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

OF TEXAS

BRYAN TEXAS UTILITIES'S RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION TO TARGETED ELECTRIC MOUS QUESTION NOS. STAFF 1-1 THROUGH 1-120

TO: John Lajzer, Public Utility Commission of Texas, 1701 N. Congress Ave., Austin, Texas 78711

The City of Bryan, Texas, operating its municipally owned utility, Bryan Texas Utilities ("BTU), files these responses to Commission Staff's First Request for Information to Targeted Electric MOUs, Question Nos Staff 1-1 through 1-120 ("Staff's First RFIs to MOUs"). Commission Staff directed that responses to Staff's First RFIs to MOUs be filed by August 30, 2024, thus these responses are timely filed. BTU stipulates that its responses may be treated by all parties as if they were filed under oath. BTU reserves the right to object at the time of any hearing to the admissibility of the information produced. Pursuant to Staff's instructions, and the Public Utility Commission of Texas' ("Commission" or "PUC") "Second Order Suspending Rules" in Docket No. 50664, these responses are being filed on the PUC Interchange. However, notice of these responses are not being emailed to any party, as there are no known "parties" to Docket No. 56822 and no known service list or email addresses to which notice should be sent.

Dated: August 30, 2024

Respectfully Submitted,

/s/Gary D. Miller

Gary D. Miller General Manager Bryan Texas Utilities P.O. Box 8000 Bryan, TX 77805 979-821-5700

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.

RESPONSE:

Bryan Texas Utilities (BTU) has not conducted a hurricane or major storm drill in 2024. BTU's Emergency Operations Plan (EOP), developed to comply with 16 TAC §25.53, does not require a drill when the EOP is activated in response to an emergency.¹ Following an EOP activation, meetings are conducted and after-action reports generated. BTU utilizes these after-action meetings as training opportunities to document lessons learned and areas for improvement. Since BTU activated its EOP in January 2024, a separate hurricane or major storm drill was not conducted for the summer 2024 season.

SPONSOR:

¹ 16 Texas Administrative Code (TAC) §25.5 (53).

<u>STAFF 1-2</u> Do you ever seek participation of your customers during a hurricane drill? If yes, please provide a description of their level of involvement.

RESPONSE:

BTU does not currently seek participation from customers during drills.

SPONSOR:

- **STAFF 1-3** Are actual events and conditions experienced during a previous hurricane or storm used in the next year's hurricane or major storm drill? If yes:
 - a. How long would an actual storm be used to set the conditions for future hurricane drills?
 - b. What hurricanes and major storms were used to set the conditions for the 2024 hurricane drill?

RESPONSE:

Actual events and conditions experienced during a hurricane or storm are incorporated into training and documentation through after-action meetings and reports.

- a. There is no set time for how long actual events are used for drills.
- b. Not applicable.

<u>STAFF 1-4</u> Please identify any electric, water, sewer, or telecommunication utilities that invited you to participate in their 2024 hurricane or major storm drill.

RESPONSE:

BTU was not invited by any electric, water, sewer, or telecommunications utilities to participate in 2024 hurricane or major storm drills.

SPONSOR:

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

RESPONSE:

BTU monitors the following resources for storm tracking:

Weather Service / Information Resources		
KBTX-TV (Local	www.kbtx.com/weather	
Weather)		
Weather Channel	https://weather.com/weather/today/1/53ad9a4aa13fa15b8eab976	
(Website)	e93b9e0d183fdd8660e9438bd40cf97f11ef73c4f	
Storm Geo (Weather	https://www.stormgeo.com/	
Service)		
ERCOT	https://www.ercot.com/gridmktinfo/dashboards/weatherforecast	
(Meteorological		
Report)		
NWS (5-day Rain	http://www.wpc.ncep.noaa.gov/qpf/day1-5.shtml	
Forecast)		
NWS (West Gulf	www.weather.gov/wgrfc/	
River Forecast)		
NWS (Current Radar)	https://radar.weather.gov	
NOAA (Storm	http://www.spc.noaa.gov	
Prediction -		
Tornadoes)		
NOAA (Storm	www.nhc.noaa.gov	
Prediction -		
Hurricane and		
Tropical Storms)		

SPONSOR:

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

RESPONSE:

BTU attempts to monitor all storms that are projected to impact its services territory. This typically results in a 3–5-day period of monitoring before activation of the EOP Storm Levels, referenced in BTU Response to Staff 1-12.

SPONSOR:

<u>STAFF 1-7</u> How many days before projected landfall did you start tracking the storm eventually named Hurricane Beryl?

RESPONSE:

Following several days of monitoring weather advisories, in which the storm was known and identified, BTU began meeting about Hurricane Beryl on July 6, 2024.

SPONSOR:

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

RESPONSE:

Yes, BTU IT staff call the company that supports our outage tracking software to verify system functionality before storms are expected to hit our service territory. During the course of daily operations, the system is observed for functionality.

SPONSOR:

<u>STAFF 1-9</u> How far in advance of landfall did you initiate requests for mutual assistance?

RESPONSE:

BTU did not request mutual assistance for Hurricane Beryl.

SPONSOR:

STAFF 1-10 Provide information as to how restoration efforts are prioritized, and resources are allocated following a hurricane or major storm. For purposes of this question, please provide how these prioritizations and allocation guidelines were used in practice during your response to Hurricane Beryl.

RESPONSE:

Details regarding BTU's prioritization and restoration procedures are contained in BTU's confidential EOP, Annex B - TDSP Load Shed Annex, on file with the Commission.

In general, when restorations and/or repairs are required, hazardous conditions, such as downed power lines, are the highest priority. This is necessary to maintain public safety. To restore service to as many customers as possible, restoration of transmission circuits, substations, and distribution feeder mains would be the next highest priority and would be dispatched simultaneously. The remaining distribution restoration would typically proceed in the following order:

- 1. primary feeder lines;
- 2. primary fused laterals;
- 3. transformers;
- 4. secondaries; and
- 5. service drops.

Repairs to primary feeder lines are prioritized, so that service to the largest blocks of customers can be restored safely and quickly. Depending on the weather event's severity and how widespread the damage and outages are within BTU's 640 square mile service territory, crews may be directed to sweep the circuit (i.e. repair ALL damage related to that circuit: circuit, fuses, and transformers) before moving on to the next circuit.

BTU's Mobile Workforce Management System (MWFM) assists BTU's System Operators, Distribution Managers, and Planning Coordinator with real-time planning, scheduling, assigning, re-assigning, and dispatching of work orders such as trouble tickets, outage tickets, etc. to BTU's crews and contractors.

Restoration efforts are further enhanced by information from BTU's Outage Management System (OMS) and Automatic Vehicle Locating System (AVL). These systems enhance BTU staffs' visibility and control of resources during weather events such as Hurricane Beryl.

The information included on each MFWM trouble order includes the name and location of the device determined to be out of service as well as the number of customers affected. This assists staff in systematically prioritizing repairs and allows for an orderly and prompt response in the restoration of BTU's customers.

These procedures were used during Hurricane Beryl restoration.

SPONSOR:

STAFF 1-11 Describe the procedures during an emergency for handling complaints and for communicating with the public; the media; customers; the commission; the Office of Public Utility Counsel (OPUC); local and state governmental entities, officials, and emergency operations centers, the reliability coordinator for your Company's power region; and critical load customers directly served by the entity.

RESPONSE:

See <u>BTU Response to Staff 1-11, Attachment 1 (CONF)</u> (Crisis Communication Plan), pages 6-11, for details about how BTU communicates with external stakeholders during an emergency, some or all of which is included in BTU's confidential EOP on file with the Commission.

CONFIDENTIALITY STATEMENT

The response to this RFI contains confidential material protected from public disclosure pursuant to TEX. GOV'T CODE § 552.110(c) and TEX. GOV'T CODE § 552.101, in conjunction with 18 C.F.R. § 388.113(c)(2) and TEX. GOV'T CODE § 418.181.

SPONSOR:

STAFF 1-12 Does your company use an operating condition system? If yes, define each level of the operating condition system and actions taken at each level. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

RESPONSE:

BTU uses Emergency Levels when determining operating conditions as described in <u>BTU</u> <u>Response to Staff 1-12, Attachment 1 (CONF)</u> (Emergency Levels). This information can be found in BTU's confidential EOP at Section 5 (p. 19) and Section 9 (p. 32), which is on file with the Commission.

CONFIDENTIALITY STATEMENT

The response to this RFI contains confidential material protected from public disclosure pursuant to TEX. GOV'T CODE § 552.110(c) and TEX. GOV'T CODE § 552.101, in conjunction with 18 C.F.R. § 388.113(c)(2) and TEX. GOV'T CODE § 418.181.

SPONSOR:

STAFF 1-13 Explain the system and tools used to manage all emergency response assignments. Your response should include management of mutual assistance and contract personnel and consider needed food and lodging facilities.

RESPONSE:

See <u>BTU Response to Staff 1-13</u>, <u>Attachment 1 (CONF)</u> (BTU Major Event Preparedness and Restoration Plan), which is also included as Appendix C in BTU's confidential EOP on file with the Commission.

BTU has implemented a Mobile Workforce Management System (MWFM) to assist BTU's System Operators, Distribution Managers, and Planning Coordinator with real-time planning, scheduling, assigning, re-assigning, and dispatching of work orders such as trouble tickets, outage tickets, etc. to BTU's crews and contractors.

Restoration efforts are further enhanced by information from BTU's Outage Management System (OMS) and Automatic Vehicle Locating System (AVL). These systems enhance BTU staffs' visibility and control of resources during weather events.

The information included on each MWFM trouble order includes the name and location of the device determined to be out of service as well as the number of customers affected. This assists staff in systematically prioritizing repairs and allows for an orderly and prompt response in the restoration of BTU's customers.

BTU Major Event Preparedness and Restoration Plan included as Appendix C in BTU's confidential EOP contains a list of restaurants and lodging facilities. BTU's Energy Management Department coordinates lodging and meals as necessary.

CONFIDENTIALITY STATEMENT

The response to this RFI contains confidential material protected from public disclosure pursuant to TEX. GOV'T CODE § 552.110(c) and TEX. GOV'T CODE § 552.101, in conjunction with 18 C.F.R. § 388.113(c)(2) and TEX. GOV'T CODE § 418.181.

STAFF 1-14 How far in advance of the May 2024 Derecho and Hurricane Beryl did you initiate emergency preparations? Describe the timeframes for the preparation work in anticipation of emergency operations plan activation. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

RESPONSE:

2024 Derecho

On the morning of May 16, 2024, Distribution management added additional standby personnel to the standby list as part of the preparation of the storm's arrival. The Transmission/Distribution on Call (TDOC) supervisor called in additional personnel as the storm event began impacting the BTU system.

Hurricane Beryl

In the days leading up to the weather event, BTU personnel, including BTU management, System Operations Center (SOC) personnel and Transmission/Distribution On-Call personnel (TDOC), monitored TS Beryl as it developed into hurricane level storm.

The following timelines show how BTU began preparations for and responded to Hurricane Beryl:

July 6: In accordance with BTU's Emergency Operations Plan,² management declared BTU TDSP to be at "Pre-Storm Watch Level".

BTU held a pre-storm watch meeting with all departments represented. Information about the storm and the projected path was communicated. Estimated rainfalls and counties that could be affected was communicated so everyone could start preparing. A follow-up meeting was planned, for July 7, to update everyone on the status of department preparations, the storm's latest path, predicted strength, and land fall location.

<u>July 7</u>: BTU held a pre-storm watch meeting with all departments represented. Updated information about the status of department preparations and the storm's projected path and landfall location. Meeting attendees communicated preparation updates from their areas.

July 8: BTU held an early morning storm watch meeting with all departments represented to communicate the actual landfall location, storm path prediction, and storm intensity predictions. All attendees communicated preparation activity updates from their areas. That morning, in accordance with BTU's Emergency Operations Plan, management declared BTU TDSP to be at a Level 1. As the storm intensified and the system began to experience larger scale outages, BTU went to Level 2.

SPONSOR:

² BTU Emergency Operations Plan V2.0 (2024), Section 5 - TDSP Weather Related Hazards Identification Plan & EOP Activation Procedure (pages 21-22).

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

RESPONSE:

2024 Derecho

May 16: BTU personnel began receiving to outage calls at 2:38PM.

May 17: BTU personnel restored the last outage at 3:02AM.

For the entirety of the May 2024 Derecho, BTU recorded a total of 27 outages affecting 373 customers.

Hurricane Beryl

July 8: BTU crews reported to work at 6:00AM in anticipation of the storm's arrival. A meeting was held with in-house construction crews to communicate Hurricane Beryl's storm path. Crews stood ready as BTU waited for the storm bands to arrive in the Bryan/College Station area.

BTU communicated to its contract crews, including 12 vegetation management tree crews and five line construction contract crews, that system wide damage from Hurricane Beryl was anticipated and they were to remain on the BTU system to respond as needed.

BTU personnel began receiving outage calls at 08:09AM.

Later that afternoon at 3:28 PM, BTU activated Major Preparedness and Restoration Plan - Restoration Response Level 1.

Crews were placed on staggered shifts due to the estimated restoration time for all outages.

- First Shift: 6:00AM 4:00PM return to work at midnight.
- Second Shift: 6:00AM 12:00 midnight return to work at 9:00AM next day
- Third Shift: 6:00AM 10:00PM return to work at 6:00AM next day
- All contractor crews worked 16 hours on 8 hours off.

All outages were restored by approximately 2:00PM on 7/9/2024 and BTU returned to normal operations.

SPONSOR:

STAFF 1-16 Please detail the extent and duration of outages experienced by your customers during and in the aftermath of the May 2024 Derecho and Hurricane Beryl. Include the total number of customers affected; minimum, maximum, and average hours of service interruptions; and maximum and average time to service restoration in your response.

RESPONSE:

The table below details the extent and duration of outages experienced by BTU customers during and in the aftermath of the May 2024 Derecho and Hurricane Beryl, including the total number of customers affected; minimum, maximum, and average hours of service interruptions. All outages related to Hurricane Beryl began on 8 July 2024.

	Total number of customers affected	Minimum hours of service interruptions	Maximum hours of service interruptions	Average hours of service interruptions
May 2024 Derecho	373	0.70	10.07	3.81
Hurricane Beryl	6,048	0.33	23.32	6,32

BTU does not track service restoration times.

SPONSOR:

STAFF 1-17 Provide the following information concerning your service territory:

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

RESPONSE:

a. May 2024 Derecho

	City of Bryan	Brazos County (excluding City of Bryan)	Burleson County	Robertson County
Sum of All Outage Durations (Hours)	31,19	31,62	32,59	6,78
Customers Out	212	51	105	4

b. Hurricane Beryl

	City of Bryan	Brazos County (excluding City of Bryan)	Burleson County	Robertson County
Sum of All Outage Durations (Hours)	243.98	259.42	14.70	0
Customers Out	2404	2855	789	0

c. BTU service territory is relatively compact and therefore location does not necessarily make a significant difference. However, the number of customers per mile of line (customer density) within the city limits of Bryan is higher than in the rural areas of BTU's service territory. BTU has more miles of line in the rural areas. More miles of line per customer increases system exposure to weather events and increases restoration times.

SPONSOR:

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

RESPONSE:

Bryan Texas Utilities did not encounter any unusual challenges in restoring operations due to the May 2024 Derecho.

During Hurricane Beryl storm restoration efforts:

- It became evident that restoration activities were going to span over two (2) days. Three shifts were implemented that ensured a constant group of workers available to work outages while providing the workers a necessary rest period.
- Contractor crews were utilized to help restore outages to locations where access was very challenging and required track equipment. By assigning the long duration outages that required equipment replacement to the contractor, BTU was able to keep their crews working through and restoring many smaller outages which help shorten the outage durations.
- Trees/limbs from outside the right of way (ROW) fell into the powerlines. Crews had to wait on tree crews to clear vegetation before restoration of power could be completed. This meant that crews had to move on to others outages and then come back to the locations after the vegetation was cleared. This hampered restoration efforts and increased outage durations.

STAFF 1-19 Please provide a copy of the after-action reports or provide a date by when the action reports will be completed for the May 2024 Derecho and Hurricane Beryl.

RESPONSE:

Damage for the May 2024 Derecho was relatively minor, therefore a Lessons Learned document was not generated.

For Hurricane Beryl, please see <u>BTU Response to Staff 1-19</u>, <u>Attachment 1</u> (Post Storm Analysis Meeting for the July 8-9, 2024 Hurricane Beryl Weather Event).

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

RESPONSE:

N/A

SPONSOR:

Electric Utilities Communication and Coordination

STAFF 1-21 Provide the following information concerning the communication strategy and policy in place before July 8, 2024:

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

RESPONSE:

- a. As a municipal utility and a department of the City of Bryan, Bryan Texas Utilities closely coordinates with other City of Bryan departments. The utility regularly communicates with these partners when storms are expected, during the event, post event, and on a regular basis for continuance of daily operations. BTU communicates to other utilities in its service territory including other local government organizations and special utility districts through many channels including phone, email, and in-person meetings. Some of these entities are included on pre-storm and storm operations meetings internally when events are forecasted or ongoing. This is a format where each department or entity can communicate regarding their preparations, request resources, and coordinate with others in order to act. BTU understands the reliance on electricity for most other utilities to be able to provide their respective services and as such prioritizes critical loads and utility infrastructure to ensure community safety and resilience. BTU Executive Management and Energy Account Managers (key accounts) have the primary responsibility to keep local utility and governmental parties informed.
- b. Call center staffing is evaluated leading up to the forecasted event to determine the necessity for additional staffing during or after regular business hours. If the event is forecasted to heavily impact the area, the Executive Director of Customer Operations would direct staffing of an extended operation of the call center on a rotating shift basis. This can be accomplished both from BTU facilities or in a work-from-home format to accommodate weather complications that might impact travel.
- c. Information is disseminated from System Operations to the Public Information Officer who relays that to the public using a variety of channels including, but not limited to direct text messaging, social media, traditional media outlets, press releases, website, and customer interactions through the Customer Care department.

STAFF 1-22 Describe your communication strategy with the public before, during, and after the May 2024 Derecho and Hurricane Beryl and by what means these communications were conducted.

RESPONSE:

See <u>BTU Response to Staff 1-11, Attachment 1 (CONF)</u>, page 2-3 for BTU's communication strategy.

In response to Hurricane Beryl, BTU posted on social media outlets of Facebook and X (Twitter) on July 7 at approximately 9:37pm with a message regarding utility preparations including the readying of additional crews and materials. The message encouraged customers to follow along with any outages and updates on our real-time outage map. The post also included a few tips regarding customer actions of having an emergency plan and monitoring local weather conditions. Local outages began around midday on July 8. BTU issued updates on social media on July 8 at 12:53pm, 2:10pm, 5:53pm, and 7:58pm. By 8:00pm on July 8, less than 200 customers remained without power. BTU issued an all-restored notice on social media channels at 3:38pm on July 9, approximately 24 hours after outages began. BTU responded to approximately 25 direct messages from individuals on social media during this time. BTU's automated outage messaging system sent 12,243 text messages directly to customers on July 8 and 1,049 on July 9.

The May 2024 Derecho was less impactful to the BTU service territory. There were scattered minor outages resulting in fewer communications. Two messages were posted to BTU's social media pages at 4:30pm and again at 9:30pm at which time only 130 customers remained without power.

STAFF 1-23 Please provide any available data regarding customer feedback you received in response to your service restoration efforts during and in the aftermath of Hurricane Beryl.

RESPONSE:

Data associated with customer feedback regarding response to Hurricane Beryl is anecdotal. Outages from Hurricane Beryl impacted around 10% of BTU customers and were restored within approximately 24 hours from their onset. BTU received many positive comments from customers on social media including some of the anecdotal evidence below.

Facebook

We are in good hands. Thank you to all our BTU crew. God bless and stay safe. – Melisa Thane #heros – Darby Drummond

Stay safe! We appreciate all of the linemen. - Collette Gibbs

Thank ya'lls linemen sooo much...they are incredible! – Jan Houdek Jones

Y'all have done amazing today! Thank you! - Jessica Rojas

We love BTU ! So attentive to customer needs, all while safely guarding our linemen and crews! Thank you for your services, all! – Cyndi Smith

Wow y'all work so hard, you got my lights back on in a reasonable time thank you so much! I pray all the guys are now safe and warm from fm2039. – Karey Hanson Kokemoor

i'm at 5 hours without power ... good for those 3000 other people though - Chelsea Mansker

(X) Twitter

@BTU_BryanTX busted their butts after today's storm. An uprooted tree brought down power lines in our neighborhood. A city of Bryan crew cleared the downed tree and a BTU crew got the lines back up and powered. All of this in just 6 hours. This was just one of hundreds of storm related outages they had to deal with this evening.

Excellent work. – John Melvin

SPONSOR:

STAFF 1-24 What steps are being taken to improve coordination and communication with local governments, medical and eldercare facilities, community organizations, trade associations, and other similar organizations for future significant weather events?

RESPONSE:

BTU identified one area for improvement resulting from the Hurricane Beryl response. BTU utilizes a direct text messaging system to send information to customers regarding outages. Outages must be verified in BTU's outage management system prior to texts being sent. Outage verification can be delayed when there are many outages, therefore delaying the time it takes to receive outage communications. To expedite this process, BTU is training more employees to verify outages, and utilizing a predictive model to send notifications during high outage times or predicted weather events.

SPONSOR:

STAFF 1-25 What steps are being taken to improve coordination and communication with other electric, water, sewer, and telecommunication utilities for future significant weather events?

RESPONSE:

Utility partners have an Energy Account Manager assigned to them by BTU. These individuals manage the relationship between BTU and the customer, including communicating before, during, and after weather events. As with most communications, these are typically accomplished using a combination of phone, email, and in person discussions. BTU has not identified any addition steps necessary to improve coordination and communication with other utilities.

SPONSOR: Gary D. Miller

General Manager, Bryan Texas Utilities

- STAFF 1-26 Provide the following information concerning call centers and help desks used by your company before July 8, 2024:
 - a. How many people work in call centers or help desks?
 - b. Of these people, please provide the percentage of these employees that are full-time employees (FTE), contracted labor, or temporary/seasonal workers.
 - c. What is the target wait time or response time for calls?
 - d. What is the target resolution time for calls?
 - e. Provide a detailed description of company-specific training provided to call center and help desk operators concerning major outages and major weather events including, but not limited to, hurricanes and high wind events.
 - f. What is the maximum call volume for the call centers of help desks that were available and in operation during or in the aftermath of Hurricane Beryl?

RESPONSE:

- a. Fifteen (15) individuals work in the Customer Care call center at BTU.
- b. 100% of the individuals are considered full time employees.
- c. BTU does not have a target wait time. BTU's goal is to answer calls as quickly as possible in the order in which they are received. On July 8, 2024 the average hold time was 47 seconds and the average talk time was 138 seconds. On July 9, 2024 the average hold time was 32 seconds and the average talk time was 166 seconds.
- d. BTU does not have an ascribed target resolution time.
- e. BTU employs a Talent Development Coordinator whose duties include thoroughly training all Customer Care Representatives. They specifically train on how to address outage and emergency situations.
- f. The dates for Hurricane Beryl impacting the BTU service territory was July 8-9. The total number of calls received by the Customer Care Center are listed below.
 7/8/24 758 Calls
 7/9/24 440 Calls

SPONSOR:

STAFF 1-27 Provide the daily average and peak call volume to your call centers or help desks during or in the aftermath of Hurricane Beryl. For purposes of this question, please provide responses for each day from July 8, 2024, through the date power was restored to at least 99% of the customers in the service territory in the Impacted Area.

RESPONSE:

Date	Average calls per hour	Max calls per hour
July 8, 2024	84	127
July 9, 2024	49	62

SPONSOR:

STAFF 1-28 Describe how you communicated and shared information on recovery resources and updates with local and state leaders as well as your customers during leading up to, during, and in the aftermath of Hurricane Beryl.

RESPONSE:

At peak, less than 10% of BTU's customers were without power. Most of those were restored within six hours, and the remainder restored within 24 hours. Communications with local leaders occurred as needed, but communications with state leaders was not warranted.

STAFF 1-29 Please indicate whether calls incoming to your call centers, help desks, or priority call desks are recorded, and if so, provide your retention schedule for the captured calls.

RESPONSE:

Incoming calls to the Customer Care and System Operations Centers are recorded. Calls are retained for 4 calendar years.

SPONSOR:

STAFF 1-30 If calls incoming to your priority call desks are not recorded, please indicate if incoming calls are logged or otherwise tracked. If tracked or logged, please provide a copy of all logged or otherwise tracked calls to the priority call desk during or in the aftermath of Hurricane Beryl.

RESPONSE:

Incoming calls are recorded.

STAFF 1-31 Please provide an audio copy and transcript of any pre-recorded messages related to either the May 2024 Derecho or Hurricane Beryl used by your call centers or help desks and the date these messages were utilized.

RESPONSE:

BTU did not utilize pre-recorded messages for either the May Derecho or Hurricane Beryl.

- **STAFF 1-32** Provide the following information concerning the outage tracker in use on July 8, 2024:
 - a. The date the outage tracker was rolled out to customers.
 - b. The last date the software underpinning the outage tracker was updated.
 - c. whether the outage tracker was functioning during the May 2024 Derecho and Hurricane Beryl as intended or provide an explanation as to why not.
 - d. Whether the outage tracker was mobile-friendly;
 - e. the languages supported by the outage tracker;
 - f. Whether the outage tracker captured circuit-specific or meter-specific information or both.
 - g. Whether the outage tracker was cloud-based or operated through an onpremise server?
 - h. The maximum number of simultaneous users the outage tracker was designed to accommodate.
 - i. Whether you had internal facing redundancies/contingencies for outage tracking, and if so if these redundancies/contingencies were utilized during your response to Hurricane Beryl.
 - j. The date of the last stress or load test of the outage tracker.

RESPONSE:

- a. BTU's outage tracker was rolled out in August 2012.
- b. The last date the outage tracker software was updated was April 3, 2024.

c. The outage tracker map was functional during both the May Derecho and Hurricane Beryl.

d. The outage tracker is mobile friendly and can be viewed on mobile devices such as cell phones, tablets, etc.

- e. English is the only supported language at this time on the outage tracker.
- f. The outage tracker captures both circuit- and meter-specific data.

g. The outage tracker is supported via an on-premise server.

h. There is no documented maximum number of simultaneous users for the outage tracker per the manufacturer.

i. BTU does have internal redundancies to ensure the outage tracker remains operational. The outage tracker experienced no operational issues during Hurricane

Beryl, and as such no redundancies were utilized. If the production site was compromised, BTU could launch the test version with the same timely information within a few minutes. A "test" version of the outage tracker site is a copy of the production site.

j. The most recent stress/load test of the outage tracker was completed in October 2022.

SPONSOR:

STAFF 1-33 Provide daily total and peak numbers of users accessing your outage tracker in the greater Houston area during each day of the May 2024 Derecho event.

RESPONSE:

BTU does not have data for the May timeframe due to retention schedules.

STAFF 1-34 Provide the daily total and peak number of users accessing your outage tracker in the Impacted Area starting from July 8, 2024 through the date service was restored to 100% of your service territory.

RESPONSE:

Numbers below represent the total traffic for the outage tracker page on July 8-9, 2024. BTU began to experience outages due to Hurricane Beryl approximately midday on July 8. All customers were restored within approximately 24 hours.

Total website traffic per day 7/8/2024 – 69,634 7/9/2024 – 21,655 Peak traffic occurred during the noon hour on 7/8/2024 with 10,248 sessions.

STAFF 1-35 Describe any processes or policies adopted by your company as contingencies to inform customers about service outages and estimated restoration times in the event the outage tracker is offline.

RESPONSE:

In the event that the outage tracker was offline, BTU would rely on the direct to customer text messaging, social media, and local media channels to communicate with customers.

SPONSOR:

STAFF 1-36 Please indicate if the processes or policies described in your response to Staff 1-35 were utilized during either the May 2024 Derecho event or in the aftermath of Hurricane Beryl. If they were, please identify the dates the identified processes and policies were activated.

RESPONSE:

BTU's outage tracker remained operational and therefore did not warrant the implementation of contingent processes.

STAFF 1-37 Please provide a breakdown of smart meters currently in service for each county in your service territory that was included within the Impacted Area. In providing a response to this question, please provide both raw numbers and answers as a percentage of total customers in each county.

RESPONSE:

BTU serves customers in Brazos County, Robertson, and Burleson Counties. All BTU meters are smart meters. The number of meters, by county, is listed below.

- BRAZOS 67,070
- BURLESON 1,874
- ROBERTSON 264

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

RESPONSE:

As BTU is a municipal utility, it is a department of the local government. Information is shared with other departments and leaders on a daily basis utilizing phone calls, emails, texts, and in person meetings. Storm meetings which include leadership from within the organization began on 7/6/24.

STAFF 1-39 Describe what processes, if any, you had in place on or before July 8, 2024, to contact medical and eldercare facilities or critical infrastructure (e.g., police stations, firehouses, TV stations) in advance of a hurricane or major storm. Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

RESPONSE:

As included on pages 35, 36, and 37 of BTU's Load Shed Annex in the Emergency Operations Plan, BTU's Customer Operations Division is the primary method of contacting critical infrastructure regarding outage status. Energy Account Managers are responsible for contacting critical infrastructure during outage situations and serving as the liaison between the customer and BTU's operations personnel.

STAFF 1-40 If your company has a process to contact critical care facilities, provide the date and method (e.g., email, phone call, text message) you initially contacted medical facilities, eldercare facilities, or critical infrastructure (e.g., police stations, firehouses, TV stations) in advance of Hurricane Beryl.

RESPONSE:

As Hurricane Beryl's impacts to BTU's service territory were minimal, BTU did not have to contact critical infrastructure.

STAFF 1-41 Please describe how you communicate and with what frequency you communicate with critical care and at-risk customers about service outages and restoration efforts.

RESPONSE:

Critical care and at-risk customers are notified regarding service outages via direct text messages as long as they have a current number on file and have not opted out of text communications. Communications are also posted on BTU social media pages as often as practical, and at least twice per day during outage situations. Typically, social media pages are updated approximately every three hours during large outage situations. Critical care customers are also informed at regular intervals via bill inserts and on the website about outage restoration processes and expectations.

SPONSOR:

STAFF 1-42 For ERCOT-located utilities, please describe any communication with interconnected power generation companies regarding their operational status during Hurricane Beryl.

RESPONSE:

BTU is vertically integrated, owning its own generation, transmission, distribution, and retail sections. As such, BTU's communication with the generation department flows continuously during severe weather or other emergency situations. Communications are accomplished during in person meetings, with texts, phone calls, and emails.

Electric Utilities – Customer Restoration Workflow

STAFF 1-43 Please state whether you have a service restoration plan regarding service outages caused by extreme or emergency weather events. If you do, please provide a copy of that plan(s). Please include citations to the relevant section(s) of your EOP filed with the PUCT when answering this question.

RESPONSE:

Please see <u>BTU Response to Staff 1-13</u>, <u>Attachment 1 (CONF)</u>, at pages 6-11, for details of restoration of service outages caused by extreme or emergency weather events. The Major Event Preparedness and Restoration Plan is included in BTU's confidential EOP as Appendix C.

SPONSOR:

STAFF 1-44 Please describe the procedures followed for customer restoration of service, including prioritization criteria and timelines for restoration or service. Please note if these policies may lead to quicker restoration of service for an area of your service territory relative to the others and why.

RESPONSE:

Procedures for customer restoration of service, including prioritization criteria and timelines for restoration or service, are included in BTU's EOP at Appendix C (Major Event Preparedness and Restoration Plan), pages 6-7. See <u>BTU Response to Staff 1-13</u>, Attachment 1 (CONF).

It is BTU's intent to facilitate the direction of restoration efforts to be concentrated toward safely and efficiently restoring service to the largest number of customers, with an emphasis on critical customers and infrastructure, in the shortest amount of time. These policies are applied equally throughout BTU's service territory. It is not intended that these policies would impact service restoration times in any area of BTU's service territory relative to the others.

SPONSOR:

STAFF 1-45 Please describe and explain any changes or modifications made to your service restoration plan(s) during and in the aftermath of the May 2024 Derecho or Hurricane Beryl.

RESPONSE:

At this time, there have been no formal changes or modifications to BTU's service restoration plan. However, as a result of the lessons learned from Hurricane Beryl, Staff is reviewing the relevant parts of our EOP in an attempt to incorporate lessons learned.

STAFF 1-46 Please provide a county-by-county summary of date on which and number of damage assessment, vegetation, and linemen crews that you deployed to assess and begin service restoration efforts after Hurricane Beryl made landfall in the Impacted Area.

RESPONSE:

As part of the preparation for the arrival of Hurricane Beryl, BTU identified a total of 31 crews which consisted of 14 in-house BTU construction crews, 2 BTU damage assessment crews, 12 vegetation management contractor crews, and 3 construction contractor crews. These crews performed restoration activities in 2 of the 3 counties that BTU serves. Below is the breakdown of crews and the counties they performed restorations activities in.

	7/8/2024	7/9/2024
Counties	No. of Crews	No. of Crews
Burleson County	2	0
Brazos County	29	2

SPONSOR:

STAFF 1-47 Please provide a county-by-county summary of the percentage of your customers that did not have service due to outages caused by Hurricane Beryl for each day from the day Hurricane Beryl made landfall in the Impacted Area to when service was fully restored to your customers.

RESPONSE:

Below is a county-by-county summary of the percentage of BTU 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 our customers. All BTU customers were restored by 9 July 2024.

	Brazos	Burleson	Robertson
8-Jul-24	7.6%	1.2%	0.0%
9-Jul-24	0.1%	0.0%	0.0%

STAFF 1-48 Please describe how calls received by your call centers during and after Hurricane Beryl were incorporated in your service restoration workflow and processes.

RESPONSE:

Information received by our call center influences restoration efforts by informing system operations and field personnel of specific situations such as trees on lines or lines down in an area. Customer provided information is communicated to system operations to help restoration efforts by collecting needed materials in advance or by mobilizing the appropriate pieces of equipment for each situation. Additionally, customer provided information may help inform of areas where damage may be more impactful than others, creating a higher priority situation.

SPONSOR:

STAFF 1-49 Please describe your coordination efforts with local, state, and federal agencies, as well as any other stakeholders regarding service restoration before, during, and after Hurricane Beryl. Please provide details of any formal agreements or understandings with these parties.

RESPONSE:

Due to the minimal impact Hurricane Beryl had on our system, BTU required no coordination efforts regarding our service restoration. BTU maintains mutual aid agreements but does not have formal agreements with state or federal entities with regards to outage coordination.

STAFF 1-50 Excluding the need to clear significant volumes of vegetation, please identify and described any major challenges you experienced during the process of restoring service to your customers before, during, and after Hurricane Beryl and any solutions implemented to address those challenges.

RESPONSE:

Bryan Texas Utilities did not encounter any major challenges in restoring service to customers before, during, or after Hurricane Beryl.

SPONSOR:

<u>STAFF 1-51</u> Please describe any lessons learned about restoring service to customers during Hurricane Beryl and how what you learned will inform restoration efforts in the future.

RESPONSE:

See <u>BTU Response to Staff 1-19</u>, Attachment 1.

STAFF 1-52 Does your utility employ the National Incident Management System? If yes, please provide the date on which your utility starting using NIMS as its framework for managing emergency event response.

RESPONSE:

Bryan Texas Utilities does not employ the National Incident Management System.

STAFF 1-53 Are your emergency response personnel trained in Incident Command System processes? If not, please describe any training your emergency event management personnel have received and how they interact with local and state officials and other utilities.

RESPONSE:

BTU has several emergency response personnel that are trained in Incident Command System processes.

Distribution Infrastructure

STAFF 1-54 Please explain your process for evaluating and replacing distribution poles. Please include an explanation for the following in your response:

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

RESPONSE:

- a. BTU has a formal annual pole inspection and treatment program where approximately 10% of distribution poles are inspected each year. Based on BTU's pole inspection cycle, poles are evaluated at least every 10 years.
- b. Poles are evaluated to determine the percentage of the pole's original strength still remaining at the time of inspection. The minimum circumference of each wood pole at or below ground line is measured. Measurements of decay and damage conditions are collected and input into a strength calculating program which determines the percent remaining strength of the pole per NESC guidelines.
- c. The status of each pole is determined based on the results of circumference measurements and strength calculations. Poles that do not meet minimum remaining strength requirements are identified for reinforcement or replacement.

SPONSOR:

STAFF 1-55 Please provide your minimum required right-of-way (ROW) width for both 3-phase and single-phase distribution lines.

RESPONSE:

BTU's standard is twenty (20) ft wide ROW easements for all overhead distribution lines located on private property.

SPONSOR:

- **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.

RESPONSE:

See <u>BTU Response to Staff 1-56</u>, Attachment 1.

SPONSOR: Gary D. Miller

General Manager, Bryan Texas Utilities

- 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.

RESPONSE:

BTU's distribution system does not include feeders with poles taller than 60 feet above ground level.

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.

RESPONSE:

BTU uses the standard "10% of overall pole length +2 feet" embedment depth for distribution poles. The exception to this are poles 30' in length, which are embedded 5-1/2' deep. This standard has not changed in the last 10 years. It should be noted that this standard does not apply to poles that have been specifically designed for special conditions. The required embedment depth would be determined as part of the design criteria for these poles.

SPONSOR:

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.

RESPONSE:

BTU's standard distribution pole sizes and class are:

- 1. Feeder: 45' class 2
- 2. Single phase and three phase, non-feeder: 40' class 2

SPONSOR:

STAFF 1-60 Please explain the NESC construction strength and overload factors your distribution lines were built to in the past.

RESPONSE:

BTU designs and constructs its distribution lines to meet the requirements for the applicable NESC Construction Grade. This includes the application of relevant strength and overload factors per Sections 24 and 25 of the NESC. BTU lines are generally constructed to meet NESC Grade C construction standards, however, Grade B Construction (including applicable safety factors) is used where conditions warrant the higher grade of construction.

SPONSOR:

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.

RESPONSE:

BTU has not adopted any new NESC construction strength and overload factors for distribution lines in the last two years.

SPONSOR:

- **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.

RESPONSE:

- a. All BTU distribution feeders are designed to a minimum NESC Grade C construction.
- b. Poles are predominately wood with some concrete, composite, steel, and ductile iron poles.
- c. BTU's standard requires twenty (20) ft wide ROW easements for all overhead distribution lines located on private property.
- d. All BTU distribution feeders were designed based on the specific loading conditions and NESC standards (including the applicable strength and overload factors) in place at the time the line was constructed.
- e. BTU is unaware of any distribution line that experienced damage but remained standing.

SPONSOR:

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.

RESPONSE:

BTU had 63,647 distribution poles in service before the May 2024 Derecho. All poles were subject to the same wind loading criteria based on the NESC "Medium Loading District".

Total Poles	Wood	Composite	Steel	Concrete	Ductile Iron
63,647	60,551	254	256	2,383	203

SPONSOR:

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.

RESPONSE:

BTU had no distribution poles fail due to the May 2024 Derecho.

<u>SPONSOR:</u> Gary D. Miller

General Manager, Bryan Texas Utilities

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.

RESPONSE:

There were three (3) distribution poles that failed during Hurricane Beryl. All three poles failed due to high winds and trees. All three poles were subject to the same wind loading criteria based on the NESC "Medium Loading District".

Туре	Original pole height- class	Replacement pole height- class
Wood	35'-6	35'-2
Wood	40'-4	40'-2
Wood	45'-4	45'-2

SPONSOR:

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.

RESPONSE:

BTU has a formal annual pole inspection and treatment program where approximately 10% of distribution poles that have accumulated ten years or more of service are inspected each year. Based on BTU's pole inspection cycle, poles are evaluated at least every 10 years.

No BTU distribution poles failed due to the May 2024 Derecho. Three BTU distribution poles failed due to Hurricane Beryl.

Туре	Pole#	Inspection Date
Wood	166141	12/2020
Wood	137208	12/2020
Wood	152783	03/2023

See BTU Response to Staff 1-66, Attachment 1.

SPONSOR:

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?

RESPONSE:

BTU has no opinion at this time.

Transmission Infrastructure

- **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?

RESPONSE:

- a. Evaluation of the need for hardening existing transmission lines is conducted annually during budget development.
- b. BTU considers the age, construction type (wood vs alternative material), past performance, and potential loading of transmission lines when evaluating lines for rebuild/reconductor.
- c. When BTU determines the necessity of building, rebuilding or reconductoring its transmission lines, BTU's practice is to harden the transmission line at that time. Any wood pole replaced is typically replaced with a concrete pole or steel pole. BTU's practice is to use steel poles with concrete foundations for angle and deadend poles and concrete poles for all tangent poles. Poles are designed to meet or exceed the applicable NESC in effect at the time of design.

SPONSOR: Gary D. Miller

General Manager, Bryan Texas Utilities

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.

RESPONSE:

BTU has 2,308 transmission structures. 1,302 are concrete, 360 are steel, and 646 are wood. All transmission structures are built to the NESC Zone 3 (Medium) loading criteria

SPONSOR:

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.

RESPONSE:

None of BTU's transmission structures failed due to the May 2024 Derecho.

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.

RESPONSE:

None of BTU's transmission structures failed 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.

RESPONSE:

Not applicable.

SPONSOR:

Vegetation Management

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 inhouse 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.

RESPONSE:

- a. BTU Vegetation management staff currently consists of (1) full time Utility Arborist who is a permanent staff member. The Arborist oversees contract crews who perform vegetation management. Contract crews remain on the BTU system throughout the year and are required to be available at all times. Crew quantities fluctuate between 8-14 crews based on need. Crew makeup varies between 3 and 4 members, depending on work performed at the time.
- b. The average size of BTU's vegetation management staff has not varied from the response to question a.
- c. Before the commencement of each fiscal year, BTU's arborist meets with BTU's tree trimming contractor to discuss feeders to be trimmed in the upcoming trim cycle and the contractor staffing necessary to complete trim cycles.
- d. BTU does not utilize in-house vegetation management crews and, therefore, is unable to provide the cost difference per circuit-mile between using contractors versus in-house vegetation management crews.
- e. BTU retains an arborist as part of our permanent vegetation management staff.

SPONSOR:

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.

RESPONSE:

BTU's distribution voltage is 7.2/12.47kV. BTU's typical distribution clearance specification for overhead distribution is 20' wide centered on the line and ground-to-sky wherever possible. Where ground-to-sky clearance is not attainable, vegetation under the line is cut to a point 8' below the neutral conductor.

BTU staff uses NERC Standard *FAC-003-5 Transmission Vegetation Management*, Table 2 as a guide for determining minimum vegetation clearances based on the transmission line's voltage. BTU's system contains 69kV and 138 kV lines. An abridged version of Table 2 is included below.

(AC) Nominal System Voltage (KV)	(AC) Maximum System Voltage (kV)	Minimum Vegetation Clearance Distances (feet) Over sea level up to 500 ft
69	72	1.1ft
138	145	2.3 ft

SPONSOR:

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?

RESPONSE:

BTU does not incorporate any specific vegetation inspections with regard to high customer count circuit segments.

SPONSOR:

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.

RESPONSE:

BTU does not currently retain inspection logs and field reports from workers who performed VM services.

SPONSOR:

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?

RESPONSE:

BTU is unaware of any of its feeders located in hurricane prone areas.

<u>SPONSOR</u>: Gary D. Miller General Manager, Bryan Texas Utilities

- **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.

RESPONSE:

Derecho

Circuit Name	Outage Date/Time	Outage Duration (hrs)	Circuit Voltage	Outage Cause Description	NERC Category
161	5/16/24 3:14 PM	2.22	7.2/12.47kV	Tree on line	Blow-in
1232	5/16/24 3:31 PM	1.33	7.2/12.47kV	Limb on line	Blow-in
2831	5/16/24 3:46 PM	1	7.2/12.47kV	Tree on line	Blow-in
2241	5/16/24 3:49 PM	1.33	7.2/12.47kV	Limb on line	Fall-in
2921	5/16/24 3:54 PM	7,83	7.2/12.47kV	Tree on line	Fall-in
821	5/16/24 4:06 PM	10	7.2/12.47kV	Tree on line	Blow-in
111	5/16/24 4:36 PM	3.2	7.2/12.47kV	Limb on line	Fall-in
222	5/16/24 5:21 PM	3,37	7.2/12.47kV	Limb on line	Fall-in
2911	5/16/24 5:30 PM	3,03	7.2/12.47kV	Tree on line	Fall-in
212	5/16/24 5:47 PM	2.63	7.2/12.47kV	Tree on line	Fall-in
1912	5/16/24 5:51 PM	3.73	7.2/12.47kV	Tree on line	Fall-in

Hurricane Beryl

Circuit	Outage	Outage Duration	Circuit	Outage Cause	NERC
Name	Date/Time	(hrs)	Voltage	Description	Category
212	7/8/24 9:26 AM	12.5	7.2/12.47kV	Tree on line	Fall-in
511	7/8/24 10:19 AM	1.42	7.2/12.47kV	Tree on line	Fall-in
1531	7/8/24 10:24 AM	0.92	7.2/12.47kV	Tree on line	Blow-in
2631	7/8/24 10:26 AM	15.37	7.2/12.47kV	Tree on line	Blow-in
1521	7/8/24 10:30 AM	6.7	7.2/12.47kV	Tree on line	Blow-in
6522	7/8/24 10:36 AM	2.35	7.2/12.47kV	Tree on line	Blow-in
721	7/8/24 10:45 AM	2.07	7.2/12.47kV	Tree on line	Fall-in
2641	7/8/24 10:45 AM	14.47	7.2/12.47kV	Tree on line	Fall-in

		Outage			
Circuit	Outage	Duration	Circuit	Outage Cause	NERC
Name	Date/Time	(hrs)	Voltage	Description	Category
2811	7/8/24 10:54 AM	7,58	7.2/12.47kV	Tree on line	Blow-in
631	7/8/24 10:55 AM	5,95	7.2/12.47kV	Tree on line	Fall-in
641	7/8/24 10:56 AM	8.48	7.2/12.47kV	Tree on line	Fall-in
2222	7/8/24 10:59 AM	16.87	7.2/12.47kV	Tree on line	Fall-in
711	7/8/24 11:06 AM	3,18	7.2/12.47kV	Tree on line	Fall-in
1531	7/8/24 11:14 AM	4,12	7.2/12.47kV	Tree on line	Blow-in
2641	7/8/24 11:15 AM	6.28	7.2/12.47kV	Tree on line	Blow-in
121	7/8/24 11:16 AM	4.55	7.2/12.47kV	Tree on line	Blow-in
2831	7/8/24 11:16 AM	6,77	7.2/12.47kV	Tree on line	Fall-in
2821	7/8/24 11:19 AM	6,35	7.2/12.47kV	Tree on line	Blow-in
1111	7/8/24 11:24 AM	15.28	7.2/12.47kV	Tree on line	Fall-in
1141	7/8/24 11:25 AM	13.3	7.2/12.47kV	Tree on line	Fall-in
2921	7/8/24 11:26 AM	4,77	7.2/12.47kV	Tree on line	Fall-in
2921	7/8/24 11:36 AM	4,65	7.2/12.47kV	Tree on line	Fall-in
1141	7/8/24 11:37 AM	14.83	7.2/12.47kV	Tree on line	Fall-in
2831	7/8/24 11:37 AM	6.83	7.2/12.47kV	Tree on line	Fall-in
1621	7/8/24 11:39 AM	5.5	7.2/12.47kV	Tree on line	Fall-in
1621	7/8/24 11:40 AM	4.42	7.2/12.47kV	Tree on line	Fall-in
2212	7/8/24 11:45 AM	7.43	7.2/12.47kV	Tree on line	Fall-in
1711	7/8/24 11:48 AM	15.85	7.2/12.47kV	Tree on line	Fall-in
1141	7/8/24 11:49 AM	14,97	7.2/12.47kV	Tree on line	Fall-in
142	7/8/24 11:51 AM	1.32	7.2/12.47kV	Tree on line	Fall-in
231	7/8/24 11:52 AM	11.02	7.2/12.47kV	Tree on line	Blow-in
1222	7/8/24 11:53 AM	7.3	7.2/12.47kV	Tree on line	Fall-in
2212	7/8/24 11:54 AM	9,38	7.2/12.47kV	Tree on line	Fall-in
1912	7/8/24 11:59 AM	16,15	7.2/12.47kV	Tree on line	Fall-in
1131	7/8/24 12:02 PM	10.12	7.2/12.47kV	Tree on line	Fall-in
1222	7/8/24 12:21 PM	2.17	7.2/12.47kV	Tree on line	Fall-in
2321	7/8/24 12:32 PM	13,97	7.2/12.47kV	Tree on line	Fall-in
2841	7/8/24 12:34 PM	4,78	7.2/12.47kV	Tree on line	Blow-in
2321	7/8/24 12:46 PM	5.88	7.2/12.47kV	Tree on line	Blow-in
112	7/8/24 12:46 PM	0.85	7.2/12.47kV	Tree on line	Fall-in
811	7/8/24 12:58 PM	14.22	7.2/12.47kV	Tree on line	Fall-in
431	7/8/24 12:59 PM	5,85	7.2/12.47kV	Tree on line	Fall-in
1232	7/8/24 1:04 PM	3.75	7.2/12.47kV	Tree on line	Fall-in
1222	7/8/24 1:13 PM	4.62	7.2/12.47kV	Tree on line	Blow-in
1111	7/8/24 1:21 PM	4.05	7.2/12.47kV	Tree on line	Blow-in
6451	7/8/24 2:12 PM	9,18	7.2/12.47kV	Tree on line	Fall-in
711	7/8/24 2:18 PM	2.15	7.2/12.47kV	Tree on line	Fall-in

Circuit Name	Outage Date/Time	Outage Duration (hrs)	Circuit Voltage	Outage Cause Description	NERC Category
1232	7/8/24 2:46 PM	3.2	7.2/12.47kV	Tree on line	Blow-in
331	7/8/24 6:55 PM	4,97	7.2/12.47kV	Tree on line	Fall-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.

RESPONSE:

See BTU Response to Staff 1-79, Attachment 1.

<u>STAFF 1-80</u> For the May 2024 Derecho and Hurricane Beryl, please provide the percentage of forced interruptions that were related to vegetation issues.

RESPONSE:

For the May 2024 Derecho, 63.8% of forced interruptions were related to vegetation issues.

For Hurricane Beryl, 20.7% of forced interruptions were related to vegetation issues.

SPONSOR:

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?

RESPONSE:

While not in response to the May 2024 Derecho or Hurricane Beryl, beginning October 1, 2024, BTU will begin implementing a 4-year trim cycle as opposed to the 5-year trim cycle BTU has used in the past.

<u>SPONSOR</u>:

STAFF 1-82 When did you last substantively review, augment, or modify your vegetation management plan before July 8, 2024?

RESPONSE:

During the FY 2025 budget development process that BTU staff completed in March/April 2024 timeframe, BTU budgeted for and modified its vegetation plan by implementing a 4-year trim cycle. The trim cycle had previously been 5 years.

SPONSOR:

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.

RESPONSE:

BTU does not have a procedure to track whether vegetation-related outages were caused by trees or branches outside of the easement or right of way.

<u>SPONSOR</u>: Gary D. Miller General Manager, Bryan Texas Utilities **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.

RESPONSE:

BTU has developed a web portal that allows customers to report <u>any</u> vegetation related concerns they observe – whether on their property or not. When submitted, these concerns are automatically emailed to BTU's Utility Arborist, with a copy to BTU's Distribution Division Manager. Once received, each concern is investigated and, if work is needed, a workorder is entered in BTU's Mobile Workforce Management System. This allows tracking of workorder completion.

BTU may contact a property owner if a hazardous condition is observed and act in order to mitigate risk.

<u>SPONSOR</u>: Gary D. Miller General Manager, Bryan Texas Utilities **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.

RESPONSE:

During the normal course of their work or travel within the BTU system, field personnel report any issues found to the Arborist. Once received, a workorder is entered in BTU's Mobile Workforce Management System. This allows tracking of workorder completion.

<u>SPONSOR</u>:

Staffing and Mutual Assistance

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

RESPONSE:

- a. BTU participated in or was a member of two mutual assistance programs on or before July 8, 2024. They are coordinated through the American Public Power Association and Texas Electric Cooperatives.
- b. See BTU Response to Staff 1-86, Attachments 1 and 2.
- c. Members of the two mutual assistance programs are listed below:

<u>American Public Power Association Mutual Aid Agreement Members (FEMA Region VI)</u> <u>https://www.publicpower.org/fema-mutual-aid-agreement-region-vi</u>

Arkansas

Clarksville Connected Utilities (Clarksville, AR) Conway Corporation (Conway, AR) North Little Rock Electric Department (North Little Rock, AR) Piggott Municipal Light, Water & Sewer (Piggott, AR)

Louisiana

City of Abbeville (Abbeville, LA) City of Alexandria (Alexandria, LA) Town of Boyce (Boyce, LA) Terrebonne Parish Utilities Department (Houma, LA) Town of Jonesville (Jonesville, LA) City of Kaplan (Kaplan, LA) Lafayette Utilities System (Lafayette, LA) Minden Utility Department (Minden, LA) City of Morgan City (Morgan City, LA) Natchitoches Light & Water Plant (Natchitoches, LA) City of New Roads (New Roads, LA) City of Plaquemine Light & Water (Plaquemine, LA) City of Rayne Utilities (Rayne, LA) Ruston Light & Power (Ruston, LA) City of St. Martinville (St. Martinville, LA) Vidalia Municipal Utilities (Vidalia, LA) Vinton Public Power Authority (Vinton, LA) Welsh Utility Department (Welsh, LA) City of Winnfield (Winnfield, LA)

New Mexico

Farmington Electric Utility System (Farmington, NM)

Oklahoma

City of Altus (Altus, OK)

Claremore Municipal Electric Department (Claremore, OK) City of Copan (Copan, OK) City of Cushing (Cushing, OK) Edmond Electric (Edmond, OK) Kingfisher Public Works Authority (Kingfisher, OK) Lexington Electric Department (Lexington, OK) City of Lindsay (Lindsay, OK) Mannford Electric Department (Mannford, OK) Purcell Public Works Authority (Purcell, OK) City of Sallisaw, OK (Sallisaw, OK) Stillwater Electric Utility (Stillwater, OK) The Town of Manitou (Tipton, OK) Grand River Dam Authority (Tulsa, OK) Walters Public Works Authority (Walters, OK) Wynnewood Water & Light Department (Wynnewood, OK)

Texas

Austin Energy (Austin, TX) Brownfield Municipal Light & Power (Brownfield, TX) Brownsville Public Utilities Board (Brownsville, TX) Bryan Texas Utilities (Bryan, TX)

City of College Station (College Station, TX) Denton Municipal Electric (Denton, TX) Flovdada Power & Light (Floydada, TX) Garland Power & Light (Garland, TX) Georgetown Utility Systems (Georgetown, TX) GEUS (Greenville, TX) Pedernales Electric Cooperative Inc. (Johnson City, TX) Kerrville Public Utility Board (Kerrville, TX) Liberty Municipal Electric System (Liberty, TX) Lubbock Power & Light (Lubbock, TX) New Braunfels Utilities (New Braunfels, TX) Robstown Municipal Utilities (Robstown, TX) CPS Energy (San Antonio, TX) City of Seguin (Seguin, TX) City of Weatherford Municipal Utility System (Weatherford, TX)

Texas Electric Cooperatives Mutual Aid Agreement Members

Bailey County ECA Bandera EC Bartlett EC **Big Country EC** Bluebonnet EC Bowie-Cass EC **Brazos EPC** Bryan Texas Utilities Central Texas EC Cherokee County ECA Coleman County EC Comanche EC Concho Valley EC CoServ Electric Deaf Smith EC Deep East Texas EC East Texas EC Fannin County EC

Farmers EC, NM Farmers EC, TX Fayette EC Fort Belknap EC Golden Spread EC Grayson-Collin EC Greenbelt EC Guadalupe Valley EC Hamilton County ECA Harmon EA Heart of Texas EC HILCO EC Houston County EC J-A-C EC Jackson EC Jasper-Newton EC Karnes EC Lamar EC

Lamb County EC LCRA Lea County EC Lighthouse EC Lyntegar EC Magic Valley EC Medina EC MidSouth EC Navarro County EC Navasota Valley EC North Plains EC Nueces EC Panola-Harrison EC Pedernales EC PenTex Energy Rayburn Country EC **Rio Grande EC** Rita Blanca EC

Rusk County EC Sam Houston EC San Bernard EC San Miguel EC San Patricio EC South Plains EC South Texas EC SW Arkansas EC SW Rural EA SW Texas EC Swisher EC Taylor EC Tri-County EC, OK Tri-County EC, TX Trinity Valley EC United Co-op Services Upshur Rural ECC Victoria EC Western Farmers EC Wharton County EC Wise EC Wood County EC

SPONSOR:

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.

RESPONSE:

BTU did not need to request any mutual assistance crews to assist with restoration efforts.

<u>SPONSOR</u>: Gary D. Miller General Manager, Bryan Texas Utilities **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.

RESPONSE:

During BTU preparation meetings for the potential effects of Hurricane Beryl, the possible need for mutual assistance from other utilities and/or additional contractors was discussed. BTU did not need to request any mutual assistance crews to assist with restoration efforts.

SPONSOR:

STAFF 1-89 Please describe the process and timeline for requesting or activating assistance as part of your membership or participation in any mutual assistance program(s) prior to, during, or in the aftermath of Hurricane Beryl.

RESPONSE:

During BTU preparation meetings for the potential effects of Hurricane Beryl, the possible need for mutual assistance from other utilities and/or additional contractors was discussed. BTU did not need to request any mutual assistance crews to assist with restoration efforts.

<u>SPONSOR</u>:

STAFF 1-90 Once you learned of the Hurricane Beryl's potential to affect your ability to provide service to your customers, what specific actions were taken to begin coordinating with and staging mutual assistance resources to respond to service issues resulting from the hurricane?

RESPONSE:

During BTU preparation meetings for the potential effects of Hurricane Beryl, the possible need for mutual assistance from other utilities and/or additional contractors was discussed. In the days leading up to Hurricane Beryl making landfall, BTU staff closely monitored the storm's predicted track. As it became evident that the storm would make landfall well to our east, Staff determined that there should not be any need to make any requests for mutual assistance given that BTU had all of its internal crews and support staff available which were augmented by 5 distribution construction crews and 12 vegetation management crews under contract to BTU and working in our service territory.

SPONSOR:

- **STAFF 1-91** Provide the following information concerning mutual assistance received in response to either the May 2024 Derecho or Hurricane Beryl:
 - a. Identify all mutual assistance programs from which you requested assistance;
 - b. Describe the specific assistance, including but not limited to the number of damage assessors, vegetation management crews, linesmen, generators, and materials, requested from the mutual assistance program(s); and
 - c. Provide all documentation of requests made to mutual assistance programs and their responses to your requests.
 - d. If it is not evident from the documentation provided in response to Staff 1-91(c), please provide the date the request was made, the date the specific assistance requested began arriving in the Impacted Area, and the date by when the specific assistance requested was fully received.

RESPONSE:

BTU did not need to request any mutual assistance crews to assist with restoration efforts due to the May 2024 Derecho or Hurricane Beryl.

SPONSOR:

STAFF 1-92 When you receive responses to requests for assistance from other mutual assistance program participants that confirm their ability to provide the requested assistance, are you able to accept or decline resources being offered as needed, or must you accept all assistance provided in response to a request?

RESPONSE:

Neither mutual assistance program that BTU is part of stipulates that BTU must accept any or all resources being offered in response to a request for mutual assistance.

<u>SPONSOR</u>: Gary D. Miller General Manager, Bryan Texas Utilities **STAFF 1-93** What considerations did you give to reimbursement of costs and expenses incurred by participants of mutual assistance programs when making requests for assistance during the events of Hurricane Beryl?

RESPONSE:

BTU did not need to request any mutual assistance crews to assist with restoration efforts due to Hurricane Beryl.

SPONSOR: