CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PROJECT NO. 56822
INVESTIGATION OF EMERGENCY PREPAREDNESS AND RESPONSE

PUBLIC UTILITY COMMISON OF TEXAS
REQUEST NO.: PUC-RFI01-064

QUESTION:

Electric Utilities – Customer Restoration Workflow

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.

ANSWER:

CenterPoint Houston has an 86-page Emergency Restoration Plan (last revised, October 21, 2019) that addresses restoration priorities and resource mobilization, among other issues. CenterPoint Houston also has a Texas Electric Emergency Operations Plan ("EOP", last revised, March 15, 2024) that provides an incident management system for all emergencies that CenterPoint Houston may encounter.

Relevant citations within the EOP regarding CenterPoint Houston's response to Hurricane Beryl would include Sections 1, 3.1-3.3, and Annex page 58 on "Hurricanes."

Please refer to PUC-RFI01-010 for the CEHE Emergency Operations Plan 2024 Update filed in Project No. 53385.

SPONSOR:
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RESPONSIVE DOCUMENTS:
PUC-RFI01-064 - centerpoint-energy-storm-restoration-plan

CenterPoint Energy

STORM RESTORATION PLAN

Revised as of 12/5/2016

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Table of Contents

I. Introduction

A. Purpose

The purpose of this document is to capture the processes associated with storm restoration within CenterPoint (CNP) Distribution Power and Delivery (or "Company"). This plan is intended to help staff facilitate the service restoration process. This plan solely applies to the operations occurring during Trouble Levels 1-8. When operations expand beyond this level, the Emergency Operations Plan (EOP) will be activated, and the applicable roles, responsibilities, and response processes will transition to those outlined within the EOP.

CNP provides an essential public service that vitally affects the health, safety, comfort, and general well-being of the people living in the area served by the Company. The goal of the CNP Storm Restoration Plan is to restore service to customers as safely, quickly, and efficiently as possible; ultimately restoring power to the most customers in the least amount of time.

The processes outlined in this plan aim to improve service response time, thereby improving overall reliability. Improving service response time is defined by a reduction in the time it takes CNP to restore service after outages, and as a result, minimize the duration of outages; this measurement is established through SAIDI, SAIFI, and CAIDI.

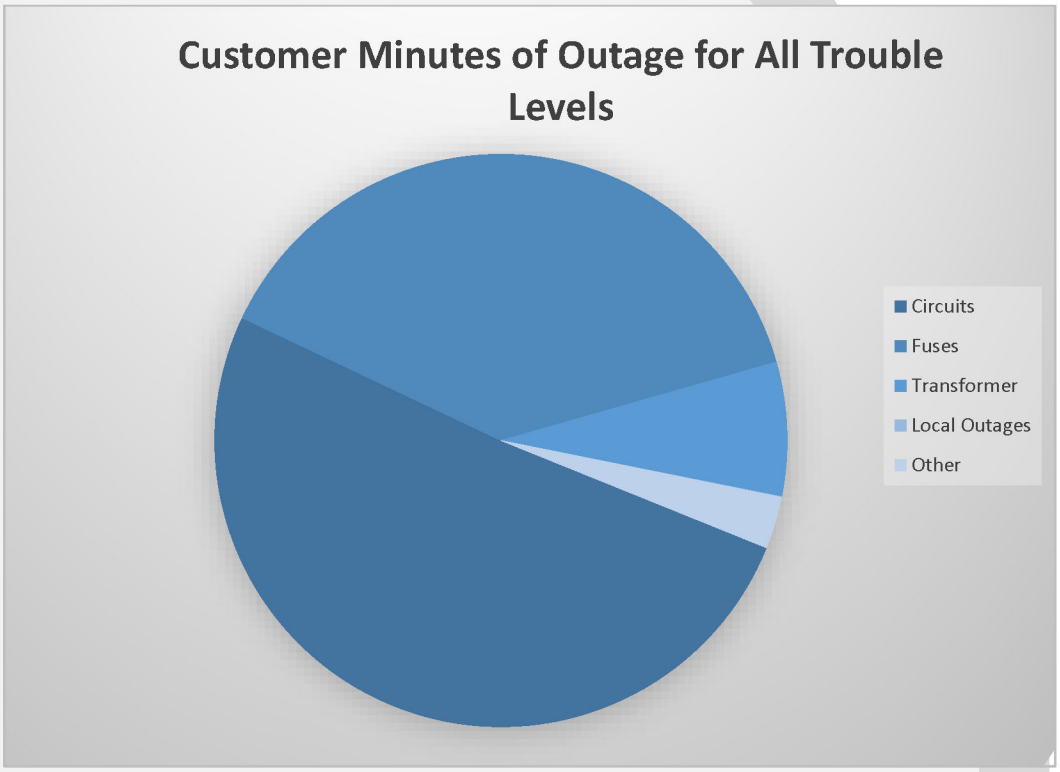
This manual will be revised annually and on an as-needed basis to reflect changes in the processes.

B. Restoration Priorities

For CNP, the vast majority of recorded outage minutes are the result of circuit and fuse outages, making these two areas the highest priority for restoration. Transformer and local outages are the other most common source of outages.

The service restoration process utilizes the following restoration sequence:

1. Circuits/Sections
2. Fuses
3. Transformers
4. Local Outages (individual customers)



CNP critical and priority customers may bypass this sequence as needed. A list of critical and priority customers is kept up-to-date regularly within the Premise Registry Database.

II. Storm Restoration Levels

Storm Restoration consists of Information Collection, the Mobilization of Resources, Damage Assessment, Restoration, and the Resumption of Normal Operations. The caliber of response associated with each of these actions is based on Activation Levels, categorizations of Trouble Levels. The following subsections detail each Operational Procedure and the Activation Levels. During Storm Restoration, DVAL becomes the command and control center for operations.

A. Trouble Level Descriptions

Trouble levels are used to classify the impact a storm has had on the system. As a storm is approaching, the Trouble Level is used to better determine how the Company will respond. CNP's eight Trouble Levels will be used to determine the necessary Activation Level.

B. Activation Levels

Activation Levels establish the type of operations a storm will require based on the anticipated severity of the event or the current Trouble Level. This categorization of operations aids in identifying when operations will change and what those changes will be.

The following descriptions provide a brief overview for typical qualifications of the activation levels, however activation levels are at the discretion of the Incident Commander (IC), and may be called at any time during a storm.

1. Minor

The Minor Activation Level is in effect when Trouble Levels reach 1-2 system-wide, or when Trouble Level 1 is in place for individual service centers.

2. Significant

In a Significant Activation Level, multiple regions are affected (or anticipated to be affected), requiring coordinated response across the CNP service area. The Significant Activation Level is in effect when Trouble Levels reach 3-4 system-wide, or when Trouble Level 2-3 is in place for individual service centers.

3. Major

A Major Activation Level, most or all regions are affected (or anticipated to be affected), requiring coordinated response and resource management across the CNP service area. The Major Activation level is in effect when Trouble Level 5-8 are reached system-wide, or when Trouble Level 4-8 is reached within individual service centers.

4. EOP

When resources are taxed beyond the Level 8 threshold and the Incident Commander makes a call to a Regional Mutual Assistance Group (RMAG), operations will transfer to those designated in the *CenterPoint Energy 2015 Storm Emergency Operations Plan Manual*.

III. Organization and Assignment of Responsibilities

A. Overview

CNP has adopted the Incident Command System (ICS). ICS, a component of the National Incident Management System (NIMS), is a fundamental element of incident management which provides standardization through the use of common terminology and a scalable organizational structure. The ICS process and structure establishes clear roles and responsibilities and provides a process for aligning and documenting activities and information across Storm Restoration stakeholders represented in the Incident Response Team (IRT). The Company utilizes ICS to manage service restoration incidents at all levels.

The ICS structure of the IRT adopted by CNP is created to be able to expand and contract based on the needs of the situation. The IC, in consultation with the Section Chiefs, will determine when additional personnel need to be activated to fill necessary roles.

B. Storm Management Teams

1. Duty Storm Team

The Duty Storm Team is responsible for the storm restoration process in a Minor activation level. The Duty Storm Team operates on a one-week rotation schedule beginning at 8 AM on Thursday of each week. This team is comprised of:

- Incident Commander (IC)
- Operations Section Chief (OSC)
- Planning Section Chief (PSC)
- Distribution Control Officer (DCO)
- Forestry Branch Director (FBD)
- Foreign Crew Coordinator (FCC)

The Duty Storm Team roster and rotation schedule is kept on SharePoint where it is updated annually and consistently maintained as changes occur.

2. Incident Management Team (IMT)

The Incident Management Team (IMT) takes command of a storm restoration process during a significant event, or as activated by the Incident Commander. The IMT is a designated group of individuals who are tasked with consistent response in the event of a storm to improve overall efficiency in a Significant or Major storm event.

Within the IMT is the "Command Team." The Command Team is the team collectively responsible for developing the Storm Response Plan. They are the source of direction and control of Storm Restoration response. The Command Team is comprised of the Incident Commander, The Ops Section Chief, and the Planning Section Chief.

The following positions make up the IMT and Command Team. There are two groups, A and B, that allow for replacements and redundancies. The staffing of each team is at the discretion of the Incident Commander.

Command Team	Position	IMT 'A'	IMT 'B'
•	Incident Commander	Director of Operations	Director of Distribution Project Management
•	Ops Section Chief	Operations Manager	Operations Manager
•	Planning Section Chief	Distribution Services Manager	Service Area Manager
	Distribution Control Officer	Director of Distribution Control Operations	Manager Distribution Control
	Foreign Crew Coordinator	QA	QA
	Forestry Branch Director	Senior Forester	Senior Forester

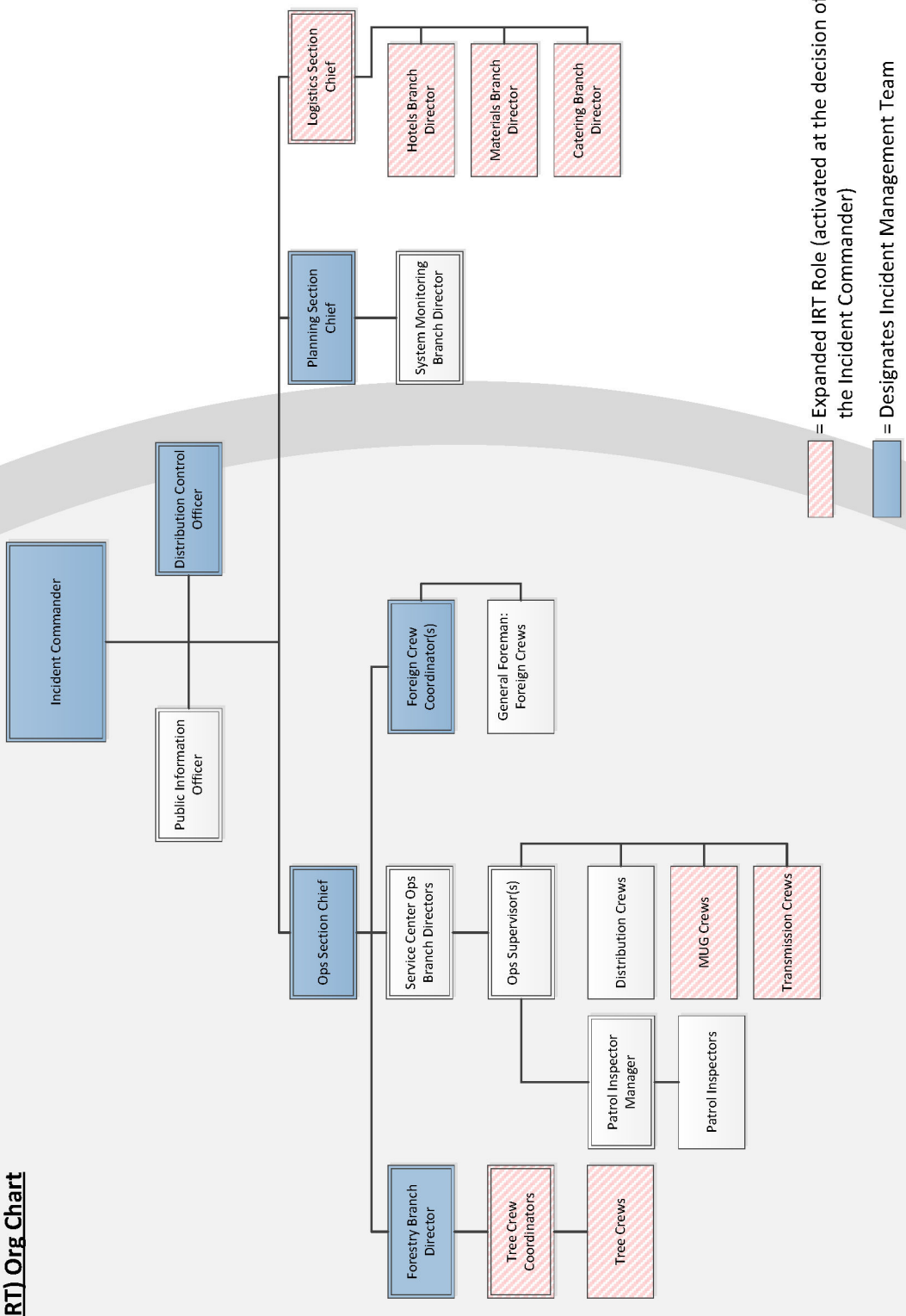
3. Incident Response Team

The Incident Response Team (IRT) holds responsibility for responding to outages and managing the Storm Restoration efforts of CNP. During minor storm activations, the IRT will be comprised of the Duty Storm Team. At the discretion of the IC, the structure will undergo additional changes based on the needs of the incident and the severity of storm. The IMT will fill the assigned roles within the IRT when the Activation Level has escalated to Significant. The IC will expand and contract the IRT as the needs of the incident change throughout Storm Restoration.

See Glossary of Names for corresponding IRT names with day-to-day jobs.

See Expanded IRT Annex for roles noted as and "Expanded IRT Role" on the chart below.

Storm Restoration – Incident Response Team (IRT) Org Chart



The staffing of the IRT is ultimately at the discretion of the IC. The following chart identifies the general IRT response needs based on the Activation Level.

Activation Level	Overview of Typical Electric Impact	Level of Response
Minor (TL 1-2)	Normal conditions across system.	Regular Operations • Duty Storm Team working.
Significant (TL 3-4)	Multiple regions affected; requires coordinated response across the service area.	Partial • Duty Storm Team responding; • Contract Crews activated, as needed; • Additional IRT Members activated as needed.
Major (TL 5-8)	Most or all regions affected; requires coordinated response and resource management across the service area.	Full • IMT activated to DVAL; • Additional IRT Members activated as needed; • Contract Crews activated, as needed; • Logistics activated at Trouble Level 8 as needed; • Mutual Assistance Foreign Crews activated, as needed.
EOP		

C. Overview of Responsibilities

Roles and Responsibilities	
Role	**Responsibilities**
Incident Commander **IC Job Aid**	***Storm Management Teams***: *Command Team, Incident Management Team, Incident Response Team* ***Primary Tasks***: *Event Monitoring, Resource Planning, Operational Communications* • Pre-Storm o Monitor weather forecast for potential event. o Work with OSC to develop the Storm Response Plan. o Initiate and facilitate pre-planning call. o Communicate pre-event status to leadership. o Gather contact information for other key resources (Distribution Control, Major Underground, Substation, Transmission, etc.). • Storm Operations o Facilitate all planning calls. o Monitor all StormGeo Reports and Situational Awareness. o Work with OSC and PSC to adjust the Storm Response Plan, as needed. o Continually monitor outages and referrals to determine resource allocation needs. o Activate additional resources in collaboration with the OSC. • Transition/Demobilization o Release IRT members from DVAL as activity subsides. o Collaborate with OSC and FCC on completion of last referrals and demobilize. o Brief incoming IC on event status and outstanding issues.

	Roles and Responsibilities	
	Role	**Responsibilities**

	Distribution Control Officer	***Storm Management Team:*** *Incident Response Team*
		Primary Tasks*: Event Monitoring, Resource Assignment*
		• Pre-Storm
		  ○ Monitor StormGeo information for potential weather.
		  ○ Notify IC directly of impending weather, if after hours.
		  ○ Send out conference call notification when initiated by IC.
		  ○ Notify StormGeo of the conference call.
		  ○ Attend pre-planning call and provide the system status update.
		• Storm Operations
		  ○ Continuously monitor Situational Awareness and report anomalies to Command Team.
		  ○ Resolve any dispatching concerns.
		  ○ Support the IC and OSC with resource decisions, as needed.
		• Transition/Demobilization
		  ○ Provide information on decrease in outages to consider demobilization.
		  ○ Brief incoming DCO on event status and outstanding issues.

Operations Section	**Operations Section Chief**
	OSC Job Aid
		Storm Management Teams*: Command Team, Incident Management Team, Incident Response Team*
		Primary Tasks*: Event Monitoring, Resource Planning, Prioritization of Work*
		• Pre-Storm
		  ○ Monitor weather forecast for potential event.
		  ○ Work with IC to develop the Storm Response Plan.
		  ○ Attend pre-planning call to report on required actions and resources.
		• Storm Operations
		  ○ Attend all planning calls.
		  ○ Monitor all StormGeo Reports and Situational Awareness.
		  ○ Work with IC and PSC to adjust the Storm Response Plan, as needed.
		  ○ Continually monitor outages and referrals to determine resource allocation needs.
		  ○ Activate additional resources in collaboration with the IC.
		• Transition/Demobilization
		  ○ Brief incoming OSC on pending work.

Roles and Responsibilities	
Role	**Responsibilities**

Forestry Branch Director	***Storm Management Teams:*** *Incident Management Team, Incident Response Team*
	Primary Tasks*: Restoration Support*
	• Pre-Storm
	  ○ Attend pre-planning call and provide an update on forestry resources.
	• Storm Operations
	  ○ Attend all planning calls.
	  ○ Continually maintain visibility on forestry crew jobs, location, and status.
	  ○ Maintain spreadsheet of forestry resource information.
	  ○ Communicate work orders/completion to/from the general foremen.
	• Transition/Demobilization
	  ○ Brief incoming Forestry Branch Director on jobs in progress or outstanding issues.
	  ○ Release forestry resources as directed by the IC.

Service Center Ops Branch Directors	***Storm Management Teams:*** *Incident Response Team*
	Primary Tasks*: Event Monitoring, Assignment of Work*
	• Pre-Storm
	• Storm Operations
	  ○ Follow the Storm Response Plan as it is communicated from the IC.
	  ○ Follow day-to-day procedures for directing damage assessment and restoration for service center territory.
	  ○ Respond to information requests from Command Team including ETA/ETR information and resource levels.
	  ○ Contact Command Team for resource reallocation when damage assessment of circuit and fuses for assigned service center have been completed.
	• Transition/Demobilization
	  ○ Work with Ops Supervisor to ensure adequate staffing for the following day.
	  ○ Release Service Center resources as directly by the Command Team.

Roles and Responsibilities	
Role	**Responsibilities**

Ops Supervisor	***Storm Management Teams***: *Incident Response Team*
	Primary Tasks: *Event Monitoring, Assignment of Work*
	• Pre-Storm
	• Storm Operations
	  ○ Manage crews conducting Damage Assessment and Restoration in Service Suite.
	  ○ If Patrol Inspectors are activated:
	  ▪ Communicate orders for Patrol Inspectors to Patrol Inspector Manager.
	  ▪ Drop order to be worked on self in Service Suite.
	  • Note should include "Consultant – NAME"
	  ▪ Enter Damage Assessment details from Patrol Inspector Manager into Service Suite.
	  ▪ Refer the order to the appropriate crew.
	• Transition/Demobilization
	  ○ Work with Service Center Ops Branch Director to ensure adequate staffing for the following day.

Distribution Crews	***Storm Management Teams***: *Incident Response Team*
	Primary Tasks: *Damage Assessment, Restoration*
	• Pre-Storm
	• Storm Operations
	  ○ Break down into 1-man first responder crews, when requested.
	  ○ Make repairs during Damage Assessment, when able to do so within proper safety guidelines.
	  ○ Build up into 2-man crews and 4-man construction crews, as requested.
	• Transition/Demobilization

	Roles and Responsibilities	
	Role	**Responsibilities**

	Patrol Inspector Manager
	PI Manager Job Aid
		Storm Management Teams: *Incident Response Team*
		Primary Tasks*: Resource Planning/Assignment, Documentation*
		• Pre-Storm
		  ○ Gather information on Patrol Inspector Availability,
		• Storm Operations
		  ○ Assign and communicate work orders from Ops Supervisor to Patrol Inspectors.
		  ○ Communicate Damage Assessment information from Patrol Inspectors to Ops Supervisor.
		  ○ Maintain records of Patrol Inspector assignment.
		• Transition/Demobilization
		  ○ Brief incoming Patrol Inspector Manager on outstanding issues.

	Patrol Inspectors	***Storm Management Teams:*** *Incident Response Team*
		Primary Tasks*: Damage Assessment*
		• Storm Operations
		  ○ Receive damage assessment requests from Patrol Inspector Manager.
		  ○ Assess damage at requested site including:
		  ▪ Address
		  ▪ Easement (Y/N)
		  ▪ Truck Accessible (Y/N)
		  ▪ Pole Size
		  ▪ Equipment Needs
		  ▪ Wire Down (Y/N)
		  ▪ Pole Down (Y/N)
		  ▪ Urgency
		  ▪ Pictures
		  ○ Communicate damage assessment information to Patrol Inspector Manager.

Roles and Responsibilities		
	Role	**Responsibilities**

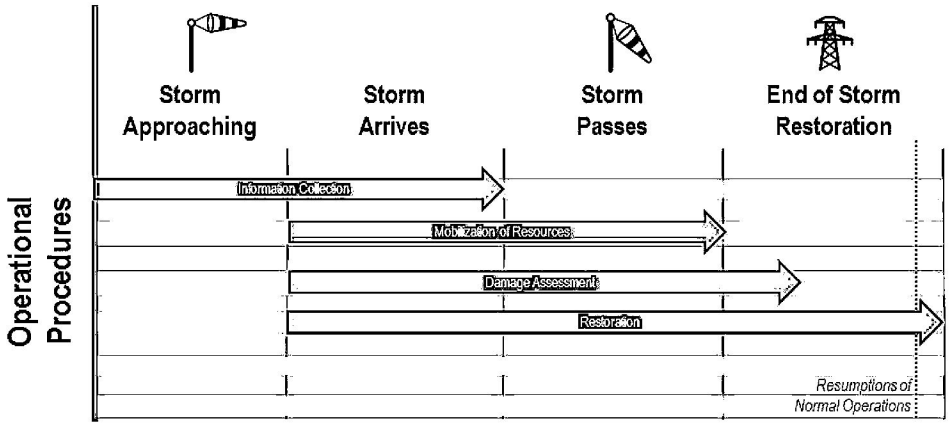
	Foreign Crew Coordinator
	FCC Job Aid
		***Storm Management Teams**: Incident Management Team, Incident Response Team*
		***Primary Tasks**: Event Monitoring, Resource Planning/Assignment, Documentation*
		• Pre-Storm
		  ○ Attend pre-planning call to report on contract crew availability.
		  ○ Compile contract resource information including truck numbers, crew name, phone numbers, general foreman's name and Service Center. (FCC Crew Log Template)
		• Storm Operations
		  ○ Attend all planning calls.
		  ○ Continually maintain visibility on contract resource jobs, location, and status.
		  ○ Communicate resource requirements and crew locations to/from the general foremen.
		  ○ Assign orders in Mobile Data to contract general foremen.
		• Transition/Demobilization
		  ○ Brief incoming FCC on work in progress, contract resource status and outstanding issues.

	Roles and Responsibilities	
	Role	**Responsibilities**
Planning Section	**Planning Section Chief** **PSC Job Aid**	***Storm Management Teams***: *Command Team, Incident Management Team* ***Primary Tasks***: *Conference Call Support, Resource Monitoring, Prioritization of Work, Customer Service Coordination, Documentation* • Pre-Storm ○ Set up event SharePoint folder. ○ Attend pre-planning call, take notes, document outputs and post to SharePoint. • Storm Operations ○ Begin Unit Log. ○ Create staffing list. ○ Notify Customer Service to direct priority issues to PSC. ○ Attend all planning calls. ○ Document all planning calls and post to SharePoint. ○ Gather ETA/ETR information. ○ Assist in Storm Response Plan development. ○ Maintain staffing list. ○ Maintain Unit Log. ○ Continually monitor referrals to determine prioritization of work assignments and to determine additional contractor resource needs. ○ Coordinate with FCC to assign work. ○ Coordinate with DCO, as needed. ○ Prepare event summary for the IC, and post to SharePoint. • Transition/Demobilization ○ Email all documentation from event to the incoming PSC. ○ Brief incoming PSC on outstanding issues/pending work. ○ Transition maintenance of staffing list to incoming PSC. ○ Finalize Unit Log and post all documentation to SharePoint.

IV. Storm Restoration Operational Procedures

Storm Restoration Operational Procedures provide the coordination of storm response activities by their procedural categories. An overview is given for each procedure, with the breakdown of the procedure following in the next section.

The following procedures occur concurrently until all damage has been assessed and CNP has reached the resumption of normal operations. Though written in a sequential order, some procedures, such as Damage Assessment and Restoration, may already be occurring before others. For instance, Mobilization of Resources may be implemented for cases that arise before reaching a Significant event. The following figure depicts the five operational procedures comprising CNP's storm restoration process and their not overlap.



A. Overview of Operational Procedures

1. Information Collection

Information Collection fuels the pre-planning of Storm Restoration response. Weather updates are continuously monitored to gain awareness of the type of event approaching and possible intensity. During this time, neighboring utility companies may be contacted to gain awareness of what effects the event had in that area to aid in the pre-planning of the response. Contact information for all IRT members will also be collected at this time to have available if the need arises to activate additional resources.

Incident Response Team members are notified to participate in a planning call to evaluate potential weather impact, staffing and determine appropriate plan of action. The planning phases of this process are critical for storms that occur after standard business hours, to enable crews to be mobilized before the weather hits.

See Information Collection for the procedure details.

2. Mobilization of Resources

Successful resource allocation is at the center of Storm Restoration. To accomplish restoring power in a timely manner, CNP utilizes mainly Internal and Contract Crews, but may also activate Mutual Assistance crews, if needed. These crews are explained in more detail below.

Each decision made during Storm Restoration has an impact on the proper allocation of resources. The goal is to restore power to as many customers as soon as possible in a timely and safe manner. At the onset of an event, internal crews will be broken down to create as many first responders (1-man crews) as possible to assess damage. As damage gets assessed (generally when all circuits and fuses have been assigned for damage assessment) internal crews will begin to be built up into 2-man crews, and eventually to 4-man construction crews to assist in restoration.

a. Personnel/Crew Types

Internal Crews

CNP holds an internal cadre of trained crews to be utilized in all facets and phases of Storm Restoration. A count of these resources is continually available via the Situational Awareness dashboard. The proper allocation and management of these resources is pivotal in ensuring a successful Storm Restoration.
See Crew Designations for the breakdown and designation of internal crews.

Contract Crews

CNP maintains contracts with **North Houston Pole Line Company** and **MP Technologies** for additional restoration support. Combined, these "contract crews" can add up to 73 crews to complement CNP's resources. These resources are activated during storm restoration when it is determined external crews are required. Contract Crews are utilized as 4-man construction crews, enabling internal crews to conduct damage assessment and smaller restoration activities. The number of contract crews requested will be determined by the referral rate during an event.

Mutual Assistance

When the need for additional crews expands beyond the foreign crews already contracted with CNP, the Company may contact neighboring utility companies to employ foreign crews contracted to the other company.

b. Storm Duration Staffing Considerations

Single Day Events

For events that can be wrapped up in 24 hours or less, resources are to be held to finish the event and maintain appropriate staffing for the next day.

Multi-Day Events

A multi-day event is an event that reaches an activation level of "Significant" or above for 24 continuous hours. During one of these events, maximize the number of resources available to work during daylight hours. In a multi-day event, minimal one and two-man staffing on the system remains at night to continue damage assessment and troubleshooting, with the goal to release the majority of internal resources by 10:00 p.m. in order to have them back for the next day. Decisions about whether or not to hold resources need to be made and communicated by 7:00 p.m.

The following matrix provides guidance on resources to consider activating depending on the staffing at the onset of the event and the anticipated severity of the event.

Activation Level	Current Staffing (Prior to the Onset of the Event) – High	Current Staffing (Prior to the Onset of the Event) – Low
Major (5 - 8)	▪ *Contract Crews* ▪ *Transmission Crews* ▪ *Substation Crews* ▪ *MUG Crews* ▪ *Patrol Inspectors*	▪ *Contract Crews* ▪ *Streetlight Crews* ▪ *Transmission Crews* ▪ *Substation Crews* ▪ *MUG Crews* ▪ *Patrol Inspectors* ▪ *Mutual Aid* ▪ *Logistics*
Significant (3 - 4)	▪ *Contract Crews*	▪ *Contract Crews* ▪ *MUG Crews*

See Mobilization of Resources for the procedure details.

3. Damage Assessment

Damage Assessment begins with the mobilization of crews to assess all damage. This may include making repairs within safety guidelines or referring the order to be assigned to the appropriate crew. Typically, this will be conducted by internal first responders (1-man crews). When a Service Center has reached a Major event (Trouble Level 4 and above), Patrol Inspectors may be activated to assist in Damage Assessment. This will enable damage to be assessed more quickly and allow for internal crews to begin to be built up again to assist in Restoration. The Patrol Inspectors may also be activated at the discretion of the Incident Commander.

See Damage Assessment for the procedure details.

4. Restoration

Restoration follows the restoration priorities to optimize restoration by restoring service to the most customers as quickly as possible. Internal crews will restore service when possible during damage assessment, however, for cases requiring 2-man and 4-man construction crews, crews will need to be built up from the first responder crews as the event progresses. Contract Crews will be activated and utilized depending on the severity of the event and at the discretion of the IC and OSC.

See Restoration for the procedure details.

5. Resumption of Normal Operations

Resumption of Normal Operations occurs as Damage Assessment is fully completed and remaining referred orders are minimal. IRT members will be released as their roles are no longer needed, but the FCC and/or IC will remain at DVAL until the referred orders are reduced to a manageable level and command is transferred to the leadership at the board. Internal crews will be released when remaining work can be managed by activated contract crews. Internal crews will be released before contract crews to ensure crews are given the appropriate eight-hour rest period before being needed to return to normal operations.

See Resumption of Normal Operations for the procedure details.

B. Operational Procedures Details

1. Information Collection

Process

The following is a detailed description of the process followed for pre-planning for a storm during Information Collection.

Step	Activity	Description
1	Pre Storm Conference Call	The Incident Commander will initiate and facilitate a call with the stakeholders listed below using conference call agenda. Based on input from stakeholders, the Incident Commander should make decisions regarding the areas of impact, current resources, anticipated need and next steps. Will crews be held? ◦ If **YES**, proceed to Step 2. ◦ If **NO**, proceed to Step 3.
2	Notify Internal Resources	The Operations Section Chief should notify service center leadership to hold internal resources.
3	Document Outputs of Meeting	The Planning Section Chief will document all outputs on the conference call agenda and send it to all DPD leadership (VP, Directors, Ops Managers, Ops Supervisors), planning call participants, and post to Storm Restoration SharePoint site created for the event.

Stakeholders

A pre-planning conference call will include the following stakeholders:

Position	Role
Incident Commander	Initiates & Facilitates meeting
Ops Section Chief	Advises on required actions, notifies internal resources of next steps
Planning Section Chief	Captures and distributes meeting minutes, stores meeting minutes on SharePoint
Incident Management Team Member(s)	Observer
Storm Geo	Provide further insight on forecast
Distribution Control Officer	Provides system status
Foreign Crew Coordinator	Provides contract crew availability
Forestry Branch Director	Provides vegetation management availability
Public Information Officer	Observer

Outputs

The following are the outputs that will be documented by the Planning Section Chief:

Output	Details
Areas of Expected Impact	Service Centers
Current Resources	Internal DPD
	Contractors (DPM)
	Leadership – Ops Supervisors
	Tree Crews
Anticipated Needs	Holding of Crews
	Staging
	Call-outs
	Other CNP Internal Crews
	Incident Response Team
	Incident Management Team
	Damage Assessors
	Logistics
Next Steps	Next Calls
	Mobilization of Resources

2. Mobilization of Resources

Process

The following is a detailed description of the process followed for the allocation and mobilization of resources.

Step	Activity	Description
1	Communicate with Service Centers on ETA, ETR & Current Resource Levels	The Planning Section Chief sends out email to Operation Supervisors requesting their current resource levels, estimated time to complete assessment (ETA) and estimated time to completely restore service (ETR). This information is collected and given to the Incident Commander.
2	Develop Storm Response Plan	The Incident Commander takes the resource levels, ETA and ETR from Planning Section Chief and develops a plan of action. Will any additional personnel be activated? • If **YES**, then proceed to Step 3. • If **NO**, the proceed to Step 4.
3	Activate Additional Personnel/Work Groups	The Operations Section Chief will communicate to personnel and/or work groups to activate any of the following: • Call-outs • Patrol Inspectors • Other Internal Support Crews • Staging Contractors • Mutual Assistance Calls • Logistics Activations will be planned and conducted with the proper work/rest cycles being considered. For more information on internal activation guidelines refer below.
4	Deliver Plan in Incident Briefing Conference Call	Incident Briefing or Update Conference Call is scheduled and led by the Incident Commander. The agenda is prepared and includes a discussion of resources required and/or available for reallocation. ***Are Patrol Inspectors being (Service Consultant) activated?*** • If **YES**, navigate to Patrol Inspectors Process. • If **NO**, continue to Damage Assessment.

Activation

Internal staff should be activated in the order of the table below, based on the skills needed. To activate any internal support work group, the duty roster for each group can be found on EMSweb.

Resources	Abilities	Guidelines to Activate
Internal DPD Crews	All	• Storms are expected, Trouble Level 2 or above anticipated
DPD Contract Crews	All	• Storms are expected, Trouble Level 2 or above anticipated
Primary Metering	Troubleshooting, Market Orders	• Storms are expected, Trouble Level 2 or above anticipated
Streetlight Crews	Troubleshooting	• Trouble Level 3 or above achieved
Patrol Inspectors	Damage Assessment	• Service Center Trouble Level 4 achieved
Major Underground	Troubleshooting, Transformer Replacement	• System Trouble Level 5 or above achieved
Substation	Grounding	• Tree event – sustained winds, saturated ground
Internal Transmission Crews	All	• Greater than 75 4-man referrals are pending
Contract Transmission Crews	All	• Greater than 75 4-man referrals are pending
Mutual Assistance Crews	All	• Anticipate more than 150 4-man crew referrals
Logistics	Support	• Mutual assistance called out, multi-day event anticipated

3. Damage Assessment

Process

The following is the process followed for Damage Assessment

Step	Activity	Description
1	Break Down Internal Crews	Break down all crews to utilize **ENTIRE** fleet. The objective is to create as many first responders as possible. **Internal resources should only perform cut & clear at this time.**
2	Damage Assessment	All internal crews will perform damage assessment until all pending circuits and fuses for their assigned service center are assessed. Do neighboring centers have pending circuits and fuses? • If **YES,** move to Step 3. • If **NO**, continue to Restoration.
3	Refer to Command Team	If neighboring centers are still working damage assessment, the Service Center Ops Supervisor will call the Command Team. The command Team will determine if reallocation is necessary.

4. Restoration

Process

The following describes the process for managing referred orders during a storm restoration event. This process will repeat until all referral work is complete.

Step	Activity	Description
1	Receive Referred Trouble Order	Dispatch receives referred trouble order from crew with details on required work needed to be completed. **Is external crew required?** • If **YES**, navigate to Contract Crews Process. • If **No**, referral is managed by the Ops Supervisor. **Note:** If possible internal crews should still be broken down and 4 man work will be referred to contract crews.

5. Resumption of Normal Operations

Process

The following is the process followed for the Resumption of Normal Operations.

Step	Activity	Description
1	Demobilization of IRT	As Storm Restoration nears completion, the IC will begin to release members of the IRT as roles become no longer needed. **Note:** The IC and FCC will remain at DVAL until the last referred order has been assigned.
2	Report to leadership	At the completion of the event, the IC will collaborate with the PSC to develop a final report to DPD leadership about the event.
3	Begin AAR Planning	The IC will begin planning the After-Action Review of the storm upon completion of the event using the After-Action Review Process.

V. Function Specific Annexes

A. Conference Call Procedures Annex

1. Triggers for Conference Call

The Storm Team will hold a conference call for planning. The Incident Commander, Director of Operations or designee will initiate this call when one of the following triggers occur:

- StormGeo sends out a Planning Forecast stating that conditions are expected to deteriorate in the near future and cause an impact to the system due to flooding, ice, winds or other conditions.
- StormGeo sends out a Weather Alert (Condition Yellow, Red, etc.) stating that hazardous weather conditions are currently occurring in the area and could adversely impact the system.
- The Thunderstorm Severity Index (TSI) report indicates a Peak Chance of Thunderstorms greater than 75% & Peak Severity of Thunderstorms greater than 6.
- By request of the Duty Incident Commander, Director of Operations or a designee.

2. Conference Call Agenda

STORM RESTORATION CONFERENCE CALL AGENDA	*Date:* _____ *Time:* _____
Call-in Information: _____	
Items marked with an "*" are only necessary to be covered on the update call. **KICKOFF**	**LEAD**
INTRODUCTIONS/ROLL CALL **Incident Response Team** ☐ Incident Commander ☐ Operations Section Chief ☐ Planning Section Chief ☐ Distribution Control Officer ☐ Foreign Crew Coordinator(s) ☐ Forestry Branch Director ☐ Public Information Officer ☐ IMT Representative ☐ Storm Geo Representative **Service Centers*** ☐ Baytown ☐ Bellaire ☐ Cypress ☐ Fort Bend ☐ Galveston ☐ Greenspoint ☐ H.O Clarke ☐ Humble ☐ Katy ☐ South Houston ☐ Spring Branch ☐ Sugar Land	Incident Commander: _____
SITUATION UPDATE **Forecast (StormGeo)** ☐ Weather Forecast ☐ Projected Worst Case Weather Scenario **System Status Update (Incident Commander) *** ☐ Current Trouble Level ☐ Market Orders Pending ☐ Current Outages ☐ Customers Out ☐ Circuits ☐ Fuses	Incident Commander: _____

☐ Transformers ☐ Locals ☐ Pending ☐ Referred orders ☐ Anomalies ☐ Number of Internal Resources Working ☐ Number of External Resources Working ☐ Contract Crews ☐ Tree Crews **Safety Message (Incident Commander)**	
INCIDENT RESPONSE TEAM REPORT OUT	**LEAD**
Incident Commander ☐ Anticipated Needs ☐ Incident Management Team ☐ Patrol Inspectors ☐ Forestry Branch ☐ Contract Crews ☐ MUG Crews ☐ Substation Crews ☐ Transmission Crews ☐ Logistics **Operations Section Chief** ☐ Current Resources ☐ Internal DPD ☐ Leadership- Ops Supervisor ☐ Anticipated Needs ☐ Holding of Crews ☐ Staging ☐ Call-Outs **Forestry Branch Director** ☐ Current Resources ☐ Tree Crews ☐ Anticipated Needs	Incident Commander: _____

INCIDENT RESPONSE TEAM REPORT OUT	LEAD
Foreign Crew Coordinator ☐ Current Resources ☐ Foreign Crews ☐ Anticipated Needs	

NEXT STEPS	LEAD
Incident Commander* ☐ Staffing for the next operational period ☐ Management Transition Plan (Conditional) ☐ Crew Demobilization Planning (Conditional) **ACTION ITEMS**	Incident Commander: _____
SET NEXT CONFERENCE CALL Date:_____ Time: _____	Incident Commander: _____
ACTIVATION TO THE BOARD	Incident Commander: _____

Responsible Party	Action Item

3. Notetaking Template

Storm After-Action – CenterPoint Energy DPD	
Conference Call Notetaking Sheet	
Agenda Item	**Content**
Welcome	
Roll Call	Baytown? Bellaire? Cypress? Fort Bend? Galveston? Greenspoint? H.O. Clark? Humble? Katy? South Houston? Spring Branch? Sugarland? Primary Metering? Others?
Status Update	Weather Update: Current Trouble Level: Market Orders Remaining: Current Outages: • Customers Out: • Circuits: • Partials: • Fuses: • Transformers: • Locals: • Pending: Resources Currently Working: • Internal: • Contract: • Tree: • Others: • Others: • Others:

Safety Message	
Plan	Objectives for the Current Period: • Work Safely • Target for completing damage assessments / restoration is _____. • Restore power in the most efficient manner possible • Ensure EOTs are updated in a timely manner Call Outs Performed • Trouble Shooter Call Outs: • Service Center Call Outs: • Contractor Crews Requested: • Tree Crews Requested: • Others: Resources Requested: • Baytown: • Bellaire: • Cypress: • Fort Bend: • Galveston: • Greenspoint: • H.O. Clark: • Humble: • Katy: • South Houston: • Spring Branch: • Sugarland: • Primary Metering: • Others: Resources Available for Reallocation: • Baytown: • Bellaire: • Cypress: • Fort Bend: • Galveston: • Greenspoint: • H.O. Clark: • Humble:

	• Katy: • South Houston: • Spring Branch: • Sugarland: • Primary Metering: • Others: Call Outs Planned (but not yet performed) • Service Center Call Outs: • Contractor Crews Requested: • Tree Crews Requested: • Others: Resources Allocations: • Internal Resources Directed to Another Service Center: • Current Allocations of Contract Crews: • Current Allocations of Tree Crews: Processes: • Requesting additional resources (line skills or tree crews): • Managing contract crews: • What to do when crews come in the clear: How are we staffing for the next operational period (either the next work day or, if it is a multi-day event, storm restoration staffing)? Management Transition Plan – What time should the leadership transition take place?

	Crew Demobilization – Do we have a target for starting to release crews, if so what is that target? When is the next Incident Update scheduled for?

Management Reminders	Examples may include:
	• Getting management into the field, if needed.
	• Managing meals carefully.
	• ETR:
	  ○ Crews should be updating ETRs in a timely manner.
	  ○ Management can extend ETRs as needed, but those extensions need to be communicated to Customer Service.

B. Service Suite Annex

1. Crew Designations

	Alpha	Title	Crew Size		Notes	Conditional Activation
		- Seasonal Crew				
Management						
	A	Crew Leader				
	Z	Trouble Coordinator				
Response Crews						
Days	X	Response crews	1 M	Weekdays Various Shifts (daylight hours)	Includes Troubleshooters and S/C crews	First responder on weekdays
Days	W	Weekend Trouble Crews	1 M	Weekend Days (08:00 - 16:30)	Generally assigned Reliability type work on weekdays	Routine first responder on weekends, conditional use as "Overflow" responder weekdays
Days	R	Weekend Trouble Crews	2 M	Weekend Days (08:00 - 16:30)	Two man crew consists of one apprentice and one HDLM	Routine first responder on the weekends, will have reliability work assigned, used for trouble referrals
Evenings	L	Evening Trouble Crews	1 M	Evenings (15:00 - 01:00)		First Responder on Evening Shifts
Evenings	S	Evening Trouble Crews	1 M	Evenings (15:00 - 23:00)		First Responder on Evening Shifts
Evenings	T	Trouble Crews	2 M	Evenings (15:00 - 23:00)		First Responder - Only staffed during Peak Season
Evenings	P	Peak Load Crew	3 M or more	Evenings		Trouble crew - Only Staffed during peak season
Evenings	B	Large Crew Evenings	4 M	Evenings (16:00 - 24:00)		Light Construction/Trouble Crew - Year Round
GY	Y	Graveyard Shift Trouble Crews	1 M	Nights (23:00 to 07:00)		First Responder on Graveyard Shifts
All	G	URD Vans	1 M or 2 M	All Shifts	Primarily used for URD Trouble	Conditional first responder to non URD Trouble

	Alpha	Title	Crew Size		Notes	Conditional Activation
Operations Crews						
	D	CSO Crew	2 M	Monday through Friday		Fuse or Circuit vicinities in area
	H	Capacitor Crew	2 M	Monday through Friday		Circuit vicinities in area
	M	P/M Crew	1 M or 2 M	Monday through Friday		Circuit vicinities in area
	J	Internal POD crews	3/4 M	Monday through Friday	big crew construction	Circuit vicinities in area
	N	P/M Construction Crew	1 M	Monday through Friday		
	Q	AMS, CSO Contractor	1 M	Monday through Friday		AMS pre-deployment sweep
	C	Contract Streetlight Crew	1M	Monday through Friday		
Large Crews						
	E	Construction Crew	3 M or more	Monday through Friday	Combination crew with a bucket truck and a digger truck	
Contractor Crews NHPL						
	NH#OV	Contract Construction Crew	3-5M	M-F	Combination crew with a bucket truck and a digger truck	overhead crew
	NH#UR	Contract Construction Crew		M-F	Underground	undeground crew
	NH#GF	General Foreman				
Contrctor Crew MPT						
	MP#OV	Contract Construction Crew	3-5M	M-F	Combination crew with a bucket truck and a digger truck	overhead crew
	MP#UR	Contract Construction Crew		M-F	Underground	undeground crew
	MP#GF	General Foreman				
Other Crews						
	F	FSR				
	K	Mechanic				Roving Fleet Mechanic
	I	Meter Issue Resolution Representative				
	O	Revenue Meter Techs				
	U	Major Underground				
	V	High Volt Metering				
	*	Tele-communications, Radio Communications, and DACs (Substston Operations) dealing with the IG Equipment				

2. Contract Crews

Process

The following describes the process for Restoration when Contract Crews are being utilized.

Step	Activity	Description
1	Review and Prioritize Referred Orders	Planning Section Chief reviews all referrals for details and prioritizes based on number of customers affected, crews available, and resources/materials needed.
2	Communicate Referral Work to General Foreman	The Foreign Crew Coordinator communicates with the General Foreman for the contract crews the order to be worked. There should be one Foreign Crew Coordinator for each contract company that is used to respond. **Note:** Foreign Crew Coordinator will work from DVAL.
3	Override Crew Location Settings	The Foreign Crew Coordinator overrides the crew location settings in Service Suite - Dispatch Application if the contract crew is required to change Service Center locations.
4	Assign Referral Work to Contractor	The Foreign Crew Coordinator assigns the referral work to the appropriate contractor work queue in Service Suite - Dispatch Application.
5	Drops Order on Contract Crew Foreman	The Foreign Crew General Foreman places the order on the Contract Crew Foreman in Service Suite – Dispatch Application until it is completed.
6	*Order Worked*	*External crews work order to completion.*
7	Complete order in Service Suite	The Contract Crew Foreman completes the order in Service Suite – Mobile Application with completion notes.

3. Crews not on Service Suite

Patrol Inspectors, while critical to Storm Restoration, are not able to access Service Suite. Therefore, to maintain an accurate view of Damage Assessment and Restoration, the following process is utilized to ensure a continual communication flow throughout Storm Restoration.

a. Patrol Inspectors

Process

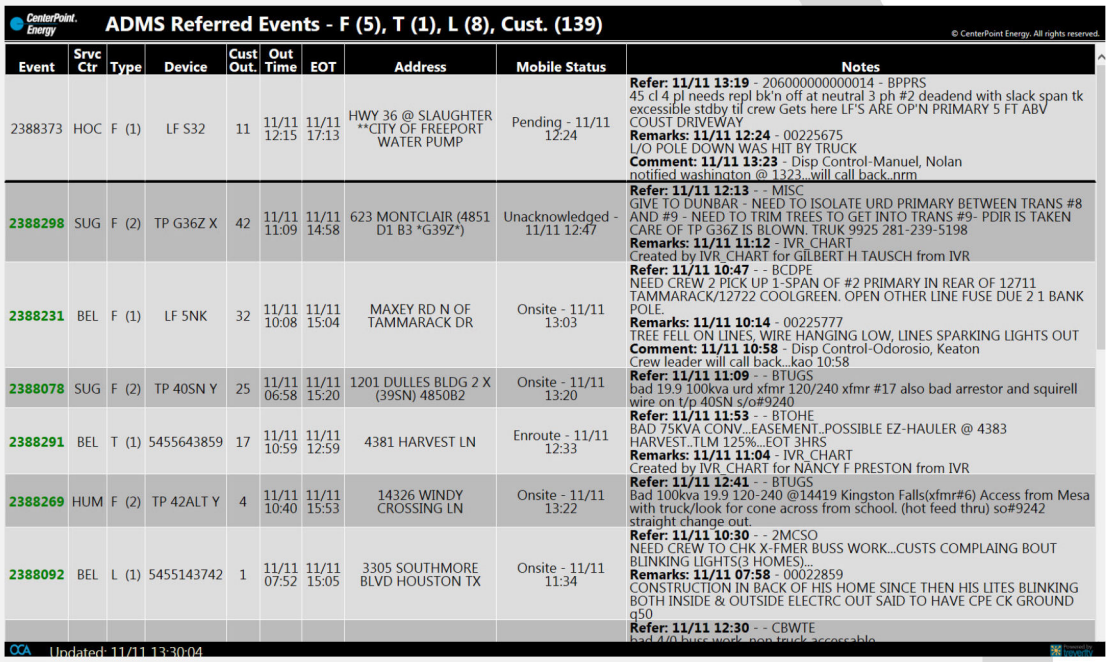
The following describes the process for damage assessment when service consultants are activated.

Step	Activity	Description
1	Activate Patrol Inspectors	The Patrol Inspectors will be activated by any one of the following triggers: • Individual Service Center trouble level greater than 4, or • By direction of the Incident Commander, Director of Operations of his designee. **Notes:** • Damage Assessment by Patrol Inspectors should only be performed during daylight hours. • Typically Patrol Inspectors should be used to assess pending fuse cases.
2	Drop Orders on Ops Supervisor	Operations Supervisor will drop orders needing to be assessed, on himself in the Service Suite Dispatch Application. Notes on order should include "Consultant - NAME."
3	Notify Patrol Inspector Manager	Operations Supervisor will notify the Patrol Inspector Manager verbally of the order details.
4	Assign Order to Patrol Inspector	The Patrol Inspector Manager will communicate the order to be worked to an available patrol inspector.
5	Assess Damage	Patrol Inspector will gather pertinent information and go to order location and assess damage Details of damage will be written down and photos will be captured, when possible, to share with Ops Supervisor when reporting back.

		The Minimum details required from the assessment include but are not limited to the following: • Address • Easement (Y/N) • Truck Accessible (Y/N) • Pole Size • Equipment Needs • Wire Down (Y/N) • Pole Down (Y/N) • Urgency
6	Report Results	Patrol Inspector calls the Operations Supervisor, reports on the damage and shares all details including pictures if applicable.
7	Enter Results in Service Suite	The Ops Supervisor is responsible for entering results in Service Suite Mobile Application and referring order to appropriate crew.

C. Situational Awareness Annex

1. Referred Events



ADMS Referred Events - F (5), T (1), L (8), Cust. (139)

Event	Srvc Ctr	Type	Device	Cust Out.	Out Time	EOT	Address	Mobile Status	Notes
2388373	HOC	F (1)	LF S32	11	11/11 12:15	11/11 17:13	HWY 36 @ SLAUGHTER **CITY OF FREEPORT WATER PUMP	Pending - 11/11 12:24	**Refer: 11/11 13:19** - 206000000000014 - BPPRS 45 cl 4 pl needs repl bk'n off at neutral 3 ph #2 deadend with slack span tk excessible stdby til crew Gets here LF'S ARE OP'N PRIMARY 5 FT ABV COUST DRIVEWAY **Remarks: 11/11 12:24** - 00225675 L/O POLE DOWN WAS HIT BY TRUCK **Comment: 11/11 13:23** - Disp Control-Manuel, Nolan notified washington @ 1323...will call back..nrm
2388298	SUG	F (2)	TP G36Z X	42	11/11 11:09	11/11 14:58	623 MONTCLAIR (4851 D1 B3 *G39Z*)	Unacknowledged - 11/11 12:47	**Refer: 11/11 12:13** - - MISC GIVE TO DUNBAR - NEED TO ISOLATE URD PRIMARY BETWEEN TRANS #8 AND #9 - NEED TO TRIM TREES TO GET INTO TRANS #9- PDIR IS TAKEN CARE OF TP G36Z IS BLOWN. TRUK 9925 281-239-5198 **Remarks: 11/11 11:12** - IVR_CHART Created by IVR_CHART for GILBERT H TAUSCH from IVR
2388231	BEL	F (1)	LF 5NK	32	11/11 10:08	11/11 15:04	MAXEY RD N OF TAMMARACK DR	Onsite - 11/11 13:03	**Refer: 11/11 10:47** - - BCDPE NEED CREW 2 PICK UP 1-SPAN OF #2 PRIMARY IN REAR OF 12711 TAMMARACK/12722 COOLGREEN. OPEN OTHER LINE FUSE DUE 2 1 BANK POLE. **Remarks: 11/11 10:14** - 00225777 TREE FELL ON LINES, WIRE HANGING LOW, LINES SPARKING LIGHTS OUT **Comment: 11/11 10:58** - Disp Control-Odorosio, Keaton Crew leader will call back...kao 10:58
2388078	SUG	F (2)	TP 40SN Y	25	11/11 06:58	11/11 15:20	1201 DULLES BLDG 2 X (39SN) 4850B2	Onsite - 11/11 13:20	**Refer: 11/11 11:09** - - BTUGS bad 19.9 100kva urd xfmr 120/240 xfmr #17 also bad arrestor and squirell wire on t/p 40SN s/o#9240
2388291	BEL	T (1)	5455643859	17	11/11 10:59	11/11 12:59	4381 HARVEST LN	Enroute - 11/11 12:33	**Refer: 11/11 11:53** - - BTOHE BAD 75KVA CONV...EASEMENT..POSSIBLE EZ-HAULER @ 4383 HARVEST..TLM 125%...EOT 3HRS **Remarks: 11/11 11:04** - IVR_CHART Created by IVR_CHART for NANCY F PRESTON from IVR
2388269	HUM	F (2)	TP 42ALT Y	4	11/11 10:40	11/11 15:53	14326 WINDY CROSSING LN	Onsite - 11/11 13:22	**Refer: 11/11 12:41** - - BTUGS Bad 100kva 19.9 120-240 @14419 Kingston Falls(xfmr#6) Access from Mesa with truck/look for cone across from school. (hot feed thru) so#9242 straight change out.
2388092	BEL	L (1)	5455143742	1	11/11 07:52	11/11 15:05	3305 SOUTHMORE BLVD HOUSTON TX	Onsite - 11/11 11:34	**Refer: 11/11 10:30** - - 2MCSO NEED CREW TO CHK X-FMER BUSS WORK...CUSTS COMPLAING BOUT BLINKING LIGHTS(3 HOMES)... **Remarks: 11/11 07:58** - 00022859 CONSTRUCTION IN BACK OF HIS HOME SINCE THEN HIS LITES BLINKING BOTH INSIDE & OUTSIDE ELECTRC OUT SAID TO HAVE CPE CK GROUND q50
									Refer: 11/11 12:30 - - CBWTE

CCA Updated: 11/11 13:30:04

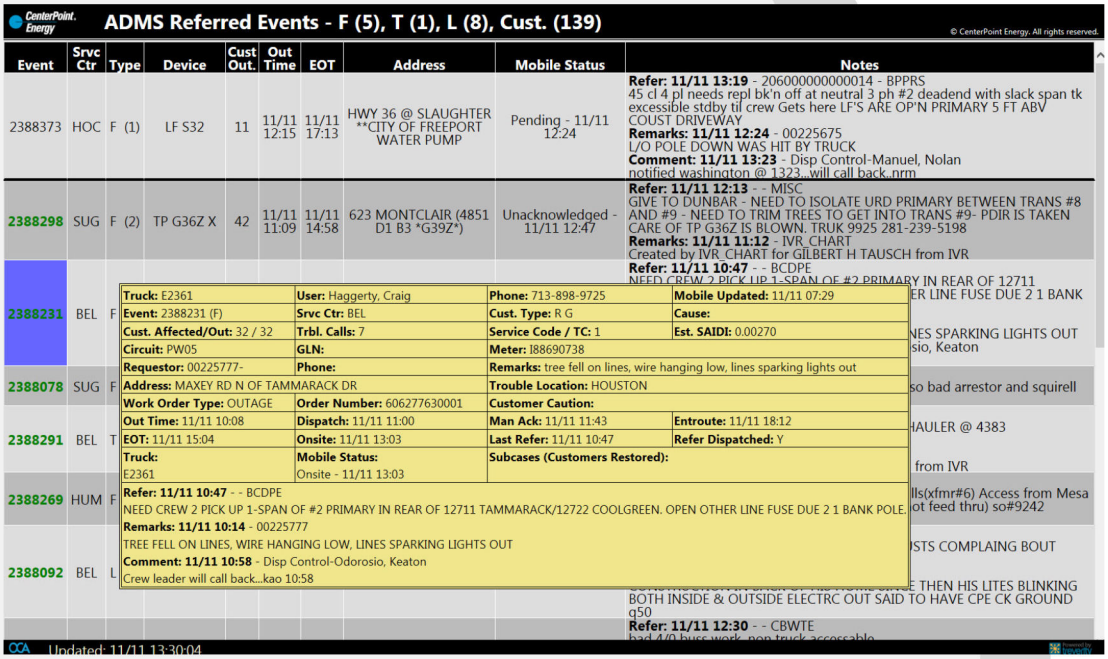
Referred Events	
Purpose: This screen provides information about the status of referrals in the system in the entirety of the service area.	
Column	**User Notes**
Header Row	• This row provides a summary of the types of outages and the number of customers affected. In this image, there are: ○ 5 fuses, ○ 1 transformer, and ○ 8 locals affected, ○ Impacting a total of 139 customers
Event Column	• If the event number is **bolded and green**, the referral has been assigned to either an internal crew or a contract crew. • If the event number is in black and not bolded, the referral is still pending and has yet to be assigned. ○ These referrals will automatically stay at the top of the screen. ○ From there, the referrals on this screen are ordered by the number of customers affected.

Referred Events	
Purpose: This screen provides information about the status of referrals in the system in the entirety of the service area.	
Column	**User Notes**

Type Column	• Notes the device affected:
	  ○ F: Fuse
	  ○ C: Circuit
	  ○ T: Transformer
	  ○ L: Local
	  ○ 1: Overhead
	  ○ 2: Underground

Notes Column	• All referral comments/notes are displayed in this column. • The Referral Code gives more information about the order.

a. Referred Events Pop-Up



Referred Events Pop-Up	
Hovering over the event number on the Referred Events screen will display additional information about the order, including a summary of all the statuses of that order up to that point.	
Column	**User Notes**
Key Information	• What truck is holding the referral • What circuit the outage is on • The number of trouble calls received • What time the referral was received • What time a crew was dispatched
Est. SAIDI	• This section is the extent to which the particular outage may affect the total SAIDI.
Cust. Type	• The customer type affected is categorized as: ○ R: Residential ○ C: Commercial ○ I: Industrial

2. System Summary

CenterPoint Energy

1

11/11 13:25:04

Outage Event Summary

Event Summary	Events	Referred	Cust. Affected	Cust. Out	24h SAIDI
Total	75	15	226	217	0.15
Circuit Lockout	0	0	0	0	0.00
Part Rest Circuits	0	0	0	0	0.06
Part Circuits	0	0	0	0	0.00
Fuses	6	5	126	117	0.06
Transformers	15	1	46	46	0.02
Local	54	9	54	54	0.01

Reliability Performance (Forced & Outside)

	11/10 Actual	11/10 Goal	11/10 Status	2015 Goal	11/11 Est.	11/11 Goal	11/11 Est. Status
SAIDI YTD		85.70		96.00		85.79	
SAIDI Day		0.18				0.10	
SAIFI YTD		1.2468		0.0837		1.2483	
SAIFI Day		0.0026				0.0015	
CAIDI YTD		72.36		72.00		72.36	
CAIDI Day		72.36				72.36	

Z	A	X	S	Y	W	L	G	I	J	B	T	P	D	M	N	C	R	E	H	U	V	K	Res.
11	16	51	3	1	0	0	8	0	0	0	2	0	41	9	19	21	0	36	9	0	0	0	200

Srvc Ctr	Circuits: Lockout	Circuits: Partial Rest	Circuits: Partial	Circuits: Pend.	Fuse: Total	Fuse: Pend.	Trans: Total	Trans: Pend.	Local: Total	Local: Pend.	Orders: Total	Orders: Refer	Orders: Pend. Refer	Orders: Market Orders	Orders: Over 4h	Customers: Affected	Customers: Out	Crews: 1 Man	Crews: 2 Man	Crews: Big	Crews: URD	Resources: Surplus
System	0	0	0	0	6	0	15	3	54	5	75	15	1	47	3	226	217	64	92	36	8	194
BAY	0	0	0	0	0	0	5	3	8	4	13	1	0	2	0	20	20	5	6	6	1	18
BEL	0	0	0	0	1	0	2	0	8	0	11	4	0	9	1	58	58	12	11	4	0	26
CYP	0	0	0	0	0	0	0	0	3	0	3	0	0	1	0	3	3	8	9	2	1	20
FTB	0	0	0	0	0	0	0	0	1	1	1	0	0	2	0	1	1	3	6	3	0	12
GAL	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	4	3	0	9
GPT	0	0	0	0	0	0	1	0	7	0	8	0	0	10	0	8	8	6	11	1	1	19
HOC	0	0	0	0	2	0	2	0	10	0	14	4	1	0	0	31	31	7	8	6	1	20
HUM	0	0	0	0	1	0	2	0	3	0	6	1	0	1	0	21	12	4	9	2	1	15
KTY	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	7	2	0	12
SOH	0	0	0	0	0	0	0	0	4	0	4	1	0	4	0	4	4	7	14	3	1	25
SPB	0	0	0	0	0	0	1	0	5	0	6	2	0	6	0	6	6	3	4	2	1	10
SUG	0	0	0	0	2	0	2	0	5	0	9	2	0	8	2	74	74	4	3	2	1	8

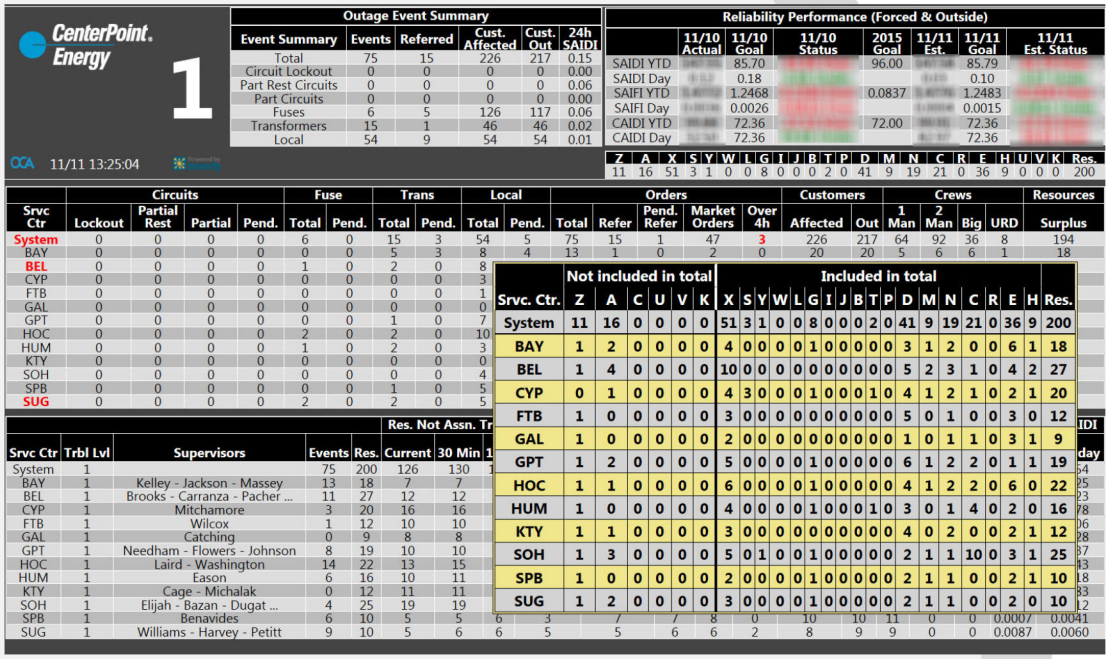
Srvc Ctr	Trbl Lvl	Supervisors	Events	Res.	Res. Not Assn. Trbl.: Current	Resources Required (All Events): 30 Min	Resources Required (All Events): 1 Hr	Resources Required (All Events): Total Req	Resources Required (All Events): Surplus	Resources Req (Trbl Lvl 3): 30 Min	Resources Req (Trbl Lvl 3): 1 Hr	Resources Req (Trbl Lvl 3): Total Req.	Resources Req (Trbl Lvl 3): Surplus	Contractor: 30 Min	Contractor: 1 Hr	Contractor: Events	Contractor: Cust. Out	Estimated SAIDI: Today	Estimated SAIDI: Yesterday
System	1		75	200	126	130	137	36	164	168	175	6	194	198	205	0	0	0.0307	0.1554
BAY	1	Kelley - Jackson - Massey	13	18	7	7	7	6	12	12	12	0	18	18	18	0	0	0.0020	0.0025
BEL	1	Brooks - Carranza - Pacher ...	11	27	12	12	13	5	22	22	23	1	26	26	27	0	0	0.0061	0.0123
CYP	1	Mitchamore	3	20	16	16	18	1	19	19	21	0	20	20	22	0	0	0.0010	0.0278
FTB	1	Wilcox	1	12	10	10	10	1	11	11	11	0	12	12	12	0	0	0.0005	0.0006
GAL	1	Catching	0	9	8	8	8	0	9	9	9	0	9	9	9	0	0	0.0011	0.0028
GPT	1	Needham - Flowers - Johnson	8	19	10	10	10	3	16	16	16	0	19	19	19	0	0	0.0028	0.0137
HOC	1	Laird - Washington	14	22	13	15	16	7	15	17	18	2	20	22	23	0	0	0.0016	0.0043
HUM	1	Eason	6	16	10	11	12	3	13	14	15	1	15	16	17	0	0	0.0025	0.0018
KTY	1	Cage - Michalak	0	12	11	11	11	0	12	12	12	0	12	12	12	0	0	0.0003	0.0583
SOH	1	Elijah - Bazan - Dugat ...	4	25	19	19	20	2	23	23	24	0	25	25	26	0	0	0.0034	0.0212
SPB	1	Benavides	6	10	5	5	6	3	7	7	8	0	10	10	11	0	0	0.0007	0.0041
SUG	1	Williams - Harvey - Petitt	9	10	5	6	6	5	5	6	6	2	8	9	9	0	0	0.0087	0.0060

System Summary	
Purpose: This screen provides a high-level overview of how the restoration efforts are progressing in relation to the rest of the storm.	
Column	**User Notes**

Header Row	• The large, white number is the current trouble level.
	• The Outage Event Summary provides a summary of the events over a 24-hour period, including:
	  ○ Type
	  ○ Number of referrals
	• The Reliability Performance section displays how current efforts are comparing the SAIDI, CAIDI, and SAIFI goals from both a daily and yearly perspective.
	• The summary of crew typed logged onto the system at the present time are displayed below the Reliability Performance section. Crew Designations are listed in the previous annex.

System Summary	
Purpose: This screen provides a high-level overview of how the restoration efforts are progressing in relation to the rest of the storm.	
Column	**User Notes**
Outage Breakdown	• The types of outages are categorized horizontally and organized based on the restoration priorities and divided into "total" and "pending" columns. Outages in the "pending" columns are ones still waiting to be assigned to a crew. • The Orders section shows: ▪ Total number of orders ▪ Number referred ▪ Number pending ○ **Note**: The referrals rate can be calculated using the "total" and "refer" columns of this section: Refer/Total=Referral Rate. ○ **Note**: Market Orders must be completed according the established guidelines. ○ **Note**: Any order taking longer than the 4-hour timeframe will be displayed in **red**. • The Customers section shows how many customers were initially affected and how many are still out at the present moment. • The Crews section displays the breakdown of the four main types of crews on the system. ○ **Note**: The crews listed here are internal only. For contract crew availability, contact the OSC at DVAL. • The Resources section uses an algorithm to calculate the surplus of crews for each service center based the on the number/types of outages and the crews currently logged into the system. ○ **Note**: When a **red** number appears in this column, the corresponding Service Center may be understaffed.
Service Center Breakdown	• The bottom section of this screen displays the current trouble level at each of the Service Centers and the current supervisors at each. ○ **Note**: Hovering over the supervisor's name will display the contact information for that supervisor. • The following columns display predictions of the possible resources needed if the trouble level were to change for each Service Center.

a. System Summary Pop-Up



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1

11/11 13:25:04

Outage Event Summary

Event Summary	Events	Referred	Cust. Affected	Cust. Out	24h SAIDI
Total	75	15	226	217	0.15
Circuit Lockout	0	0	0	0	0.00
Part Rest Circuits	0	0	0	0	0.06
Part Circuits	0	0	0	0	0.00
Fuses	6	5	126	117	0.06
Transformers	15	1	46	46	0.02
Local	54	9	54	54	0.01

Reliability Performance (Forced & Outside)

	11/10 Actual	11/10 Goal	11/10 Status	2015 Goal	11/11 Est.	11/11 Goal	11/11 Est. Status
SAIDI YTD		85.70		96.00		85.79	
SAIDI Day		0.18				0.10	
SAIFI YTD		1.2468		0.0837		1.2483	
SAIFI Day		0.0026				0.0015	
CAIDI YTD		72.36		72.00		72.36	
CAIDI Day		72.36				72.36	

Z	A	X	S	Y	W	L	G	I	J	B	T	P	D	M	N	C	R	E	H	U	V	K	Res.
11	16	51	3	1	0	0	8	0	0	0	2	0	41	9	19	21	0	36	9	0	0	0	200

Srvc Ctr	Circuits: Lockout	Circuits: Partial Rest	Circuits: Partial	Circuits: Pend.	Fuse: Total	Fuse: Pend.	Trans: Total	Trans: Pend.	Local: Total	Local: Pend.	Orders: Total	Orders: Refer	Orders: Pend. Refer	Orders: Market Orders	Orders: Over 4h	Customers: Affected	Customers: Out	Crews: 1 Man	Crews: 2 Man	Crews: Big	Crews: URD	Resources: Surplus
System	0	0	0	0	6	0	15	3	54	5	75	15	1	47	3	226	217	64	92	36	8	194
BAY	0	0	0	0	0	0	5	3	8	4	13	1	0	2	0	20	20	5	6	6	1	18
BEL	0	0	0	0	1	0	2	0	8													
CYP	0	0	0	0	0	0	0	0	3													
FTB	0	0	0	0	0	0	0	0	1													
GAL	0	0	0	0	0	0	0	0	0													
GPT	0	0	0	0	0	0	1	0	7													
HOC	0	0	0	0	2	0	2	0	10													
HUM	0	0	0	0	1	0	2	0	3													
KTY	0	0	0	0	0	0	0	0	0													
SOH	0	0	0	0	0	0	0	0	4													
SPB	0	0	0	0	0	0	1	0	5													
SUG	0	0	0	0	2	0	2	0	5													

Srvc Ctr	Trbl Lvl	Supervisors	Events	Res.	Current	30 Min
System	1		75	200	126	130
BAY	1	Kelley - Jackson - Massey	13	18	7	7
BEL	1	Brooks - Carranza - Pacher ...	11	27	12	12
CYP	1	Mitchamore	3	20	16	16
FTB	1	Wilcox	1	12	10	10
GAL	1	Catching	0	9	8	8
GPT	1	Needham - Flowers - Johnson	8	19	10	10
HOC	1	Laird - Washington	14	22	13	15
HUM	1	Eason	6	16	10	11
KTY	1	Cage - Michalak	0	12	11	11
SOH	1	Elijah - Bazan - Dugat ...	4	25	19	19
SPB	1	Benavides	6	10	5	5
SUG	1	Williams - Harvey - Petitt	9	10	5	6

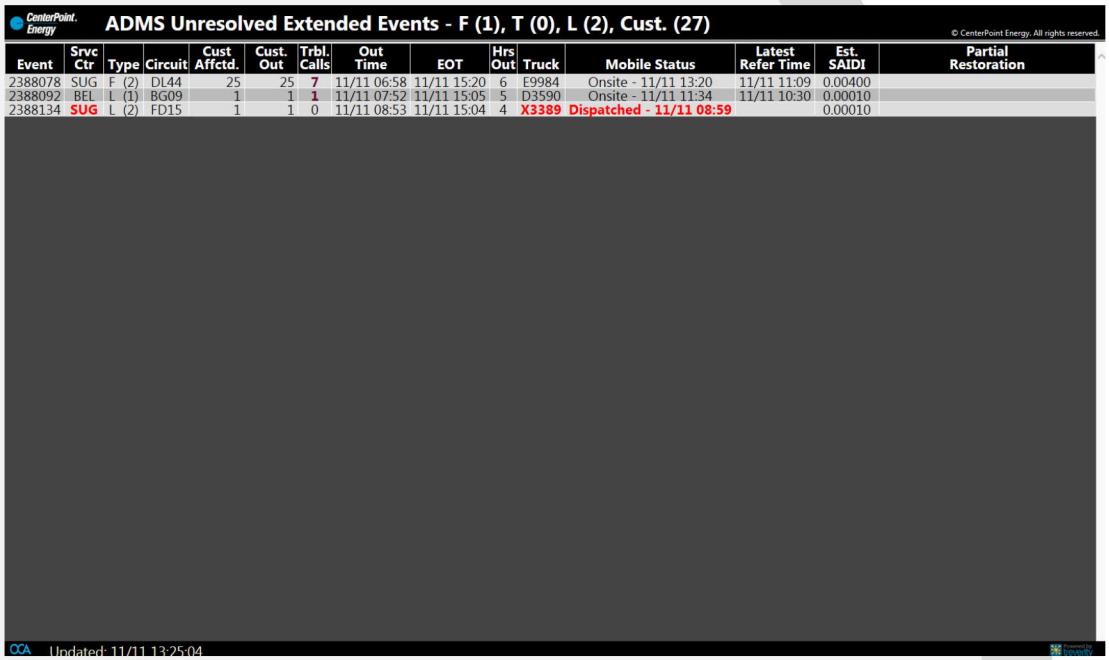
Srvc. Ctr.	Not included in total: Z	A	C	U	V	K	Included in total: X	S	Y	W	L	G	I	J	B	T	P	D	M	N	C	R	E	H	Res.
System	11	16	0	0	0	0	51	3	1	0	0	8	0	0	0	2	0	41	9	19	21	0	36	9	200
BAY	1	2	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	3	1	2	0	0	6	1	18
BEL	1	4	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	5	2	3	1	0	4	2	27
CYP	0	1	0	0	0	0	4	3	0	0	0	1	0	0	0	1	0	4	1	2	1	0	2	1	20
FTB	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	3	0	12
GAL	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	1	9
GPT	1	2	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	6	1	2	2	0	1	1	19
HOC	1	1	0	0	0	0	6	0	0	0	0	1	0	0	0	0	0	4	1	2	2	0	6	0	22
HUM	1	0	0	0	0	0	4	0	0	0	0	1	0	0	0	1	0	3	0	1	4	0	2	0	16
KTY	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	2	1	12
SOH	1	3	0	0	0	0	5	0	1	0	0	1	0	0	0	0	0	2	1	1	10	0	3	1	25
SPB	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0	2	1	10
SUG	1	2	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	2	1	1	0	0	2	0	10

Srvc Ctr	Res. Not Assn. Tr	IDI
System	6	0.0007
BAY	3	0.0041
BEL	7	
CYP	7	
FTB	8	
GAL	0	
GPT	10	
HOC	10	
HUM	11	
KTY	0	
SOH	0	
SPB	0	0.0007
SUG	0	0.0087

Srvc Ctr	day
System	54
BAY	25
BEL	23
CYP	78
FTB	06
GAL	28
GPT	87
HOC	13
HUM	18
KTY	83
SOH	12
SPB	0.0041
SUG	0.0060

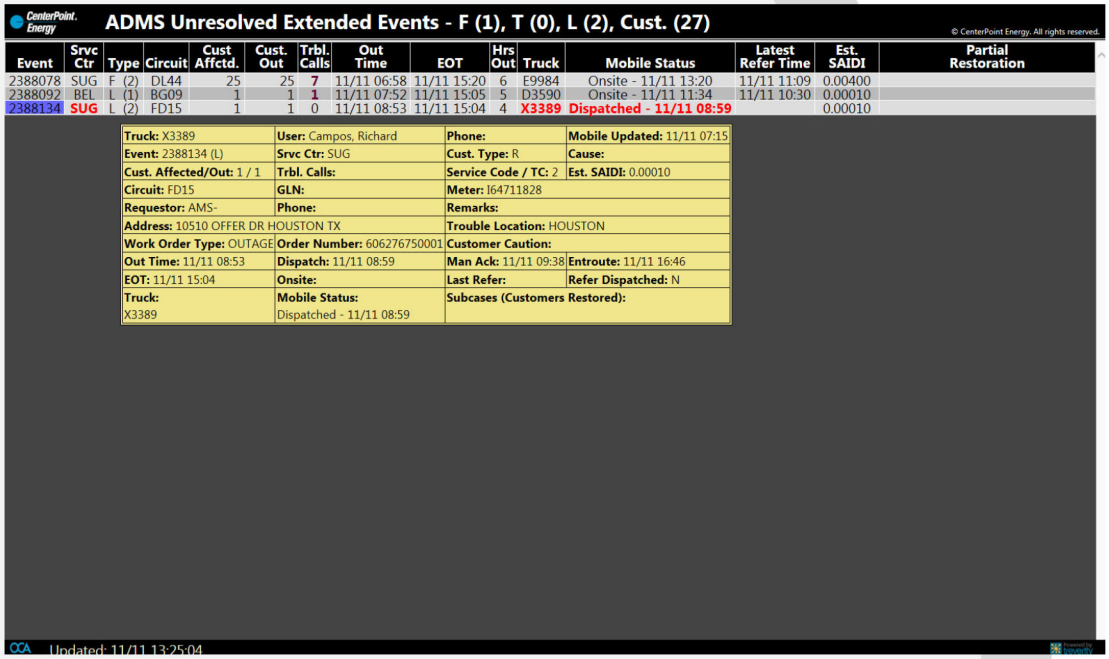
System Summary Pop-Up	
Hovering over a crew size (1-Man, 2-Man, Big, or URD) will breakdown that crew size by the crew type and what each Service Center has available at the present moment.	
Column	**User Notes**
How to Use this Pop-Up	• This pop-up is useful to ensure the right crews are available at each Service Center during the escalation of the event for restoration. ○ The numbers assist in planning, breaking down crews, and building up crews, depending on the needs of the event.
Not Included in Total	• Specialty crews • Supervisors
Included in Total	• Line-skill crews

3. Unresolved Extended Events



Unresolved Extended Events	
Purpose: This screen provides leadership a summary of all outages that have lasted beyond the usual 4-hour mark for restoration and helps leadership to prioritize the outages.	
Column	**User Notes**
Header Row	• Provides a summary of the types of outages and the number of customers affected. In this image, there are: ○ 1 fuse, ○ 0 transformers, and ○ 2 locals affected, ○ Impacting a total of 27 customers
Event Column	• The events are sorted by the duration of the outage.
Status Column	• This column shows the current status of the order, as it is being worked. ○ **Note**: When a **red** status appears in this column, that order has been stagnant at that status for an extended period of time.

a. Unresolved Extended Events Pop-Up



Unresolved Extended Events Pop-Up	
Hovering over the event number on the Unresolved Extended Events screen will display additional information about the order.	
Column	**User Notes**
Key Information	• What truck is holding the referral • What circuit the outage is on • The number of trouble calls received • What time the referral was received • What time a crew was dispatched
Est. SAIDI	• This section is the extent to which the particular outage may affect the total SAIDI.

Cust. Type	• The customer type affected is categorized as:
	  ○ R: Residential
	  ○ C: Commercial
	  ○ I: Industrial

D. Job Aid Annex

1. Incident Commander

Mission: The Incident Commander will initiate and facilitate planning conference calls and make decisions regarding the areas of impact, current resources, anticipated need and next steps.

Incident Name:		Date/Time Initiated:	
Prepared By:	Name:	Date:	Time:

Task	Manual Page	Reference
Task: Event Monitoring		
Pre-Storm		
☐ Monitor Situational Awareness and weather for potential event.		
☐ Initiate pre-planning conference call.		
☐ Work with the OSC to develop the Storm Response Plan.		
☐ Facilitate pre-planning conference call and determine anticipated needs. — Anticipated Weather Type. — Anticipated Impact. — Time of Day. — Current Staffing Levels.		
Make contact with other internal resource groups to gather contact information and coordinate efforts: ◦ Streetlight ◦ Distribution Control ◦ Transmission ◦ Substation ◦ Major Underground ◦ Primary Metering		
Storm Operations		
☐ Monitor all StormGeo reports and Situational Awareness.		

Task	Manual Page	Reference
— Weather System Information — Work Levels — Progression of Event — Magnitude of Event — Number of Outages		
☐ Develop agendas for the conference calls in conjunction with the OSC.		
☐ Facilitate planning conference calls.		
☐ Review conference call and event summary provided by PSC.		
Transition and Demobilization		
☐ Report out event status to the incoming IC.		
Task: Resource Planning		
Pre-Storm		
☐ Estimate current staffing levels and evaluate potential resource needs based on: — Time of Day — Day of the Week Consider: — Holding Crews — Call-outs		
☐ Review Storm Response Plan developed by OSC.		
Storm Operations		
☐ Monitor ETA and ETR to understand resource needs.		
☐ Monitor referral rate and determine order to assign crews and place of assignment. Consider: — Current Resource Allocation at Service Centers — Work/Rest Cycles for Crews — Largest Customer County — Highest Priority Jobs — Backlog Prioritize incoming jobs by: — Criticality Level of Customer		

Task	Manual Page	Reference
— Outlying Service Area		
☐ Designate staff assignments and collaborate on resource needs with the OSC.		
☐ Mobilize Forestry Branch Director, as needed.		
Manage additional resource activation with support from the OSC. ☐ — Call-Outs — Patrol Inspectors — Other Internal Support Crews — Staging Contract Resources — Mutual Assistance Calls — Logistics		
☐ Revise Storm Response Plan as needed.		
Transition/Demobilization		
☐ Release IRT members from DVAL as restoration activity subsides.		
☐ Verify completion of final referral for demobilization.		
Task: Operational Communications		
Pre-Storm		
☐ Communicate pre-event status to leadership.		
Storm Operations		
☐ Maintain situational awareness for peak efficiency and communicate to senior leadership.		
☐ Communicate Storm Response Plan to IRT.		
Transition/Demobilization		
☐ Collaborate with OSC and FCC on completion of last referrals and demobilize.		

2. Operations Section Chief

Mission: The Operations Section Chief will advise on required actions and notify internal resources of next steps and communicate to personnel and/or work groups regarding resource activation.

Incident Name:		Date/Time Initiated:	
Prepared By:	Name:	Date:	Time:

Task	Manual Page	Reference
Task: Event Monitoring		
Pre-Storm		
☐ Monitor Situational Awareness and weather for potential event.		
☐ Work with the IC to develop the Storm Response Plan.		
☐ Attend pre-planning conference call and report out on required actions and resources.		
Storm Operations		
☐ Attend planning conference calls.		
☐ Assist the IC in developing agendas for the conference calls.		
☐ Monitor all StormGeo reports and Situational Awareness. — Weather System Information — Work Levels — Progression of Event — Magnitude of Event — Number of Outages		
Transition and Demobilization		
☐ Report out to the incoming OSC.		
Task: Resource Planning		
Pre-Storm		
☐ Estimate potential system impacts based on: — Type of Storm (flooding, ice storms, thunderstorms, etc.) — StormGeo Weather Report		

Task	Manual Page	Reference
☐ Estimate current staffing levels and evaluate potential resource needs based on: — Time of Day — Day of the Week Consider: — Holding Crews — Call-outs		
☐ Draft Storm Response Plan and submit to IC for review. — Number, Source, and Placement of 1-man Trucks — Number, Source, and Placement of 2-man Trucks — Number, Source, and Placement of Contract Crews — Number and Placement of Tree Crews		
Storm Operations		
☐ Monitor outages and referrals to determine if additional crews are required, or if changes in crew allocation are needed.		
☐ Assist IC in designation of staff assignments and collaboration on resource needs.		
☐ Manage additional resource activation with the IC. — Call-Outs — Patrol Inspectors — Other Internal Support Crews — Staging Contract Resources — Mutual Assistance Calls — Logistics		
☐ Adjust and implement revised Storm Response Plan as needed.		
Transition/Demobilization		
☐ Release internal and external crews.		
Task: Prioritization of Work		
Storm Operations		
☐ Monitor referrals and determine order to assign contract resources. Consider: — Current Resource Allocation at Service Centers — Work/Rest Cycles — Largest Customer Count		

Task	Manual Page	Reference
— Highest Priority Jobs — Backlog Prioritize incoming jobs by: — Criticality Level of Customer — Outlying Service Area		
☐ Direct PSC and FCC in assignment of referral orders.		
Transition/Demobilization		
☐ Provide a briefing on pending work to incoming OSC.		

3. Planning Section Chief

Mission: The Planning Section Chief will document and distribute all outputs and meeting minutes, as well as maintain visibility on and support the allocation of internal resources.

Incident Name:		Date/Time Initiated:	
Prepared By:	Name:	Date:	Time:

Task	Manual Page	Reference
Task: Conference Call Support		
Pre-Storm		
☐ Receive notification of pre-planning call from DCO via Send Word Now.		
☐ Attend pre-planning call. Take notes, document outputs, and capture: — Areas of Expected Impact (Service Centers) — Current Resources (Internal DPD, Contractors, Leadership/Ops Supervisors, Forestry) — Anticipated Needs (Holding of Crews, Staging, Call-Outs, Other CNP Internal Crews, Incident Management Team, Damage Assessors, Logistics) — Next Steps (Next Calls, Activation to the Board)		
Storm Operations **These are recurring actions for each planning conference call.*		
☐ Gather ETA and ETR information.		
☐ Provide summary to IC and OSC.		
☐ Assist in Storm Response Plan development.		
☐ Attend planning calls.		
Task: Resource Monitoring		
Pre-Storm		
☐ Create staffing list.		
Storm Operations		
☐ Maintain staffing list.		

Task	Manual Page	Reference
Transition/Demobilization		
☐ Transition maintenance of staffing list and gain verbal confirmation for transition.		
☐ Finalize staffing list and post to SharePoint.		
Task: Prioritization of Work		
Storm Operations		
☐ Monitor referrals and determine order to assign contract resources. Consider: — Largest customer count — Highest priority jobs — Backlog Prioritize incoming jobs by: — Criticality level of customer — Outlying service area		
☐ Coordinate with FCC to assign work.		
Transition/Demobilization		
☐ Provide a briefing on pending work to incoming PSC.		
Task: Customer Service Coordination		
Pre-Storm		
☐ Notify Customer Service to direct priority issues to PSC.		
Storm Operations		
☐ Coordinate with DCO as needed to assign crews to priority issues.		
☐ Report back to Customer Service.		
Transition/Demobilization		
☐ Provide briefing on outstanding issues to incoming PSC.		
Task: Documentation		
Pre-Storm		

Task	Manual Page	Reference
☐ Set up event SharePoint folder using the event date as the folder name.		
☐ Document pre-planning call, distribute notes, and post to SharePoint.		
☐ Begin Unit Log.		
Storm Operations		
☐ Maintain Unit Log.		
☐ Timestamp IRT member arrival times in the Unit Log.		
☐ Document planning calls and post to SharePoint.		
☐ Prepare event summary for IC, as needed, and post to SharePoint.		
Transition/Demobilization		
☐ E-mail all documentation from event to incoming PSC.		
☐ Finalize Unit Log and post all documentation to SharePoint.		

a. Unit Log Template

1. Incident Date:	2. Time:
3. Activity Log (Continue on Reverse):	
TIME	EVENTS
4. Prepared by	

b. Staffing List Template

[INSERT LINK TO EXCEL FILE]

4. Foreign Crew Coordinator

Mission: The Foreign Crew Coordinator will manage completion of jobs, provide contract crew availability and communicate with all assigned contract crews.

Incident Name:		Date/Time Initiated:	
Prepared By:	Name:	Date:	Time:

Task	Manual Page	Reference
Task: Event Monitoring		
Pre-Storm		
☐ Gather information on current contract resource jobs, location, and status.		
☐ Attend pre-planning call and report and contract crew availability.		
Storm Operations		
☐ Attend planning calls.		
☐ Maintain visibility on contract resources jobs, location, and status.		
Task: Resource Planning/Assignment		
Storm Operations		
☐ Support OSC as needed.		
☐ Communicate resource requirements to the general foremen.		
☐ Update contract crews location settings in Service Suite.		
☐ Assign referrals to contractor work queues in Service Suite.		
☐ Relay work completion information to OSC.		
Task: Documentation		
Transition/Demobilization		
☐ Provide briefing on outstanding issues to incoming FCC.		

**FCC Contractor Crew Log can be found in Storm Restoration Folder on SharePoint.

5. Patrol Inspector Manager

Mission: The Patrol Inspector Manager will monitor Damage Assessment by Patrol Inspectors and be the main source of communication between the patrol inspectors and the Ops Supervisor.

Incident Name:		Date/Time Initiated:	
Prepared By:	Name:	Date:	Time:

Task	Manual Page	Reference
Task: Resource Planning/Assignment		
Pre-Storm		
☐ Gather information on Patrol Inspector availability.		
Storm Operations ***These actions occur to support Damage Assessment operations.*		
☐ Receive work orders from the Ops Supervisor.		
☐ Assign and communicate work order to Patrol Inspector.		
☐ Receive damage assessment information from Patrol Inspector including: — Address — Easement (Y/N) — Truck Accessible (Y/N) — Pole Size — Equipment Needs — Wire Down (Y/N) — Pole Down (Y/N) — Urgency — Pictures		
☐ Communicate damage assessment information to the Ops Supervisor.		
Task: Documentation		
Storm Operations		
☐ Maintain record of Patrol Inspector assignment.		
Transition/Demobilization		

Task	Manual Page	Reference
☐ Provide briefing on outstanding issues to incoming Patrol Inspector Manager.		

E. Expanded IRT Annex

1. Major Underground (MUG) Crews

MUG Crews are utilized for trouble shooting and transformer replacement. These crews will be activated when a Major event occurs and the threshold of Trouble Level 5 is reached, or at the discretion of the IC.

2. Transmission Crews

Transmission Crews are may be utilized for all aspects of Storm Restoration. Both internal and contract transmission crews may be activated with greater than seventy-five referrals requiring 4-man construction crews are pending.

3. Logistics Section

The Logistics Section will only be necessary in uncommon, extreme circumstances. Requests for Logistics are to be directed to the Materials Branch Director, when the Section is not fully activated. Logistics will be fully activated with Mutual Assistance is called out, or a multi-day event is anticipated.

4. Mutual Assistance

Mutual Assistance Crews will follow the same process as the Contract Crews Process, when activated. These crews will only be activated when more than 150 4-man crew referrals are anticipated.

F. Reference Materials Annex

1. Contact List/Information

[Insert link to location]

2. Glossary of Names

- Incident Commander - Activator
- Operations Section Chief – Duty Ops Manager
- Planning Section Chief – Duty Service Area Manager
- Distribution Control Officer - Director of Distribution Control Operations
- Logistics Section Chief – Purchase Designee
- Forestry Branch Director – Duty Forester
- Tree Crew Coordinator – Service Center Forester
- Service Center Ops Branch Manager – Service Center Ops Manager
- Patrol Inspector Manager – Service Area Manager or Senior Service Consultant
- Patrol Inspectors – Service Consultants
- Foreign Crew Coordinator – DPM Contractor Coordinator

3. Glossary of Terms

- SAIDI - The average outage duration for each customer served, and is calculated as: where is the number of customers and is the annual outage time for location, and is the total number of customers served
- SAIFI - The average number of interruptions that a customer would experience
- CAIDI - The Customer Average Interruption Duration Index (CAIDI) is a reliability index commonly used by electric power utilities
- Minor Event - Trouble Levels reach 1-2 system-wide, or when Trouble Level 1 is in place for individual service centers
- Significant - Trouble Levels reach 3-4 system-wide, or when Trouble Level 2-3 is in place for individual service centers
- Major - Trouble Levels 5-8 are reached system-wide, or when Trouble Level 4-8 is reached within an individual service centers
- EOP - Resources are taxed beyond the Level 8 threshold and the Incident Commander makes the call to a Mutual Assistance Group, operations will transfer to those designated in the *CenterPoint Energy 2015 Storm Emergency Operations Plan Manual*

- Job Aid Positions:

- **Incident Commander:** The Incident Commander will initiate and facilitate planning conference calls and make decisions regarding the areas of impact, current resources, anticipated need and next steps.
- **Operations Section Chief:** The Operations Section Chief will advise on required actions and notify internal resources of next steps and communicate to personnel and/or work groups regarding resource activation.
- **Planning Section Chief:** The Planning Section Chief will document and distribute all outputs and meeting minutes, as well as maintain visibility on and support the allocation of internal resources.
- **Foreign Crew Coordinator:** The Foreign Crew Coordinator will manage the completion of jobs, provide contract crew availability and communicate with all assigned contract crews.
- **Patrol Inspector Manager:** The Patrol Inspector Manager will monitor Damage Assessment by Patrol Inspectors and be the main source of communication between the patrol inspectors and the Ops Supervisor.

4. Document Retention

The CNP Retention Schedule states all records related to identifying, managing, restoring and reporting on electric supply outages for residential, commercial or industrial customers should be maintained for 5 years.

5. Referral Codes

2MBUT	Bad Trans. Less than a 75kv	CBWTE	Tr Buss Wrk NTA
2MCOE	Cut out/switch easement	CBWTS	Tr Buss Wrk TA
2MCOS	Cut Out/Switch Street	CDRM	OH Mid Span
2MCSO	2 Man CSO Crew	CDRO	OH Drop Rep
2MHSE	High Side Easement	CIBD	URD Drop Bypass
2MHSS	High Side Street	CIBS	URD Sec Bypass
2MLME	Limiter Easement	CLBTE	Lmtr Tr Bank NTA
2MLMS	Limiter Street	CLBTS	Lmtr Tr Bank TA
2MURD	2 man URD Issue	CLLTE	Lmtr Ltr Tr NTA
2MWDE	Wire down easement	CLLTS	Lmtr Ltr Tr TA
2MWDS	Wire Down Street	CLSTE	Lmtr Stp Tr NTA
ASSEM	Tech Assgn Emergency	CLSTS	Lmtr Stp Tr TA
ATCCE	Tree Crew NTA	COL	Collections
ATCCS	Tree Crew TA	COMD	C/O MD
BCBP	URD Pri Bypass	COPL	C/O at Pole
BCDNE	Neu-Sta Dn NTA	COTR	C/O at Trans
BCDNS	Neu-Sta Dn TA	COWH	C/O at WTHR HD
BCDPE	Pri Down NTA	CSFRE	L/F Disc NTA
BCDPS	Pri Down TA	CSFRS	L/F Disc TA
BCDSE	Sec Dwn NTA	CSTRE	Trans Disc NTA
BCDSS	Sec Dwn TA	CSTRS	Trans Disc TA
BCJRE	Pri Jmpr NTA	DCTTE	CNP Trim NTA
BCJRS	Pri Jmpr TA	DCTTS	CNP Trim TA
BHARE	Mtl - Xarm NTA	DIV01	Object in Mtr
BHARS	Mtl - Xarm TA	DIV02	Mtr Glass Broken
BPNSE	Stub Pole NTA	DIV03	Inner Seal Missing
BPNSS	Stub Pole TA	DIV04	By-Pass or Jumper from Dro
BPPRE	Repl Pole NTA	DIV05	Jumpers inside meter can
BPPRS	Repl Pole TA	DIV06	Lock Band Damaged
BPPRZ	Repl Pole EZ	DIV07	Mtr Can damaged
BPSRE	SVC Pole NTA	DIV08	Mtr Jaws damaged
BPSRS	SVC Pole TA	DIV09	Mtr upside down
BPSRZ	SVC Pole EZ	DIV10	Pot link open
BTOHE	OH Trans. NTA	DIV11	Pot Link Missing
BTOHS	OH Trans. TA	DIV12	Outer Seal (missing, trick)
BTSVE	Step Trans. NTA	DIV13	Switched Meter
BTSVS	Step Trans. TA	DIV14	Needs Tamper Proof Lid
BTUGE	URD Trans. NTA	DIV15	Unauthorized Reconnect
BTUGS	UDR Trans. TA	DIV16	AMS MTR Display Error
BTUGZ	URD Trans. EZ	DIV17	Mtr Band missing

DIV18	Mtr Pole Leaning
DIV19	Mtr Can loose from wall
DIV20	Mtr gone- open hot base
DIV21	AMS MTR Damaged-guts
DIV22	AMS Mtr-con/dis wires cut
DIV23	Resistor-AMS Con/Dis wire
DIV24	AMS Mtr-no display
DIV25	CT Mtr- switch off
DIV26	Apt- ext cord-LSV
DIV27	Foreign object in meter
DIV28	Hole in glass with wire
DIV29	Jumper -no meter
DIV30	Found Unsealed
DIV31	Other Explain
DIV32	Found and Left OK
DIV33	Electrical Work
DIV34	Inner Seal Broken
DIV35	Backfeed at Load Side Jaws
DIV36	Hard HCO
DIV37	Stolen Meter
E3UDG	3 Phase UG
EPMHC	Primary Metering
ESLDC	Street Light
EURDV	URD Van
FCODT	Cust Ownd Dist
FHH2O	High Water
FMISC	Miscellaneous
IGDAC	DACs Issue
IGOPS	Operations Issues
IGRAD	Radio Issue
IGTEL	Tele-Com Issue
INC	Incomplete
IRATE	Irate Customer
MISC	Miscellaneous
MTRDM	Meter Damaged
NOMTR	No Meter
NOTTM	Not Enough Time
NTECH	Night Tech
NXTDY	Next Day
OTHER	See Remarks
PRIMT	Primary Metering
R-T&D	Requires T&D
RMLB	Cant remove L/B
TMP	Unauthorized R/C

G. After-Action Review Processes Annex

Storm After-Action – CenterPoint Energy DPD Meeting Location Adddress		
Agenda		
Date & Time **Meeting Room**		
Agenda Item	**Time Allotted**	**Note/Actions**
1. Introductions	Insert Time Allotment	
2. Summary of Discussion □ Storm Restoration Review □ Challenges/Issues □ Action Items	N/A	
3. Incident Review	Insert Time Allotment	
4. Challenges/Issues	Insert Time Allotment	
5. Identify Action Items and Next Steps	Insert Time Allotment	

Additional Notes

Storm After-Action – CenterPoint Energy DPD Activity Review Checklist	
Activity	**Note/Actions**
Pre-Planning Call □ Did a Pre-Planning Call occur?	
Adequacy of Resource Decisions □ Did Call-Outs occur more than once?	
Analytics: □ Were there instances of lengthy repair times? □ What was the average standby time for contract resources? □ Were there any issues with grounding? □ Was the referral process centralized?	
IRT Reporting □ Did members report in a timely manner?	
Staffing for the next day □ Was staffing for the next day properly planned for?	

Safety □ Were there any safety issues/violations?	

Storm After-Action – CenterPoint Energy DPD		
Resource Allocation Review		
Service Center	Time of Restoration of Circuits and Fuses Completion	Time of Communication to Incident Command for Reallocation
Baytown		
Bellaire		
Cypress		
Fort Bend		
Galveston		
Greenspoint		
H.O. Clarke		
Humble		
Katy		
South Houston		
Spring Branch		
Sugar Land		

*To be completed during Storm Restoration

Storm After-Action – CenterPoint Energy DPD
Improvement Action Plan

Improvement Action Plan activities chart The following chart details the improvement actions decided upon as a result of the storm occurring on DATE.

Responsible Party	Identified Area of Improvement	Identified Possible Solution (training, resources, etc.)	Scheduled Date of Completion	Actual Date of Completion
Name of Responsible Party				
	Activities: ***(Add additional rows as needed)***			

Responsible Party	Identified Area of Improvement	Identified Possible Solution (training, resources, etc.)	Scheduled Date of Completion	Actual Date of Completion
Name of Responsible Party				
	Activities: ***(Add additional rows as needed)***			

Responsible Party	Identified Area of Improvement	Identified Possible Solution (training, resources, etc.)	Scheduled Date of Completion	Actual Date of Completion
Name of Responsible Party				
	Activities: ***(Add additional rows as needed)***			

*The issue collection card will be used to inform the "Challenges/Issues" portion of the meeting, as well as provide information for the Improvement plan.

Issues Collection Card

Date: _____ Storm Date:_____

Name:_____

Issue (Provide brief problem statement.)	**Priority**	**Recommended Proponent(s) for Action**	**Impact** (Check one or more.)
	___ Critical (requires immediate action) ___ Long-term (requires phased plan)		___Pre-Storm ___Damage Assessment ___Restoration ___Post-Storm ___Contractor Utilization
	___Critical (requires immediate action) ___Long-term (requires phased plan)		___Pre-Storm ___Damage Assessment ___Restoration ___Post-Storm ___Contractor Utilization
	___ Critical (requires immediate action) ___ Long-term (requires phased plan)		___Pre-Storm ___Damage Assessment ___Restoration ___Post-Storm ___Contractor Utilization

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PROJECT NO. 56822
INVESTIGATION OF EMERGENCY PREPAREDNESS AND RESPONSE

PUBLIC UTILITY COMMISON OF TEXAS
REQUEST NO.: PUC-RFI01-065

QUESTION:

Electric Utilities – Customer Restoration Workflow

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.

ANSWER:

CenterPoint Houston's procedures for restoration of service are set forth in its Emergency Restoration Plan and the Texas Electric Emergency Operations Plan. Please see the response to requests 1-10 and 1-64 for a discussion of the procedures for customer restoration of service. As a general matter, CenterPoint Houston works to restore service by prioritizing outages affecting the largest number of customers. These generally cascade from transmission lines, to substations, to circuits, to fuses, to transformers, then to individual meters. In addition to this general approach, CenterPoint Houston prioritizes restoring its critical customers experiencing outages, including hospitals, emergency services, warming/cooling centers, senior/assisted living, small emergency rooms and dialysis centers, clinics and pharmacies, and grocery stores.

While the above described process inherently means that some areas of CenterPoint Houston's service territory will be restored more quickly than others, those differences are circumstantial based on the level of outages and in any given situation. The criteria that is used to determine when and how to restore customers are consistent with the Public Utility Regulatory Act and Commission rules and are fairly and reasonably applied across CenterPoint Houston's service territory.

SPONSOR:
Deryl Tumlinson

RESPONSIVE DOCUMENTS:
None

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PROJECT NO. 56822
INVESTIGATION OF EMERGENCY PREPAREDNESS AND RESPONSE

PUBLIC UTILITY COMMISON OF TEXAS
REQUEST NO.: PUC-RFI01-066

QUESTION:

Electric Utilities – Customer Restoration Workflow

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.

ANSWER:

CenterPoint Energy Houston Electric, LLC (CenterPoint Houston) has not yet made any changes to its service restoration plan following the May 2024 Derecho or Hurricane Beryl. The service restoration plans are designed to be flexible and to effectively respond to restoration needs following all manner of events that may have differing impacts. CenterPoint Houston followed its service restoration plans for its restoration efforts following both the May 2024 Derecho and Hurricane Beryl though each event was unique and presented its own challenges.

CenterPoint Houston outlined several "Pillars of Action," in accordance with the presentation that CenterPoint Energy's CEO Jason Wells made to the Commission during the July 25, 2024 Open Meeting. The "Pillars of Action" are a critical series of actions that will be taken by CenterPoint Houston to improve all aspects of future emergency response. The "Pillars of Action" are summarized below:

1. Resiliency

- Vegetation management: Target 2,000 incremental line miles with higher risk vegetation
- System hardening: Harden approximately 350 distribution line miles to the latest extreme wind standard
- Stronger poles: 100% of the remaining pole replacements planned for 2024 will be replaced with composite poles
- Use of predictive modeling:
  - Establish a 25% resource buffer
  - Leverage artificial intelligence to accelerate dispatch of vegetation crews based on damage modeling

2. Communications

- Outage tracker: Launch a new cloud-based outage tracker
- Customer engagement:
  - Launch initial public communications earlier in the storm cycle and establish a robust daily cadence of public communications
  - Power Alert Service: Scale capacity

3. Partnerships

- Public awareness
  - Launch emergency preparedness community education campaign
  - Re-emphasize "Right Tree - Right Place" program
- Backup temporary generation:
  - Increase, on a short-term lease basis, small temporary generation units from 4 to 13
  - Install donated back-up generator facilities
- Engage with local emergency management offices to confirm contact information of critical facilities and infrastructure

The "Pillars of Action" may result in future updates to CenterPoint Houston's service restoration

plan.

SPONSOR:
Deryl Tumlinson

RESPONSIVE DOCUMENTS:
PUC-RFI01-066 - P56793 - Hurricane Beryl Presentation to the Public Utility Commission of Texas

CenterPoint® Energy

Patrick V. Reinhart
Vice President, Electric Regulatory
Relations & Policy

1005 Congress Ave., Suite 650
Austin, Texas 78701
(512) 470-7212
patrick.reinhart@centerpointenergy.com

July 24, 2024

The Honorable Thomas J. Gleeson
The Honorable Lori Cobos
The Honorable Jimmy Glotfelty
The Honorable Kathleen Jackson
The Honorable Courtney K. Hjaltman
Public Utility Commission of Texas
P.O. Box 13326
Austin, TX 78711-3326

RE: Project No. 56793 – *Issues Related to the Disaster Resulting from Hurricane Beryl*

Dear Chairman Gleeson, Commissioner Cobos, Commissioner Glotfelty, Commissioner Jackson, and Commissioner Hjaltman:

Thank you for the opportunity for CenterPoint Energy Houston Electric, LLC (the Company) to present to you information on the impact of Hurricane Beryl, our preparation and restoration efforts, as well as the immediate, near-term, and long-term action items that will be undertaken by the Company in response to Hurricane Beryl. Please find attached the slide deck that the Company will use during its presentation at the Open Meeting scheduled for July 25, 2024. We look forward to engaging with you at the Open Meeting and as the Company implements its immediate, near-term, and long-term action items.

Sincerely,

Patrick V. Reinhart

CenterPoint Energy

Hurricane Beryl
Presentation to the Public Utility Commission of Texas

Thursday, July 25, 2024

Jason Wells, *President & CEO*

Tony Gardner, *SVP & Chief Customer Officer*

Randy Pryor, *VP Major Underground & Distribution Modernization*

Opening and Action Plan

Jason Wells

Pillars of Action

The following highlights some of the critical series of actions we plan to take to improve all aspects of our future emergency response.*

Resiliency

Vegetation Management
- Target 2,000 incremental line miles with higher risk vegetation

System Hardening
- Harden nearly 350 distribution line miles to the latest extreme wind standard

Stronger Poles
- 100% of the remaining pole replacements currently planned for 2024 will be replaced with composite poles (approximately 1,000 poles)

Predictive Modeling
- Establish a 25% resource buffer
- Leverage AI to accelerate dispatch of vegetation crews based on damage modeling

Communications

Outage Tracker Tool
- Launch a new cloud-based outage tracker

Customer Engagement
- Launch initial public communications earlier in the storm cycle and establish a robust daily cadence of public communications
- Scale capacity for Power Alert Service

Partnerships

Public Awareness
- Launch emergency preparedness community education campaign
- Re-emphasize "Right Tree – Right Place" program

Backup Emergency Generation
- Increase on a short-term lease basis small increment (up to 1MW) mobile generation from 4 to 13 units
- Install donated back-up generator facilities

Enhanced Response Capability
- Engage with local Emergency Management Offices to confirm contact information of critical facilities and infrastructure

* See appendix for full list of actions.

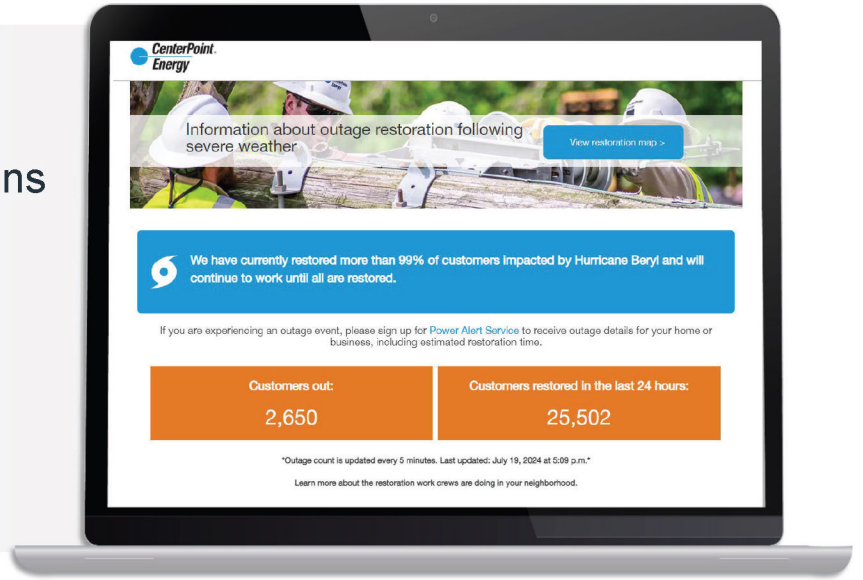
Immediate Actions | Near-Term Actions | Long-Term Actions

Re-establishing Trust in Our Communications

Tony Gardner

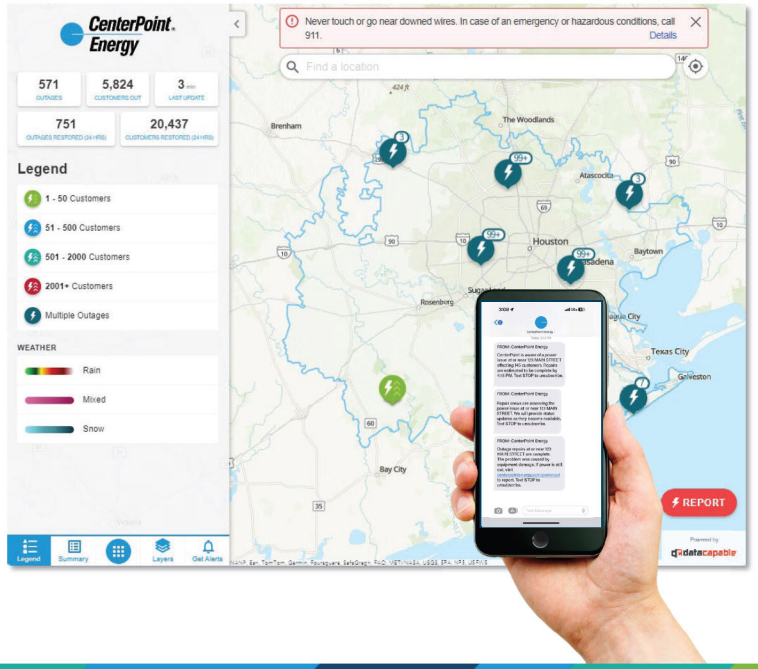
Key Areas for Improvement

- Outage tracker
- Customer and public communications
- Estimated times for restoration (ETRs)
- Call center staffing
- Coordination with local/state emergency responders



Re-establishing Trust in Our Communications

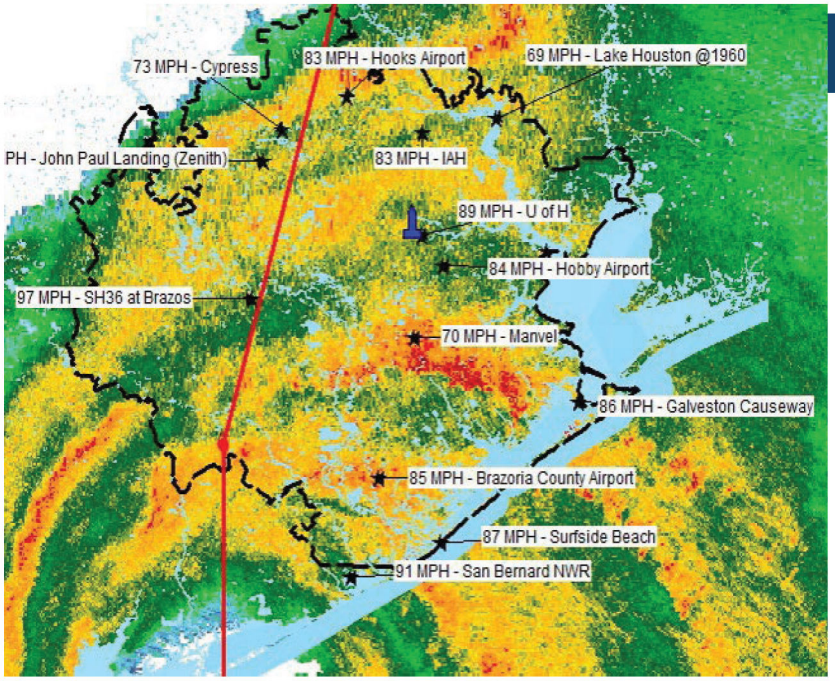
- **New Outage Tracker by August 1** to view and report outages and restoration status
- **Daily media briefings** during events
- **Enhancements to Power Alert Service®** system for proactive texts, emails and phone calls to affected customers
- **Process for communicating global estimated time to restore (ETRs)** at the beginning of a significant outage event with updates throughout restoration activities.
- **Enhanced call center staffing** and training before storm season.



Restoring Power to Our Customers

Randy Pryor

Hurricane Beryl Overview



Key Takeaways

Category 1
the largest Houston-area storm since 1983

Torrential rain and flooding
with rainfall peaks of over one foot high

97 MPH peak wind gusts
and heat wave with highs of 105 degrees

2.26 million people impacted by power outages

Response and Restoration

By the numbers

2,000+
CenterPoint Energy crew workers mobilized

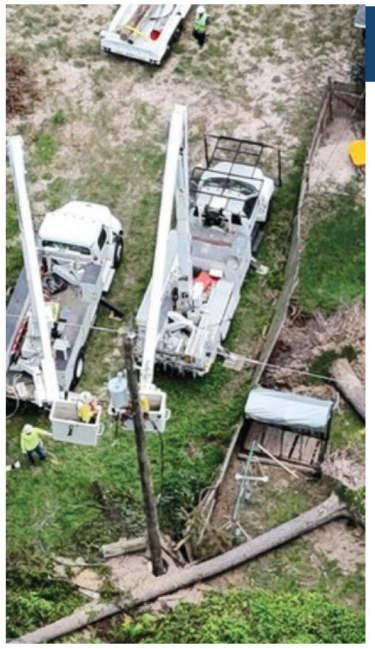
13,000+
Mutual aid crew workers mobilized

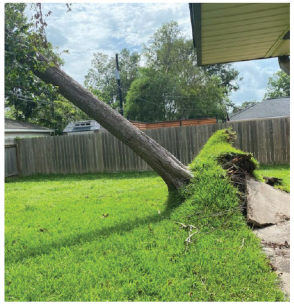
22 Staging sites to support hard-hit areas

28 Emergency generation locations

Community and Grid Damage







By the numbers

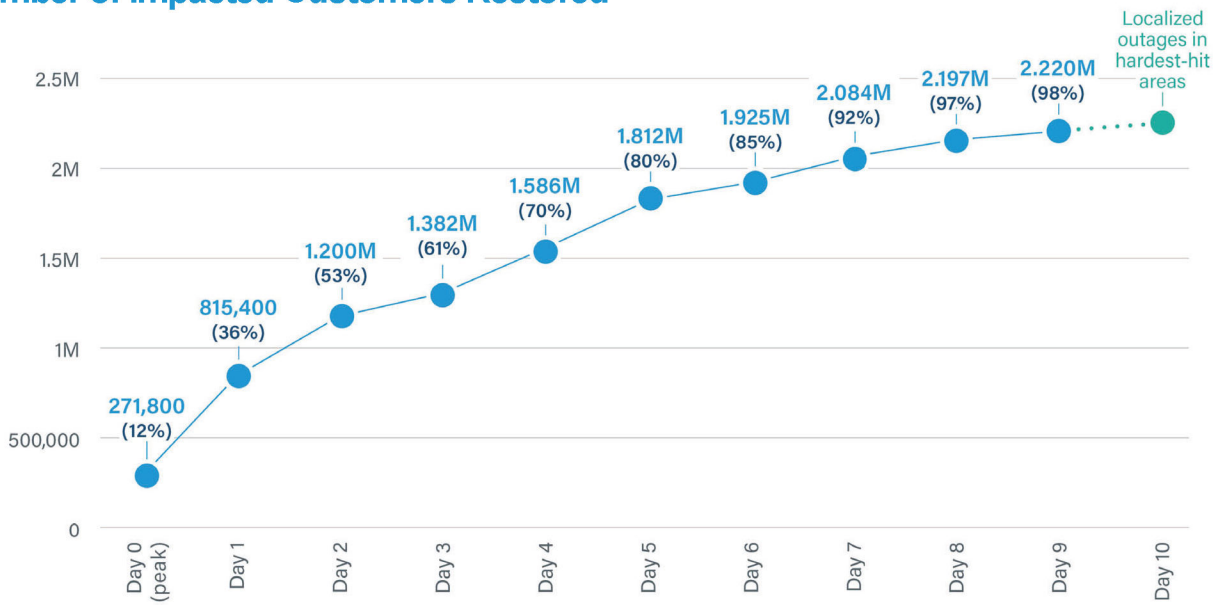
35,000+ Trees removed or trimmed

8,500+ Circuit miles walked to repair damage
(nearly 10x the width of Texas)

3,000+ Poles replaced

Storm Restoration

Number of Impacted Customers Restored



Closing

Jason Wells

Engaging with our communities

Launching a widespread public outreach effort to directly engage on ways we can improve.

Key Audiences:

- Residential customers
- Business customers
- Community leaders
- Local and state elected leaders
- Emergency and first responders
- Essential service providers

1:1 Meetings (July)

Small Group Listening Sessions (July-September)

Neighborhood Meetings and Open Houses (August-September)

Emergency Responders Roundtables (Ongoing)

Small Group Listening Session

Appendix

Phases of Action: Our Plan for Greater Resiliency, Improved Communications and Stronger Partnerships

CenterPoint Energy

PHASE 1: Immediate

IMMEDIATELY:
- Establish a 25% resource buffer
- Develop expanded staging site housing for four strategic locations
- Prioritize restoration and temporary generation deployment for critical facilities
- Launch initial public communications earlier in the storm cycle and establish a robust daily cadence of public communications

BY AUGUST 1, 2024
- Launch a new cloud-based outage tracker
- Begin to use predictive modeling and AI technology to identify higher risk vegetation
- Increase on a short-term lease basis small increment (up to 1MW) mobile generation from 4 to 13 units
- Adopt a policy of holding daily press briefings before and during a named storm
- Launch emergency preparedness community education campaign

PHASE 2: Near-Term

BY AUGUST 15, 2024
- Complete aerial imagery and visual inspections on all overhead distribution circuits
- Coordinate more closely with local, county, and state officials as well as emergency management personnel
- Develop an emergency preparedness and response communications playbook
- Re-emphasize "Right Tree – Right Place" program
- Launch a plan to engage with community focus groups on outage tracker
- Increase call center capacity by 165% for storm events with a standard average speed of answer of 5 minutes or less
- Launch Power Alert Service campaigns
- Scale capacity for Power Alert Service
- Brief trade associations for critical care facilities
- Engage with local Emergency Management Offices to refresh our prioritization and to confirm contact information
- Re-train call center agents
- Target the first 350 of 2,000 incremental distribution line miles with higher risk vegetation

BY AUGUST 31, 2024
- Leverage AI to accelerate dispatch of vegetation crews based on damage modeling
- Based on inspections, provide to Gov's office an estimated date to execute repairs based on risk
- Evaluate the expansion of the number of temporary generation units, and temporary generation transportation assets in our fleet, informed by the needs of critical facilities
- Based on damage modeling, dispatch crews as soon as safe to do so
- Leverage damage models to identify locations for staging sites
- Begin using predictive modeling tools to inform resource planning to prepare for a major storm

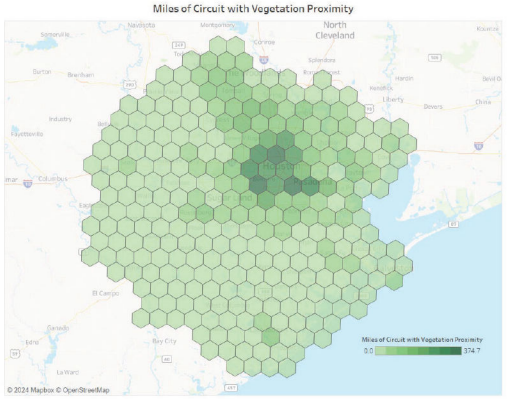
BY SEPTEMBER 30, 2024
- Select sites for up to 10 donated back-up generator facilities
- Conduct listening sessions in every county

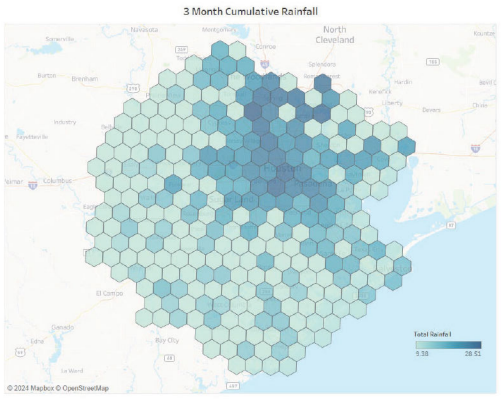
PHASE 3: Long-Term

BY DECEMBER 31, 2024
- Target the remaining 1,650 of 2,000 incremental line miles with higher risk vegetation
- Harden nearly 350 distribution line miles to the latest extreme wind standard
- Deploy more than 500 automated devices
- 100% of the remaining pole replacements currently planned for 2024 will be replaced with composite poles (approximately 1,000 poles)

BY JUNE 1, 2025
- Install donated back-up generator facilities

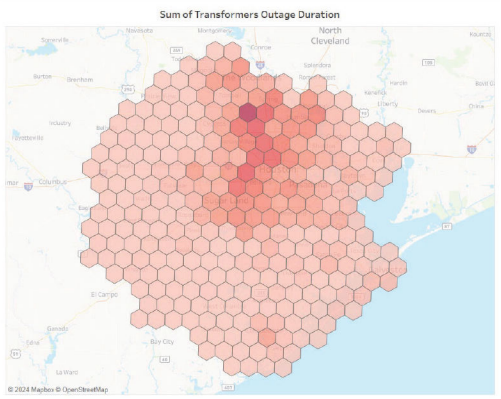
Vegetation as a Driver of Long Outages





Highest cumulative rainfall totals were in the north central part of the service territory

This area also had the higher density of vegetation.



The polygons with the longest outage durations were co-located with the highest rainfall and vegetation totals.

Figures are not final and are subject to review.