Request

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

The following response was prepared by or under the direct supervision of Allyn Giles and Mindy Carr.

Oncor's Area Managers, through the Customer Service group, are reviewing potential enhancements to customer and municipal messaging and communication channels so that more information can be provided as restoration progresses.

Request

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

Response

The following response was prepared by or under the direct supervision of Connie Piloto.

The Large Commercial and Industrial team has utilized customer feedback to increase proactive outreach to this customer base over the last year, and is reviewing those processes in connection with these storm events.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

a. Oncor has 162 call center agents and staff that rotate through three shifts 24/7, and it has 9 employees that assist with escalations. Oncor's call center provider has the ability to provide surge staffing to assist with call handling during periods of high volume. Oncor also has a program called the "Customer Engagement Response Team" where employees from various areas of the company undergo training to handle outage calls, engage with customers via live chat, and social media care. These employees assist during large scale events by handling emergency calls and customer inquiries.
b. 154 are full time contracted labor; 17 are full time employees.
c. For general inquiries, 80% of calls answered within 20 seconds is the target on a blue sky day and 90% of calls answered within 10 seconds is the target for emergency responder calls (911, fire department, police). Oncor's telephony platform allows for prioritization of calls. During large scale events, emergency calls are prioritized.
d. Oncor does not have requirements for call length, but monitors average call time for each call queue. If desired, Oncor can provide the average handle time for the call queues related to outage calls.
e. Agents undergo extensive training and each training is based on specific skills. For outage training, agents undergo one week of training that covers:
    - Electricity 101: Overview of how the electrical system is designed, identifying key pieces of equipment, and describing the Texas electric market structure
    - Market Training: outlines roles and requirements of each market participant
    - Oncor maintenance efforts to limit outages
    - Common causes of outages (wind, lightning, wildlife), their impact to Oncor's equipment, and the full effort of restoration that drives restoration times
    - Outage Lifecycle at Oncor
    - Outage Repairs Before Restoration: outlines common repairs and the work involved

- Safety Training: Identifying and handling hazardous situations; includes potential emergency situations and fire/police support
- Oncor systems: outage creation, restoration status, repair details
  Critical care, chronic conditions, critical load and business awareness outage specifics

f. Oncor's contact center is scalable with staffing and telephony needs. Oncor's telephony systems are designed to sustain 10,000 concurrent calls using agent queues, virtual hold capabilities, and Integrated Voice Response (IVR) system. In 2021-2024, Oncor worked with telecom providers and suppliers to expand call paths to the contact center, expand virtual hold options, implement a new high capacity IVR with redundancy, and increase surge staffing capabilities.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

Daily Call Volumes
July 8, 2024: 47,857
July 9, 2024: 28,503
July 10, 2024: 15,629
Daily Average: 30,663

Peak (Concurrent) Calls
July 8, 2024: 3,739
July 9, 2024: 1,801
July 10, 2024: 991

Request

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

The following response was prepared by or under the direct supervision of Mindy Carr.

As outlined in Oncor's responses to Staff RFI Set No. 1, Question Nos. 1-22 and 1-38, among others, Oncor began utilizing regular communication channels, particularly its social media pages, for informing customers and state and local leaders of potential inclement weather ahead of Hurricane Beryl's landfall and continuing throughout its impact, including flood watches, wind advisories and expected rainfall. Following the storm, these communications also included restoration updates, safety messages and photos of personnel performing local restoration work. Oncor Area Managers shared these messages with their appropriate local leaders through various channels, including phone calls, texts, emails, primarily based on the communication preferences of each local official. Local leaders regularly contacted by Area Managers during Hurricane Beryl include, but are not limited to, city managers, city council members, staff from various city departments (public works, transportation, fire department, etc.), mayors, county judges, county commissioners, and more. Oncor Area Managers also utilized social media channels to echo Oncor messaging to all of their local contacts, including area residents. On July 9, as the storm moved through Oncor's Impacted Area (in particular the Lufkin/Nacogdoches area), Oncor's Region Manager was interview by local news media about restoration activities, as well as information the public needs for reporting outages and mutual assistance efforts. Oncor's Regulatory Affairs group notified the Public Utility Commission and the Office of Public Utility Counsel of a significant interruption at 3:22pm on July 8th via email. Oncor Regulatory Affairs continued providing morning, afternoon, and evening restoration updates each day with the final update provided at 10:38pm on July 10th. These updates included information on the affected locations, approximate number of customers affected, and estimated time of restoration. Oncor also submitted a summary report which can be found on the Commission's Interchange site, Project No. 56058, Item No. 22 (https://interchange.puc.texas.gov/Documents/56058_22_1411572.PDF).

Oncor's Governmental Affairs team communicated with key state leaders and legislative offices, including the Governor's staff, Lt. Governor's staff, House Speaker's staff, Senate Business and Commerce Committee Chair and staff, House State Affairs Committee Chair and staff, beginning on Monday, July 8, 2024, via text messages. Updates were sent early morning, mid-day and early evening that day regarding restoration efforts in the Impacted Area. In the days that followed, text messages continued to these offices regarding mutual assistance and mobile generation use in those areas. Oncor's Governmental Affairs team also reposted or shared updates from Oncor's Communications team via social media channels, specifically using the #TXLEGE hashtag on X.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

All calls placed to Oncor's call center are recorded, and records are retained for no less than 5 years.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

All calls placed to Oncor's call center are recorded.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

The following text to voice message was posted on Oncor's Integrated Voice Response (IVR) system for areas impacted by Hurricane Beryl.
"Your area has been impacted by landfall from Hurricane Beryl. There is damage to Oncor lines and poles. Teams must remove trees and limbs, then repair the lines and poles in order to restore power. Safety for our teams and the public remains Oncor's number one priority. We appreciate your patience. Please continue to hear more about your location."
Oncor's system uses a live "text to speech" application found in newer generation tools and does not require the uploading of an audio file. Oncor does not have an audio copy of this message. Creating an audio recording of what was playing on July 9, 2024 would require putting the message in live production to create a recording, which would cause customers to hear an inapplicable, out-of-date message, and likely cause confusion.

Request

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

The following response was prepared by or under the direct supervision of Ajeet Baranwal.

a. April 2012
b. The most recent software update for outage map/tracker happened on 8/21/2024. Prior to 07/08/2024, the most recent software update happened on 06/11/2024.
c. Oncor's outage map/tracker was functioning as intended during the Derecho Event and Hurricane Beryl.
d. Oncor's outage map/tracker is mobile friendly.
e. Oncor's outage map/tracker supports English and Spanish.
f. Oncor's outage map/tracker captures premise/meter data grouped at an event level (device level).
g. Oncor's outage map/tracker is cloud-based.
h. Oncor's outage map/tracker is based on cloud technology designed to scale based on the number of users needing to access it.
i. Yes, Oncor has internal redundancy to generate data feed for the outage map/tracker. The redundancy was not activated in response to Hurricane Beryl.
j. Oncor's current vendor performed stress testing in Q1 2024.

Request

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

The following response was prepared by or under the direct supervision of Ajeet Baranwal.

Oncor does not track daily peak use of its outage tracker. The below daily total user data is for the entire Oncor service area, as Oncor cannot readily isolate users in a certain geographic area and Oncor does not serve the greater Houston area.

5/16/2024	130,046
5/17/2024	95,351

Request

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

Response

The following response was prepared by or under the direct supervision of Ajeet Baranwal.

Oncor does not track daily peak use of its outage tracker. The below daily total user data is for the entire Oncor service area, as Oncor cannot readily isolate users in the Impacted Area.

7/8/2024	313,443
7/9/2024	199,956
7/10/2024	115,091

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

In the event Oncor's outage map were to be offline, Oncor would utilize a messaging banner on the outage map webpage, if possible, and on Oncor.com. Updates would also be shared across our social media platforms, which are monitored and staffed by live agents 24/7 in order to respond to individual customers as they report or request information on current outages. The My Oncor Alerts messaging platform, MyOncor App and the Integrated Voice Response (IVR) system would also be utilized to provide area specific messaging to all registered customers.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

No. Oncor's outage tracker remained online throughout both events.

Request

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

The following response was prepared by or under the direct supervision of Daniel Hall.

Please see Attachment 1 to this response for the breakdown of smart meters for each county in the Oncor service territory that is in the Impacted Area. Detailed are the number of total customers, the number of customers with smart meters and the percentage of total customers that have smart meters.

ATTACHMENT:

ATTACHMENT 1 - Breakdown of smart meters for each county in the Oncor Service territory in the Impacted Area, 1 page

COUNTY	Total Customers	Total Smart Meter Customers	Percentage Smart Meter
ANDERSON	17171	17132	99.773%
ANGELINA	41835	41775	99.857%
CHEROKEE	16466	16435	99.812%
FREESTONE	7677	7644	99.570%
HENDERSON	29462	29407	99.813%
HOUSTON	6172	6149	99.627%
LEON	5450	5426	99.560%
NACOGDOCHES	23672	23649	99.903%
RED RIVER	2347	2332	99.361%
RUSK	1611	1607	99.752%
SMITH	107443	107282	99.850%
TRINITY	1	1	100.000%
VAN ZANDT	13161	13122	99.704%
WOOD	150	148	98.667%

Request

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

Response

The following response was prepared by or under the direct supervision of Charles Elk.

Not all local governments within Oncor's service territory were located within the Impacted Area. However, those local governments in the Impacted Area (i.e., the East Texas portion of Oncor's service territory) that were within the anticipated path of the storm were initially contacted as follows.

Oncor Area Managers in the East Texas area started making contact with local government leaders on Sunday, July 7, 2024, the day before Hurricane Beryl made landfall. The Area Managers made phone calls to local government officials to inform them that Oncor had staff available for restoration and prepared for weather impacts to the East Texas area. Oncor Area Managers also utilized social media channels to echo messaging from Oncor's Communication Team to the relevant local governments about pre-storm preparation, restoration activities, and safety around power lines.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

In Oncor's EOP, which can be found on the Commission's Interchange site, Project No. 53385, Item No. 2097 (https://interchange.puc.texas.gov/Documents/53385_2097_1375649.PDF), Section 2.9 "Procedures for communicating with Critical Load Customers directly served by Oncor during and emergency" provides details on how Oncor communicates with Critical Load customers during an emergency. This process also extends to customers designated as critical care or chronic care. Customers that are enrolled in the My Oncor Alerts program receive outage notifications and important updates related to an outage event. In the case of Hurricane Beryl, weather impacts were downgraded to a tropical storm with rain and potential flooding being the primary anticipated impacts as the weather system moved into Oncor's eastern service area.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

No proactive contact was made with such facilities in advance of Hurricane Beryl. It was expected to be downgraded to a tropical storm with rain and possible flooding to impact the eastern portions of the Oncor service area.

Request

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

The following response was prepared by or under the direct supervision of Allyn Giles.

Customers designated as critical care, chronic care, and critical load are provided confirmation of their designation when their premise is identified by Oncor's Integrated Voice Response (IVR) system, digital virtual assistant (chat via website or text message) or via agent. Customers with these designations are provided an opportunity to speak with an agent and are placed in the call or live chat queue if there is agent availability.
If a storm creates a multiday restoration event, critical care, chronic care, and critical load facilities are notified to anticipate that restoration of power could take multiple days. How they are contacted is contingent upon the contact information available to Oncor. For landline phone numbers, customers are sent a broadcast voicemail. For cell phone numbers, customers are sent a text message.
If load shed is anticipated or occurs, Oncor sends messages to critical care, chronic care and critical load customers when load shed is possible (EEA 2), when load shed occurs (EEA 3), and at the completion of load shed.

Request

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

Response

The following response was prepared by or under the direct supervision of Collin Martin.

Oncor maintains situational awareness of interconnected power generation companies through its real-time supervisory control and data acquisition (SCADA) system which communicates real-time information about the status, operating parameters, and capabilities of generation resources. Additionally, Oncor directly communicates with generation resources that are interconnected to the Oncor transmission system on an as-needed basis. These communications include, but are not limited to, reactive adjustments required to reliably operate the transmission system within established system operating voltage limits, notifications and coordination activities for planned and unplanned transmission facility or generation facility outages, and periodic communication system checks to verify functionality.

In the event of a transmission facility outage that impacts a generation resource, Oncor communicates with ERCOT and the generation resource to provide notification of the event and then coordinates on any further actions that may be required to reliably operate the system or restore service. Oncor did not experience any transmission facility outages as result of Hurricane Beryl that interrupted service to a generation resource interconnected to the Oncor transmission system. Therefore, Oncor followed its typical communication practices with generation companies during that event.

Request

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 following response was prepared by or under the direct supervision of Keith Hull.

Yes, Oncor has an Emergency Restoration Plan ("ERP"). Oncor's ERP is the voluminous and confidential response to Staff RFI Set No. 1, Question No. 1-10 and will be made available to Commission Staff on the Oncor FTP site. Oncor discusses certain components of the ERP in Oncor's 2024 PUC EOP on pp. 4-13 of Section 2, pp. 13-14 of Section 3, pp.14-16 of Section 4, and pp.16-18 of Section 5.

Request

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

The following response was prepared by or under the direct supervision of Keith Hull.

Please reference p. 1 of Section 1 (titled "Plan Description") of Oncor's ERP, which is the voluminous and confidential material in Oncor's response to Staff RFI Set No. 1, Question No. 1-10, which will be made available to Commission Staff on the Oncor FTP site. Page 1 of Section 1 describes Oncor's customer prioritization for service restoration. Oncor's target timelines for restoration can be found in the Incident Command System Activation tables on pp. 2-3 of Section 1 (titled "Plan Description") of Oncor's ERP.

An overview of Oncor's storm strategy is outlined in the Appendix of the Emergency Restoration Plan (p. 130 of pdf file). While mainline restoration and priority switching are a focus to get the greatest number of customers back on in the shortest amount of time, the priority of customer restoration described on p. 1 of Section 1 (titled "Plan Description" under the subheading "Plan Implementation") of the Emergency Restoration Plan takes precedence over or happens in tandem with mainline restoration to ensure the safety of our customers first and foremost.

Request

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

The following response was prepared by or under the direct supervision of Keith Hull.

Oncor did not update its Emergency Restoration Plan or PUC EOP during or in the aftermath of the May 2024 Derecho or Hurricane Beryl. These plans are reviewed and revised annually as part of Oncor's Emergency Preparedness and Business Continuity program.

Request

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

The following response was prepared by or under the direct supervision of Keith Hull.

Oncor does not track resources by county. Oncor's resources are tracked in various methods and can be quantified in relation to the Service Center, District, Region, or device assigned during storm restoration. Resources are moved frequently throughout the duration of storm response to restore customers as safely and quickly as possible.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

See Native File 1, tab 1-47 in Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for county-by-county daily summary of percent of customers interrupted due to forced outages caused by Hurricane Beryl for July 8-10, 2024. By July 10, 2024, at approximately 10:00 p.m., all Oncor customers who could safely receive power and had experienced outages due to Hurricane Beryl had their service restored.

Request

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

Response

The following response was prepared by or under the direct supervision of Allyn Giles.

Calls may be received through Oncor's Integrated Voice Response (IVR) system or contact center agents. The IVR and agents are able to create outage tickets, provide status updates and provide any noted messaging related to restoration activities in the area. Outage tickets that are created flow into Oncor's Outage Management System. Outage tickets are reviewed, prioritized and dispatched by distribution personnel.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

As outlined in Oncor's response to Staff RFI Set No. 1, Question No. 1-28, Oncor Area Managers are responsible for sharing information on recovery resources and updates with local and state leaders, including local agencies such as regional TDEM representatives. During and after Hurricane Beryl impacts, Oncor's Area Manager for the Lufkin and surrounding region coordinated with the area's local TDEM representative multiple times to discuss outage impacts and restoration efforts.

Oncor's Regulatory Affairs group notified the Public Utility Commission (PUC) and the Office of Public Utility Counsel of a significant interruption at 3:22pm on July 8th via email. Oncor Regulatory Affairs continued providing morning, afternoon, and evening restoration updates each day with the final update provided at 10:38pm on July 10th. These updates included information on the affected locations, approximate number of customers affected, and estimated time of restoration. Oncor also submitted a summary report which can be found on the Commission's Interchange site, Project No. 56058, Item No. 22 (https://interchange.puc.texas.gov/Documents/56058_22_1411572.PDF).

Request

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

The following response was prepared by or under the direct supervision of Keith Hull.

Oncor did not encounter any major challenges to restoring service to customers before, during, or after Hurricane Beryl. Minor challenges encountered during this event were due to boating equipment needed to restore service to customers in East Texas due to severe flooding; however, this issue is not abnormal when flooding takes place in this area. Specialized equipment was available to restore power quickly to affected customers.

Request

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

The following response was prepared by or under the direct supervision of Keith Hull.

Oncor reviews its response to every major event for potential opportunities for improvement. Oncor also reviews – through its participation in industry organizations – the responses to other major events across the US for lessons learned and best practices.

With respect to Hurricane Beryl, the event underscores the importance of communication to customers and all stakeholders. Oncor is reviewing all methods and channels of communication for potential areas of improvement.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Yes, Oncor has employed the National Incident Management System since 2007.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Yes, Oncor's emergency response personnel are trained on Incident Command System processes, and verification of that training is submitted each year in Oncor's PUC EOP filing which can be found on the Commission's Interchange site, Project No. 53385, Item No. 2097 (https://interchange.puc.texas.gov/Documents/53385_2097_1375649.PDF).

Request

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;
c. When you decide to replace the distribution pole.

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

(a) In-service distribution poles inspected through Oncor's pole inspection program are evaluated using a specification developed based on the American Wood Protection Association (AWPA) guidelines for a Pole Maintenance Program. The target area of Oncor's distribution pole inspection program is determined on an annual basis, considering various risk factors, to identify poles with elevated likelihood and consequence of failure. Risk factors considered include time since the last inspection, pole vintage, failure history in the area, and customer counts. High-impact poles on each feeder are targeted to have a 10-15 year cycle. High-impact poles include those on the feeder mainline, where a pole failure would result in an outage for all customers served by that feeder. The Oncor System Resiliency Plan (SRP), filed with the PUCT under Docket No. 56545, would enhance this program by assessing poles to meet a more resilient requirement and addressing a higher number of poles. Further enhancements of this program outlined in the SRP include additional activities such as lightning protection improvements and crossarm hardening.

In addition to Oncor's dedicated pole inspection program, Oncor employees perform pole and other facility inspections throughout the day as part of their normally scheduled duties. They are trained to watch for potential hazards and report system issues that may need correcting. Through this process, Oncor identifies poles, insulators, and components for replacement. Oncor's vegetation management and line contractors are also instructed to report any pole conditions believed to be potential issues for remediation.

(b) An Oncor internal specification developed based on AWPA guidelines provides instructions for evaluating poles through visual means, sounding, and a boring inspection. Examples of conditions to be inspected include, but are not limited to: woodpecker damage, lightning damage, fire damage, mechanical damage, severity of ant and/or termite damage, split tops, severely weathered or decayed tops, external decay, internal decay, other types of damage to the pole (including mechanical damage), hole clusters and/or large holes allowing hardware movement, and visible shell rot.

(c) A pole is targeted to be addressed if it is determined to be inadequate through the inspection process, either due to excessive strength loss below a threshold as established by the applicable National Electric Safety Code (NESC) guidelines or a

significant defect such as those noted above in response to subpart (b). The pole may be replaced or reinforced to achieve the required structural strength. The Oncor enhanced pole inspection guidelines adhere to the NESC requirement where the threshold for failure is 75% of design strength, and the remediations are required to bring the pole strength to at least the design strength levels.

Request

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

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

Single phase distribution lines have a minimum ROW width of 20 feet (10 feet on each side of the centerline). Multi-phase lines have a minimum ROW width of 30 feet (15 feet on each side of the centerline).

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

(a) See Native File 1, tab 1-56-Beryl in Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for: quantity and percentage of each installed pole type, quantity and percentage of pole failures by pole type due to Hurricane Beryl, primary cause of failure for each pole type due to Hurricane Beryl, primary point of pole failure, crossarm failures and information on feeders being upgraded to higher NESC load cases.

Similarly, tab 1-56-Derecho of the same attachment provides the same information relating to the May 2024 Derecho Event.

(b) See Oncor's response to subpart (a) above.

(c) See Oncor's response to subpart (a) above.

(d) See Oncor's response to subpart (a) above.

(e) Oncor, as well as Oncor's predecessor companies, designed and constructed distribution facilities to meet the applicable requirements of the NESC at the time of construction. The NESC code handbook catalogues the changes and impact of changes regarding strength and load factors. Oncor distribution facilities are often constructed under multiple applicable NESC codes, depending on the sequence of construction of the feeder due to expansion of the distribution system and load growth over time. See Oncor's response to subpart (a) above for each feeder's pole age information and reference NESC change highlights below for applicable requirements during the time of construction.

The strength and loading requirements contained within the NESC have changed over time; however, for ease of reference, significant changes associated with particular NESC editions are noted below:

Key Highlights:

1915 - Publication of the Preliminary Edition of the NESC; first edition to include strength requirements.
1916 - 2nd Edition of the NESC; Introduces NESC 250B District Loading. Heavy district loading is 0.5" of ice, and 8psf wind. Medium and light weather criteria are a specified fraction of heavy district loading.
1926/1927 - Part 2 Update, updates NESC 250B district loading. Medium district loading (0.25" ice, 8psf wind) and light district loading (0" ice, 12 psf wind) are now independently defined.
1941 - Reduces weather loading criteria for NESC 250B, but adds NESC constant "k" for heavy, medium, and light loading to give similar conductor loading. This is essentially the same criteria that exists today.
1977 - Addition of NESC 250C - Extreme Wind
2007 - Addition of NESC 250D - Concurrent Ice and Wind
2023 - Updated 250C wind maps to 50 year MRI for Grade C construction and 100 year MRI for Grade B Construction

Currently Oncor builds majority its distribution system (facilities under 60 feet) based on loading conditions set forth in NESC Rule 250B. Starting in 2025, Oncor's design standards will become more stringent by incorporating additional loading conditions outlined in the NESC Rule 250C (Extreme Wind) and NESC Rule 250D (Concurrent Ice & Wind). The NESC only requires that the loading criteria described within Rule 250C and Rule 250D be considered for facilities that exceed 60 feet above the ground, but Oncor will begin applying these to all distribution poles newly constructed or rebuilt going forward.

(f) The Oncor System Resiliency Plan (SRP) includes an Overhead System Resiliency & Modernization measure with a program to enhance the structural capacity of overhead facilities on the distribution system. This program will ensure distribution facilities in high-impact areas meet higher wind and ice loading standards as described above in response to subpart (e). Native File 1, tabs 1-56-Beryl and 1-56-Derecho in Oncor's response to Staff RFI Set No. 1, Question No. 1-101 includes a list of the feeders with sections currently targeted for upgrades to meet higher wind loading standards. Note that the Oncor SRP investment is prioritized to mitigate wildfire risk, address historically underperforming areas, and enhance the distribution system's resiliency based on projected customer benefits. The current target list of feeders is based on a snapshot of a dynamic grid. It could change as Oncor continually leverages its prioritization methodology to identify the best opportunities for the SRP program implementation.

(g) The identified rebuilds are planned to commence and get completed within the timeframe of the Oncor SRP, which is proposed to be fully implemented prior to year-end 2028. These feeders will be prioritized based on the approach discussed above in response to subpart (f).

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The following information is provided in accordance with the agreement of the requesting parting in lieu of the requested information. The information, as agreed to be provided, limits the request to feeders in the Impacted Area or Derecho affected counties.

(a) See Native File 1, tab 1-57 from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for a list of Oncor feeders with poles taller than 60 feet.

(b) There were no Oncor poles over 60 feet tall that were damaged due to the May 2024 Derecho or Hurricane Beryl. See Native File 1, tab 1-56-Beryl and 1-56-Derecho from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for damage experienced on these lines due to either the May 2024 Derecho or Hurricane Beryl.

(c) Oncor's distribution lines are currently, and have historically been, designed to meet or exceed the applicable standards set by the governing NESC at the time of construction. Poles taller than 60 feet have been designed to meet NESC Rule 250-C (extreme wind) since its introduction into the 1977 code and Rule 250-D (extreme ice with concurrent wind) since its introduction into the 2007 code.

Request

Please explain your standard for distribution pole embedment. In your response, please explain if this standard has changed in the last 10 years.

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

Distribution wood pole and wood pole equivalent (WPE) embedment depths are determined through an empirically derived formula that incorporates structural loads, pole length and soil type.

Standard concrete poles have foundation embedment ranging from 12-28 ft., and foundation diameters ranging from 3-4 ft.; the foundation diameter is primarily driven by the butt size of the pole, with a minimum 6" of cover to allow pole installation and concrete backfill placement. The foundation depth for standard concrete poles was determined using an internally developed tool that considers allowable soil strength, structure loads, and pole diameter.

Non-WPE distribution steel pole foundations are custom designed, using soil borings at or near the structure location, and leverage either internal foundation calculation tools, or third party foundation design software such as Moment Foundation Analysis & Design (MFAD) or LPile.

The standard wood pole and WPE embedment depths have not changed over the last 10 years. Standard concrete poles were added to Oncor's Distribution Standards in 2018, but the foundation design philosophy for those poles has not changed in the past 10 years.

Request

Please provide the standard distribution pole size and class for both single and three phase lines on your system within the Impacted Area.

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

Single phase lines are typically 35-40 ft. poles. Typical pole classes are 3 and 5.
Three phase lines are typically 40-45 ft. poles. Typical pole classes are 1, 3 and 5.

The full list of Oncor Distribution current standard pole heights and classes are as follows:
Classes: H1, 1, 3, and 5
Heights: 35, 40, 45, 50, 55, 60, 65, and 70 ft.
See Attachment 1 for a breakdown of Pole Classes and Heights for feeders in the Impacted Area (only showing data if greater than 1% of total).

ATTACHMENT:

ATTACHMENT 1 - Staff_RFI_1-59_Pole_Data, Dated September 2, 1 page

3 Phase		
Pole Classes	1	47.5%
	3	43.1%
	5	2.2%
Pole Heights	35	7.95%
	40	35.48%
	45	39.43%
	50	9.58%
	55	2.84%
	60	1.35%
Single Phase		
Pole Classes	3	26.6%
	5	66.9%
Pole Heights	35	28.6%
	40	57.6%
	45	8.5%

Request

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

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

Please refer to Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e) for the historical construction strength and overload factors.

Request

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

The following response was prepared by or under the direct supervision of Robel Luiseged.

Oncor stays compliant with updates to NESC, and in the last two years there was an update to the NESC. The 2023 NESC updated the wind load factor for Rule 250C for Grade C (At Crossings) and Grade C (Elsewhere) from 0.87 to 1.0. Oncor adopted these updates when they became effective.

Oncor will also update its design standards in 2025 as discussed in response to Staff RFI Set No. 1, Question No. 1-56(e).

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

(a) These lines were designed to the corresponding NESC at the time of construction. Please refer to Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e) for more information.
(b) See Native File 1, tabs 1-62.b-Beryl and 1-62.b-Derecho from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for the types of poles installed on feeders in the impacted area that did not lose power during Hurricane Beryl and the May 2024 Derecho.
(c) Single phase lines have a ROW width of 20 feet (10 feet on each side of the centerline). Multi-phase lines have a ROW width of 30 feet (15 feet on each side of the centerline).
(d) These lines would be designed to the corresponding NESC applicable at the time of construction. Please refer to Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e).
(e) There were no distribution lines which experienced damage but remained standing and continued to provide service.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

See Native File 1, tab 1-63 from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for the by feeder number of distribution poles installed by type, their percentage of the total and pole age information. See Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e) for NESC change highlights and applicable requirements during the time of construction.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The total number of distribution poles that failed due to the May 2024 Derecho was 9 poles. Of these, 4 poles failed due to vegetation in right of way and 5 poles failed due to wind. See Native File 1, tab 1-64 from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for detailed information including pole age. See Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e) for NESC change highlights and applicable requirements during the time of construction.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The total number of distribution poles that failed due to Hurricane Beryl was 116 poles. Of these, 41 poles failed due to vegetation in right of way, 33 poles failed due to vegetation out of right of way, and 42 poles failed due to wind. See Native File 1, tab 1-65 from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for detailed information including pole age. See Oncor's response to Staff RFI Set No. 1, Question No. 1-56(e) for NESC change highlights and applicable requirements during the time of construction.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

Oncor has inspection records for distribution poles available going back to 2005. Even though older records are not available, the Oncor distribution pole inspection program has been active for decades prior to 2005. Of the pole failures described in Staff RFI Set No. 1, Question Nos. 1-64 and 1-65, four poles have maintenance inspection records available. Refer to Native File 1, tab 1-66 in Staff RFI Set No. 1, Question No. 1-101, for information on these poles.

Oncor's distribution pole inspection program is prioritized based on the approach described in response to Staff RFI Set No. 1, Question No. 1-54(a). See Native File 1, tabs 1-64 and 1-65 in Oncor's response to Staff RFI Set No. 1, Question No. 1-101 herein for vintages of the failed poles.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

Oncor does not have distribution feeders within what it considers to be hurricane prone areas. Utilities and the Commission should strongly consider incorporating NESC Rules 250C and 250D into their design standards for overhead distribution facilities regardless of structure height as NESC Rule 250C, as well as NESC Rule 250D, are based on historical weather conditions, and are reasonably likely to occur in the future. As described within Oncor's SRP filing, Oncor's overhead distribution standards will incorporate loading conditions described by NESC Rule 250C, and NESC Rule 250D, as part of the design process for future overhead distribution projects starting in 2025.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

(a) Oncor evaluates the condition, reliability, and resilience of the transmission system on an ongoing basis.

(b) The condition of the overhead transmission system is regularly assessed through aerial patrols (annually), ground based patrols (every 2-5 years), and focused inspections of wood poles (every 8-12 years). Observations collected through these programs are recorded within OTIS, Oncor Transmission's GIS application. Integrating electronic inspection and patrol results in this manner allows relevant information (e.g., pictures, detailed notes, inspection dates) to be easily accessed for future reference, supports prioritization of necessary remediation efforts, and ensures open observations are tracked to a final resolution.
Unplanned outages that occur on the transmission system are documented and reviewed on a daily basis. Regular analysis of this data assists in the identification of assets that have experienced poor performance; the failure modes and mechanisms (e.g., wood cross arm failures due to age related strength loss) associated with these outages are leveraged to identify other facilities that are likely to experience similar performance challenges in the future.

(c) A variety of factors - circuit condition, historical performance, original design criteria, location, etc. - are considered as part of evaluating circuits for future hardening activities. While at least a portion of many circuits may be suitable for hardening (e.g., major highway crossings), legacy circuits, particularly those supported by wood structures and components, are typically the type of transmission lines that are prioritized for hardening activities.

It's important to note the level of organic hardening that regularly occurs on the Oncor Transmission System as existing overhead facilities, often legacy circuits supported by wood structures, are reconductored or rebuilt to support the consistent load growth within ERCOT. For example, during the 2023 calendar year approximately 390 miles of transmission line was rebuilt or reconductored.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

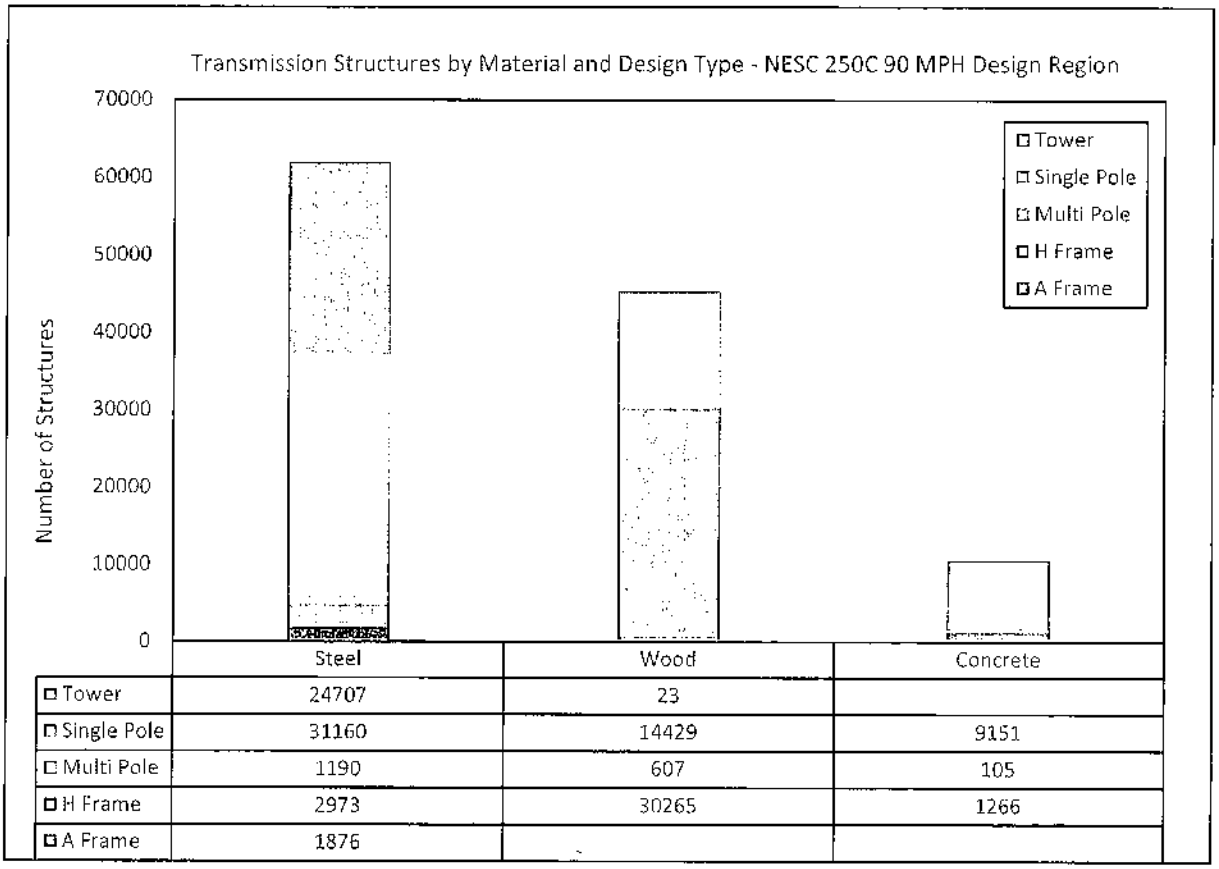
As of May 2024, a total of 117,899 transmission structures were supporting circuits in service on the Oncor transmission system.

Nearly all Oncor transmission structures are located in a region governed by NESC standards that require withstanding a 3 second gust wind speed of 90 MPH, according to Figure 250-2(a) within Rule 250C of the 2023 National Electric Safety Code (NESC).
A small number of Oncor's transmission structures are located between the 90 MPH and 95 MPH contour lines that are shown on Figure 250-2(a); linearly interpolating between these two values, as permitted by the second footnote associated with Figure 250-2(a), places this small group of structures in a region with a 3 second gust wind speed of approximately 91 MPH.

A detailed assessment of these structures by material type, structure design, and NESC Rule 250C wind loading criteria is shown in Figure 1 and Figure 2 included in Attachment 1.

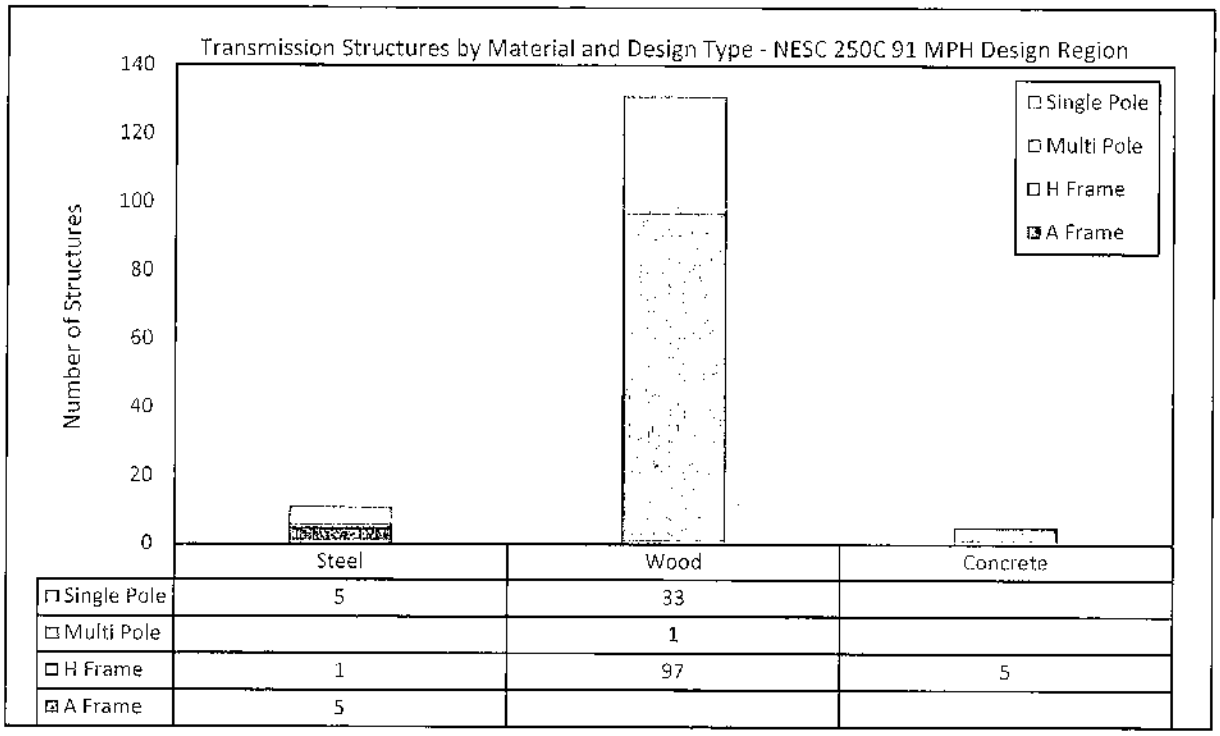
ATTACHMENT:

ATTACHMENT 1 - Staff_RFI_1-69_Figures, Dated September 2, 2 Pages



	Steel	Wood	Concrete
Tower	24707	23	
Single Pole	31160	14429	9151
Multi Pole	1190	607	105
H Frame	2973	30265	1266
A Frame	1876		

Figure 1 - Transmission structures by material and design type within 90 MPH Design Region



	Steel	Wood	Concrete
Single Pole	5	33	
Multi Pole		1	
H Frame	1	97	5
A Frame	5		

Figure 2 - Transmission structures by material and design type within 91 MPH design region

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

No Oncor transmission structure failures occurred due to the May 2024 Derecho.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

No Oncor transmission structure failures occurred due to Hurricane Beryl.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

Not applicable. No Oncor transmission structure failures occurred due to the Derecho Event or Hurricane Beryl.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

a. As of July 2024, the transmission vegetation management (VM) staff consists of six full-time Oncor employees, 14 contracted utility foresters, 62 contracted line clearance crews, and four contracted herbicide application crews.

   The distribution VM staff consists of eight full-time Oncor employees, 48 contracted utility foresters and notification specialists, 428 contracted line clearance crews, and six contracted herbicide application crews.

   Additionally, there are five full-time Oncor employees and three contracted employees in VM Business Operations that support both transmission and distribution VM

b. See tables showing average annual staff size over the last 5 years.

Annual Average Oncor VM Employees		
Year	Transmission	Distribution
2019	6	8
2020	6	8
2021	6	8
2022	6	8
2023	6	8
2024	6	8

Annual Average VM Contract Forester/ Notification Specialist Employees		
Year	Transmission	Distribution
2019	13	49
2020	13	47
2021	14	43
2022	14	44
2023	14	54
2024	14	49

Annual Average VM Contract Crews				
Year	Transmission		Distribution	
	Line Clearance	Herbicide	Line Clearance	Herbicide
2019	44	5	254	5
2020	47	3	255	5
2021	53	5	252	4
2022	59	4	293	6
2023	66	6	310	4
2024	66	3	391	4

Annual Average VM Business Operations Employees		
Year	Oncor	Contractors
2019	4	4
2020	4	4
2021	4	4
2022	4	4
2023	5	3
2024	5	3

c. Staffing levels for the last five years have been based on projected work load for the various VM programs. Because the projected work load can vary from year to year, the number of contracted resources can also vary from year to year.

d. Oncor does not utilize in-house VM crews and therefore cannot provide the requested cost difference.

e. Oncor employs degreed foresters and International Society of Arboriculture (ISA) Certified Arborists as part of its full-time Oncor employee complement. In addition, certain contracted utility forester positions that Oncor utilizes are also required to maintain the ISA Certified Arborist credential. Lastly, some contracted line clearance providers also have employees who maintain their ISA Certified Arborist credential.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Transmission vegetation minimum clearances by voltage at the time of pruning are as follows:
69 kV--15 feet,
138 kV--15 feet, and
345 kV--20 feet.

Distribution vegetation minimum clearances at the time of pruning are as follows:
Primary voltage conductors – approximately ten (10) feet or greater,
Non-insulated secondary conductors – approximately seven (7) feet or greater, and
Insulated secondary and neutral conductors – approximately three (3) feet or greater.

Minimum vegetation clearances were derived from Oncor's understanding of industry standards, tree species composition, and re-growth rates found across its territory informed by previously performed tree re-growth studies. Vegetation clearance specifications are applied uniformly across the system, while periodicity of vegetation maintenance is variable due to the wide-ranging ecoregions that span the Oncor service territory.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Oncor does not typically allow these high impact segments to be outside of their normal cycle period, and has incorporated methods to proactively identify problematic vegetation between their cycle period.

Oncor's East Texas Hazard Tree program, further described in Oncor's response to Staff RFI Set No. 1, Question No. 1-84, is a proactive approach to identifying problematic vegetation between pruning cycles in higher risk areas.

Also, Oncor VM Transmission contract personnel perform annual vegetation inspections of the bulk electric system and identify problematic vegetation between vegetation cycle work.

Additionally, Oncor has hundreds of field personnel who are in the field every day and also help with identifying and problematic vegetation between pruning cycles.

Request

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

Response

The following response was prepared by or under the direct supervision of Paul Folger.

The following information is provided in accordance with the agreement of the requesting party in lieu of the requested information. The information, as agreed to be provided, is limited to inspections/reports on facilities in the Impacted Area.

The information requested is voluminous and will be made available on the Oncor FTP site upon request. An index of the voluminous information is included in Attachment 1.

ATTACHMENT:

ATTACHMENT 1 - Voluminous Index, 1 page

VOLUMINOUS INDEX

1. Impacted Area VM Inspection Logs, 21 pages
2. Impacted Area VM Field Reports, 418 pages

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Oncor does not have any assets within what it considers to be hurricane prone areas and therefore does not proactively address vegetation in those areas ahead of hurricane season.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The following information is provided in accordance with the agreement of the requesting party in lieu of the requested information. The information, as agreed to be provided, is limited to the circuits with outages in the Impacted Area due to Hurricane Beryl or the May 2024 Derecho.

(a) See Native File 1, tab 1-78-Dist and tab 1-78-Trans from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for the name of circuits, date, time and duration of outages, the voltages of the circuits, and the cause of the outage.

(b) See Oncor's response to subpart (a) above.

(c) See Oncor's response to subpart (a) above.

(d) See Oncor's response to subpart (a) above.

(e) See Oncor's response to subpart (a) above.

Oncor does not classify distribution vegetation outages into the NERC categories. However, trees in right of way could be equivalent to Grow-In and trees out of right of way could be equivalent to Fall-In.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The following information is provided in accordance with the agreement of the requesting party in lieu of the requested information. The information, as agreed to be provided, is limited to the circuits with outages in the Impacted Area due to Hurricane Beryl or the May 2024 Derecho.

The information requested is confidential. An index of the confidential information is included in Attachment 1.

ATTACHMENT:

ATTACHMENT 1 – Confidential Index, 1 page

CONFIDENTIAL INDEX

1. PUCT_RFI_VM_MAPS.ZIP, Dated September 3, 96 pages

Request

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

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

For distribution, 48.3% of the forced interruptions in the Impacted Area were related to vegetation issues in Derecho and Beryl. For transmission, 100% (5 total events) of the forced interruptions in the Impacted Area that occurred during Hurricane Beryl were initiated by Off-ROW tree fall ins. One other outage occurred during Hurricane Beryl on the Transmission system outside of the Impacted area due to a detached ground wire not related to vegetation. No transmission outages were associated with the May 2024 Derecho.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

Oncor implements various programs to improve the reliability and resiliency performance of its distribution system, as outlined in the Oncor Storm Hardening Plan. While vegetation risk cannot be entirely eliminated, it is mitigated by a proactive pruning and tree risk program. Oncor has an existing program, with investments exceeding $225M over the past three years, to programmatically perform vegetation management work on mainline and select laterals to include line clearance pruning, herbicide application, and hazard tree mitigation. Through this program, Oncor annually addresses approximately 3,100 miles of right of way tree pruning. In addition, through the proposed SRP, Oncor plans to more than double the current distribution vegetation management work scope to target an additional 7,000 miles across the distribution system on average each year and leverage technology to assess risk better.

The infrastructure issues are to be addressed through the existing pole inspection program and enhancements of this program as outlined in response to Staff RFI Set No. 1, Question No. 1-54(a). Additionally, the Structural Capacity Enhancement Program within the Oncor SRP aims to rebuild targeted distribution facilities to meet the more stringent design requirements discussed in response to Staff RFI Set No. 1, Question No. 1-56(e).

Request

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

Response

The following response was prepared by or under the direct supervision of Robel Lulseged.

Every year Oncor updates its distribution Vegetation Management Plan. Its last substantial review, augmentation or modification before July 8, 2024 occurred on December 18, 2023.

Prior to July 8, 2024, Oncor's Transmission Vegetation Management Program (TVMP) was last reviewed and updated in February 2024.

Request

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

The following response was prepared by or under the direct supervision of Robel Lulseged.

The following information is provided in accordance with the agreement of the requesting party in lieu of the requested information. The information, as agreed to be provided, is limited to the circuits with outages in the Impacted Area due to Hurricane Beryl or the May 2024 Derecho.

For distribution, 28.7% of vegetation-related outages were caused by trees or branches outside of the right of way (ROW). See Native File 1, tab 1-83 from Oncor's response to Staff RFI Set No. 1, Question No. 1-101 for a county-by-county breakdown of events.

For transmission, 100% of the five vegetation-related force interruptions that occurred during Hurricane Beryl in the Impacted Area were initiated by Off-ROW trees, with one in Leon County, one in Angelina County, and three in Nacogdoches County. No transmission outages were associated with the May 2024 Derecho.

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

While Oncor evaluates and mitigates hazard trees across its system, it has a specific program for the heavily wooded, eastern part of its service area, encompassing the Athens, Jacksonville, Lufkin, Nacogdoches, Palestine, and Tyler areas. Oncor's East Texas Hazard Tree Program addresses trees that are dead, dying, diseased, or defective and pose an imminent threat to Oncor's facilities. Circuits are patrolled, and trees that are dead, dying, diseased, defective, or otherwise determined to be an imminent threat to Oncor facilities (including those off of Oncor's right-of-way) are felled or removed when possible.

In addition to the Oncor's East Texas Hazard Tree Program, Oncor's VM Transmission contract foresters perform annual ground-based, tree risk assessments on all 345 kV lines to reduce Off-ROW tree fall-ins.

Also, Oncor provides tree-planting guidelines through our "Know Before You Grow" brochure. Vegetation Management distributes these brochures at events and through various activities with the property owners and customers throughout the year. This brochure is available on-line at:
https://www.oncor.com/content/dam/oncorwww/documents/safety/KBYG_Brochure_FINAL_02.pdf

Request

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

The following response was prepared by or under the direct supervision of Paul Folger.

Oncor's East Texas Hazard Tree Program has two Oncor VM employees who participate in the management of the program, which typically has seven dedicated line clearance crews focused on mitigating Off-ROW hazard trees.

In addition, Oncor has hundreds of field personnel who are in the field every day and also help with identifying and creating VM work orders to assist with hazards outside of the ROW.

Request

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

a) Please identify all mutual assistance programs you participated in or were a member of on that date;
b) Please provide copies of any agreements entered as part of your membership or participation in those mutual assistance programs;
c) Please provide a list of members or participants for each mutual assistance program you are a member or participant in.

Response

The following response was prepared by or under the direct supervision of Keith Hull.

Yes. Oncor participated in or was a member of three mutual assistance groups on and before July 8, 2024.

a) Texas Mutual Assistance Group ("TXMAG"), Midwest Mutual Assistance Group ("MWMAG"), Southeastern Electric Exchange ("S.E.E."), and the Edison Electric Institute.

b) Attachment 1 to this response is the TXMAG Charter and Governing Principles, Attachment 2 to this response is the MWMAG Charter & Governing Principles, and Attachment 3 to this response is the S.E.E. Statement of Understanding and Endorsement. Attachment 4 to this response is the Edison Electric Institute Mutual Assistance Agreement.

c) The members of TXMAG and S.E.E. can be found on their respective public facing websites: https://texasmutualassistancegroup.org/Pages/Home.aspx and https://www.theexchange.org/members.html. The members of MWMAG can be found on p. 2 of Attachment 2 to this Response. The members of the Edison Electric Institute can be found on pp. 2-4 of Attachment 5 to this response.

ATTACHMENTS:

ATTACHMENT 1 - TXMAG Charter and Governing Principles, 9 pages
ATTACHMENT 2 - MWMAG Charter & Governing Principles, 9 pages
ATTACHMENT 3 - S.E.E. Statement of Understanding and Endorsement, 1 page
ATTACHMENT 4 - Edison Electric Institute Mutual Assistance Agreement, 5 pages
ATTACHMENT 5 - Edison Electric Institute Members List, 4 pages

January 3rd, 2024

TXMAG CHARTER AND GOVERNING PRINCIPLES

Electric companies have occasion to call upon other companies for emergency assistance in the form of personnel or equipment to aid in maintaining or restoring electric utility service when such service has been disrupted by acts of the elements, equipment malfunctions, accidents, sabotage or any other occurrences where the parties deem emergency assistance to be necessary or advisable. While it is acknowledged that a company is not under any obligation to furnish such emergency assistance, experience indicates that companies are willing to furnish such assistance when personnel or equipment are available. As such, the TXMAG charter and governing principles are as follows:

NAME

- The name of this group shall be the Texas Mutual Assistance Group, also known as TXMAG.

PURPOSE

- The purpose of the TXMAG is to effectively and collaboratively share resources within Texas and the five adjacent states, as well as assist other regional mutual assistance groups when called upon.

PRINCIPLES

- The TXMAG is comprised of electric distribution and transmission utility companies whose mission is to provide a forum for safe, effective, and coordinated regional and national emergency assistance efforts with other member companies.

REQUIREMENTS FOR JOINING THE TEXAS MUTUAL ASSISTANCE GROUP

- The TXMAG membership shall not exceed twenty-five (25) members.
- Potential voting members of the TXMAG shall be Investor Owned Utilities (IOU) and Texas Municipalities. Contract utility companies that provide service for the TXMAG member IOUs and Municipalities may join as non-voting TXMAG members.
- Acceptance into the TXMAG requires the requesting company to:
    - Sign the formal TXMAG Agreement Document
    - Attend the next TXMAG conference and provide a presentation about their company. Specific items to be presented are noted below. Following the presentation, current members will be allowed to ask questions.
        - Geographic location(s)
        - Number of customers
        - Full Time Equivalent (FTE) employees available to assist
        - Equipment available to assist
        - Crew make up for restoration work (2-man, 3-man, etc.)
        - Restrictions on the type of work that can be performed (Overhead Distribution only, switching restrictions, etc.)
        - Information about their lineman training program
        - Mutual aid experience – receiving and/or sending
        - Safety Statistics including Incident Rate, DART Rate, etc.

Voting on the membership request will take place following the question and answer period and after the representative of the requesting company exits the room/facility. TXMAG members must be present at the conference in order to vote. Acceptance or rejection will be determined by unanimous vote. If accepted, the new company shall provide contact information for a primary and two secondary contacts.

CURRENT MEMBERSHIP

- Current voting members of the Texas Mutual Assistance Group include:
  - **AEP**
  - **AUSTIN ENERGY**
  - **BROWNSVILLE PU**
  - **CENTERPOINT ENERGY**
  - **CLECO**
  - **CPS ENERGY**
  - **CROSS TEXAS**
  - **EL PASO ELECTRIC**
  - **ENTERGY**
  - **LONE STAR TRANSMISSION, LLC**
  - **LOWER COLORADO RIVER AUTHORITY (LCRA)**
  - **MISSISSIPPI POWER**
  - **OG&E**
  - **ONCOR ELECTRIC DELIVERY**
  - **SHARYLAND UTILITIES**
  - **TNMP**
  - **WETT**
  - **XCEL/SPS**
- Current non-voting members of the Texas Mutual Assistance Group include:
  - **ASPLUNDH**
  - **CAN-FER**
  - **DAVEY TREE SURGERY**
  - **FRONT LINE POWER**
  - **GREAT SOUTHWESTERN**
  - **HARGRAVE**
  - **L.E. MEYERS**
  - **MESA LINE SERVICES**
  - **MP TECHNOLOGIES**
  - **NORTH HOUSTON POLE**
  - **NORTH STAR ENERGY**
  - **PIKE**
  - **PRIMORIS T&D SERVICES**
  - **QUANTA SERVICES**
  - **TEMPEST ENERGY**
  - **TREES INC.**
  - **WILLBROS T&D SERVICES**
  - **WRIGHT TREE SERVICE**

January 3rd, 2024

FOOTPRINT OF THE TEXAS MUTUAL ASSISTANCE GROUP

ORGANIZATION & GOVERNANCE

- All procedures and protocols associated specifically with the TXMAG will be approved by voting member companies. Each voting member company within the TXMAG will be afforded one (1) vote per decision.
  - Unanimous votes shall be required for the following:
    - New memberships. New membership requests shall be heard at annual conferences and acceptance/rejection will be determined by those members in attendance at the meeting.
  - Majority votes shall be required for the following:
    - Filling TXMAG governing positions. Filling TXMAG positions shall take place at annual conferences with positions being awarded to those members willing to serve, in attendance at the meeting, and receives the majority vote.
    - Meeting locations
    - Meeting agendas
    - Membership count
    - Geographic boundaries
    - Representatives to federal, regional, or other industry groups
    - Charter & Governing Principles adjustments when determined necessary
- Votes for issues other than new memberships and filling TXMAG governing roles may be taken at conferences/meetings or via conference call. Regardless of the method, the above criteria will be used to determine acceptance or rejection.

- The TXMAG shall convene, at minimum, once a year to discuss best practices, significant restoration events in the prior year, new laws/legislation impacting electric service restoration, and other topics deemed valuable to the group. These meetings shall be rotated between member companies.
- Non-voting member companies shall be allowed to participate in annual meetings and discussions unless a portion of the meeting has been specifically designated as a closed discussion forum.
- Non-voting member person or company of TXMAG shall not be allowed to participate in TXMAG business decisions.
- Any modifications of the TXMAG Charter & Governing Principles must be approved by at least ¾ of the TXMAG voting member companies.

REPRESENTATIVE ROLES, RESPONSIBILITES, ELECTIONS, & SUCCESSION PLANNING

- Three representatives from the voting membership of the TXMAG shall be selected to represent the membership as officers. These positions and responsibilities are noted below and will be held for a period of two years:
  - Chair
    - Represent the TXMAG on the EEI Mutual Assistance / Emergency Preparedness Executive Committee.
    - Represent the TXMAG on regional conference calls.
    - Be available 24/7/365 to assist fellow members with acquiring resources for pre-staging and/or restoration.
    - Participate on the monthly EEI conference calls.
    - Attend the TXMAG conferences and provide updates to the membership.
    - Attend Edison Electric Institute (EEI) Mutual Assistance conferences.
    - Ad hoc responsibilities to EEI and the EEI Mutual Assistance / Emergency Preparedness (MAEP) Executive Committee.
    - Communicate TXMAG mobilization and status to other RMAGs and EEI.

  - Vice-Chair
    - Represent the TXMAG on the EEI Mutual Assistance / Emergency Preparedness Executive Committee.
    - Represent the TXMAG on regional conference calls.
    - Be available 24/7/365 to assist fellow members with acquiring resources for pre-staging and/or restoration.
    - Participate on the monthly EEI conference calls.
    - Attend the TXMAG conferences and provide updates to the membership.
    - Attend Edison Electric Institute (EEI) Mutual Assistance conferences.
    - Ad hoc responsibilities to EEI and the EEI Mutual Assistance / Emergency Preparedness (MAEP) Executive Committee.

- Secretary
  - Ensure the membership receives all information disbursements from the EEI.
  - Ability to distribute email and phone notifications to membership regarding an event.
  - Attend the TXMAG conferences and provide updates to the membership (preferably).
  - Attend Edison Electric Institute (EEI) Mutual Assistance conferences (preferably).
  - Ad hoc responsibilities to EEI and the Executive Committee.

- Elections of officers shall follow the rules below:
  - Each voting member company shall have one (1) vote.
  - A simple majority will determine outcomes. At least one representative from at least ½ of the membership shall be in attendance to vote.

- Officer Succession
  - Nominations for governing roles shall only be considered if submitted by a member company to all other member companies verbally during a planned meeting or via email. No individual should be nominated for a governing role unless he or she has agreed to assume the role if elected for the position.
  - If an officer vacates his/her position before fulfilling their two-year term, automatic succession will occur and an election will be conducted at the next scheduled meeting to fill the Secretary position.
  - If two or more officers vacate their positions before fulfilling their two-year term, automatic succession will occur and an election will be conducted at the next scheduled meeting to fill the Vice-chair and Secretary vacancies.
  - The Chair position shall be filled by the individual holding the Vice-Chair position, by rotating them into the role at the Spring Meeting or when the Chair position is vacated prematurely.
  - The Vice-Chair position shall be filled by the individual holding the Secretary position, by rotating them into the role at the Spring Meeting or when the Vice-Chair is vacated prematurely.
  - Nominations for Secretary will be accepted prior to and during the Spring Meeting every other year.
  - Election of Secretary will occur every two years at the Spring Meeting.
  - There is no obligation for any individual company to supply an officer, but all companies are encouraged to participate.
  - It is preferred that no more than one of the three officers can be employed by the same holding company.
  - Exceptions are allowed to these restrictions only when there is an absence of individuals who are willing and capable of holding the officer positions.
  - Voting will be by secret ballot vote. Voting by e-mail is not permissible.

ACQUIRING & ALLOCATION OF RESOURCES

- Participation in resource requests, response and allocation is a privilege of participating in the TXMAG. If a company continually fails to participate when resources are needed, their membership may be reviewed at the next TXMAG conference.
- Utilities requesting assistance shall contact the TXMAG Chair or Vice-Chair. Either the TXMAG Chair or Vice-Chair with then send out an electronic notice (voice mail/email/text message) notifying the rest of the membership of the need for resources. The electronic notification shall include the following information:
  - Name of the company requesting resources
  - Single contact information from requesting company

- Final destination of resources
- Number of customer outages
- Number and type (Distribution, Transmission, Damage Assessment) of resources needed
- Desired arrival time to final destination
- Number of miles out or resource estimated arrival time where resources would be considered
- Number and type of special equipment (alley machines, heavy complement of digger derricks, track equipment, etc.)
- Anticipated duration of the restoration
- Special safety requirements

- If the three members governing the TXMAG are impacted, they may call upon the leadership of another Regional Mutual Assistance Group (RMAG) or the EEI Mutual Assistance / Emergency Preparedness Executive Committee to assist in managing resources.
- In the event the number of resources needed are not acquired within the TXMAG request, the requesting company can contact the TXMAG Chair and/or Vice-Chair and request assistance from another RMAG(s). The TXMAG Chair and/or Vice-Chair will notify the other RMAG(s) of the resource needs.
- Acquiring company and/or contractor resources shall follow the progression below:
  1. From other members within the requestor's state. It is requested an update be sent to the TXMAG Chair and Vice-Chair just so they are aware of crew movement.
  2. From other members in states that are contiguous to the requestor's state, it is requested an update be sent to the TXMAG Chair and Vice-Chair so they are aware of crew movement.
  3. Obtaining resources from non-RMAG sources is appropriate if it is validated the crews are not dragging up from IOUs to perform storm work.
- When releasing contractors, every effort should be made to release them to companies where existing contracts are in place.
- Contact information for requesting companies shall be provided to all members releasing resources.
- Prior to releasing resources outside of the TXMAG, an email should be sent to the membership and confirm there are no needs or issues with releasing crews outside of the TXMAG.

GOVERNING PRINCIPLES

In the absence of a continuing formal contract between a company requesting emergency assistance ("Requesting Company") and a company willing to furnish such assistance ("Responding Company"), the following principles are suggested as the basis for a contract governing emergency assistance to be established at the time such assistance is requested:

1. The emergency assistance period shall commence when personnel and/or equipment expenses are initially incurred by the Responding Company in response to the Requesting Company's needs. (This would include any request for the Responding Company to prepare its employees and/or equipment for transport to the Requesting Company's location, but to await further instructions before departing). The emergency assistance period shall terminate when such employees and/or equipment have returned to the Responding Company, and shall include any mandated DOT rest time resulting from the assistance provided and reasonable time required to prepare the equipment for return to normal activities (e.g., cleaning off trucks, restocking minor materials, etc.).

2. To the extent possible, the companies should reach a mutual understanding and agreement in advance on the anticipated length - in general - of the emergency assistance period. For extended assistance periods, the companies should agree on the process for replacing or providing extra rest for the Responding Company's employees. It is understood and agreed that if; in the Responding Company's judgment such action becomes necessary the decision to terminate the assistance and recall employees, contractors, and equipment lies solely with the Responding Company. The Requesting Company will take the necessary action to return such employees, contractors, and equipment promptly.

3. Employees of Responding Company shall at all times during the emergency assistance period continue to be employees of Responding Company and shall not be deemed employees of Requesting Company for any purpose. Responding Company shall be an independent Contractor of Requesting Company and wages, hours and other terms and conditions of employment of Responding Company shall remain applicable to its employees during the emergency assistance period.

4. Responding Company shall make available at least one supervisor in addition to crew foremen. All instructions for work to be done by Responding Company's crews shall be given by Requesting Company to Responding Company's supervisor(s); or, when Responding Company's crews are to work in widely separate areas, to such of Responding Company's foremen as may be designated for the purpose by Responding Company's supervisor(s).

5. Unless otherwise agreed by the companies, Requesting Company shall be responsible for supplying and/or coordinating support functions such as lodging, meals, materials, etc. As an exception to this, the Responding Company shall normally be responsible for arranging lodging and meals en route to the Receiving Company and for the return trip home. The cost for these in transit expenses will be covered by the requesting company.

6. Responding Company's safety rules shall apply to all work done by their employees. Unless mutually agreed otherwise, the Requesting Company's switching and tagging rules should be followed to ensure consistent and safe operation. Any questions or concerns arising about any safety rules and/or procedures should be brought to the proper level of management for prompt resolution between management of the Requesting and Responding Companies.

7. All time sheets and work records pertaining to Responding Company's employees furnishing emergency assistance shall be kept by Responding Company.

8. Requesting Company shall indicate to Responding Company the type and size of trucks and other equipment desired as well as the number of job function of employees requested but the extent to which Responding Company makes available such equipment and employees shall be at Responding Company's sole discretion.

9. Requesting Company shall reimburse Responding Company for all costs and expenses incurred by Responding Company as a result of furnishing emergency assistance. Responding Company shall furnish documentation of expenses to Requesting Company. Such costs and expenses shall include, but not be limited to, the following:

    a. Employees' wages and salaries for paid time spent in Requesting Company's service area and paid time during travel to and from such service area, plus Responding

Company's standard payable additives to cover all employee benefits and allowances for vacation, sick leave and holiday pay and social and retirement benefits, all payroll taxes, workmen's compensation, employer's liability insurance and other contingencies and benefits imposed by applicable law or regulation.

b. Employee travel and living expenses (meals, lodging and reasonable incidentals).

c. Replacement cost of materials and supplies expended or furnished.

d. Repair or replacement cost of equipment damaged or lost.

e. Charges, at rates internally used by Responding Company, for the use of transportation equipment and other equipment requested.

f. Administrative and general costs, which are properly allocable to the emergency assistance to the extent such costs, are not chargeable pursuant to the foregoing subsections.

10. Requesting Company shall pay all costs and expenses of Responding Company within sixty days after receiving an invoice therefor.

11. Requesting Company shall indemnify, hold harmless and defend the Responding Company from and against any and all liability for loss, damage, cost or expense which Responding Company may incur by reason of bodily injury, including death, to any person or persons or by reason of damage to or destruction of any property, including the loss of use thereof, which result from furnishing emergency assistance and whether or not due in whole or in part to any act, omission, or negligence of Responding
Company except to the extent that such death or injury to person, or damage to property, is caused by the willful or wanton misconduct and/ or gross negligence of the Responding Company. Where payments are made by the Responding Company under a workmen's compensation or disability benefits law or any similar law for bodily injury or death resulting from furnishing emergency assistance, Requesting Company shall reimburse the Responding Company for such payments, except to the extent that such bodily injury or death is caused by the willful or wanton misconduct and/ or gross negligence of the Responding Company.

12. In the event any claim or demand is made or suit or action is filed against Responding Company alleging liability for which Requesting Company shall indemnify and hold harmless Responding Company under paragraph (11) above, Responding Company shall promptly notify Requesting Company thereof, and Requesting Company, at its sole
cost and expense, shall settle, compromise or defend the same in such manner as it in its sole discretion deems necessary or prudent. Responding Company shall cooperate with Requesting Company's reasonable efforts to investigate, defend and settle the
claim or lawsuit.

13 Non-affected companies should consider the release of contractors during restoration activities. The non-affected company shall supply the requesting companies with contact information of the contactors (this may be simply supplying the contractors name). The contractors will negotiate directly with requesting companies.

BILLING & INVOICING

- With respect to each Emergency Assistance event, Requesting Companies agree that they will reimburse Responding Companies for all costs and expenses incurred by Responding Companies.
- Responding Companies must maintain auditable records to ensure proper billing and/or invoicing

RELATED GROUPS

- Mutual assistance groups:
  - Great Lakes Mutual Assistance Group (GLMA)
  - North Atlantic Mutual Assistance Group (NAMAG)
  - Midwest Mutual Assistance Group (MMAG)
  - Western Region Mutual Assistance Group (WRMAG)
  - Wisconsin Mutual Assistance Group (WIMAG)
  - Southeastern Electric Exchange (SEE)

Last update September 7th, 2023 – TXMAG CO-Chair: Michael Martin

(Revised 03/27/2024)

Midwest Mutual Assistance Group
Charter & Governing Principles

NAME

- The name of this group shall be the Midwest Mutual Assistance Group, also known as MMAG and MMA.

PURPOSE

- The purpose of the MMAG is to effectively and collaboratively share resources within the Midwest region of the United States as well as assist other regional mutual assistance groups when called upon.

PRINCIPLES

- The MMAG is comprised of electric distribution and transmission utility companies whose mission is to provide a forum for safe, effective, and coordinated regional and national emergency assistance efforts with other member companies.
- All members of the MMAG will agree to and secure a company officer signature on the Edison Electric Institute Mutual Assistance Agreement. The Edison Electric Institute Suggested Governing Principles Covering Emergency Assistance Arrangements Between Edison Electric Institute Member Companies document is implied as part of the signed agreement.

REQUIREMENTS FOR JOINING THE MIDWEST MUTUAL ASSISTANCE GROUP

- The MMAG membership shall not exceed forty-six (46) members.
- Potential members to the MMAG shall be Investor Owned Utilities (IOU).
    - Municipalities, Rural Cooperatives, and public utilities should be encouraged to join American Public Power Association (for Municipals) and National Rural Electric Cooperative Association (for Cooperatives).
- Acceptance into the MMAG requires the requesting company to:
    - Attend the next MMAG conference and provide a presentation about their company. Specific items to be presented are noted below. Following the presentation, current members will be allowed to ask questions.
        - Geographic location(s)
        - Number of customers
        - Full Time Equivalent (FTE) employees available to assist
        - Equipment available to assist
        - Crew make up for restoration work (2-man, 3-man, etc.)
        - Restrictions on the type of work that can be performed (Overhead Distribution only, switching restrictions)
        - Information about their lineman training program
        - Mutual aid experience – receiving and/or sending
        - Safety Statistics including Incident Rate, DART Rate, etc.
- Voting on the membership request will take place following the question-and-answer period and after the representative of the requesting company exits the room/facility. MMAG members must be present at the conference in order to vote. Acceptance or rejection will be determined by three-fourths of the votes cast in the affirmative. If accepted, the new company shall provide contact information for a primary and two secondary contacts.

Midwest Mutual Assistance Group
Charter & Governing Principles

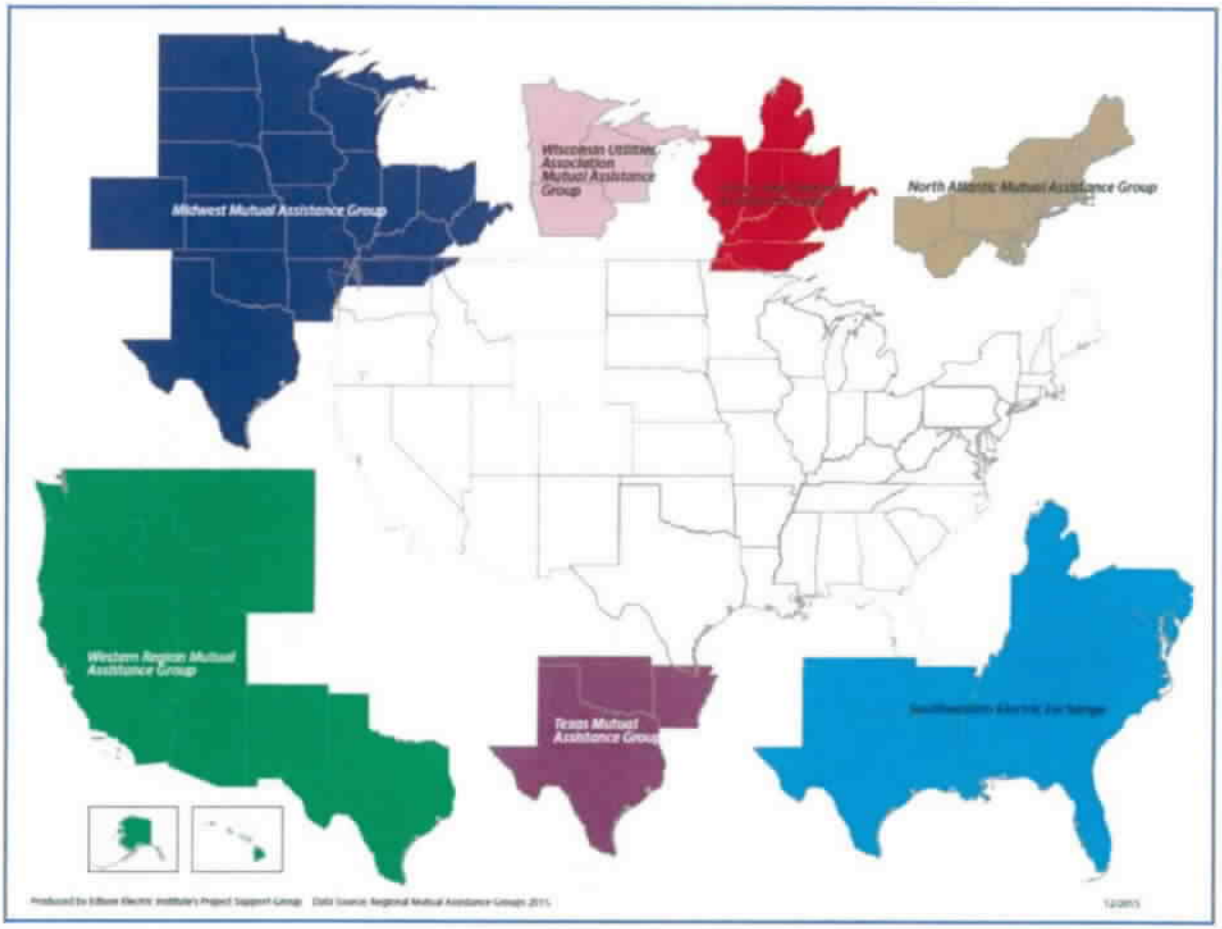
CURRENT MEMBERSHIP

- The membership list in this document will be maintained by the MMAG officers. This list should coincide with the information in the Resource Allocation Management Program for Utility Personnel (RAMP-UP) tool. It will be the individual company's responsibility to maintain their information in RAMP UP. Current members of the Midwest Mutual Assistance Group include:

1. Alliant Energy – IPL
2. Alliant Energy – WPL
3. Allete/Minnesota Power
4. Ameren – Illinois
5. Ameren – Missouri
6. American Electric Power – Appalachian Power Co.
7. American Electric Power – Indiana Michigan Power Co.
8. American Electric Power – Kentucky Power Co.
9. American Electric Power – Ohio Power Co.
10. American Electric Power – Public Service of Oklahoma
11. American Electric Power – SW Electric Power Co.
12. American Electric Power – Texas
13. American Transmission Co.
14. Black Hills Energy
15. CenterPoint Energy
16. Duke Energy – Midwest
17. Empire District – Liberty Utilities Central
18. Entergy – Arkansas
19. Entergy – Louisiana
20. Entergy – Mississippi
21. Entergy – Texas
22. Evergy
23. Exelon ComEd
24. Indianapolis Power & Light Co.
25. ITC Midwest
26. ITC Holdings Corp.
27. LG&E KU
28. Madison Gas & Electric
29. MidAmerican Energy Co.
30. Nebraska Public Power District.
31. Northern Indiana Public Service Co.
32. Northwestern PSC
33. Oklahoma Gas & Electric Co.
34. Omaha Public Power
35. Oncor Electric Delivery
36. Otter Tail Power Co.
37. Texas-New Mexico Power Co.
38. Upper Peninsula Power Company
39. Vectren Energy
40. We Energies
41. Wisconsin Public Service

42. XCEL Energy – Colorado
43. XCEL Energy – Minnesota
44. XCEL Energy – Southwestern Public Service
45. XCEL Energy – Wisconsin

FOOTPRINT OF THE MIDWEST MUTUAL ASSISTANCE GROUP



ORGANIZATION & GOVERNANCE

- The MMAG is comprised of Company representatives from Edison Electric Institute (EEI) member companies.
- All procedures and protocols associated specifically with the MMAG will be voted on by member companies. Each operating company (noted above) within the MMAG will be afforded one (1) vote per decision. In situations where multiple operating companies are represented by one individual, that individual may vote only one time. In situations where multiple operating companies are represented by multiple individuals, the total number of votes shall not exceed the total number of companies.
- Member representing multiple companies – the # of people in attendance
  - A three-fourths of the votes cast in the affirmative shall be required for the following:
    - New memberships. New membership requests shall be heard at annual conferences and acceptance/rejection will be determined by those members in attendance at the meeting.

- A simple majority of the votes cast in the affirmative shall be required for the following:
  - Filling MMAG governing positions. Filling MMAG positions shall take place at annual conferences with positions being awarded to those members willing to serve, in attendance at the meeting, and receives the majority vote.
  - Meeting locations
  - Meeting agendas
  - Membership count
  - Geographic boundaries
  - Representatives to federal, regional, or other industry groups
  - Charter & Governing Principles adjustments when determined necessary
- Votes for issues other than new memberships and filling MMAG governing roles may be taken at conferences/meetings or via conference call or email. Regardless of the method, the above criteria will be used to determine acceptance or rejection.
- The MMAG shall convene, at minimum, once a year to discuss best practices, significant restoration events in the prior year, new laws/legislation impacting electric service restoration, and other topics deemed valuable to the group. These meetings shall be rotated between member companies.
- Non-member companies (including vendors/sponsors) shall be allowed to participate in annual meetings and discussions unless a portion of the meeting has been specifically designated as a closed discussion forum.
- No non-member person or company of MMAG shall be allowed to participate in MMAG business decisions.
- Any modifications of the MMAG Charter & Governing Principles must be approved by three quarters of the MMAG member companies. Proposed Changes will be emailed to the MMAG membership one month prior to the meeting.

REPRESENTATIVE ROLES, RESPONSIBILITES, ELECTIONS, & SUCCESSION PLANNING

- Four representatives from the MMAG shall be selected to represent the membership. These positions and responsibilities are noted below:
  - Chair Person
    - Represent the MMAG on the EEI Mutual Assistance / Emergency Preparedness Executive Committee.
    - Represent the MMAG on regional conference calls.
    - Be available to assist fellow members with acquiring resources for pre-staging and/or restoration. If the Chair Person should become unavailable, they should coordinate with the other representatives and notify the membership who to contact in their absence.
    - Create events in the Resource Allocation Management Program for Utility Personnel (RAMP UP) tool.
    - During regional events, perform the allocation and matching of resources to company in RAMP UP when it is utilized.
    - Participate in the National Response Event drills by notifying members to enter available resources or other activities as needed.
    - Participate on the monthly EEI conference calls.
    - Attend the MMAG conferences and provide updates to the membership.

- Attend Edison Electric Institute (EEI) Mutual Assistance conferences.
- Ad hoc responsibilities to EEI and the EEI Mutual Assistance / Emergency Preparedness (MA/EP) Executive Committee.

- Vice Chair Person
  - Represent the MMAG on the EEI Mutual Assistance / Emergency Preparedness Executive Committee.
  - Represent the MMAG on regional conference calls.
  - If the Chair is unavailable---
    - Be available to assist fellow members with acquiring resources for pre-staging and/or restoration. If the Vice Chair Person should become unavailable, they should coordinate with the other representatives and notify the membership who to contact in their absence.
    - Create events in the RAMP UP tool.
    - During regional events, perform the allocation and matching of resources to company in RAMP UP when it is utilized.
    - Participate in the National Response Event drills by notifying members to enter available resources or other activities as needed.
  - Participate on the monthly EEI conference calls.
  - Attend the MMAG conferences and provide updates to the membership.
  - Attend Edison Electric Institute (EEI) Mutual Assistance conferences.
  - Ad hoc responsibilities to EEI and the EEI Mutual Assistance / Emergency Preparedness (MA/EP) Executive Committee.
- Secretary
  - Ensure the membership receives all information disbursements from the EEI.
  - Ensure members are maintaining their contact information in the RAMP-UP tool.
  - Maintain MMAG contact roster on a quarterly basis.
  - Troubleshoot user access including resetting passwords.
  - Ability to distribute email and phone notifications to membership regarding an event.
  - Attend the MMAG conferences and provide updates to the membership.
  - Attend Edison Electric Institute (EEI) Mutual Assistance conferences (preferably).
  - Ad hoc responsibilities to EEI and the Executive Committee.
- Secretary in Waiting
  - Learn the duties of the Secretary position and support the Secretary role.
- Advisory Council
  - This council shall be comprised of MMAG members who have completed their MMAG Executive Committee term and are volunteering serve as advisors to the MMAG
  - Advisory Council members may participate in MMAG activities and if there is a situation where members of the Executive Committee are impacted by an event request can be made to have members on the Advisory Council step in to perform the Executive Committee duties as needed to support resource requests.

  - There is no obligation for members who have completed their Executive Committee term to serve on the Advisory Council is it at the member's discretion to serve as a member of the Advisory Council
  - Contacts will be included in the MMAG contract roster
- Elections of officers shall follow the rules below:
  - Each member company shall have one (1) vote.
  - A simple majority will determine outcomes. At least one representative from at least ½ of the membership shall be in attendance to vote.
  - An officer of the MMAG may not be an officer of another RMAG.
- Officer Succession
  - Nominations for governing roles shall only be considered if submitted by a member company to all other member companies verbally during a planned meeting or via email. No individual should be nominated for a governing role unless he or she has agreed to assume the role if elected for the position.
  - If an officer vacates his/her position before fulfilling their one-year term, automatic succession will occur and an election will be conducted at the next scheduled meeting (or via email) to fill the Secretary in Waiting position.
  - If two or more officers vacate their positions before fulfilling their one-year term, automatic succession will occur and an election will be conducted at the next scheduled meeting (or via email) to fill the vacated positions.
  - The Chair position shall be filled by the individual holding the Vice-Chair position, by rotating them into the role at the annual Spring meeting or when the Chair position is vacated prematurely.
  - The Vice-Chair position shall be filled by the individual holding the Secretary position, by rotating them into the role at the annual Spring Meeting or when the Vice-Chair is vacated prematurely.
  - The Secretary position shall be filled by the individual holding the Secretary-in-Waiting position, by rotating them into the role at the annual Spring meeting or when the Secretary is vacated prematurely.
  - Nominations for Secretary In Waiting will be accepted prior to and during the Spring meeting each year.
  - Election of Secretary In Waiting will occur every year at the Spring meeting.
  - There is no obligation for any individual company to supply an officer, but all companies are encouraged to participate.
  - No more than one of the four officers can be employed by the same holding company.
  - Exceptions are allowed to these restrictions only when there is an absence of individuals who are willing and capable of holding the officer positions.
  - When voting at the Spring meeting, voting will be by secret ballot vote. Voting by e-mail is not permissible unless filling a position outside of the Spring meeting.

NATIONAL RESPONSE EVENT and RESOURCE ALLOCATION MANAGEMENT PROGRAM for UTILITY PERSONNEL

- Members must designate a Home RMAG, by operating company, for reporting resources during an NRE Event.

- Members understand and have agreed that at the time a National Response Event (NRE) has been activated, that MMAG available resources will become included in a national pool of resources available, as outlined in the EEI NRE Playbook.
- Members understand that resources may be assigned to a regional group other than MMAG even if MMAG is engaged in the restoration of an event.
- During an NRE, it is expected that MMAG members will utilize the RAMP-UP tool developed for EEI members in support of the allocation of resources.
- During an NRE, requesting companies are expected to provide the count of all of the resources by type that they have been able to secure at the time of the request (NON-NATIVE FTE RESOURCES ACQUIRED)
- Responsibilities of Members
  - Members will be responsible for establishing and maintaining their own list of company representatives assigned to access RAMP-UP (up to 10 concurrent users per company).
    - This responsibility includes designating the level of access required as designed and defined within RAMP-UP;
    - This responsibility includes notifying the MMAG Chair and Vice-Chair, EEI MAEP Executive Committee Representatives, whenever a change is made to their designated RAMP-UP users.
  - As outlined in the RAMP-UP User Guide, members will be responsible for entering their company's resource requests and resources available whenever the use of RAMP-UP is activated in response to request for assistance.

ACQUIRING & ALLOCATION OF RESOURCES

- Core hours for resource requests to the MMAG are 0700-2200 Central Time
- Conference calls will provide at least a two-hour advanced noticed to allow members time to make contact and get resources entered into RAMPUP
- Executive committee members will work with requesting utility(s) to determine appropriate scheduling of conference call
- Participation in resource requests, response, allocation, and matching (utilizing the RAMP UP tool) is a privilege of participating in the MMAG. If a company continually fails to participate when resources are needed, their membership may be reviewed at the next MMAG conference.
- When utilities are making a request for resources the following information must be provided and request must be entered into RAMPUP prior to a call being scheduled and notification going out to members for MMAG activation:
  a. Name of the company requesting resources
  b. Single contact information from requesting company has been identified and is correct in RAMPUP
  c. Anticipated final destination
  d. Number of customer outages
  e. Number of trouble tickets
  f. Number and type (Distribution, Transmission, Damage Assessment) of resources needed
  g. Desired arrival time to final destination and timing of when resources would not be considered
  h. What type of resources will be accepted union or non-union, or state if both will be accepted
  i. Number and type of special equipment (alley machines, heavy complement of digger derricks, track equipment, etc.)

j. Special safety requirements
k. The time in which responding resources shall be entered into the RAMP UP tool in order for allocation and matching to be performed

- Utilities requesting assistance shall contact the MMAG Chair or Vice Chair. Either the MMAG Chair or Vice Chair will then send out an electronic notice (voice mail/email/text message) notifying the rest of the membership of the need for resources. The electronic notification shall include the requesting utilities responses to items a.-k. as listed above.
- Once resource requests and responses have been entered into the RAMP UP tool, the Chair and Vice Chair will conduct a conference call and will allocate and match the resources offered on the call.
- If the four members governing the MMAG are impacted, they may call upon the leadership of another Regional Mutual Assistance Group (RMAG) or the EEI Mutual Assistance / Emergency Preparedness Executive Committee to assist in managing resources within RAMP UP.
- In the event the number of resources needed are not acquired within the MMAG request, the requesting company can contact the MMAG Chair and/or Vice Chair and request assistance from another RMAG(s). The MMAG Chair and/or Vice Chair will notify the other RMAG(s) of the resource needs. The secondary RMAG(s) will be invited to join the event in RAMP UP so responding resources may be entered.
- Acquiring company and/or contractor resources shall follow the progression below:
  1. From other members within the requestor's state. It is requested an update be sent to the MMAG Chair and Vice Chair just so they are aware of crew movement.
  2. From other members in states that are contiguous to the requestor's state. It is requested an update be sent to the MMAG Chair and Vice Chair just so they are aware of crew movement.
  3. The member's home RMAG as identified in RAMP-UP.
  4. An RMAG that is contiguous to the requesting member's RMAG (2nd RMAG).
  5. An RMAG that is contiguous to the 2nd RMAG (3rd RMAG).
  6. If the resource requirements are greater than what the impacted RMAG(s) can offer, the affected company(s) CEO(s) can contact the National Response Event Executive Committee (NREC) and request a National Response Event be declared.
- When releasing contractors, every effort should be made to release them to companies where existing contracts are in place.
- Contact information for requesting companies shall be provided to all members and contractor companies from whom resources were acquired.
- Prior to releasing resources outside of the MMAG, an email should be sent to the membership and confirm there are no needs or issues with releasing crews outside of the MMAG.

RELATED GROUPS

- Mutual assistance groups:
  - Great Lakes Mutual Assistance Group (GLMA)
  - North Atlantic Mutual Assistance Group (NAMAG)
  - Texas Mutual Assistance Group (TXMAG)
  - Western Region Mutual Assistance Group (WRMAG)
  - Wisconsin Mutual Assistance Group (WIMAG)
  - Southeastern Electric Exchange (SEE)
- Oversight committees:
  - National Response Event Executive Committee (NREC)

  - National Mutual Assistance Response Team (NMART)
- Supporting resources:
  - Edison Electric Institute (EEI)

HELPFUL LINKS

- Edison Electric Institute: http://www.eei.org/Pages/default.aspx
- EEI Restore Power Workroom: https://eei-restorepower.groupsite.com/login

Statement of Understanding
And
Endorsement

The member companies of Southeastern Electric Exchange understand that they will have occasion to either provide or receive assistance in the form of personnel and equipment to aid in restoring electric service when it has been disrupted and cannot be restored in a safe and timely manner by the affected company or companies without assistance. For this reason, the Board of Directors of Southeastern Electric Exchange instructs and authorizes the Mutual Assistance Committee to develop and maintain operating procedures and guidelines to insure the most effective and efficient response by the entire membership when emergency assistance is requested by one or more member companies. Final acceptance of the *Southeastern Electric Exchange Mutual Assistance Procedures and Guidelines*, as well as any future modifications, must be approved by ¾ of the appointed and serving members of the S.E.E. Mutual Assistance Committee, each operating member company having one (1) vote.

Further, as a member of the Board of Directors of Southeastern Electric Exchange, Inc., the undersigned hereby endorses the following principles and agreements on behalf of his / her member company:

1. Whether providing or receiving assistance, personnel safety will be the preeminent objective and responsibility of all participants.

2. Member companies agree to adhere to and operate in accordance with the procedures contained in the *Southeastern Electric Exchange Mutual Assistance Procedures and Guidelines*.

3. Whether providing or receiving assistance, members will work together to minimize risk to all parties. In accordance with S.E.E. procedures, responding companies will provide assistance (personnel and equipment) on a not-for-profit basis, and requesting companies will reimburse responding companies for all expenses incurred in providing the assistance. In keeping with this principle, S.E.E. members agree to abide by the indemnification provisions contained in the *Southeastern Electric Exchange Mutual Assistance Procedures and Guidelines.*

Oncor Electric Delivery Co.
Company Name

Brenda Pulis
Company Officer Signature

Brenda Pulis, P.E.
Name of Company Officer

10-20-11
Date

Edison Electric Institute
Mutual Assistance Agreement

Edison Electric Institute ("EEI") member companies have established and implemented an effective system whereby member companies may receive and provide assistance in the form of personnel and equipment to aid in restoring and/or maintaining electric utility service when such service has been disrupted by acts of the elements, equipment malfunctions, accidents, sabotage, or any other occurrence for which emergency assistance is deemed to be necessary or advisable ("Emergency Assistance"). This Mutual Assistance Agreement sets forth the terms and conditions to which the undersigned EEI member company ("Participating Company") agrees to be bound on all occasions that it requests and receives ("Requesting Company") or provides ("Responding Company") Emergency Assistance from or to another Participating Company who has also signed the EEI Mutual Assistance Agreement; provided, however, that if a Requesting Company and one or more Responding Companies are parties to another mutual assistance agreement at the time of the Emergency Assistance is requested, such other mutual assistance agreement shall govern the Emergency Assistance among those Participating Companies.

In consideration of the foregoing, the Participating Company hereby agrees as follows:

(1) When providing Emergency Assistance to or receiving Emergency Assistance from another Participating Company, the Participating Company will adhere to the written principles developed by EEI members to govern Emergency Assistance arrangements among member companies ("EEI Principles"), that are in effect as of the date of a specific request for Emergency Assistance, unless otherwise agreed to in writing by each Participating Company.

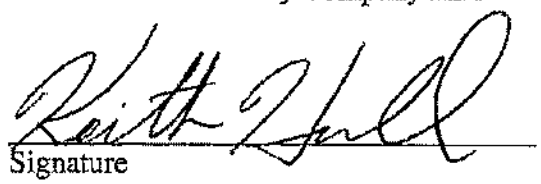
(2) With respect to each Emergency Assistance event, Requesting Companies agree that they will reimburse Responding Companies for all costs and expenses incurred by Responding Companies in providing Emergency Assistance as provided under the EEI Principles, unless otherwise agreed to in writing by each Participating Company; provided, however, that Responding Companies must maintain auditable records in a manner consistent with the EEI Principles.

(3) During each Emergency Assistance event, the conduct of the Requesting Companies and the Responding Companies shall be subject to the liability and indemnification provisions set forth in the EEI Principles.

(4) A Participating Company may withdraw from this Agreement at any time. In such an event, the company should provide written notice to EEI's Director of Security of Transmission and Distribution Operations.

(5) EEI's Director of Security of Transmission and Distribution Operations shall maintain a list of each Participating Company which shall be posted on the RestorePower web site at www.restorepower.com. However, a Participating Company may request a copy of the signed Mutual Assistance Agreement of another Participating Company prior to providing or receiving Emergency Assistance.

Oncor Electric Delivery Company LLC



Signature

Officer Name: Keith Hull
Title: Vice President Distribution Operations
Date: March 27, 2013

SUGGESTED GOVERNING PRINCIPLES COVERING EMERGENCY ASSISTANCE ARRANGEMENTS BETWEEN EDISON ELECTRIC INSTITUTE MEMBER COMPANIES

Electric companies have occasion to call upon other companies for emergency assistance in the form of personnel or equipment to aid in maintaining or restoring electric utility service when such service has been disrupted by acts of the elements, equipment malfunctions, accidents, sabotage or any other occurrences where the parties deem emergency assistance to be necessary or advisable. While it is acknowledged that a company is not under any obligation to furnish such emergency assistance, experience indicates that companies are willing to furnish such assistance when personnel or equipment are available.

In the absence of a continuing formal contract between a company requesting emergency assistance ("Requesting Company") and a company willing to furnish such assistance ("Responding Company"), the following principles are suggested as the basis for a contract governing emergency assistance to be established at the time such assistance is requested:

1. The emergency assistance period shall commence when personnel and/or equipment expenses are initially incurred by the Responding Company in response to the Requesting Company's needs. (This would include any request for the Responding Company to prepare its employees and/or equipment for transport to the Requesting Company's location but to await further instructions before departing). The emergency assistance period shall terminate when such employees and/or equipment have returned to the Responding Company, and shall include any mandated DOT rest time resulting from the assistance provided and reasonable time required to prepare the equipment for return to normal activities (e.g. cleaning off trucks, restocking minor materials, etc.).

2. To the extent possible, the companies should reach a mutual understanding and agreement in advance on the anticipated length – in general – of the emergency assistance period. For extended assistance periods, the companies should agree on the process for replacing or providing extra rest for the Responding Company's employees. It is understood and agreed that if; in the Responding Company's judgment such action becomes necessary the decision to terminate the assistance and recall employees, contractors, and equipment lies solely with the Responding Company. The Requesting Company will take the necessary action to return such employees, contractors, and equipment promptly.

3. Employees of Responding Company shall at all times during the emergency assistance period continue to be employees of Responding Company and shall not be deemed employees of Requesting Company for any purpose. Responding Company shall be an independent Contractor of Requesting Company and wages, hours and other terms and conditions of employment of Responding Company shall remain applicable to its employees during the emergency assistance period.

4. Responding Company shall make available at least one supervisor in addition to crew foremen. All instructions for work to be done by Responding Company's crews shall be given by Requesting Company to Responding Company's supervisor(s); or, when

Responding Company's crews are to work in widely separate areas, to such of Responding Company's foremen as may be designated for the purpose by Responding Company's supervisor(s).

5. Unless otherwise agreed by the companies, Requesting Company shall be responsible for supplying and/or coordinating support functions such as lodging, meals, materials, etc. As an exception to this, the Responding Company shall normally be responsible for arranging lodging and meals en route to the Receiving Company and for the return trip home. The cost for these in transit expenses will be covered by the requesting company.

6. Responding Company's safety rules shall apply to all work done by their employees. Unless mutually agreed otherwise, the Requesting Company's switching and tagging rules should be followed to ensure consistent and safe operation. Any questions or concerns arising about any safety rules and/or procedures should be brought to the proper level of management for prompt resolution between management of the Requesting and Responding Companies.

7. All time sheets and work records pertaining to Responding Company's employees furnishing emergency assistance shall be kept by Responding Company.

8. Requesting Company shall indicate to Responding Company the type and size of trucks and other equipment desired as well as the number of job function of employees requested but the extent to which Responding Company makes available such equipment and employees shall be at Responding Company's sole discretion.

9. Requesting Company shall reimburse Responding Company for all costs and expenses incurred by Responding Company as a result of furnishing emergency assistance. Responding Company shall furnish documentation of expenses to Requesting Company. Such costs and expenses shall include, but not be limited to, the following:

   a. Employees' wages and salaries for paid time spent in Requesting Company's service area and paid time during travel to and from such service area, plus Responding Company's standard payable additives to cover all employee benefits and allowances for vacation, sick leave and holiday pay and social and retirement benefits, all payroll taxes, workmen's compensation, employer's liability insurance and other contingencies and benefits imposed by applicable law or regulation.

   b. Employee travel and living expenses (meals, lodging and reasonable incidentals).

   c. Replacement cost of materials and supplies expended or furnished.

   d. Repair or replacement cost of equipment damaged or lost.

   e. Charges, at rates internally used by Responding Company, for the use of transportation equipment and other equipment requested.

f. Administrative and general costs, which are properly allocable to the emergency assistance to the extent such costs, are not chargeable pursuant to the foregoing subsections.

10. Requesting Company shall pay all costs and expenses of Responding Company within sixty days after receiving an invoice therefor.

11. Requesting Company shall indemnify, hold harmless and defend the Responding Company from and against any and all liability for loss, damage, cost or expense which Responding Company may incur by reason of bodily injury, including death, to any person or persons or by reason of damage to or destruction of any property, including the loss of use thereof, which result from furnishing emergency assistance and whether or not due in whole or in part to any act, omission, or negligence of Responding Company except to the extent that such death or injury to person, or damage to property, is caused by the willful or wanton misconduct and / or gross negligence of the Responding Company. Where payments are made by the Responding Company under a workmen's compensation or disability benefits law or any similar law for bodily injury or death resulting from furnishing emergency assistance, Requesting Company shall reimburse the Responding Company for such payments, except to the extent that such bodily injury or death is caused by the willful or wanton misconduct and / or gross negligence of the Responding Company..

12. In the event any claim or demand is made or suit or action is filed against Responding Company alleging liability for which Requesting Company shall indemnify and hold harmless Responding Company under paragraph (11) above, Responding Company shall promptly notify Requesting Company thereof, and Requesting Company, at its sole cost and expense, shall settle, compromise or defend the same in such manner as it in its sole discretion deems necessary or prudent. Responding Company shall cooperate with Requesting Company's reasonable efforts to investigate, defend and settle the claim or lawsuit.

13 Non-affected companies should consider the release of contractors during restoration activities. The non-affected company shall supply the requesting companies with contact information of the contactors (this may be simply supplying the contractors name). The contractors will negotiate directly with requesting companies.

Last update September 2005

- Section 11 and 12 updated

EEI
Edison Electric
INSTITUTE

Power by Association℠

Members List

U.S. Investor-Owned Electric Companies
International Members
Associate Members

EEI The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for nearly 250 million Americans and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. In addition to our U.S. members, EEI has more than 70 international electric companies as International Members, and hundreds of industry suppliers and related organizations as Associate Members. Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

U.S. Electric Companies

- AES Corporation
  - AES Indiana
  - AES Ohio
- ALLETE
  - Minnesota Power
  - Superior Water, Light and Power Company
- Alliant Energy
- Ameren Corporation
  - Ameren Illinois
  - Ameren Missouri
- American Electric Power
  - AEP Ohio
  - AEP Texas
  - Appalachian Power Company
  - Indiana Michigan Company
  - Kentucky Power Company
  - Public Service Company of Oklahoma
  - Southwestern Electric Power Company
- American Transmission Company
- AVANGRID
  - Central Maine Power
  - New York State Electric & Gas
  - Rochester Gas & Electric
  - The United Illuminating Company
- Avista Corporation
  - Avista Utilities
  - Alaska Electric Light and Power Company
- Berkshire Hathaway Energy
  - MidAmerican Energy Company
  - NV Energy
  - PacifiCorp
    - Pacific Power
    - Rocky Mountain Power
- Black Hills Corporation
  - Black Hills Energy
- CenterPoint Energy
- Central Hudson Gas & Electric Corp.
- Cleco Corporate Holdings
- CMS Energy
  - Consumers Energy
- Consolidated Edison
  - Consolidated Edison Company of New York
  - Orange and Rockland Utilities
- Dominion Energy
- DTE Energy
- Duke Energy
- Duquesne Light Company
- Edison International
  - Southern California Edison
- El Paso Electric
- Entergy Corporation
  - Entergy Arkansas
  - Entergy Louisiana
  - Entergy Mississippi
  - Entergy New Orleans
  - Entergy Texas
- Evergy
- Eversource Energy
- Exelon Corporation
  - Atlantic City Electric
  - BGE
  - ComEd
  - Delmarva Power
  - PECO
  - Pepco
- FirstEnergy Corp.
  - The Illuminating Company
  - Jersey Central Power & Light
  - Met-Ed
  - Mon Power
  - Ohio Edison
  - Penelec
  - Penn Power
  - Potomac Edison
  - Toledo Edison
  - West Penn Power
- Florida Public Utilities
- Green Mountain Power
- Hawaiian Electric Industries
  - Hawaiian Electric Company
- IDACORP
  - Idaho Power
- ITC Holdings Corp.
  - ITC Great Plains
  - ITC Michigan
  - ITC Midwest
- Liberty
- MDU Resources Group
  - Montana-Dakota Utilities Company
- MGE Energy
  - Madison Gas and Electric Company
- Mt. Carmel Public Utility Company
- National Grid
- NextEra Energy
  - Florida Power & Light Company
- NiSource
  - Northern Indiana Public Service Company
- NorthWestern Energy
- OGE Energy Corporation
  - Oklahoma Gas & Electric Company
- Ohio Valley Electric Corporation
- Oncor
- Otter Tail Corporation
  - Otter Tail Power Company
- PG&E Corporation
  - Pacific Gas & Electric Company
- Pinnacle West Capital Corporation
  - Arizona Public Service Company
- Portland General Electric
- PPL Corporation
  - PPL Electric Utilities
  - LG&E and KU Energy
  - Rhode Island Energy
- Public Service Enterprise Group
  - Public Service Electric & Gas Company
  - PSEG Long Island
- Puget Sound Energy
- San Diego Gas & Electric Company
- Sharyland Utilities
- Southern Company
  - Alabama Power Company
  - Georgia Power Company
  - Mississippi Power Company
- Tampa Electric an Emera Company
- Tennessee Valley Authority – *EEI Strategic Partner*
- TXNM Energy
  - PNM
  - TNMP
- UGI Corporation
  - UGI Utilities
- Unitil Corporation
- UNS Energy Corporation
  - Tucson Electric Power
  - UniSource Energy Services
- Upper Peninsula Power Company
- Vermont Electric Power Company
- Versant Power
- WEC Energy Group
  - We Energies
  - Wisconsin Public Service
  - Upper Michigan Energy Resources
- Xcel Energy

International Members

- AES Corporation
  - AES Andes
  - AES Argentina
  - AES Bulgaria
  - AES Brasil
  - AES Chile
  - AES Colombia
  - AES Dominicana
  - AES El Salvador
  - AES India
  - AES Jordan
  - AES Netherlands
  - AES Panamá
  - AES Vietnam