Angleton Substation, Circuit 1243
Angleton Substation, Circuit 1244
Angleton Substation, Circuit 1245
Butler Road Substation, Circuit 1442
Clemons Dome Substation, Circuit 301
Freeway Park Substation, Circuit 1101
Freeway Park Substation, Circuit 1103
Freeway Park Substation, Circuit 1293
Freeway Park Substation, Circuit 1295
Freeway Park Substation, Circuit 1298
Freeway Park Substation, Circuit 1299
Heights Substation, Circuit 1122
Heights Substation, Circuit 1132
Old Ocean Substation, Circuit 1260
Seminole Substation Circuit 1404
Sweeny Substation, Circuit 1260
Sweeny Substation, Circuit 1261
Tejas Substation, Circuit 1212
Tejas Substation, Circuit 1215
Tejas Substation, Circuit 1217
West Columbia Substation, Circuit 1234

b. TNMP's distribution facilities with pole heights less than 60 feet above ground sustained damage from vegetation and wind, primarily consisting of broken crossarms and downed wire. TNMP's Distribution facilities with heights greater than or

equal to 60 feet above ground sustained no damage from May 2024 Derecho or Hurricane Beryl.

c. TNMP's distribution facilities with pole heights less than 60 feet above ground were designed to NESC Rule 250B and Grade C Construction. TNMP's distribution facilities with pole heights greater than or equal to 60 feet above ground were designed and constructed to NESC Rule 250C and Grade B Construction.

STAFF 1-58.	Please explain your standard for distribution pole embedment. In your response, please explain if this standard has changed in the last 10 years.
Prepared by:	Vincent Herrera
Sponsored by:	Chris Gerety
RESPONSE:	TNMP's current standard distribution pole embedment is 10% of pole height plus 2 feet. The standard has not changed in the last ten years.

STAFF 1-59.	Please provide the standard distribution pole size and class for both single and three phase lines on your system within the Impacted Area.
Prepared by:	Vincent Herrera
Sponsored by:	Chris Gerety
RESPONSE:	The standard distribution pole for both single-phase lines and three-phase lines is a 45-foot, class 3 pole.

STAFF 1-60.	Please explain the NESC construction strength and overload factors your distribution lines were built to in the past.
Prepared by:	Vincent Herrera
Sponsored by:	Chris Gerety
RESPONSE:	TNMP's distribution facilities were designed and constructed to current NESC Grade C Construction Guidelines at the time of construction.

STAFF 1-61. Please explain any new NESC construction strength and overload factors you adopted for distribution lines in the last two years to improve system resiliency.

Prepared by: Vincent Herrera

Sponsored by: Chris Gerety

RESPONSE: TNMP has not adopted new NESC construction strength or overload factors for TNMP's distribution lines in the last two years.

STAFF 1-62. Please provide the following information regarding distribution feeders in the Impacted Area that did not lose power during Hurricane Beryl and the May 2024 Derecho:

a. Provide the designed criteria for these lines;

b. The type of poles installed;

c. The ROW widths;

d. Explain if these lines are designed to the latest NESC construction strength and overload factors; and

e. Explain if any distribution line experienced damage but remained standing.

Prepared by: Vincent Herrera, Kenneth Macune, Jason Putnal

Sponsored by: Chris Gerety

RESPONSE:

a. The unaffected distribution feeders were all designed and constructed to NESC Rule 250B/C and Grade C/B. The respective circuits are relatively short feeders, with few trees, few customers, and predominately underground laterals serving customers.
b. The mainline circuits include wood and concrete poles.
c. All overhead distribution main-line facilities are installed within public road right-of-ways, 16 feet wide easements for three phase construction, or ten feet wide easements for single phase construction. City-owned and State-owned road right-of-way will vary in width.
d. TNMP's distribution facilities were designed and constructed to current NESC Rule 250B/C and Grade C/B construction at the time of construction.
e. TNMP's distribution lines of the unaffected feeders did experience damage to crossarms, wire, and insulators, interrupting service to customers served from fused laterals. The Circuit Breaker never locked out.

STAFF 1-63.	Please provide the number of distribution poles that were in service before the May 2024 Derecho. In your response, please provide quantities by pole type and NESC wind loading criteria of the pole.
Prepared by:	Vincent Herrera
Sponsored by:	Chris Gerety
Attachment:	STAFF 1-56
RESPONSE:	Please see response to STAFF 1-56 and Attachment STAFF 1-56. TNMP maintains 103,032 poles in its Gulf Coast Region. All poles were designed and constructed to current NESC Rule 250B/C and Grade C/B Construction Guidelines, as a minimum at the time of construction.

STAFF 1-64. Please provide the total number of distribution poles that failed due to the May 2024 Derecho. In your response, please provide separate quantities for each pole type and NESC wind loading criteria for the poles that failed, and separately identify the number of pole failures caused by either high wind or structural loading from vegetation or debris.

Prepared by: Vincent Herrera, Jason Putnal

Sponsored by: Keith Nix

RESPONSE: TNMP sustained zero (0) poles failures during May 2024 Derecho.

STAFF 1-65. Please provide the total number of distribution poles that failed due to Hurricane Beryl. In your response, please provide separate quantities for each pole type and NESC wind loading criteria for the poles that failed, and separately identify the number of pole failures caused by either high wind or structural loading from vegetation or debris.

Prepared by: Vincent Herrera, Jason Putnal

Sponsored by: Chris Gerety

RESPONSE: Please see response to STAFF 1-56 and Attachment STAFF 1-56. During Hurricane Beryl, 481 wood poles failed and were caused predominately by trees located outside the right-of-way. No concrete, steel, or composite poles failed. All failed poles were designed and constructed to NESC Rule 250B/C and Grade C/B construction. No poles greater than 60 feet above the ground failed.

STAFF 1-66.

For each distribution pole that failed due to the May 2024 Derecho or Hurricane Beryl, please provide the date of the last inspection and explain the planned frequency of those inspections. Additionally, please provide the most recent inspection report for each pole that failed.

Prepared by: Chris Gerety, Vincent Herrera, Jason Putnal

Sponsored by: Keith Nix

RESPONSE:

TNMP did not have pole failures in the May 2024 Derecho.

TNMP Engineering and Operations personnel are in the process of reviewing service orders associated with the restoration during and after Hurricane Beryl. This review includes manually identifying certain distribution poles for reconciliation with individual pole failure records. The review is not complete at this time, and therefore, information sorted by individual pole failure is not currently available. TNMP's review is scheduled to be complete by October 1, 2024. However, TNMP will provide a supplemental update to this request with responsive information completed as of September 15, 2024.

All TNMP distribution line shall be visually inspected by a qualified patrolman experienced with distribution line facilities and construction. Distribution lines are patrolled as part of day-to-day operations or as operating conditions and/or reliability indicators warrant. Condition based inspections include visual inspections, sounding inspections of poles, and below ground-line inspections when visual or sounding inspections result in suspected damage, decay, or reduction in strength.

STAFF 1-67.	Should the PUCT require utilities to construct and maintain distribution feeder equipment located in a hurricane prone area to a certain NESC standard? If so, which ones? If no, why not?
Prepared by:	Vincent Herrera
Sponsored by:	Chris Gerety
RESPONSE:	Yes, the PUCT should require utilities to construct and maintain its distribution facilities compliant to NESC Rule 250C and Grade B, Heavy Construction as a minimum standard for hurricane prone areas.

STAFF 1-68. Please explain your process for evaluating the hardening of transmission lines. If you file an annual storm hardening report under 16 TAC § 25.95, do not merely recite information provided in those filings. In your response, please include an explanation for the following:

a. How frequently this evaluation is conducted?

b. What criteria is utilized for this evaluation?

c. When do you decide to harden transmission lines?

Prepared by: Chris Gerety

Sponsored by: Chris Gerety

RESPONSE:

a. TNMP installs hardened transmission infrastructure as a standard across nearly all the transmission infrastructure it replaces. On a limited basis TNMP will replace a wood transmission pole with a wood pole.
b. TNMP works with its local area operations teams to identify the transmission lines in most need to be hardened and then proactively replaces those lines. We have targeted and focused on radial load serving lines as a priority unless a full line rebuild is needed to support load growth or other transmission planning criteria violation.
c. TNMP performs annual transmission line condition patrols to assess the condition of its transmission lines and performs an annual transmission planning assessment to verify the need from a capacity or overload perspective.

STAFF 1-69.

Please provide the number of transmission structures that were in service before the May 2024 Derecho In your response, please provide quantities by structure type and NESC wind loading criteria of the structure.

Prepared by: Vincent Roberts, Chris Gerety

Sponsored by: Chris Gerety

RESPONSE:

TNMP shows the following transmission structure counts for TNMP's Galveston County system:

Grand Total: 2,737

- Wood: 687
- Non-Wood: 2,050

TNMP did not experience the loss of any transmission structures during the May 2024 Derecho.

NESC wind loading varies across TNMP's system and new construction is built in accordance with NESC Figure 250-2(a). In the Gulf Coast, TNMP's new construction is built for 130 mph wind loading.

STAFF 1-70.	Please provide the total number of transmission structures that failed due to the May 2024 Derecho. In your response, please provide separate quantities for each structure type and NESC wind loading criteria of the structure, and separately identify the number of structure failures caused by either high wind or structural loading from vegetation or debris.
Prepared by:	Vincent Roberts, Chris Gerety
Sponsored by:	Chris Gerety
RESPONSE:	TNMP did not experience any transmission structure failures due to the May 2024 Derecho event.

STAFF 1-71.	Please provide the total number of transmission structures that failed due to Hurricane Beryl. In your response, please provide separate quantities for each structure type and NESC wind loading criteria of the structure, and separately identify the number of structure failures caused by either high wind or structural loading from vegetation or debris.
Prepared by:	Chris Gerety, Vincent Roberts
Sponsored by:	Chris Gerety
RESPONSE:	TNMP did not experience any transmission structure failures due to Hurricane Beryl.

STAFF 1-72.	For each transmission structure that failed due to the May 2024 Derecho or Hurricane Beryl, please provide the date of the last inspection and explain the planned frequency of those inspections. Additionally, please provide the most recent inspection report for each structure that failed.
Prepared by:	Chris Gerety, Vincent Roberts
Sponsored by:	Chris Gerety
RESPONSE:	TNMP did not experience any transmission structure failures during either of these events.

STAFF 1-73. Provide the following information concerning your vegetation management staff:

a. Provide the current size of your vegetation management staff. Your response should include a separate figure for full-time staff and independent contractors.

b. Provide the average size of your vegetation management staff over the last 5 years. Your response should include a separate figure for full-time staff and independent contractors.

c. Please explain how you determined the appropriate level of full-time vegetation management staff for each of the last 5 years.

d. Provide the cost difference per circuit-mile between using contractors versus in-house vegetation management crews.

e. Whether you retain an arborist as part of your permanent vegetation management staff or have an arborist consult with your vegetation management crews.

Prepared by: David Stricker, Timothy Cool

Sponsored by: Keith Nix

RESPONSE:

a. Seven full time employees, 140 independent contractors.
b. Seven full time employees, 85 independent contractors.
c. The size and distribution of TNMP's service territory were factored when determining the appropriate level of full-time vegetation management staff for each of the last 5 years. TNMP services 270,000 customers in the Gulf Coast, North TX, and Central/West TX regions of the state. Within each region, TNMP has determined that a single, local full-time TNMP Forester is necessary and adequate to manage VM activities. Foresters manage budgets, develop work plans, work with customers, and oversee line clearance tree trim crew activities. All TNMP Foresters understand the needs of their region, are ISA Certified Arborists and are familiar with the local flora within their service territories. For special projects or storm response, additional TXNM Foresters located in New Mexico are available to assist when necessary.
d. Not applicable. We only utilize contract vegetation management crews.
e. All seven of our permanent vegetation management staff are ISA Certified Arborists.

STAFF 1-74. Please describe the minimum clearance standard for vegetation along transmission and distribution power lines at various voltage levels and how these clearances were derived based on your service territory.

Prepared by: David Stricker, Timothy Cool

Sponsored by: Keith Nix

RESPONSE:

Transmission minimum clearance standard

- 69kV – 10'
- 138kV – 10'
- 345kV – 15'

Distribution minimum clearance standard

- Up to 35kV – at least 3-5 years of clearance. Clearance at time of trimming is species dependent.

Table 2 from NERC standard FAC-003-5 provides the Minimum Vegetation Clearance Distances (MVCD) for transmission line voltages at various elevations. TNMP's clearance standard is a minimum and exceeds NERC FAC-003-5 values for flash-over.

STAFF 1-75.	Does your company incorporate any inspection of high customer count circuit segments to proactively identify problematic vegetation for circuits that may be outside their normal cycle period?
Prepared by:	David Stricker, Timothy Cool
Sponsored by:	Keith Nix
RESPONSE:	No, inspections are based on worst performing circuits from prior year.

STAFF 1-76. Please provide inspection logs and field reports from workers who performed VM services in the Impacted Area for the past five years.

Prepared by: David Stricker, Timothy Cool

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-76_Gulf Coast Clearion Data
STAFF 1-76A

RESPONSE:

Exhibit "CONFIDENTIAL STAFF 1-76_CLEARION WORK GROUPS AND INSPECTION GROUPS" is an excel spreadsheet which includes numerous sheets that document vegetation management work for the years 2020-2024. The first sheet, "Clearion Data" includes all information collected by TNMP's VM operations management system Clearion. The subsequent thirty-eight sheets are specific work and or inspection groups for circuits from the impacted area. Information such as the Region, Feeder/Circuit, Start Structure, Work Group ID, Inspection Group ID (if applicable), Complete Date-Time, Completed By, Complete Notes, Task Description Quantity, Actual, Quantity Unit, Species, Property Address, Work Group Type, Operating Company, Phase, Created By, Modified By, Crew Organization, etc. are visible.

Clearion was not utilized to capture all Vegetation Management work performed in years 2020 through 2024. Exhibit "CONFIDENTIAL STAFF 1-76A - 2020-2024 GTX VM Maximo Report" has been included as evidence of vegetation management work in TNMP's Gulf Coast region. Exhibit "STAFF 1-76A - 2020-2024 GTX VM Maximo Report" is an excel spreadsheet that includes all vegetation management work billed for the years 2020 through 2024. The region, GTX (Gulf Coast Texas) and work type (PM, EM, etc.) can be found in column C. Circuit information is found in column S.

STAFF 1-77.	Does your company conduct proactive vegetation management on feeders located in hurricane prone areas? If so, how far in advance of hurricane season do you send out vegetation management crews?
Prepared by:	David Stricker, Timothy Cool
Sponsored by:	Keith Nix
RESPONSE:	Yes, TNMP conducts planned vegetation management throughout the year in hurricane prone areas.

STAFF 1-78. Please provide a list of the circuits that experienced a vegetation-related outage during the May 2024 Derecho and Hurricane Beryl, and provide the following information pertaining to the circuits identified:

a. The name of the circuit(s);
b. The date, time, and duration of the outage;
c. The voltage of the circuit(s);
d. A description of the cause of the outage; and
e. The NERC category (Grow-In, Fall-In, Blow-In) associated with the outage.

Prepared by: Kenneth Macune, David Stricker, Timothy Cool

Sponsored by: Keith Nix

Attachment: STAFF 1-78_Hurricane Beryl Vegetation-Related Outages by Circuit

RESPONSE: TNMP experienced minimal vegetation impact during the May 2024 Derecho (seven total outages, 103 customers affected).

a. Bay Area Circuits	Mainland Area Circuits	Brazoria Area Circuits
AL1115	DC1266	
AL1116	DC1267	
AL1117	DC1272	AG1153
AL1168	DC1274	AG1154
AL1230	DC1277	AG1155
AL1231	DC1279	AG1240
AL1232	TC1101	AG1241
AL1254	TC1103	AG1242
AL1257	TC1132	AG1243
AL1259	TC1134	AG1244
FI1107	TC1201	AG1245
FI1108	TC1202	BZ1270
FI1109	TC1204	BZ1271
FI1148	TC1205	BZ1290
FI1149	TC1212	BZ1291
FI1196	TC1214	SW1128
FI1251	TC1215	SW1129
FI1252	TC1222	SW1260
FI1253	TC1478	SW1261
FI1402	TC1248	SW1262

FI1403	TC1292	SW1263
FI1404	TC1293	SW1264
FI1436	TC1294	WC1233
FI1440	TC1295	WC1234
FI1441	TC1298	WC1235
LC1010	TC1299	WC1237
LC1012	TC1224	
LC1280	TC1228	
LC1282	TC1477	
LC1283		
LC1285		

b. Please see Exhibit STAFF 1-78_Hurricane Beryl Vegetation-Related Outages by Circuit for the primary circuit outages (substation breaker operation) and durations of those outages.

c. Please see Exhibit STAFF 1-78_Hurricane Beryl Vegetation-Related Outages by Circuit for the voltage of the primary circuit outages (substation breaker operation).

d. Individual outage causes were not tracked but vegetation contacts resulted in wire down, broken crossarms, and pole failures that were consistent with this type of storm.

e. During the storm, outages occurred due to all three NERC categories – Fall In, Blow In, and Grow In.

STAFF 1-79.	Please provide aerial maps of circuits and their easements that experienced a vegetation-related outage during the May 2024 Derecho and Hurricane Beryl. Overlay the map with the circuits that received vegetation management treatment for the past 5 years, using a distinct color code for each year. Provide any additional information or details to show clarity.
Prepared by:	Chris Gerety, Vincent Herrera, Kenneth Macune, David Stricker, Timothy Cool
Sponsored by:	Chris Gerety
Attachment:	CONFIDENTIAL STAFF 1-79 Maps-VegTreatments_2020-2024

RESPONSE:

The identified circuits in exhibit "CONFIDENTIAL STAFF 1-79 Maps-VegTreatments_2020-2024" reflect preventative vegetation management treatment, as well as vegetation management treatment in response to customer requests, that was performed on the circuit in whole or in part.

STAFF 1-80.	For the May 2024 Derecho and Hurricane Beryl, please provide the percentage of forced interruptions that were related to vegetation issues.
Prepared by:	Kenneth Macune
Sponsored by:	Keith Nix
RESPONSE:	May 2024 Derecho:17.5%. Hurricane Beryl: Approximately 85%.

STAFF 1-81. What steps are being taken to address vegetation management and infrastructure issues that contributed to outages or were identified during restoration after the May 2024 Derecho and Hurricane Beryl?

Prepared by: Keith Nix, Chris Gerety, David Stricker, Vincent Herrera

Sponsored by: Keith Nix

Regarding infrastructure issues, TNMP experienced expected levels of storm damage and vegetation issues that accompany any sort of tropical storm or hurricane with the types of wind, amount of lightning, and associated rainfall. Past experience has shown that the distribution system will experience downed wires, broken poles/crossarms, and down service wires, etc. TNMP will use this information to target areas of the system impacted by storms such as the May 2024 Derecho and Hurricane Beryl to improve and harden its infrastructure in the upcoming months.

RESPONSE:

Regarding vegetation management, the majority of the outages experienced during both the May 2024 Derecho and Hurricane Beryl resulted from tree contacts or fall-ins. In response, TNMP provided necessary vegetation management services to restore service and also retained crews beyond the storm to perform additional preventative maintenance on some of its backbone 3-phase feeder circuits. Additionally, TNMP has increased our use of herbicides, implemented the use of drones for applying herbicides to areas where vegetation is encroaching, and targeted species that could impact reliability as they mature. TNMP also applied tree growth regulators to reduce post trimming regrowth rates up to 70%.

STAFF 1-82.	When did you last substantively review, augment, or modify your vegetation management plan before July 8, 2024?
Prepared by:	Keith Nix, Chris Gerety, David Stricker, Timothy Cool
Sponsored by:	Keith Nix
RESPONSE:	The last substantively review, augment, or modify of the vegetation management plan before July 8, 2024, was on February 19, 2024.

STAFF 1-83. What percentage of vegetation-related outages were caused by trees or branches outside of the easement or right of way? In responding to this question, please provide both an overall percentage and a breakdown for each county within your service territory that was affected by the May 2024 Derecho or within the Impacted Area for Hurricane Beryl.

Prepared by: Kenneth Macune, David Stricker, Timothy Cool

Sponsored by: Keith Nix

RESPONSE: This information was not formally tracked or documented due to TNMP's focus being on immediate restoration. However, based on conversations with outside contractors and mutual assistance, our estimation for the percentage of vegetation-related outages caused by trees or branches outside of the easement or right of way is approximately 70%. Information was not recorded at a county level.

- Galveston County, 70%.
- Brazoria County, 70%.

STAFF 1-84.	Describe your programs or initiatives that are designed to work with property owners to address potentially hazardous vegetation management issues that are outside of the utility easement or right of way.
Prepared by:	David Stricker, Timothy Cool
Sponsored by:	Keith Nix
RESPONSE:	TNMP operations include the utilization of Consulting Utility Foresters (CUF) to plan and schedule vegetation management work along our easement or right of way. Planning includes assessing our easement or right of way to identify diseased, dead, and structurally compromised trees and notifying customers of required work. Planning also includes the assessment, customer notification/discussion, and possible mitigation of potentially hazardous vegetation adjacent to the easement or right of way.

STAFF 1-85.	Identify the number of staff that participate in any program or initiative designed to address vegetation management hazards outside of the utility easement or right of way.
Prepared by:	Timothy Cool
Sponsored by:	Keith Nix
RESPONSE:	In the service territory impacted by the storms, TNMP has 1 TNMP forester and approximately 52 contracted staff (3 Consulting Utility Foresters – CUF's, 1 Project Manager, 3 General Foreman, and 45-line clearance tree trimmers) that participate in any program or initiative designed to address vegetation management hazards outside of the utility easement or right of way.

STAFF 1-86.

Please state whether you participated in or were a member of any mutual assistance programs on or before July 8, 2024. If yes:

a. Please identify all mutual assistance programs you participated in or were a member of on that date;

b. Please provide copies of any agreements entered as part of your membership or participation in those mutual assistance programs;

c. Please provide a list of members or participants for each mutual assistance program you are a member or participant in.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

Attachment: STAFF 1-86_MMAG Charter 2024, STAFF 1-86_TXMAG Agreement September 2023

RESPONSE:

a. TNMP is a participant in the following mutual assistance groups: Texas Mutual Assistance Group (TXMAG), Southeastern Electric Exchange (SEE), and Midwest Mutual Assistance Group (MMAG).

b. For Midwest Mutual Assistance Group (MMAG), please see STAFF 1-86_MMAG Charter 2024. For Texas Mutual Assistance Group (TXMAG), please see STAFF 1-86_TXMAG Agreement September 2023. TNMP does not currently have a copy of the confidential agreement with Southeastern Electric Exchange (SEE) but has requested one. Pursuant to conversation with Staff, TNMP need not produce a copy of such agreement.

c. To view SEE membership, please use the following link: *https://www.theexchange.org/members.html*

To view TXMAG membership, please use the following link: *https://texasmutualassistancegroup.org/Pages/Home.aspx*

For MMAG participants, please see pages 3 & 4 of STAFF 1-86_MMAG Charter 2024.

STAFF 1-87. Please describe, prior to, during, or in the aftermath of Hurricane Beryl how you integrated mutual assistance crews into your existing

emergency preparedness and response processes, any coordination challenges you faced in doing so, and how you addressed any such challenges prior to, during, or in the aftermath of Hurricane Beryl.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

RESPONSE: TNMP integrates mutual assistance crews into its emergency preparedness and response by first participating in sourcing events required to obtain the requested crews as determined by the mutual assistance administrator upon request by an impacted member. Once the resource levels are shared and agreed upon the contact points from the mutual assistance crews are contacted by TNMP's mutual assistance coordination contact to determine crew rosters, equipment listing, arrival times/locations, and other logistics concerns. Once crews arrive to TNMP facilities a prepared presentation that includes an introduction to TNMP and Safety procedures is completed to on-board external crews. From there, crews are assigned a specific TNMP work location where they meet with local construction and management personnel for work assignments. Once work assignments are provided the crews begin work and are monitored by TNMP employees for completed work activities and required paperwork detailing work location and work performed. TNMP personnel then will update TNMP's work management and GIS systems to reflect completed work done by mutual assistance crews. Any issues or concerns are reported back to either the local Field Supervisor or Project leader and mitigation strategies are formulated at the management level.

Coordination challenges included overcoming the communications issues experienced in some areas due to the storm impacting telecommunications facilities. To overcome this, TNMP distributed portable 2-way radios to crews to ensure communication would occur. Tracking and completing work was also an issue as outside crews were not well versed in the types of information that TNMP required to be compiled as work was done. Additional TNMP employees were brought in to help process the work as it was completed and submitted. Logistics issues around crew lodging, meals, materials, pickup/acquisition, etc. were also experienced but were navigated by TNMP personnel in accordance with the EOP.

STAFF 1-88. Please describe the command structure and communication protocols used to manage and direct resources from mutual assistance program(s) you received assistance from prior to, during, and in the aftermath of Hurricane Beryl.

Prepared by: Keith Nix, Pauline Moore

Sponsored by: Keith Nix

Attachment: CONFIDENTIAL STAFF 1-6_TNMP Emergency Operations Plan (EOP)

RESPONSE: Please refer to page 23 of TNMP's EOP to view the organizational chart. The command structure is as follows: the "Mutual Assistance" box lists the TNMP employees that are responsible for obtaining and reporting the acquisition of mutual assistance resources. Once that is completed and shared the "Logistics" line of responsibility then sees to the needs of arriving crews and administered by the TNMP employees in each of those boxes. As far as direction and management of crews received the "Field Supervisors" and "Project Leaders" are then responsible for assigning and monitoring work performed by these crews once the analysis has been completed by the 'Restoration" line of responsibility to determine damage assessments and completion of needed work packets.

Regarding communications protocols as discussed in STAFF 1-87, the Field Supervisor or Project Leader responsible for the mutual assistance crews are the point person for work assignment, reporting of issues, etc. This is completed in several communications mediums, including phone calls, text messages, emails, or daily de-briefing meetings. TNMP management and crew management are in constant communications during the event.