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DOCKET NO. 56822

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

SAM HOUSTON ELECTRIC COOPERATIVE, INC.'S RESPONSES TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION TO TARGETED ELECTRIC CO-OPS QUESTION NOS. STAFF 1-1 THROUGH 1-20

TO: Public Utility Commission of Texas c/o John B. Lajzer, Division Director, P.O. Box 13326, Austin, Texas 78711-3326

Sam Houston Electric Cooperative, Inc. ("SHEC") submits these responses to Commission Staff's First Request for Information ("RFI") to Targeted Electric Coops, Question Nos. Staff 1-1 through 1-120 ("Staff's First RFIs to Co-ops"). Commission Staff requested that responses to Staff's First RFIs to Co-ops be filed by August 30, 2024, thus these responses are timely filed. SHEC stipulates that all parties may treat these answers as if they were filed under oath. SHEC 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,

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ATTORNEYS FOR SAM HOUSTON ELECTRIC COOPERATIVE, INC.

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:

a. SHEC conducted a hurricane drill on May 15, 2024.

b. The drilled hurricane reached Category 5 status when it hit the Yucatan Peninsula and weakened to a Category 3 and made landfall at Galveston as a Category 3. In the drill, we activated two 500-man base camps, two additional man camps, and three staging areas for material, fuel, and equipment. SHEC experienced a 100% outage situation with multiple trees down and debris throughout the service area. SHEC's infrastructure experienced multiple lines down, poles on the ground, and damaged transformers and service drops.

c. The 2024 hurricane drill used a hurricane scenario provided by StormGeo. In the 2023 hurricane drill, SHEC used Hurricane Laura (2020) as the drill, which hurricane did impact the eastern portion of SHEC's service territory.

d. StormGeo

e. Not applicable

f. Not applicable

g. As the drill progressed from Phase 1 (about six days out) to Phase 7 (sustained winds fall below 39 mph), each individual or group simulated the tasks and their actions to the group. At the end of each phase, performance evaluation discussions took place between each storm group and the third-party participant.

h. Feedback from SHEC's CEO, Assistant General Manager, and Director of Cooperative Services was positive. StormGeo's Senior Tropical Meteorologist directed the 2024 drill. He stated he was very impressed with SHEC's response and the different tasks assigned to personnel in every department of the cooperative.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-2

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

RESPONSE:

SHEC's drills have typically been designed to be conducted internal to the organization.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

From time-to-time, actual hurricane events and conditions are used in SHEC's hurricane drills.

a. SHEC does not have a set timeframe.

b. The hurricane used to drill in 2024 was a hurricane created by StormGeo, a third-party weather service.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-4

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

RESPONSE:

No other utilities invited SHEC to participate in their 2024 hurricane or major storm drill.

SHEC participated in the 2024 Polk County Office of Emergency Management Hurricane Exercise, May 15 – 17, 2024.

SHEC participated in the Polk County Hazard Mitigation Plan Meeting, May 21, 2024.

SHEC sponsored and participated in the 2024 Polk County Hurricane Party (Seminar), hosted by the Polk County Office of Emergency Management on June 12, 2024.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-5

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

RESPONSE:

SHEC used the following resources for weather and storm tracking purposes:

- StormGeo
- Texas Department of Emergency Management
- National Hurricane Center

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-6

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

RESPONSE:

StormGeo begins providing storm notifications at the formation of any tropical wave development in the Atlantic Ocean. SHEC starts to track the storms when the notifications are created by StormGeo. The number of days before landfall varies based on the storm's location of formation, path, and speed.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-7

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

RESPONSE:

SHEC started tracking the storm on June 25, 2024.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-8

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

RESPONSE:

Yes

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-9

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

RESPONSE:

SHEC began securing crews on July 6, 2024, after the projected storm track shifted significantly.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

SHEC first prioritizes restoring power to substations, then clearing and energizing main circuits or feeders, then clearing and energizing branches or taps extending from main feeders, and then individual meters that are affected.

With Hurricane Beryl, when the sustained winds reached a safe level for employees and contractors to work, they were sent to affected areas for damage assessment and to begin restoration while mutual aid crews were in route to SHEC's service area. SHEC used the information from the assessors to allocate internal and external resources, using the prioritization strategy described above. Crew housing, material staging, and food preparation were located as close as practical to the most heavily damaged areas.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

During a major event or emergency, SHEC responds to consumer-member complaints and/or concerns in the same manner as during typical operations. Complaints are initially addressed by the staff member that receives the complaint. Issues are moved to team leads, supervisors, or managers as appropriate and necessary. Consumer-members can also appeal decisions to the Management Review Board and then to the Board of Directors. SHEC regularly communicates outage and restoration information to the Public Utilities Commission of Texas during major events or emergencies. If SHEC is notified of a complaint received by the Commission, SHEC promptly responds to the member and copies the Commission.

SHEC provides electricity to consumer-members throughout a ten-county service area. The Cooperative's communication plan employs numerous channels to inform audiences prior to, during, and after a major event. These audiences include:

- SHEC consumer-members, including key and critical accounts;
- SHEC employees;
- General public;
- Local, state, and federal emergency management;
- Public Utility Commission of Texas;
- MISO (Midcontinent Independent System Operator) and ERCOT; and
- Media.

Communication channels include, but are not limited to:

- Corporate website;
- Online outage map viewer;
- Online consumer-member portal;
- Mobile app;
- Social media;
- IVR phone system;
- Overflow service for power outage phone calls;
- Press releases; and
- Media.

The Cooperative maintains databases and contact information for key groups, including:

- Emergency management officials;
- Media; and
- Key and critical accounts.

Real-time information is available to all external and internal audiences on SHEC's outage viewer map, via the corporate website and via the mobile app. The Cooperative provides regular updates prior to, during, and after major events. These updates are provided as needed throughout the day, and they continue until no longer needed.

The Cooperative participates in local and state emergency management meetings. Participation may be in person, via phone, or electronically. SHEC provides regular updates to the Public Utilities Commission of Texas through their emergency management coordinator. Cooperative staff participates in Texas Department of Emergency Management calls daily regarding emergency coordination within the energy industry and situation awareness.

The statewide cooperative association, Texas Electric Cooperatives (TEC), was at the State Operations Center during Hurricane Beryl restoration. SHEC remaining in constant communication with TEC, and TEC shared SHEC's progress with the other entities represented there. Updates were provided to our local representatives and governments by email and phone call.

The reliability coordinators for SHEC's region are South Texas Electric Cooperative for the load located in ERCOT (1% of SHEC system load) and Entergy Transmission Control Center for SHEC's load in MISO (99% of SHEC system load). SHEC's Dispatch Supervisors communicate directly with these entities during a major event by phone and email.

Critical load consumer-members engage directly with SHEC's engineering department by phone and email.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC uses an operating condition system for System-Wide Emergency, Generation Supply and Transmission Only, and System-Wide Distribution Only Emergency events. The specific levels within the systems and actions taken at each level are detailed on page 47 of SHEC's confidential Emergency Operations Plan (EOP) on file with the Commission. Excerpts of the relevant sections of the confidential EOP are included at SHEC Response to Staff 1-12, Attachment 1 (CONF).

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.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

On or about February of every year, RFPs (Request for Proposals) are sent out to line contractors, vegetation contractors, and storm service (base camp) contractors for major outage work. Contracts are signed after receipt and review of responses and insurance and OSHA 300 documentation is provided.

SHEC also contracts with schools, church camps, county fairgrounds, and businesses to use their facilities for staging areas for material, housing, equipment, and related items.

The camps and storm service contractors provide all the lodging, food, and laundry needs of employees and contractors. SHEC also reserves rooms at hotels in the affected areas, if needed.

SHEC employees are assigned contract crews for field guidance. All crew locations are tracked and managed through system operation protocols.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

May 2024 Derecho

StormGeo issued a StormWatch Threat Assessment on May 15, 2024. SHEC placed extra line crews on call for May 16, 2024. As soon as the storm hit, SHEC called in its employees, 14 contractor line crews, and 28 right-of-way (ROW) crews. Within an hour, SHEC had 32 additional contract crews in route to start work the next morning, May 17, 2024.

Hurricane Beryl

On Friday, July 5, 2024, SHEC assembled the EOP team in preparation for Hurricane Beryl, due to significant track changes to the storm.

On Saturday morning, July 6, 2024, SHEC started securing outside contractors and had them on stand-by, began reserving hotel rooms and contacting staging site owners for lodging and food. At this point, Hurricane Beryl was predicted be a rain event for SHEC's service area, with sustained winds around 25 mph, and SHEC had implemented Storm Level Two (page 48 of SHEC's EOP).

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-15

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

RESPONSE:

May 2024 Derecho

See SHEC Response to Staff 1-14. Over 28,000 meters were affected by an outage in the Derecho event. SHEC restored 100% of the meters by the evening of May 18, 2024.

Hurricane Beryl

On Friday, July 5, 2024, SHEC assembled the EOP team in preparation for Hurricane Beryl, due to significant track changes to the storm.

Saturday morning, July 6, 2024: SHEC started securing contractors and exercising mutual aid agreements.

Monday, July 8, 2024: At safe wind, 81,500 SHEC meters were experiencing an outage. Many of these were distribution-related, but a significant number were also out of power due to significant damage to the MISO/Entergy transmission system in the region. SHEC had 271 personnel in the field providing assessments and restoration. Approximately 8% of the outages were restored by the end of the day.

Tuesday, July 9, 2024: SHEC had 723 personnel in the field providing assessment and restoration services. 22% of outages were restored by the end of the day. Two base camps were fully operational. Significant transmission issues were ongoing.

Wednesday, July 10, 2024: SHEC had 1,059 personnel in the field. 52% of outages were restored by the end of the day. A third base camp was fully operational.

Thursday, July 11, 2024: SHEC had 1,030 personnel in the field. 76% of outages were restored by the end of the day.

Friday, July 12, 2024: SHEC had 1,026 personnel in the field. 92% of outages were restored by the end of the day.

Saturday, July 13, 2024: SHEC had 753 personnel in the field. 99% of outages were restored by the end of the day.

Sunday, July 14, 2024: SHEC had 479 personnel in the field. 100% of outages were restored by the end of the day.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

May 2024 Derecho

Total Number of Members Affected were 28,505 (31.32 percent of system)

Minimum Restore Time	0 hrs.
Maximum Restore Time	48 hrs.
Average Restore Time	11 hrs.

Hurricane Beryl

Total Number of Members Affected were 81,500 (90% of system)

Minimum Restore Time	0 hrs.
Maximum Restore Time	153 hrs.
Average Restore Time	23 hrs.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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. Polk County, Liberty County, San Jacinto County, and Hardin County experienced the highest and longest outages, particularly areas close to the Trinity River. Trinity River Plaza, Sam Houston Lakes, Dayton Lakes, Big Thicket, Mason Lakes, and Old Snake River were locations along the river that were inaccessible until the river flooding subsided. These counties also are prone to flooding due to being low bottom land, especially near the river.

b. Polk County, Montgomery County, Liberty County, and San Jacinto County had the highest number of outages including the areas around Security, Willis, Conroe, and Point Blank. These are the counties where the hurricane eye and northeast quadrant of the storm passed through, going northeast across SHEC's service territory.

c. Primary factors that affected the vulnerability of these areas were heavily timbered, low lying, and already saturated ground conditions due to prior flooding and significant rainfall.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-18

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

RESPONSE:

May 2024 Derecho

Many locations were not accessible due to high water across roads and washed out roads and culverts. There also were many trees and lines down in fast flowing or high water. Another issue was major bridges and highways being closed due to the high water, making traveling to locations slow and dangerous.

Hurricane Beryl

Saturated ground from May floods made it a challenge to maneuver equipment off road to repair lines, replace poles, and remove tree debris. Further, significant downed trees and debris were in the roads, which had to be cleared to make repairs. Entergy's transmission system in the area suffered significant damage and Entergy's transmission restoration did not begin for multiple days after landfall.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-19

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

RESPONSE:

No after-action reports have been completed. SHEC conducted post-event meetings to review performance and its EOP.

Preparer: Scott Ferguson
Sponsor: Doug Turk

STAFF 1-20

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

RESPONSE:

Not applicable

Preparer: Scott Ferguson
Sponsor: Doug Turk

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. SHEC works year-round to build relationships with local governments, community organizations, and other utilities. SHEC informs these groups where they can find the latest storm updates and SHEC's outage map. They are directed to the SHEC website (www.samhouston.net) and outage map, and provided information on how they can reach SHEC during and after a hurricane or major storm.

b. After a major outage event, SHEC extends the hours of its internal call center at its office buildings to 12-hour shifts, and representatives are available from 6 a.m. to 8 p.m. This schedule lasts until the end of the major event. The Cooperative has an external overflow call center that is available 24 hours a day, 365 days a year.

c. SHEC is not a transmission and distribution utility ("TDU") and its consumer-members do not have retail electric providers ("REPs"). SHEC communicates directly with its consumer-members to provide superior service.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC's communication strategy with the public during any major event is to inform consumer-members prior to, during and after a major event.

To accomplish this strategy, the Cooperative utilizes numerous channels during a major event to inform the public and our consumer-members including, but not limited to:

- the corporate website (www.samhouston.net);
- online outage map;
- consumer-member web portal and mobile app (mySamHouston);
- social media sites including Facebook, Twitter, and Instagram;
- messages on SHEC's automated phone system;
- overflow phone service for outage phone calls;
- press releases; and
- the media.

Real-time information is available to the public on the SHEC outage viewer map, via the corporate website and via the mobile app.

The Cooperative provides regular updates prior to, during, and after a major event. These updates are provided as needed throughout the day, and they continue until no longer needed.

During a major event, public safety information is also provided to encourage caution around downed lines and trees, safe generator use, and caution when cleaning up debris.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC gathers feedback from members throughout the year using monthly transaction surveys, quarterly American Customer Satisfaction Index ("ASCI") scores, and evaluation of feedback from member interactions.

SHEC's most recent ACSI score was 93 for the second quarter of 2024 (April-June 2024), which would have included the May 2024 Derecho. The next score and transaction survey results are anticipated to be received in mid-October.

See SHEC Response to Staff 1-23, Attachment 1 for the ACSI score.

See SHEC Response to Staff 1-23, Attachment 2 for a sampling of the letters, phone calls and social media comments from consumer-members.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC is proud of its communication strategy but recognizes there is always room to learn and grow. SHEC is building on its 85 years of partnerships with local governments, community organizations, and regional groups to improve coordination. Employees have seeking out new groups to build new connections with local governments, medical facilities, and community organizations. Cooperative representatives will attend more community events this fall to reach new organizations and connect with more members of the public.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC has strong relationships with other electric utilities, including coordination and mutual aid agreements. Cooperative staff participates in local county emergency management meetings and coordinates with other utilities through these meetings.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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. SHEC has 11 full-time member service representatives in the call center, and 11 full-time member service representatives at the front counters of our offices. The front counter representatives assist on the phone system when there are no consumer-members at their desks.

b. 100% of our member service representatives are full-time employees.

c. The target wait time is 20 seconds.

d. The average call length is 3 minutes and 30 seconds. However, SHEC does not have a time limit for phone calls.

e. Ongoing training is provided throughout the year to our member service representatives. They receive educational pathways, substation training, and visits to the field to see construction in action. Before and during major events, reminder emails are sent to the member service representatives with common safety practices for consumer-members and education on the path to restore electricity.

f. The internal phone system can handle 99 phone calls at once. SHEC also has an overflow auxiliary phone queue that is virtually unlimited. Furthermore, SHEC utilizes a separate IVR phone flow for outages that is virtually unlimited.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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	Daily Average Call Volume (Per Hour)	Peak Call Volume (Per Hour)
July 8	706	1144
July 9	706	756
July 10	407	563
July 11	299	576
July 12	192	371
July 13	133	141

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

See SHEC Response to Staff 1-11 and Staff 1-22 for a description of SHEC's communications plan. Information on recovery resources was shared on SHEC's website and social media sites. This included information for consumer-members from FEMA, TDEM, and local recovery groups.

The Cooperative shared initial alerts to consumers and other groups regarding Hurricane Beryl on Friday, July 5, 2024, on the SHEC website and social media accounts: https://www.samhouston.net/news/sam-houston-ec-monitoring-hurricane-beryl.

Daily updates were provided to local representatives and governments by email and/or phone call during the recovery from Hurricane Beryl.

Information on recovery resources remains on the homepage of SHEC's website through August 31, 2024.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

Calls incoming to the call centers are recorded. There is no set retention schedule for recorded phone calls.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

Not applicable

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

See SHEC Response to Staff 1-31, Attachment 1.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

STAFF 1-32

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

a. The date the outage tracker was rolled out to customers.

b. The last date the software underpinning the outage tracker was updated.

c. whether the outage tracker was functioning during the May 2024 Derecho and Hurricane Beryl as intended or provide an explanation as to why not.

d. Whether the outage tracker was mobile-friendly;

e. the languages supported by the outage tracker;

f. Whether the outage tracker captured circuit-specific or meter-specific information or both.

g. Whether the outage tracker was cloud-based or operated through an on-premise server?

h. The maximum number of simultaneous users the outage tracker was designed to accommodate.

i. Whether you had internal facing redundancies/contingencies for outage tracking, and if so if these redundancies/contingencies were utilized during your response to Hurricane Beryl.

j. The date of the last stress or load test of the outage tracker.

RESPONSE:

a. The current outage tracker was rolled out in November 2017.

b. The software underpinning the outage tracker was last updated in July 2024.

c. The outage tracker functioned throughout both storms.

d. The outage tracker is designed to be mobile-friendly.

e. The outage tracker is available in English at this time.

f. The outage tracker shows outages by service area, county, and zip code.

g. The outage tracker is operated through an on-premise server.

h. There is no design limit of simultaneous users of the outage tracker.

i. SHEC has replicated servers at its disaster recovery site; they were not utilized during Hurricane Beryl.

j. The outage tracker was last stress tested on July 21, 2023.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

Only a portion of SHEC's service territory falls within the greater Houston area. SHEC does not track outage map requests by location or origin. The data below includes daily requests accessible worldwide.

Outage Map Requests during May Derecho		
	Daily Total Requests	Peak Number of Users
May 16	26,741	Peak Hour 20:00 – 4,703
May 17	48,522	Peak Hour 15:00 – 3,109
May 18	14,350	Peak Hour 09:00 – 1,006
May 19	5,290	Peak Hour 12:00 – 287

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC does not track outage map requests by location or origin. The data below includes daily requests accessible worldwide.

Outage Map Requests during Hurricane Beryl		
	Daily Total Requests	Peak Number of Users
July 8	154,820	Peak Hour 18:00 – 10,974
July 9	176,908	Peak Hour 15:00 – 8,278
July 10	392,563	Peak Hour 15:00 – 8,722
July 11	215,800	Peak Hour 13:00 – 5,397
July 12	91,300	Peak Hour 14:00 – 3,377
July 13	77,942	Peak Hour 09:00 – 1,943
July 14	54,947	Peak Hour 09:00 – 856

Preparer: Rachel Hawkins
Sponsor Rachel Hawkins

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 the outage tracker is offline, SHEC will publish estimated restoration times by community or subdivision through its website, social media, and to the media.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC's outage map was on-line and operational throughout both events. However, during the restoration efforts, electronic media was used to enhance outage communication with members.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC uses advanced metering infrastructure.

County	Smart Meters	Total Meters	Percentage of Smart Meters
Angelina	1,839	1,840	99.95%
Hardin	3,620	3,623	99.92%
Jasper	50	50	100.00%
Liberty	16,044	16,046	99.99%
Montgomery	17,168	17,173	99.97%
Polk	25,883	25,889	99.98%
San Jacinto	14,751	14,757	99.96%
Trinity	2,204	2,204	100.00%
Tyler	6,445	6,447	99.97%
Walker	3,768	3,768	100.00%

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

STAFF 1-38

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

RESPONSE:

SHEC employees, at multiple levels of the organization, began communicating with local officials on July 8 and 9. These were primarily phone calls and in-person interactions in the field. Updates were communicated daily with PUCT, state, regional, and county emergency management officials. SHEC staff attend daily meetings in person, by phone, or by video and provide updates at these meetings. Many local governments attend these meetings. In addition, if there are specific concerns, SHEC's experience is that local governments reach out to Cooperative staff directly, as needed.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC's Registry of Directly Served Critical Load Customers is included in its confidential EOP at page 10. The Major Event Communications Plan (at page 13 of the EOP) outlines that the communications channels used are the corporate website, outage map, online portal, social media, IVR phone system, press releases, and local media.

Real-time information is available to medical and eldercare facilities and critical infrastructure on the outage map and corporate website. Critical facilities are provided contact information for the Cooperative if they need additional information or assistance. These critical facilities also often participate in emergency management meetings or phone calls and receive information through those meetings.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC does not maintain a log of the phone calls with critical care facilities.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC encourages critical care and at-risk customers to follow service outages and restoration efforts in well-established channels, which are the website updates, outage map, outage notifications by text or email, and phone system.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

STAFF 1-42

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

RESPONSE:

SHEC does not have any interconnected power generation companies within ERCOT.

Preparer: Rachel Hawkins
Sponsor: Rachel Hawkins

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:

The primary goal of the EOP is the orderly repair of the Cooperative's electric facilities so that public health and safety are protected, and service is restored to all customers in minimum time through proper, safe and efficient use of all resources. The details of SHEC's restoration procedures are included at page 29 of its confidential EOP on file with the Commission. A relevant excerpt is included at SHEC Response to Staff 1-43 (CONF). These procedures are applied system-wide and were used during the May 2024 Derecho and Hurricane Beryl.

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.

Preparer: John Williams
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-43.

Preparer: John Williams
Sponsor: Doug Turk

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:

Not applicable

Preparer: John Williams
Sponsor: Doug Turk

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:

SHEC does not have responsive information on a county-by-county basis. Many SHEC distribution circuits cross county lines. Crews are assigned by circuit and not by county. Please see SHEC Response to Staff 1-15 for personnel numbers by day during the restoration after May 2024 Derecho and Hurricane Beryl.

Preparer: John Williams
Sponsor: Doug Turk

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:

Percentage of Co-op Meters off by County

	7/8	7/9	7/10	7/11	7/12	7/13
Angelina	73%	41%	11%	3%	3%	2%
Hardin	49%	8%	8%	9%	5%	1%
Jasper	100%	100%	33%	0%	0%	0%
Liberty	56 %	40%	35%	12%	3%	3%
Montgomery	90%	84%	45%	19%	6%	.6%
Polk	96%	90%	53%	27%	5%	.2%
San Jacinto	86%	85%	47%	34%	15%	2%
Trinity	98%	28%	7%	6%	.5%	0%
Tyler	69%	24%	5%	.7%	.04%	0%
Walker	92%	89%	78%	50%	31%	3%

Preparer: John Williams
Sponsor: Doug Turk

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:

Calls are entered into SHEC's Outage Management System (OMS). The restoration effort is guided by information provided by the OMS. The information recorded on each trouble order includes the ID device determined to be out as well as the number of customers affected. After a device is determined to be out, additional outage calls are accumulated under the ID device. The OMS allows for an orderly and prompt response in restoration of the Cooperative's delivery system.

Preparer: John Williams
Sponsor: Doug Turk

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:

To coordinate with state and federal agencies, SHEC participated daily during restoration in the Energy Industry Coordination calls and the Texas Recovery Coordination calls. SHEC also worked with local emergency management personnel during and after Hurricane Beryl. SHEC was in constant communication with its statewide cooperative association, Texas Electric Cooperatives (TEC). TEC interacted on SHEC's behalf at the State Operations Center. SHEC's public affairs consultants updated state legislators and fielded questions. Local governments and state and federal legislators also contacted SHEC directly for information.

Preparer: John Williams; Rachel Hawkins
Sponsor: Rachel Hawkins

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:

SHEC experienced the following challenges: the ground was still saturated from the May floods, which made it a challenge to maneuver equipment off road to repair lines, replace poles, and remove tree debris. Entergy's transmission system in the area suffered significant damage and Entergy's transmission restoration did not begin for multiple days after landfall.

Preparer: John Williams
Sponsor: Doug Turk

STAFF 1-51

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

RESPONSE:

Not applicable. SHEC believes its EOP and communications and restoration procedures performed as intended during the event.

Preparer: John Williams
Sponsor: Doug Turk

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:

SHEC does not employ the National Incident Management System (NIMS), but SHEC has multiple key employees who have been trained in NIMS. SHEC's EOP is structured similar to NIMS.

Preparer: John Williams
Sponsor: Doug Turk

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:

Yes, several key employees have been trained in the Incident Command System process while taking the NIMS training.

Preparer: John Williams
Sponsor: Doug Turk

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. SHEC's pole inspection program is on a 10-year rotation across the system.

b. For poles 6 years old or less, a visual inspection is performed looking for the following:

- Woodpecker holes
- Split tops
- Decayed tops
- Broken insulators
- Rotten/broken crossarms
- Broken ground wires
- Slack/broken guy wires

For poles over 6 years old, sounding, boring and a visual inspection is performed.

- Sound is performed with a hammer from groundline to as high as inspector can reach, this is to locate exterior decay and interior pockets of decay.
- Boring is performed to locate interior decay. The pole is excavated around the entire circumference of the pole to a depth of 18" below groundline.
- If decay is detected during boring process and pole passes inspection, interior will be treated.
- Boring holes are filled with treated wooden dowels or plastic plugs.
- If a pole is to be treated, a chipping tool will remove loose and decaying wood from 18" below groundline to 6" above the ground.
- All fully excavated poles shall be treated.
- Partially excavated poles have only 2-sides excavated or not at full 18" depth. This happens when poles cannot be excavated due to large rocks, roots, sidewalks, underground risers, or some other obstruction.
- Concrete, Composite, Fiberglass, Metal and Laced Towers receive a visual inspection only
    - Cracks

- Rust
- Missing bolts
- Broken ground wires
- Broken/Slack guy wires
- Broken insulators

c. After inspection, the pole is replaced if it is Rejected or identified as a Priority Pole as described below:

Reject Pole

- Any excavated pole with a remaining strength of 67% or less

Priority Pole

- A pole with an effective circumference of less than 50% of its original
- A pole with a remaining strength of 13% or less

Preparer: Joel Colston
Sponsor: Doug Turk

STAFF 1-55

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

RESPONSE:

For both 3-phase and single-phase overhead lines, SHEC requires a 20-foot ROW easement width.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

a. See SHEC Response to Staff 1-56, Attachment 1 (Excel file).

b. SHEC's pole failure count during Hurricane Beryl was 301 poles (300 wood and one concrete). SHEC also experienced 505 broken crossarms.

c. The primary cause of pole failure across the system was from vegetation located outside SHEC's ROW.

d. The primary point of failure on the poles were broken crossarms or insulator pins.

e. All SHEC's feeders are built to the following standards:

Overhead distribution circuits shall be constructed with not less than the Grade C strength requirements as described in section 26, Strength Requirements, of the NESC when subjected to the loads specified in NESC Section 25, Loading for Grades B and C. Distribution lines that underbuilds transmission circuits or that cross over limited access highways and railroad tracks shall be constructed with not less than the Grade B strength requirements as described in NESC Section 26.

f. Not applicable at this time.

g. Not applicable at this time.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

Not applicable.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC's standard pole embedment is 10% of the pole length plus 2 feet. Pole holes are backfilled with native dirt and tamped for firmness. This has been SHEC's standard for over 10 years.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

Single phase - 40' class 4 pole
Three phase - 45' class 3 pole

Preparer: Joel Colston
Sponsor: Doug Turk

STAFF 1-60

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

RESPONSE:

SHEC uses all assumed loading specifications set forth in Section 25 of the NESC. SHEC uses a combination of medium and light loading design criteria due to its service territory falling within two different loading districts. With this being the case, SHEC uses the loading district with the greatest effect, per Article 250A-1 of the NESC. Also, all SHEC lines are designed to adhere to Section 26 of the NESC, this includes all mandated strength and overload factors stated in Section 26.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC's construction standards have not changed in the past 2 years.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

All SHEC's feeders are built to the same standard of construction.

a. Design criteria is based on Section 25 and 26 of the NESC

b. Current standard is wood poles

c. Current ROW width is 20'

d. Yes, these feeders are designed to the same strength and factors as all other feeders

e. Yes, SHEC had multiple lines with damage from vegetation or debris that remained standing

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC's total in-service pole count is 172,793. Out of this total, there are 1,230 concrete poles, 1,151 steel poles, and 170,412 wood poles. All poles are designed to NESC wind loading requirements based on Figure 250.1

Preparer: Joel Colston
Sponsor: Doug Turk

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:

42 total poles failed due to the May 2024 Derecho, and all were wood poles. Each failed pole was designed to the NESC wind loading zone from Figure 250.1. Each failure was due to vegetation from outside of SHEC's ROW.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

301 poles failed due to Hurricane Beryl (300 wood and one concrete).

All failed poles were designed to the NESC wind loading zone from Figure 250.1. Each failure was due to vegetation from outside of SHEC's ROW.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC's pole inspection frequency is 10 years. The inspection dates for each feeder on the SHEC system is included in the spreadsheet at SHEC Response to Staff 1-56, Attachment 1.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

No position at this time.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

All transmission lines that SHEC has constructed since Hurricane Rita (2005) have been built to SHEC's internal hardening standards. This standard is applied to all new transmission construction and upgrades.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC has 773 total transmission structures, including 148 wood and 625 steel.

SHEC's transmission structures are designed to NESC medium wind loading but include a heavy load case for ½" of ice with 4lbs of wind for increased strength.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC did not have any transmission structure failures due to the May 2024 Derecho.

Preparer: Joel Colston
Sponsor: Doug Turk

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:

SHEC did not have any transmission structure failures due to Hurricane Beryl.

Preparer: Joel Colston
Sponsor: Doug Turk

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

Preparer: Joel Colston
Sponsor: Doug Turk

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.

RESPONSE:

a. In-house ROW employees: 4
Contractors: 106

b. SHEC's 5-year average is 101. Crew increases were made in both 2022 and 2023 in response to elevated number of dead trees caused by the summer droughts of 2021, 2022, and 2023.

c. Staffing is based on SHEC's proactive vegetation management program. SHEC's vegetation management program is on a 5-year trim cycle. All overhead lines are trimmed from the substation to the meter. This includes primary, secondary service, and guy wires. The ROW is also treated with herbicide every 5 years to reduce woody stem count. The entire system is patrolled annually for hazard trees and all dead trees are cut on a yearly cycle. Midcycle trims of "hotspots" between the 5-year cycle typically occur on the 4th growing season.

d. All trimming is done using contractors.

e. SHEC has 4 ROW staff permanently retained in house; all are certified arborists.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

SHEC's ROW standards are a 20-foot ROW for distribution lines and a 100-foot ROW for transmission lines. Due to the heavily timbered service area, SHEC's standard is to clear the full width of the ROW.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-73(c). SHEC inspects its entire system of overhead wires annually for hazard trees. Any areas of problematic vegetation are mitigated with a mid-cycle trim crew. All circuits are preplanned for vegetation management.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-76, Attachment 1 (feeder trimming and spraying report)

See SHEC Response to Staff 1-76, Attachment 2 (CONF) (2024 logs, filed separately as confidential material and redacted due to member names, phone numbers, and gate codes)

See SHEC Response to Staff 1-76, Attachment 3 (CONF) (pre-2024 logs, filed separately as confidential material and redacted due to member names, phone numbers, and gate codes)

CONFIDENTIALITY STATEMENT

The response to this RFI contains confidential protected material protected against public disclosure under Tex. Gov't Code §§ 552.101 (in conjunction with Tex. Util. Code § 32.101(c) and 16 Tex. Admin. Code § 25.272(c)(5), (g)(1)). The confidential material consists of native excel files (SHEC Response to Staff 1-76, Attachments 2 and 3) that contain customer personal identifying information, including name, phone number, location, and gate code. The information constitutes customer-specific information protected by Tex. Util. Code § 32.101(c) and 16 Tex. Admin. Code § 25.272(c)(5) & (g)(1).

Preparer: Billy Snook
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-73(c) and Staff 1-75. SHEC's entire service area is hurricane prone. SHEC's vegetation management program is a constant process that occurs during all seasons. SHEC employs a proactive 5-year trim cycle, a 4-year mid-cycle trim for hotspots, and an annual hazard tree cycle.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-78, Attachments 1 (Beryl) and 2 (Derecho).

All outages were either Fall-In or Blow-In.

Preparer: Billy Snook
Sponsor: Doug Turk

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 SHEC Response to Staff 1-79, Attachment 1 (CONF) (V).

SHEC has prepared circuit-by-circuit, aerial maps reflecting the requested information. Because every circuit on SHEC's system was affected by these storm events, there are 124 map files. The maps reveal details about SHEC's entire distribution system, including substations and main feeders overlaid on aerial satellite imagery. As explained below, given this detail, the maps constitute critical energy infrastructure information. Moreover, due to the size and number of the map files, the response to this RFI is voluminous. SHEC has prepared a share site for Staff to view the confidential maps. See contact information below to request access.

CONFIDENTIALITY STATEMENT

The response to this RFI contains confidential critical energy infrastructure information (CEII) that is protected from public disclosure pursuant to Tex. Gov't Code § 552.101 in conjunction with 18 C.F.R. § 388.113(c)(2) and Tex. Gov't Code§ 418.181. As the information is also voluminous, the information is not being filed with the responses. The rules of the Federal Energy Regulatory Commission at 18 C.F.R. § 388.113 restrict public access to, establish a duty to protect, and provide for sanctions for unauthorized disclosure of, CEII. CEII is defined as follows:

> (2) *Critical energy infrastructure information* means specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that:
>
> (i) Relates details about the production, generation, transportation, transmission, or distribution of energy;
>
> (ii) Could be useful to a person in planning an attack on critical infrastructure;
>
> (iii) Is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552; and
>
> (iv) Does not simply give the general location of the critical infrastructure.

18 C.F.R § 388.113(c)(2).

Similarly, the Texas Homeland Security Act protects critical infrastructure information from public disclosure. Tex. Gov't Code§ 418.181. Specifically, "[t]hose documents or portions of documents in the possession of a governmental entity are confidential if they identify the technical details of particular vulnerabilities of critical infrastructure to an act of terrorism." *Id.*

SHEC Response to Staff 1-79, Attachment 1 (CONF) contains CEII exempted from public disclosure under federal and state law. Such information includes detailed feeder maps and substation locations that, when viewed as a whole, reveal every feeder and substation on SHEC's system. Thus, this information provides details about the distribution of energy, which could be useful to a person planning an attack on critical infrastructure, as the information identifies critical feeders and substations and potential vulnerabilities in SHEC's critical infrastructure. The release of this information could be instrumental to terrorists in damaging SHEC's infrastructure, disrupting power to its customers, and thwarting efforts to timely restore power to its customers.

VOLUMINOUS STATEMENT

The response to this RFI is voluminous. Pursuant to 16 TAC § 22.144(h)(2), the confidential attachment will be made available for inspection through a confidential share site or at the offices of McGinnis Lochridge, LLP, 1111 West 6th St., Bldg. B, Suite 400, Austin, Texas 78703; cgalant@mcginnislaw.com; (512) 495-6083.

Index to Voluminous Attachment

- Attachment 1 - 124 oversized aerial maps of individual circuits and vegetation management treatment depictions.

Preparer: Billy Snook
Sponsor: Doug Turk

STAFF 1-80

For the May 2024 Derecho and Hurricane Beryl, please provide the percentage of forced interruptions that were related to vegetation issues.

RESPONSE:

Derecho = 68%
Beryl = 82%

Preparer: Billy Snook
Sponsor: Doug Turk

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:

See SHEC Response to Staff 1-73(c), Staff 1-75, and Staff 1-77.

SHEC's vegetation management program is on a 5-year trim cycle. All overhead lines are trimmed from the substation to the meter. This includes primary, secondary service, and guy wires. The ROW is also treated with herbicide every 5 years to reduce woody stem count. The entire system is patrolled annually for hazard trees and all dead trees are cut on a yearly cycle. Midcycle trims of "hotspots" between the 5-year cycle typically occur on the 4th growing season.

Preparer: Billy Snook
Sponsor: Doug Turk

STAFF 1-82

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

RESPONSE:

The vegetation management program is assessed annually. Crew increases were made in both 2022 and 2023 in response to an elevated number of dead trees caused by the summer droughts of 2021, 2022, and 2023.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

All vegetation-related outages on SHEC's system during both events were caused by vegetation located outside of the ROW.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

SHEC implements a proactive hazard tree program, which deals with hazardous vegetation located outside SHEC's ROW. SHEC cut down 26,000 hazard trees during 2023. Roughly 14,000 hazard trees have been cut so far in 2024.

Preparer: Billy Snook
Sponsor: Doug Turk

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:

SHEC dedicates one utility forester to its hazard tree program. The forester oversees 10 three-man crews that cut hazard trees as part of the hazard tree program. SHEC also utilizes three contracted ROW planners that identify, preplan, and coordinate the cutting of all hazard trees.

Preparer: Billy Snook
Sponsor: Doug Turk

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. SHEC is a member of the Texas Electric Cooperative (TEC) Statewide Mutual Assistance Program.

b. The form of Mutual Aid Agreement with TEC is attached at SHEC Response to Staff 1-86, Attachment 1.

c. The Texas electric cooperatives that participate in the TEC Mutual Assistance Program are as follows:

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
LCRA
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

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
Lea County EC
Lighthouse EC
South Plains EC
South Texas EC
SW Arkansas EC
SW Rural EA
SW Texas EC
Swisher EC
Taylor EC
Tri-County EC, TX
Tri-County EC, OK
Trinity Valley EC
United Co-op Services
Upshur Rural ECC
Victoria EC
Western Farmers EC
Wharton County EC
Wise EC
Wood County EC

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

On or about February of every year, SHEC sends Request for Proposals to line contractors, vegetation contractors, and storm service (base camp) contractors for major outage work. Contracts are signed and insurance and OSHA-300 documentation is provided. Crews falling under these contracts were contacted first, and they began to transport and station crews immediately, both in advance of the storm and shortly after restoration began.

SHEC communicated with its statewide organization, Texas Electric Cooperatives, during landfall on July 8, 2024. Six Texas electric cooperatives were able to send crews that were able to help with restoration immediately beginning on July 9, 2024. Our statewide Mutual Assistance Agreement proved to be effective. These line workers and crews are familiar with cooperative systems and the cooperative manner of business.

SHEC also contracts with schools, church camps, county fairgrounds, and businesses to use their facilities for staging areas for the material, housing, equipment, and related items.

Power was out at local and surrounding community hotels. Hotels with power were 60 miles north of SHEC's service territory or did not have any rooms available.

A local church camp was used as a base camp to house 122 mutual assistance personnel starting on July 9, 2024. Base camp contractors were able to quickly deploy self-contained camps to provide necessary housing and food for personnel in the field.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

SHEC's Director of Cooperative Services & Emergency Operations assembled available crews at the direction of the CEO and Assistant General Manager. This began on Saturday, July 6, 2024.

Once crews started to arrive, the crew lists were shared with the Assistant General Manager, Chief Engineer, and the Director of Administration.

Once Hurricane Beryl had passed and it was safe to begin field work, SHEC personnel started damage assessment.

SHEC's Director of Operations and Chief Engineer coordinated the incoming line crews and vegetation crews to be paired up with a Cooperative employee knowledgeable of the system and area.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

See SHEC Response to Staff RFI 1-87, Staff 1-90, and Staff 1-91.

Preparer: Scott Ferguson
Sponsor: Doug Turk

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:

See SHEC Response to Staff RFI 1-87.

Meeting held with Senior Staff on Friday, July 5 to discuss the possible impact of Hurricane Beryl.

Meeting held with Senior Staff on Saturday, July 6 to discuss the possible impact of Hurricane Beryl.

Meetings held with Senior Staff at 7:45 am, 10:30 am and 4:00 pm with Chief Staff on Sunday, July 7.

Emergency Board Meeting with SHEC Board of Directors was held on Sunday, July 7 at 7:30 pm.

The Director of Cooperative Services & Emergency Operations contacted mutual assistance crews by phone beginning July 6 and obtained the expected arrival time to SHEC service territory. Crew lists were provided with contact information of the General Foreman/Line Superintendent for each organization assisting during the restoration efforts of Hurricane Beryl.

Damage assessment took place beginning around 3:00 pm on July 8 after Hurricane Beryl had passed through the service territory and it was safe to begin assessment. Damage assessment was conducted by SHEC personnel, Linemen, Utility Designer, Utility Inspectors, Substation Technicians, Communication Technicians, Meter Technicians, and Engineers.

The Director of Cooperative Services & Emergency Operations provides the detailed lists of mutual assistance crews to the Director of Administration, the Assistant General Manager. and Chief Engineer.

The Director of Administration and her staff were responsible for lodging assignments and meal preparation.

The Director of Operations and Chief Engineer coordinated the in-coming, off-system line crews and vegetation crews to be paired up with a Cooperative employee.

Preparer: Scott Ferguson
Sponsor: Doug Turk