2006 International Conference on Overhead Lines – March 27-31, Ft. Collins, CO
"Code Update: NESC and ANSI O5"

2006 Edison Electric Institute (EEI) Transmission, Distribution & Metering Conference – April 2-5, Houston, TX
"Code Update: NESC and ANSI O5"

2006 American Wood Preservers' Association (AWPA) 102nd Annual Meeting – April 9-12, Austin, TX
"Code Update: NESC and ANSI O5"
2006 Florida Public Service Commission Workshop – April 17, Tallahassee, FL
"Wood Pole Strength & Loading"

2006 Municipal Electric Authority of Georgia (MEAG) – October 6, Cordele, GA
"Breakthroughs in Steel Restoration Truss Design"

2006 Northeast Utility Pole Conference – October 24-25, Binghamton, NY
"Code Update: NESC and ANSI O5"

2007 Institute of Electrical and Electronics Engineers (IEEE) Towers, Poles and Conductors Panel Session – Orlando, FL, January 9
"Significant Rejected Change Proposals to the 2007 NESC"

2007 Southeastern Utility Pole Conference – February 11-13, Tunica, MS
"ANSI & NESC – What's New for Your Poles"

2007 Florida Electric Cooperatives Association (FECA) Engineers Conference – May 30-June 1, Clearwater, FL
"New Technology – Managing Wood Pole Strength and Load"

2007 Western Electric Institute (WEI) Utility Pole Conference – Oct 10-11, Vancouver, WA
"ANSI & NESC Update"

2008 International Conference on Overhead Lines – March 31-April 3, Ft. Collins, CO
"Code Updates – ANSI O5 & NESC"

2008 Northeast Utility Pole Conference – October 22-23, Binghamton, NY
"Steel and Concrete Utility Structure Corrosion"

2010 Utility Reliability Conference – February 10, Columbus, OH
"Reliability from the Ground Up"

2010 International Overhead Utility Conference, March 29-April 1, Ft. Collins, CO
"Code Update – ANSI O5.1 & NESC Safety"

2011 Eastern Utility Pole Conference – October 18-19, Baltimore, MD
"ASC O5 Committee – Wood Poles, Crossarms, Laminated Poles" – *"NESC Update"*

2012 International Overhead Utility Conference, March 28-April1, Ft. Collins, CO
"NESC Update"

2012 Spring Heartland Joint Use Conference – May 9-10, Pittsburgh, PA
"ANSI / NESC Code Review"

2012 Fall Heartland Joint Use Conference – October 24-25, Dayton, OH
"ANSI/NESC Code Review"

2016 National Electrical Safety Code (NESC) Workshop: Changes for the Future - October 18-19, San Antonio, TX
Workshop Host and Presenter

2017 EUCI Seminar – Atlanta, GA *"Best Practices for Wood Utility Poles"*
Presented: "ANSI O5.1 and National Electrical Safety Code Review and Updates"

2017 National Association of Regulatory Utility Commissioners (NARUC)
Summer Policy Meeting – July 16-19, 2017, San Diego, CA
"Technology Developments & Challenges for Building 5G Small Cell Networks"
"Distributed Solar: Jurisdiction between NESC and NEC"

2018 National Association of Regulatory Utility Commissioners (NARUC)
Winter Policy Summit – February 11-14, 2018, Washington, D.C.
"Utility Distribution Poles and Lines – How Strong is Strong Enough?

2018 National Electrical Safety Code (NESC) Change Proposal Development Workshop – April 10-11, Savannah, GA
Host and Presenter

2019 EUCI Conference – Newport Beach, CA
"Wireless Pole Attachments Best Practices Conference"
Presented: Pole Loading Aspects of Wireless Antenna Attachment

2019 Osmose University – Wood Pole Technical Seminar
March 13-14; Peachtree City, GA; *1) Industry Code Interaction, 2) Strength and Loading, 3) Third Party Attachments – 4G/5G Small Cell*

2019 National Electrical Safety Code (NESC) Workshop
Change Proposal Comment Period - October 2-3, Kansas City, MO - Host and Presenter

2020 Osmose University – Joint Use Seminar
February 11-12; Peachtree City, GA; *1) NESC Update and IEEE Joint Use Working Group, 2) Pole Loading and Joint Use (Applications and Screening)*

2020 Osmose University – Wood Pole Technical Seminar
March 17-18; Peachtree City, GA; *1) Industrial Code Interaction, 2) Strength and Loading, 3) NESC Activity, 4) Third Party Attachments – 4G/5G Small Cell*

2020 EUCI Webinar – Presenter - *The Impacts of 5G on Overhead Lines*
June 27; Virtual

2021 EUCI Pole Attachments Best Practices Conference
January 25-26; Virtual; *NESC and GO 95 Update on Pole Loading and Attachments*

2021 Utilities Canadian Standards Forum
April 7; Virtual; *Overview of Wood Pole Maintenance and Improving Structural Resilience*

2021 Osmose University – Joint Use Seminar
June 15-16, Peachtree City, GA; *NESC Update & IEEE Joint Use Working*

2021 IEEE Working Group Coordinating Changes to the NESC
July 25-29; Virtual; Lessons Learned from the Failure of 26 Wood Poles

2021 POWERLINE 2021 – Sponsored by the North American Wood Pole Council
August 11, Memphis, TN; Presenter-*National Wood Pole Standards*

2021 EUCI Webinar Series – presenter
August 19, *Fiber Optic Cables*
Sept 6, *Wood Pole Loading*
October 21, *5G Deployments – What You Need to Know*

2021 Structural Resiliency Webinar – Benchmark Your Utility's Asset Health and Resiliency
November 10, Osmose Utilities Services, Inc.

2022 EUCI Webinar – Pole Attachment Best Practices Conference
January 27-28; Presenter – *NESC and GO 95 Update on Pole Loading and Attachments*

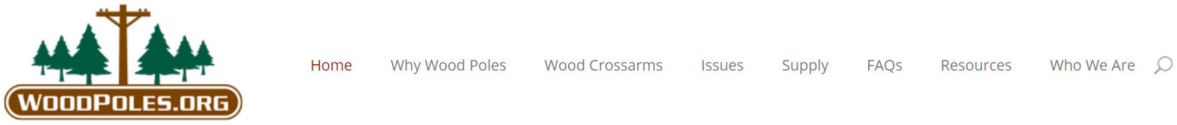
2022 Osmose University – Wood Pole Technical Seminar
June 7-8; Peachtree City, GA; Presenter-*NESC Update*

2022 Osmose University – Joint Use Seminar
August 9-10; Peachtree City, GA; *NESC Update & IEEE Joint Use Working Group*

2023 POWERLINE 2023 – Sponsored by the North American Wood Pole Council
October 11; Overland Park, KS; Presenter-*Effectiveness of Traditional Wood Pole Assessment Methods*

Training

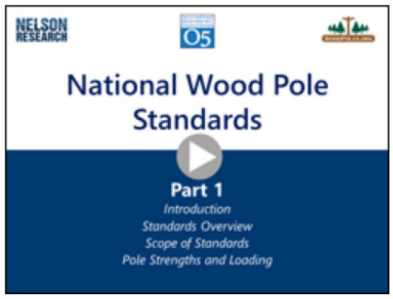
North American Wood Pole Council Website



The home page includes the following announcement about a voiceover of a PowerPoint that I created to provide an explanation of the National Standards referencing wood poles. There have been more than 5,000 hits.

New video series explains national wood pole standards

A detailed overview of the national standards that guide the design and use of wood utility poles is now available in a special three-part video series.



The **National Wood Pole Standards** video series is an expanded version the most downloaded technical document on the ***WoodPoles.org*** website. Commentary is provided by Nelson Bingel, chair of the **ASC O5 Committee**, which oversees pole standards. Bingel also chairs the ***National Electrical Safety Code (NESC).***

Each video is between 16 and 19 minutes long. Part 1 reviews the standards guiding the production and use of wood utility poles, the scope of those standards and the unique strengths and loading for wood poles. Part 2 discusses wood pole species, applied loads, pole circumferences, and groundline and height stresses. Part 3 reviews the NESC, grades of construction, transverse loading and other design factors.

The videos can be played in preview window on your computer. There are also links to view the videos on YouTube.

Click on play to learn more about wood pole standards.

2017 EUCI Symposium – Santa Clara, CA

"Best Practices for Wood Utility Pole Strength and Loading"

Created and Presented: The full day and a half symposium

- "Wood Pole Management"
- "Wood Pole Manufacturing and Strength"
- "Pole Loading Basics"
- "NESC Loading & Strength Requirements"
- "California GO 95 Loading & Strength Requirements"
- "Wood Pole Decay & Strength Loss"
- "NESC / GO 95 Strength & Loading Comparisons"
- "Clearance Basics"
- "Pole Loading Examples"
- "Third Party Attachment Processes"
- "Adding Attachments to Existing Poles"

2018 EUCI Symposium – Chicago, IL

"Best Practices for Wood Utility Pole Strength and Loading"

Updated Presentations: The full day and a half symposium

- "Wood Pole Management"
- "Wood Pole Manufacturing and Strength"
- "Pole Loading Basics"
- "NESC Loading & Strength Requirements"
- "California GO 95 Loading & Strength Requirements"
- "Wood Pole Decay & Strength Loss"
- "NESC / GO 95 Strength & Loading Comparisons"
- "Clearance Basics"
- "Pole Loading Examples"
- "Third Party Attachment Processes"
- "Adding Attachments to Existing Poles"

2019 EUCI Symposium – Denver, CO

"Best Practices for Wood Utility Pole Strength and Loading"

Updated Presentations: The full day and a half symposium

- "Wood Pole Management"
- "Wood Pole Manufacturing and Strength"
- "Pole Loading Basics"
- "NESC Loading & Strength Requirements"
- "California GO 95 Loading & Strength Requirements"
- "Wood Pole Decay & Strength Loss"
- "NESC / GO 95 Strength & Loading Comparisons"
- "Clearance Basics"
- "Pole Loading Examples"
- "Third Party Attachment Processes"
- "Adding Attachments to Existing Poles"

2020 EUCI Symposium VIRTUAL

"Best Practices for Wood Utility Pole Strength and Loading"

Updated Presentations: The full day and a half symposium

- "Wood Pole Management"
- "Wood Pole Manufacturing and Strength"
- "Pole Loading Basics"
- "NESC Loading & Strength Requirements"
- "Wood Pole Decay & Strength Loss"
- "NESC / GO 95 Strength & Loading Comparisons"
- "Clearance Basics"
- "Pole Loading Examples"
- "Third Party Attachment Processes"
- "Adding Attachments to Existing Poles"

WORKPAPERS

OF

RANDAL M. PRYOR

Distribution Vegetation Management Costs by Type and Year					
VM Type	**2020**	**2021**	**2022**	**2023**	**2024**
Proactive	$ 25,210,054	$ 26,479,583	$ 28,195,542	$ 35,582,870	$ 132,660,693
Reactive	$ 4,476,537	$ 4,724,078	$ 5,690,752	$ 9,943,120	$ 10,385,130
Hazard Tree	$ 60,575	$ 164,182	$ 911,542	$ 3,491,582	$ 2,777,348
Grand Total	**$ 29,747,166**	**$ 31,367,843**	**$ 34,797,836**	**$ 49,017,572**	**$ 145,823,171**

Pole Outages may 2024 EOP Storms
All outages from both storms filtered
Action Taken Codes: 252, 254, 351, 440, 443, 502, 530, 533
Crew remarks of Rotten Poles are highlighted in yellow

Storm	Hz	Event	Area	Level	Code	Feeder	Substation	Device	Phases	Momentary	Planned	Cust. Aff.	CMI	Start	Restored	Duration	Truck	Cause Code	Action Taken	Comment
5/16/2024	2	4981899	KTY	C	1	SE42	SEALY	IGSD G2471	C	0	0	388	599497.64	5/16/2024	5/19/2024	3897.42		W2 - Strong Wind	533 - Rpld/Rmvd Pole	relaced 3 poles at LF36APK to LF51APQ
5/16/2024	2	4981930	CYP	C	1	WL42	WALLER	WL42	C	0	0	690	1863688.3	5/16/2024	5/23/2024	10064.78	NH504	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	complete
5/16/2024		4981945	CYP	C	1	HK41	HOCKLEY	HK41	ABC	0	0	751	766.02	5/16/2024	5/16/2024	1.02		W5 - Tornado	443 - Rpld/Rmvd Pole	<Substation: HOCKLEY. District: CYP.>>CYP_5447_HK41 , NON 300% , RC ON CIR , RC USED , TBL LOC MULTIPLE LOCS, TBL SEC/ MULTIPLE, CAUSE REMARKS POLES & WIRES DOWN, CAUSE CODE W5
5/16/2024	2	4981948	CYP	C	1	WL43	WALLER	IGSD 321M	ABC	0	0	752	4128567.62	5/16/2024	5/22/2024	8526.32	R3864	W2 - Strong Wind	443 - Rpld/Rmvd Pole; 605 - Rpld/Rprd CNP Equip - No Svc Off	L/F 79ABT was causing this order to be circuit level. repairs made behind l/f 79ABT, back hot. trans bank 4069759364 left off. can be hooked back upwhen cust electricians have made repairs.
5/16/2024	2	4981990	CYP	C	1	FM02	FREEMAN	FM02	ABC	0	0	667	4817644.2	5/16/2024	5/21/2024	7233.7		W2 - Strong Wind	500 - Rpld/Rprd Picked Up Static/Neutral; 533 - Rpld/Rmvd Pole	replaced pole that was 11 spans east of pts 18985
5/16/2024	2	4981993	CYP	C	1	HK45	HOCKLEY	HK45	ABC	0	0	2934	9238127.1	5/16/2024	5/20/2024	5793.33		W5 - Tornado	536 - Rpld Pole Hardware; 542 - Rmvd Frgn Material from Pri; 533 - Rpld/Rmvd Pole	replaced 8 poles picked up 25 spans of wire
5/16/2024	2	4982000	CYP	C	1	FM01	FREEMAN	FM01	C	0	0	432	3971286.25	5/16/2024	5/24/2024	11504.33		W5 - Tornado	533 - Rpld/Rmvd Pole	replaced broken poles**CYP_5900_FM01_LOCKOUT , NON 300%, RC ON CIR , RC USED , CAUSE CODE W5, CAUSE REMARKS , MULTIPLE POLES DOWN, TBL SECTION 22455
5/16/2024	2	4982005	GPT	C	1	KDL41	KUYKENDAHL	IGSD G1597	B	0	0	1077	2455684.65	5/16/2024	5/18/2024	2956.93		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 314 - Rpld BU Trans; 502 - Picked Up Pri	replaced 45'2, 50'2, 75kva 120/240. picked up 2 phases primaryrepaired 2 poles
5/16/2024	2	4982035	CYP	C	1	FRY44	FRY ROAD	FRY44	C	0	0	2615	18823539.36	5/16/2024	5/22/2024	8506.3	NH435	W2 - Strong Wind	504 - Isolated OH Pri; 533 - Rpld/Rmvd Pole	replaced poles and picked up 12 spans of primary
5/16/2024	2	4982433	KTY	F	1	KT49	KATY	LF J97X	C	0	0	2	14324.64	5/16/2024	5/21/2024	7162.32		W5 - Tornado	443 - Rpld/Rmvd Pole	rpld 35' pole behind LF-J97X. all svc on & working
5/16/2024	2	4982648	CYP	C	1	FRY42	FRY ROAD	FRY42	ABC	0	0	3989	3035662.68	5/16/2024	5/21/2024	7294.83	FL066	W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced poles
5/16/2024	2	4982715	CYP	C	1	FRY43	FRY ROAD	FRY43	C	0	0	4060	7590292.6	5/16/2024	5/21/2024	7321.93		W2 - Strong Wind	500 - Rpld/Rprd Picked Up Static/Neutral; 533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	Broken poles wire down
5/16/2024	2	4982795	CYP	C	1	FRY49	FRY ROAD	FRY49	ABC	0	0	5469	22114405.35	5/16/2024	5/19/2024	4443.18	FL079	W2 - Strong Wind	533 - Rpld/Rmvd Pole	Replaced poles
5/16/2024	2	4982796	SPB	C	1	SA45	SATSUMA	SA45	ABC	0	0	3441	13745658.6	5/16/2024	5/19/2024	4411.73		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 542 - Rmvd Frgn Material from Pri	<Substation: SATSUMA. District: SPB.>.....SPB_5686, NON 300%, SA45 LOCKOUT, NO R/C USED, RMV TREE FROM THE PRI , RPLC POLES
5/16/2024	2	4982848	KTY	C	1	GE41	GERTIE	GE41	B	0	0	4392	13223687.53	5/16/2024	5/21/2024	7038.1		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	Cleared up faults and energized the rest of Gertie 41..Tagged PTS 8835 out of service..snuffers seem to be seized up
5/16/2024	2	4982862	KTY	C	1	GE44	GERTIE	GE44	ABC	0	0	4250	12693593.8	5/16/2024	5/19/2024	3989.83	NH476	W2 - Strong Wind	500 - Rpld/Rprd Picked Up Static/Neutral; 533 - Rpld/Rmvd Pole	replace broken poles......KTY_5727, GE44 LOCKOUT, NON 300%, NO R/C USED, RMV TREES AND RPLC POLES
5/16/2024	2	4982872	KTY	C	1	GE42	GERTIE	GE42	ABC	0	0	3353	8886403.83	5/16/2024	5/18/2024	2769.75	NH504	W2 - Strong Wind	533 - Rpld/Rmvd Pole	complete.........KTY_5624.....GE42 LOCKOUT, NON 300%, RMV TREES FROM PRI, NO R/C USED
5/16/2024	2	4983020	KTY	C	1	GE48	GERTIE	GE48	ABC	0	0	3640	10770266.09	5/16/2024	5/18/2024	2995.27	NH422	W2 - Strong Wind	533 - Rpld/Rmvd Pole	<Substation: GERTIE. District: KTY.>KTY TBL S/O 5649.... GE48 LOCKOUT
5/16/2024	1	4983021	SUG	C	1	WI01	WESTHEIMER	WI01	ABC	0	0	2288	1135305.6	5/16/2024	5/17/2024	496.2	X2894	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 542 - Rmvd Frgn Material from Pri	REMOVED TREE BRANCHES FROM ALL THREE PHASES ONE SPAN WEST OF T.P. Y78D. ALL SERVICE IS BACK ON
5/16/2024	2	4983026	CYP	C	1	STL45	STONE LAKE	STL45	ABC	0	0	3740	5442501.25	5/16/2024	5/20/2024	5996.55	Z1478	F7 - Pole	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	SERVICE RESTORED PER POWER CONTRACTOR,,,, CYP TRBL S/O 5549,,,MULT FAULTS, BROKE PL. TREES ON PRI
5/16/2024	2	4983180	SPB	C	1	CB09	CAMPBELL	CB09	ABC	0	0	2785	10115634.6	5/16/2024	5/19/2024	4334.58		W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced poles and wire
5/16/2024	2	4983208	SPB	C	1	SR05	SAUER	SR05	ABC	0	0	599	3948280.57	5/16/2024	5/21/2024	7191.53		V2 - Falling Tree - Located in the easemen	500 - Rpld/Rprd Picked Up Static/Neutral; 533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	Replaced 3 broke poles, replaced xfmr on 277/480v 50kva bank......SPB_5821, SR05 LOCKOUT, NON 300%, NO R/C USED,,,,,CREW RPLC A POLE
5/16/2024	2	4983246	SPB	C	1	SR12	SAUER	SR12	ABC	0	0	866	4211912.38	5/16/2024	5/20/2024	5786.47		W5 - Tornado	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri	Made repairs to circuit@ repair cross arm 3 spans south of D42B repalce cross arm 1 span N of D42B, WITH 6' FIBERGLASS ARMREMOVE TREE FROM PRIMARY AND PICKUP 600 PRIMARY AT BREAKOFF POLEREPLACE CL4 POLE WITH CL2 POLE AND PICK UP WIRE REDID LF29R
5/16/2024	2	4983273	SPB	C	1	SA42	SATSUMA	SA42	A C	0	0	461	2171770.9	5/16/2024	5/22/2024	8624.32		W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLACED 2 50FT POLES
5/16/2024	2	4983282	SPB	C	1	TAN44	TANNER	TAN_07A0	AB	0	0	937	5604440.47	5/16/2024	5/21/2024	6531.43		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 542 - Rmvd Frgn Material from Pri; 536 - Rpld Pole Hardware; 509 - Rpld/Rprd B/O Pri Jumper; 502 - Picked Up Pri; 546 - Rmvd/Trimmed Vegetation from Pri	ISOLATED FUSES W/ DAMAGETRIMMED TREES THROUGH ENTIRE CKTRPLD MULT POLES P/U MULT SPANS OF WIREREST. CKT TO NORMAL CONFIG. LEFT TAGS ON OPEN POINTS
5/16/2024	2	4983468	GPT	C	1	FR49	FAIRBANKS	FR49	ABC	0	0	5395	27716258.5	5/16/2024	5/23/2024	9569.38	FL027	W2 - Strong Wind	500 - Rpld/Rprd Picked Up Static/Neutral; 314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	Replaced 55 ft pole. picked up static. removed several treesstraighten 6 poles. replaced transformer
5/16/2024	2	4983471	SPB	C	1	SR15	SAUER	SR15	A	0	0	2144	11097795.1	5/16/2024	5/22/2024	8918.12		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 500 - Rpld/Rprd Picked Up Static/Neutral; 502 - Picked Up Pri; 546 - Rmvd/Trimmed Vegetation from Pri	Pick up 20 spans of primary due to bad weather and trees.LF 22S & Trip saver F01680 are still out due to wire down.
5/16/2024	2	4983473	SPB	C	1	TO09	TODD	TO09	A C	0	0	1235	9871854	5/16/2024	5/23/2024	10165.32		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 504 - Isolated OH Pri; 351 - Rpld Pole	REPLACED POLE
5/16/2024	2	4983598	SPB	C	1	WT06	WIRT	WT06	A	0	0	694	4688863.51	5/16/2024	5/22/2024	7537.95	Q4284	W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	CNTR MPT
5/16/2024	2	4983657	SPB	C	1	EC10	ECHO	EC10	ABC	0	0	382	1920533.57	5/16/2024	5/21/2024	6951.52		W2 - Strong Wind	546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	REPLCD 2 BROKE PLS. SPLICED AND PICKED UP #2 PRI IN MULTIPLE PLACES. REPLACED B/U HOOK BLADE SW ON TP 26011. ALL SERVRESTORED ON SWOR5809.
5/16/2024	2	4983660	GPT	C	1	FR45	FAIRBANKS	IGSD G2529	ABC	0	0	2843	19425207.44	5/16/2024	5/21/2024	7021.48		W2 - Strong Wind	533 - Rpld/Rmvd Pole	broken pole.........GPT_5875, G2529 LOCKOUT, NNON 300%, FR45, YSE CRIT CUST, NO ILCA CUST, RPLC POLES
5/16/2024	2	4983681	SPB	C	1	TO10	TODD	TO10	ABC	0	0	2163	9675423.45	5/16/2024	5/19/2024	4473.15		W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced poles and wire
5/16/2024	2	4983682	SPB	C	1	TO08	TODD	TO08	A	0	0	683	5804407.67	5/16/2024	5/23/2024	9212.42		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	Storm RestorationCircuit is hotLF 10HM left off, will need additional workWill get ticket next day
5/16/2024	2	4983711	GPT	C	1	WO06	WHITE OAK	WO06	ABC	0	0	1239	5345100.05	5/16/2024	5/20/2024	5734.92		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri; 519 - Rpld/Rprd BU Device	multi address pole down and wire picked up GPT TBL S/O 5911
5/16/2024	2	4983712	SPB	C	1	TO06	TODD	TO06	ABC	0	0	917	3141102.32	5/16/2024	5/20/2024	5493.88		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 514 - Rpld/Rprd/Adjusted Pole Top Switch; 502 - Picked Up Pri; 314 - Rpld BU Trans	REPLACED 4-45' CL2 POLES, 2-60' CL2 POLES, PTS 139, 1-7.2KV 50KVA 120/240V TRANS, 1-7.2KV 25KVA 120/240V TRANS, REMOVED SEVERAL TREE LIMBS FROM PRI.
5/16/2024	2	4983715	BEL	C	1	EU07	EUREKA	EU07	A	0	0	1440	6896822.94	5/16/2024	5/21/2024	6981.68		W2 - Strong Wind	314 - Rpld BU Trans; 502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 514 - Rpld/Rprd/Adjusted Pole Top Switch	rpld 5 40' poles with 45-2 poles picked up primary, neutral,secondaries and rpld pts 6643 and 4934
5/16/2024	2	4983748	GPT	C	1	DH05	DEIHL	DH05	ABC	0	0	803	2961977.37	5/16/2024	5/21/2024	7051.47	HCC06	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 602 - ISO Capbank/Recloser - No Svc Off; 500 - Rpld/Rprd Picked Up Static/Neutral	Replaced 2 broke 45 ft circuit poles, Trimmed trees and picked up wire GPT TBL S/O 5918
5/16/2024	2	4983754	SPB	C	1	WT01	WIRT	WT01	ABC	0	0	1289	10785024.33	5/16/2024	5/22/2024	8366.97	FCC	V1 - Tree Clearance	533 - Rpld/Rmvd Pole; 542 - Rmvd Frgn Material from Pri; 502 - Picked Up Pri; 546 - Rmvd/Trimmed Vegetation from Pri	TREES AND WIRE DOWN SPB S/O 5793, PICKED UP PRI, REPLACED POLES, REMOVED TREES; VARIOUS SECTIONS; NON PUC
5/16/2024	2	4983756	BEL	C	1	EU04	EUREKA	EU04	ABC	0	0	964	4082993.08	5/16/2024	5/19/2024	4235.47	262	W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLACED POLES & WIRE.
5/16/2024	2	4983757	BEL	C	1	EU08	EUREKA	EU08	ABC	0	0	1622	9935306.52	5/16/2024	5/21/2024	7308.55		W2 - Strong Wind	542 - Rmvd Frgn Material from Pri; 500 - Rpld/Rprd Picked Up Static/Neutral; 533 - Rpld/Rmvd Pole; 506 - Spliced OH Pri; 502 - Picked Up Pri; 547 - Reset Recloser/IG Device	Removed trees. Picked up 50+ spans pri & neutral. Replaced 9 broke poles. Replaced 6 transformers
5/16/2024	3	4983761	SPB	C	1	WT05	WIRT	WT05	ABC	0	0	689	5723819.83	5/16/2024	5/23/2024	9857.47		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri	completed switching order 5829 WT05 is hot
5/16/2024	2	4983762	SPB	C	1	WT11	WIRT	WT11	ABC	0	0	356	2417428.68	5/16/2024	5/21/2024	6790.53		W2 - Strong Wind	443 - Rpld/Rmvd Pole; 502 - Picked Up Pri	Replaced 40' pole with 45' pole behind LF#U60I
5/16/2024	2	4983784	GPT	C	1	WO04	WHITE OAK	WO04	ABC	0	0	1399	6320512.62	5/16/2024	5/20/2024	5311.22		W2 - Strong Wind	533 - Rpld/Rmvd Pole	TIED TO CIRCUIT OUTAGE GPT TBL S/O 5951
5/16/2024	2	4983794	SPB	C	1	TAN49	TANNER	TAN49	ABC	0	0	350	2028962.38	5/16/2024	5/20/2024	5797.1	HCC02	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	rplcd 2 55 cl2 poles and 19.9 277/480 bank. picked up 6 spans of 600 wire. left cap bank f586 offlineckt back online
5/16/2024	2	4983797	GPT	C	1	WO09	WHITE OAK	WO09	AB	0	0	304	2575665.7	5/16/2024	5/22/2024	8612.05		W5 - Tornado	533 - Rpld/Rmvd Pole	circuit fully restored. s/o 5910
5/16/2024	2	4983860	BEL	C	1	EU02	EUREKA	EU02	BC	0	0	735	3099717.27	5/16/2024	5/19/2024	4293.93		W2 - Strong Wind	546 - Rmvd/Trimmed Vegetation from Pri; 533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	Circuit level storm restoration
5/16/2024	2	4983861	GPT	C	1	FR45	FAIRBANKS	FR45	ABC	0	0	528	2646587.93	5/16/2024	5/20/2024	5636.08		W2 - Strong Wind	533 - Rpld/Rmvd Pole	circuit back hot
5/16/2024		4983889	BEL	C	1	EU12	EUREKA	EU12	ABC	0	0	174	731252.4	5/16/2024	5/19/2024	4202.6	262	W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLACE POLES & WIRE
5/16/2024		4983911	FTB	F	1	EB07	EAST BERNARD	LF 95GW	A	0	0	30	73368.9	5/16/2024	5/18/2024	2445.63	R3098	F7 - Pole	443 - Rpld/Rmvd Pole	REPLACED ROTTEN 35' POLE W/ 40' POLE.
5/16/2024	2	4983931	GPT	C	1	AN11	AIRLINE	AN11	A C	0	0	2105	17590070.98	5/16/2024	5/22/2024	8667.67		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 536 - Rpld Pole Hardware	REPLCD BROKE 45' POLE. REFRAME TOP SIDE OF CB PL. PICKED UP 2-SP 600 PRI & 4/0 NEUTRAL. CLRD LARGE TREE FROM CIR.
5/16/2024	2	4983983	BEL	C	1	EU11	EUREKA	EU11	ABC	0	0	2126	6114765.09	5/16/2024	5/20/2024	5022.97	262	W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLACED POLES & WIRE.....BEL_6052.....EU11 LOCKOUT, NON 300%, NO R/C USED, RPLC A POLE , NO CRIT CUST, NO ILCA CUST
5/16/2024	2	4984008	BEL	C	1	CR04	CROCKETT	CR_12A0	ABC	0	0	2022	3317396.92	5/16/2024	5/21/2024	7433.98		W2 - Strong Wind	443 - Rpld/Rmvd Pole	Replaced 35' pole with same
5/16/2024	2	4984076	BEL	C	1	CR02	CROCKETT	CR02	BC	0	0	1734	4360275.32	5/16/2024	5/18/2024	2788.4		W2 - Strong Wind	502 - Picked Up Pri; 314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole	replaced 3 steel arms. 1 25kva transformer. repaired primaryreplaced 3 45'2 poles
5/16/2024		4984085	HUM	C	1	KW43	KINGWOOD	KW43	ABC	0	0	4726	4475427.46	5/16/2024	5/18/2024	2920.72		W2 - Strong Wind	546 - Rmvd/Trimmed Vegetation from Pri; 533 - Rpld/Rmvd Pole	replaced king pin and removed large branch from all three phasesand static S/O 5529
5/16/2024	2	4984086	BEL	C	1	CR03	CROCKETT	CR03	ABC	0	0	1686	4217156.26	5/16/2024	5/18/2024	3007.92		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 514 - Rpld/Rprd/Adjusted Pole Top Switch	repalced 45'2 pole and PTS
5/16/2024	2	4984131	GPT	C	1	AN06	AIRLINE	AN06	C	0	0	1848	7937723.36	5/16/2024	5/21/2024	7333.18		W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced broke poles.
5/16/2024	2	4984203	GPT	C	1	AN09	AIRLINE	AN09	ABC	0	0	1653	7804876.52	5/16/2024	5/20/2024	5753.12		W5 - Tornado	533 - Rpld/Rmvd Pole	complete_GPT_S/O-5960_NON 300%_NO RC USED_TRBL SECTION VARIOUS TROUBLE LOCATIONS_TREES ON PRI, POLES DOWN AND WIRES DOWN
5/16/2024	1	4984271	BEL	C	1	GS29	GABLE STREET	GS29	C	0	0	27	66682.97	5/16/2024	5/19/2024	3901.15		W2 - Strong Wind	533 - Rpld/Rmvd Pole	Removed IG #G1342, replaced with PTS (un-named)To be named at later date, replaced pole
5/16/2024	2	4984274	GPT	C	1	RU01	RITTENHOUSE	RU01	ABC	0	0	1427	7762234.01	5/16/2024	5/20/2024	5487.18		W2 - Strong Wind	351 - Rpld Pole	making repairs to circuit s/o 5639.......GPT_5639.....RU01 LOCKOUT, NON 300%, NO R/C USED, RMV TREES FROM THE PRI,
5/16/2024	2	4984275	BEL	C	1	MID01	MIDTOWN	MID01	AB	0	0	1054	3237725.77	5/16/2024	5/19/2024	4226.63		W2 - Strong Wind	314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole; 320 - Rpld/Rprd B/U Disc; 542 - Rmvd Frgn Material from Pri	REPLACED 2) 60' POLES AND 45' POLE REPLACED 2) 50KVA 7200 120/240 OH XFMR REPLACED 1) 75KVA 7200 120/240 OH XFMR REPLACED 2 7200 CUTOUTS MAPS ATTACHED
5/16/2024	2	4984276	BEL	C	1	NS01	NORTHSIDE	NS01	ABC	0	0	337	1031598.73	5/16/2024	5/19/2024	4203.45		W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLCD BROKEN 50' CL 2 PL W/SAME AND ALL MATERIAL AS WELL.CIR RESTORED ON SWOR 5741. PL REPLD LOCATION 3415 ELYSIAN ST.
5/16/2024	2	4984284	BEL	C	1	ES02	EAST SIDE	ES02	ABC	0	0	1866	1443449.8	5/16/2024	5/20/2024	5584.43		W2 - Strong Wind	314 - Rpld BU Trans; 536 - Rpld Pole Hardware; 502 - Picked Up Pri	TRIMMED 2 LARGE TREES OFF PLS AND CNP EQUIP. PICKED UP 2 SP'S 4/0 STR CU PRI. 1 SP 3 PH #2 AAAC PRI AND NUETRAL. REPLCD 1 100 KVA 277/7.2 TRANS. AND 3 X-ARMS. ALL SERV RESTORED AND BACK TO NORMAL ON SWOR 5581.
5/16/2024	2	4984329	BEL	C	1	HR03	HARDY	HR03	ABC	0	0	2558	7489363.56	5/16/2024	5/18/2024	2927.82	262	W2 - Strong Wind	533 - Rpld/Rmvd Pole	RPL BROKEN POLES AND PICK UP SERVERAL SPANS OF #600.
5/16/2024	2	4984333	BEL	C	1	LB07	LIBERTY	IGSD G2193	ABC	0	0	479	1358937.39	5/16/2024	5/18/2024	2850.2		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	replaced 2-55'2 pole. repaired 200' 600 primary. BEL S/O 5627, SECTION 15178...TCP
5/16/2024	2	4984340	BEL	C	1	CL01	CLINTON	CL01	BC	0	0	199	1151581.92	5/16/2024	5/23/2024	9688.4		W2 - Strong Wind	646 - All CNP Equip Found OK - No Svc Off; 533 - Rpld/Rmvd Pole	Replaced 75' pole with 60' pole
5/16/2024	2	4984353	BEL	C	1	LB06	LIBERTY	LB06	ABC	0	0	149	1069295.52	5/16/2024	5/21/2024	7176.48		W5 - Tornado	533 - Rpld/Rmvd Pole	4851 Homestead- 2 45' poles changed, 4025 Homestead- 1 45' pole4343 Eastpark- 1 50' pole changed, 3 50 kva 277/480 xfmrs change7177 Cavalcade- 1 45' pole changed........BEL_5887, LB06 LOCKOUT, NON 300%, NO R/C USED, NO CRIT CUST, NO ILCA CUST
5/16/2024	2	4984409	BEL	C	1	CL09	CLINTON	CL09	ABC	0	0	408	3228376.87	5/16/2024	5/22/2024	8486.73		W2 - Strong Wind	533 - Rpld/Rmvd Pole	primary down, poles down, tree clearance, sys neutral down etc
5/16/2024	2	4984469	BEL	F	1	CL05	CLINTON	LF 79A	A C	0	0	91	761715.5	5/16/2024	5/22/2024	8370.5	LP047	W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced 45 foot pole and repaired primary
5/16/2024	2	4984602	BEL	C	1	OA01	OATES	OA01	ABC	0	0	697	4967950.68	5/16/2024	5/21/2024	7242.2		W2 - Strong Wind	546 - Rmvd/Trimmed Vegetation from Pri; 533 - Rpld/Rmvd Pole; 542 - Rmvd Frgn Material from Pri	replaced 2-45' cl2 Trimmed trees on 30 spans of primary repaired primary on multiple locatons
5/16/2024	2	4984605	HUM	C	1	GW06	GLENWOOD	GW06	ABC	0	0	1014	3899709.17	5/16/2024	5/20/2024	5185.72		W2 - Strong Wind	500 - Rpld/Rprd Picked Up Static/Neutral; 502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 536 - Rpld Pole Hardware	picked up 6 spans of 600 pri and set 3 50' poles on woodlyn dr removed large tree limbs from pri in a few places along the ckt
5/16/2024	2	4984699	BAY	C	1	NM06	NORMANDY	NM06	ABC	0	0	848	2847647.36	5/16/2024	5/19/2024	4382.87		E9 - Insulator	533 - Rpld/Rmvd Pole; 536 - Rpld Pole Hardware; 502 - Picked Up Pri	rplcd 4 45ft circuit poles and picked 600 circuit up. NM06 back on and holding
5/16/2024	2	4984702	BAY	C	1	NM04	NORMANDY	NM04	A	0	0	1172	4419754.24	5/16/2024	5/20/2024	5619.1		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 646 - All CNP Equip Found OK - No Svc Off	Customer called about another address
5/16/2024	2	4984711	HUM	C	1	GW07	GLENWOOD	GW07	B	0	0	1378	773232.96	5/16/2024	5/17/2024	1602.57		W2 - Strong Wind	314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	replace 2 45'2 poles. replaced 75kva transformer picked up 4 spans primary
5/16/2024	2	4984715	BEL	C	1	OA05	OATES	OA05	ABC	0	0	1885	11811269.35	5/16/2024	5/21/2024	7181.18		W2 - Strong Wind	519 - Rpld/Rprd BU Device; 506 - Spliced OH Pri; 502 - Picked Up Pri; 533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri	SO 5723
5/16/2024	2	4984717	BAY	C	1	NM03	NORMANDY	NM03	ABC	0	0	4322	8001814.12	5/16/2024	5/22/2024	8212.67	Q4284	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri; 514 - Rpld/Rprd/Adjusted Pole Top Switch	CNTR - POWERLINE
5/16/2024	2	4984732	HUM	C	1	GW02	GLENWOOD	GW02	ABC	0	0	2373	5163667.55	5/16/2024	5/19/2024	4303.83	HCC06	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri; 500 - Rpld/Rprd Picked Up Static/Neutral	Picked up 4 spans 600 prim, replaced 50 ft poleS/O #5531
5/16/2024	2	4984745	SOH	C	1	SB03	STRAWBERRY BEL	SB03	ABC	0	0	1539	503073	5/16/2024	5/20/2024	5618.53		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	replaced 45 ft cl 4 broken pole and picked up primary
5/16/2024	2	4984751	GPT	F	1	AD11	ALDINE	LF 15APE	A C	0	0	163	1411566.96	5/16/2024	5/22/2024	8659.92	LP037	W2 - Strong Wind	443 - Rpld/Rmvd Pole	LF 81ADA needs further assementLF 15APE on and working
5/16/2024	2	4984814	BEL	C	1	HE15	HEIGHTS	HE15	ABC	0	0	2187	6339784.95	5/16/2024	5/18/2024	2898.85		W2 - Strong Wind	704- Tried and Held; 533 - Rpld/Rmvd Pole	replaced poles and wire
5/16/2024	2	4984874	BAY	C	1	UV07	UVALDE	UV07	ABC	0	0	1170	4957150.85	5/16/2024	5/19/2024	4416.02		W2 - Strong Wind	546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	Uvalde 07 is back to normal. All service has been restored
5/16/2024	2	4984914	BEL	F	1	HG04	HARRISBURG	LF F59G	B	0	0	115	1117147.95	5/16/2024	5/23/2024	9714.33	NH40V	W2 - Strong Wind	443 - Rpld/Rmvd Pole	Broken pole wire down
5/16/2024	2	4985148	BAY	C	1	LY45	LYONDELL	LY45	ABC	0	0	2356	759485.22	5/16/2024	5/18/2024	2916.25		W5 - Tornado	533 - Rpld/Rmvd Pole	rplcd 35 ckt pole and restored back to normal
5/16/2024	2	4985155	BAY	C	1	LY48	LYONDELL	LY48	ABC	0	0	3169	16895706.02	5/16/2024	5/20/2024	5438.48		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	Picked up primaryon 5 spans, repalced insulators

All outages from both storms filtered
Action Taken Codes: 252, 254, 351, 440, 443, 502, 530, 533
Crew remarks of Rotten Poles are highlighted in yellow

Storm	Hz	Event	Area	Level	Code	Feeder	Substation	Device	Phases	Momentary	Planned	Cust. Aff.	CMI	Start	Restored	Duration	Truck	Cause Code	Action Taken	Comment
5/16/2024	2	4985164	BAY	C	1	CV02	CHANNELVIEW	CV02	ABC	0	0	263	1027327.57	5/16/2024	5/19/2024	4277.45		W2 - Strong Wind	533 - Rpld/Rmvd Pole	<Substation: CHANNELVIEW. District: BAY.>
5/16/2024	1	4985183	BAY	C	1	AI06	ALEXANDER ISLA	AI06	ABC	0	0	110	288194.7	5/16/2024	5/19/2024	4353.27	HCC03	W2 - Strong Wind	314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole	replaced 6 consecutive poles starting 1 spans S of lf H14J and replaced open delta bank 1 span S of H14J
5/16/2024	2	4985271	BAY	C	1	HL04	HIGHLANDS	HL04	ABC	0	0	645	752269.1	5/16/2024	5/17/2024	1169.02	X3286	W5 - Tornado	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	<Substation: HIGHLANDS. District: BAY.> <<<BAY_5764_NON 300% CKT_NO R/C USED ON CKT_TBL SECTION 40045>>>
5/16/2024	2	4985276	BAY	C	1	HL02	HIGHLANDS	HL02	ABC	0	0	1593	2536797.34	5/16/2024	5/19/2024	4395.13		W2 - Strong Wind	542 - Rmvd Frgn Material from Pri; 533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	replaced poles,wire,transformers,drops,trimmed treesclosed in on M759everything that can be energized is energized at this timesome services were left out because of meter loop damage
5/16/2024	2	4985300	BEL	F	1	GP07	GALENA PARK	LF 19LD	B	0	0	30	259476.6	5/16/2024	5/22/2024	8649.22	FL069	W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced broken pole, transformer, second, and drops
5/16/2024		4985541	BEL	T	1	HP05	HYDE PARK	5357822860	C	0	0	7	71880.41	5/16/2024	5/23/2024	10268.63	NH387	F7 - Pole	351 - Rpld Pole	rpld 50/c2 3ph tang, w/oh xfmr
5/16/2024	2	4985771	GPT	F	1	DH11	DEIHL	LF E83M	C	0	0	21	208661.88	5/16/2024	5/23/2024	9936.28		W2 - Strong Wind	458 - Rmvd/Trimmed Tree; 443 - Rpld/Rmvd Pole; 314 - Rpld BU Trans; 414 - Refused Line Fuse	RPLCD 35' POLE, HAD TO CUT 10' OFF 45'. RPLCD 50KVA 7.2 WITH SAME @5602 GOETTEE CIR. TRIMMED TREES, REFUSED LF E83M
5/16/2024	2	4985921	GPT	F	1	LK09	LITTLE YORK	RECL F02591	ABC	0	0	42	399868.14	5/16/2024	5/23/2024	9520.67		V2 - Falling Tree - Located in the easemen	404 - Isolated OH Pri; 443 - Rpld/Rmvd Pole	relaced broke corner pole and picked phases.
5/16/2024	1	4985934	SOH	F	1	SP05	SPENCER	LF JS3	ABC	0	0	67	560714.96	5/16/2024	5/22/2024	8368.88		W2 - Strong Wind	443 - Rpld/Rmvd Pole	replace poles ,arms ,wire
5/16/2024		4986272	BAY	F	1	BT01	BAYTOWN	LF 42AEX	A	0	0	7	48068.09	5/16/2024	5/21/2024	6866.87		W2 - Strong Wind	252 - Rpld Pole - 1 Cust; 232 - Picked/Spliced Up Drops; 414 - Refused Line Fuse	All service has been restored and Sweeped by Electricom.All servce is on and working.Replaced Broke 35' serv pole
5/16/2024	2	4986489	BAY	F	1	BT04	BAYTOWN	LF A90	AB	0	0	81	453194.88	5/16/2024	5/21/2024	7081.17		W2 - Strong Wind	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole; 314 - Rpld BU Trans	All Service has been restored and sweeped by ElectricomAll service is on and workingPole and OH 50kva 120/240/7200v.
5/16/2024	2	4986914	CYP	C	1	HK43	HOCKLEY	HK43	ABC	0	0	596	684871.99	5/16/2024	5/21/2024	7222.55		W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced inline pole 55' replaced 25kva xfmr...R/C USED O CIR, R/C O CIR, NO CRIT CUST, NO ILCA CUST, NO FLISR ON CIR, NO 300% CIRCUIT, CIRCUIT BACK TO NORMAL
5/16/2024	2	4987009	SOH	F	1	PA04	PASADENA	LF G17Y	C	0	0	41	346204.82	5/16/2024	5/22/2024	8444.02		W2 - Strong Wind	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole; 452 - Rpld Pole Hardware	All service has been restored and sweeped by ElliotAll CNP is on and working
5/16/2024	2	4987153	BEL	F	1	LB07	LIBERTY	LF 68T	BC	0	0	19	139071.07	5/16/2024	5/21/2024	7319.53		V2 - Falling Tree - Located in the easemen	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole	picked up prim in multiple locations and replaced a 45'cl2 inlinalso a 35' service pole and picke up drops
5/16/2024	2	4987576	BEL	C	1	LB02	LIBERTY	LB02	ABC	0	0	2415	6454385.01	5/16/2024	5/22/2024	8587.93		V1 - Tree Clearance	502 - Picked Up Pri; 546 - Rmvd/Trimmed Vegetation from Pri; 533 - Rpld/Rmvd Pole	replaced 9 poles and 9 spans of 600 pri,ckt back hot
5/16/2024	2	4988150	GPT	F	1	DH11	DEIHL	LF F67K	A C	0	0	16	158975.68	5/16/2024	5/23/2024	9935.98		V2 - Falling Tree - Located in the easemen	443 - Rpld/Rmvd Pole; 402 - Picked Up/Spliced OH Pri	replaced 4 45' poles picked up primary.
5/16/2024	1	4988264	BEL	T	1	HP05	HYDE PARK	5357823051	C	0	0	9	91457.37	5/16/2024	5/23/2024	10161.93	NH387	F7 - Pole	306 - Refused Trans; 351 - Rpld Pole; 301 - Rpld Lightning Arrestor; 320 - Rpld/Rprd B/U Disc	rpld rotton 50/c2, 3ph tang, alley arm, tranfered comm, xfmr
5/16/2024	2	4988484	GPT	F	1	LK06	LITTLE YORK	LF K29L	A	0	0	35	328314	5/16/2024	5/23/2024	9380.4		W2 - Strong Wind	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole	Replaced Broke 40' DE pole due to tree falling on primaryreplaced 20' of 4/0 sec. wire. LF K29L back onalso picked 1 span of #4 primary copper
5/16/2024	2	4988493	SOH	F	1	SH12	SOUTH HOUSTON	LF 18FF	C	0	0	18	152320.14	5/16/2024	5/22/2024	8462.23		W2 - Strong Wind	443 - Rpld/Rmvd Pole; 414 - Refused Line Fuse; 314 - Rpld BU Trans	replcd pole and OH xfmr
5/16/2024	2	4988505	SPB	F	1	DV10	DUNVALE	LF 57AWH	ABC	0	0	18	178840.44	5/16/2024	5/23/2024	9935.58		W5 - Tornado	443 - Rpld/Rmvd Pole; 314 - Rpld BU Trans; 402 - Picked Up/Spliced OH Pri	PU 3 SPANS OF 336 BEHIND LF-57AWH. RPLD 3 DAMAGED XMRS.RPLD BROKE POLE @ 1103 MEADOWICK DR.RPLD 3 DAMAGED XMRS. 2 @ GLN-5057614442 & 1 @ GLN-5057613539
5/16/2024	2	4988747	BEL	C	1	GS22	GABLE STREET	GS22	ABC	0	0	1458	5129507.08	5/16/2024	5/19/2024	4167.87		W2 - Strong Wind	533 - Rpld/Rmvd Pole	<Substation: GABLE STREET. District: BEL.>....BEL_5924....GS22, NON 300%, NO R/C USED, CREW RPLC POLES ALL OVERCIRCUIT
5/16/2024	2	4988823	BEL	F	1	LB07	LIBERTY	LF C32M	C	0	0	74	528933.5	5/16/2024	5/21/2024	7147.75		W2 - Strong Wind	314 - Rpld BU Trans; 443 - Rpld/Rmvd Pole; 402 - Picked Up/Spliced OH Pri	replaced 2 poles and picked up 6 spans of #2 prim and nuetralalso new trans and tree trimmed line
5/16/2024	2	4988852	BAY	F	1	GAR05	GARTH	LF BK9	A C	0	0	34	226406	5/16/2024	5/21/2024	6659		W2 - Strong Wind	452 - Rpld Pole Hardware; 303 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole	All service has been Restored and sweeped by Elliot Electric.All service is on and working
5/16/2024	2	4988909	GPT	L	1	LK07	LITTLE YORK	5262613522	A	0	0	1	9401.68	5/16/2024	5/23/2024	9401.68		V3 - Falling Tree - Outside of the easemen	252 - Rpld Pole - 1 Cust	replaced pole and wire
5/16/2024	2	4989111	SPB	C	1	SA52	SATSUMA	SA52	A C	0	0	2689	7963652.79	5/16/2024	5/19/2024	4046.38		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	replaced multiple poles
5/16/2024	2	4989115	BEL	T	1	NS08	NORTHSIDE	5458017741	B	0	0	10	95168.8	5/16/2024	5/23/2024	9516.88		W2 - Strong Wind	252 - Rpld Pole - 1 Cust	Replaced broke 35' poleservices to 219 and 221 are cut out due to WH damage
5/16/2024	2	4989208	SPB	C	1	ADK48	ADDICKS	ADK48	A	0	0	5021	26027655.88	5/16/2024	5/22/2024	8258.88		W2 - Strong Wind	533 - Rpld/Rmvd Pole	REPLACED POLES, PICKED UP WIRE. RESTORED CIRCUIT
5/16/2024	2	4989395	BEL	C	1	HE08	HEIGHTS	HE08	ABC	0	0	1838	7730251.02	5/16/2024	5/20/2024	5734.9		W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	picked up all kinds of wire and poles
5/16/2024	2	4989402	BEL	C	1	HE03	HEIGHTS	HE03	ABC	0	0	1667	4837217.25	5/16/2024	5/18/2024	2901.75	262	W2 - Strong Wind	533 - Rpld/Rmvd Pole	RPL POLES AND PICK UP 600...BACKBONE ERNGIZED.
5/16/2024	2	4989847	BEL	C	1	HOC02	H O CLARKE	HOC02	ABC	0	0	2573	7562010.24	5/16/2024	5/19/2024	3891.02	R3723	V4 - Falling Dead Tree	533 - Rpld/Rmvd Pole	rpld pole
5/16/2024	3	4991128	BEL	C	1	GP06	GALENA PARK	GP06	ABC	0	0	1562	6715500.8	5/16/2024	5/19/2024	4302.03		W2 - Strong Wind	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri	Removed trees, replace poles, picked up wire.
5/16/2024	2	4991585	BAY	F	1	GP04	GALENA PARK	LF Y15S	C	0	0	65	453488.75	5/16/2024	5/21/2024	6976.75		W2 - Strong Wind	443 - Rpld/Rmvd Pole	repairs made
5/16/2024	2	4992076	KTY	F	1	KT46	KATY	LF 69ALY	ABC	0	0	88	632612.64	5/16/2024	5/21/2024	7188.78		W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced 45' pole storm restoration29211 quail dr.
5/16/2024	2	4993995	KTY	C	1	GE49	GERTIE	GE49	ABC	0	0	5056	20066179.87	5/16/2024	5/19/2024	4343.17	NH504	W2 - Strong Wind	533 - Rpld/Rmvd Pole	complete
5/16/2024	2	4994066	BEL	C	1	ST07	SHARPSTOWN	ST07	A C	0	0	1248	2863852.34	5/16/2024	5/23/2024	9585.23	457	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 546 - Rmvd/Trimmed Vegetation from Pri; 502 - Picked Up Pri	wrk complete
5/16/2024	2	4996906	GPT	F	1	RU05	RITTENHOUSE	LF T5N	B	0	0	15	71717.25	5/16/2024	5/20/2024	4781.15		W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced 40 ft pole @ Carla St and 50 KVA 120/240 7200v picked up 5 services drops and 4 spans of primary
5/16/2024	2	4996920	GPT	F	1	RU05	RITTENHOUSE	LF T9N	A C	0	0	63	311374.35	5/16/2024	5/20/2024	4942.45		W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced 40ft pole @ 11318 O'Donald St and picked 5 spans of primary
5/16/2024	2	4998282	BEL	F	1	BU01	BUSCH	LF B32N	C	0	0	42	204255.24	5/16/2024	5/20/2024	4863.22		V2 - Falling Tree - Located in the easemen	414 - Refused Line Fuse; 443 - Rpld/Rmvd Pole	replaced pole
5/16/2024	2	5002395	BEL	F	1	CR04	-Missing Substation-	RECL F02271	ABC	0	0	177	1311725.76	5/16/2024	5/21/2024	7410.88		W2 - Strong Wind	443 - Rpld/Rmvd Pole; 458 - Rmvd/Trimmed Tree; 402 - Picked Up/Spliced OH Pri	Storm Damage, Wire Down, Pole Down, Trip Saver Device DamagedRepairs made, Service restoredStandard Cut-Outs, Trip saver F02271 needs replace later
5/16/2024	2	5005453	HUM	F	1	SW03	-Missing Substation-	LF 24EQ	B	0	0	14	116782.4	5/16/2024	5/22/2024	8341.6	HCC02	W2 - Strong Wind	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole; 323 - Rpld/Rprd Sec - Multiple Custs Off	rpled 2 40' poles. 2 spans 4/0 twist 2 spans primary
5/16/2024	2	5005695	HUM	F	1	SW03	-Missing Substation-	LF F80U	ABC	0	0	16	114972.32	5/16/2024	5/21/2024	7185.77	HCC02	W2 - Strong Wind	443 - Rpld/Rmvd Pole; 323 - Rpld/Rprd Sec - Multiple Custs Off; 314 - Rpld BU Trans; 402 - Picked Up/Spliced OH Pri	picked up oh primary and neutral and secondaries. rplcd oh trans12kv 120 240 75kva rplcd 2 poles 35'
5/16/2024	2	5006586	GPT	F	1	DH05	-Missing Substation-	RECL F02073	ABC	0	0	95	808749.25	5/16/2024	5/22/2024	8513.15	HCC06	W2 - Strong Wind	443 - Rpld/Rmvd Pole; 400 - Rpld/Rprd Picked Up Static/Neutral; 314 - Rpld BU Trans	Replaced 5 broke poles and 10 broke crossarms, replaced bad 50 kva OH transremoved alot of trees
5/16/2024	2	5006587	GPT	F	1	DH05	-Missing Substation-	RECL F02365	A C	0	0	40	289538	5/16/2024	5/21/2024	7238.45	HCC06	W2 - Strong Wind	400 - Rpld/Rprd Picked Up Static/Neutral; 402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole	Replaced 40 ft pole, picked up 8 spans wire, replaced 8 broke cross arms
5/16/2024	2	5009781	SPB	F	1	EC06	-Missing Substation-	LF 1AZ	A C	0	0	12	104705.16	5/16/2024	5/22/2024	8725.43		W2 - Strong Wind	443 - Rpld/Rmvd Pole	REPLACE TWO INLINE POLES
5/28/2024		5020011	BEL	C	1	CR02	CROCKETT	CR02	BC	0	0	1735	45440.46677	5/28/2024	9/21/1901		951382	FL066	W2 - Strong Wind	533 - Rpld/Rmvd Pole	replaced pole
5/28/2024		5020044	SPB	L	1	EC11	ECHO	5057351266	A C	0	0	1	45440.4756	5/30/2024	5/24/1909		951902	Z1 - Unknown	252 - Rpld Pole - 1 Cust	replaced service pole
5/28/2024		5020045	SPB	T	1	WT07	WIRT	5059726512	A C	0	0	1	45440.47561	5/28/2024	12/17/1900	NHP-Jerry, Mark		NH40V	V2 - Falling Tree - Located in the easemen	232 - Picked/Spliced Up Drops; 252 - Rpld Pole - 1 Cust	picked up secondarys replaced 25' service pole
5/28/2024		5020060	BEL	T	1	HG06	HARRISBURG	5655544550	ABC	0	0	3	45440.47959	5/30/2024	4/29/1909	FLP-Mortiz,Joab		FL079	W2 - Strong Wind	351 - Rpld Pole; 533 - Rpld/Rmvd Pole	Replaced pole
5/28/2024		5020385	CYP	T	1	TB41	TOMBALL	4770925852	C	0	0	1	45440.54068	5/30/2024	12/23/1907	M0226610			W2 - Strong Wind	351 - Rpld Pole	25ft broke service pole replaced
5/28/2024		5020405	HUM	C	1	SPW47	SPRINGWOODS	IGSD G2530	ABC	0	0	3318	45440.54135	5/29/2024	6/28/1905		951126	LM463	V3 - Falling Tree - Outside of the easemen	533 - Rpld/Rmvd Pole; 500 - Rpld/Rprd Picked Up Static/Neutral; 502 - Picked Up Pri	REPL 2 BROKE POLES PICKED UP 14 SPANS OF 336 PRI AND 16 SPANS OF1/0 STATIC ALL IN EASMENT REMOVED 3 FALLEN TREES S/O 6722
5/28/2024		5020558	GPT	F	1	BA47	BAMMEL	LF F46B	BC	0	0	51	45440.54698	5/29/2024	1/12/1905	OPR-Prihoda, Tracy			W2 - Strong Wind	304 - Rpld/Rprd Elbow @ Trans; 443 - Rpld/Rmvd Pole	changed out pole and trans
5/28/2024		5020828	GPT	F	1	SPW48	SPRINGWOODS	LF I27Y	A	0	0	17	45440.55346	5/29/2024	3/22/1905		943277	297	V2 - Falling Tree - Located in the easemen	443 - Rpld/Rmvd Pole	*TH* Tried & Held
5/28/2024		5020978	HUM	C	1	LW44	LOCKWOOD	LW44	ABC	0	0	2186	45440.5538	5/28/2024	2/15/1900		949102	FL027	W2 - Strong Wind	314 - Rpld BU Trans; 533 - Rpld/Rmvd Pole	replaced broke 55 ft pole and bad 50 kva oh transformer
5/28/2024		5021174	GPT	F	1	AD06	ALDINE	LF R21A	C	0	0	15	45440.55819	5/29/2024	5/1/1903	OPR-Hobbs,Jason		Q0810	W2 - Strong Wind	402 - Picked Up/Spliced OH Pri; 314 - Rpld BU Trans; 443 - Rpld/Rmvd Pole	replaced broken 40'cl4 pole, replaced 50kva 7200 120/240picked up 2 spans #2 aaac
5/28/2024		5021577	SPB	C	1	WT03	WIRT	WT03	ABC	0	0	560	45440.56146	5/29/2024	1/28/1905	NHP-Clark, Luke		NH3OV	W2 - Strong Wind	502 - Picked Up Pri; 533 - Rpld/Rmvd Pole	
5/28/2024		5021939	BAY	C	1	NP41	NEWPORT	NP41	C	0	0	4587	45440.56515	5/29/2024	3/30/1904		946439	493	W2 - Strong Wind	533 - Rpld/Rmvd Pole; 536 - Rpld Pole Hardware; 502 - Picked Up Pri; 500 - Rpld/Rprd Picked Up Static/Neutral	All meters hot...IG G1967 having scada/mapping issues
5/28/2024		5021965	BEL	F	1	HE04	HEIGHTS	LF B63P	A C	0	0	67	45440.56664	5/30/2024	5/22/1908	OPR-Cooper, Nathan			V3 - Falling Tree - Outside of the easemen	443 - Rpld/Rmvd Pole	remove large tree replace pole and pick up wire
5/28/2024		5022173	BEL	L	1	BE01	BERTWOOD	5561604185	A	0	0	1	45440.56873	5/30/2024	7/30/1907	FLP-Prewitt,Aaron		FL081	V3 - Falling Tree - Outside of the easemen	200 - Picked Up Sec W-Wire - 1 Cust; 252 - Rpld Pole - 1 Cust	cleared an oak and a pecan tree to get to pole butt to set new pole in same general spot. Set 25' service pole by hand, and installed service drop to service pole with excess rolled up.
5/28/2024		5023640	SOH	F	1	PE04	PEARLAND	RECL F02280	B	0	0	66	45440.58403	5/29/2024	8/22/1903	NHP-Woodall, Ryan			W2 - Strong Wind	443 - Rpld/Rmvd Pole	replaced broken pole, xfer facilities
5/28/2024		5024337	BEL	F	1	GG06	GULFGATE	LF C21	C	0	0	56	45440.5975	5/29/2024	11/17/1904		943701	457	W2 - Strong Wind	443 - Rpld/Rmvd Pole	wrk complete,6030 Iron Rock has weatherhead damage
5/28/2024		5024700	FTB	T	1	WR10	WHARTON	3941319570	B	0	0	3	45440.60409	5/30/2024	9/5/1907	MPT-Raymond, Tidwell		FL2GF	W2 - Strong Wind	252 - Rpld Pole - 1 Cust	C/O 2 broke 25 ft poles
5/28/2024		5025134	BRZ	T	1	LV01	LIVERPOOL	5738027147	A	0	0	2	45440.62307	5/29/2024	11/19/1904		949099	NH387	F7 - Pole	351 - Rpld Pole; 333 - Rpld/Rprd Sec Conn - Multiple Custs Off	rpld service pole picked up 1/0 twist
5/28/2024		5025289	BRZ	C	1	LJ08	LAKE JACKSON	LJ08	B	0	0	1783	45440.63167	5/29/2024	11/3/1903	FLP-Mortiz,Joab			W2 - Strong Wind	533 - Rpld/Rmvd Pole; 502 - Picked Up Pri	Picked up down primary.
5/28/2024		5025371	HUM	T	1	AD07	ALDINE	5463249580	A	0	0	12	45440.63711	5/29/2024	4/17/1905		939549	CP505	V2 - Falling Tree - Located in the easemen	351 - Rpld Pole	
5/28/2024		5025420	BAY	F	1	MB05	MONT BELVIEU	LF 7AP	B	0	0	10	45440.63976	5/30/2024	3/14/1908	OPR-Allen, Chad			V3 - Falling Tree - Outside of the easemen	402 - Picked Up/Spliced OH Pri; 443 - Rpld/Rmvd Pole; 419 - Rpld Step Trans; 458 - Rmvd/Trimmed Tree	RPLCD 45' POLE AND 25KVA 7.2KV OH TRANS, PICKED UP #2 PRI/NUTRALREMOVED TREEWORK DONE BY POWER PROS
5/28/2024		5025433	GAL	F	1	AL10	ALTA LOMA	LF 30AAJ	B	0	0	46	45440.62593	5/29/2024	7/5/1904	OPR-Culpepper, John			W2 - Strong Wind	443 - Rpld/Rmvd Pole	REPLCD BROKE 35' SERVPL AND PICKED UP SEC'S.
5/28/2024		5025594	CYP	T	1	TB47	TOMBALL	4874606802	A	0	0	6	45440.64944	5/30/2024	2/23/1907		943279	NH431	V3 - Falling Tree - Outside of the easemen	252 - Rpld Pole - 1 Cust	replaced broke service pole
5/28/2024		5025606	GAL	F	1	WBY02	WEST BAY	LF 63CB	C	0	0	21	45440.64977	5/30/2024	1/20/1908	OPR-Bownds, Brian			W2 - Strong Wind	443 - Rpld/Rmvd Pole; 314 - Rpld BU Trans	REPLACED 45 FT POLE AND 50KVA TRUCK
5/28/2024		5028656	HUM	L	1	AD03	ALDINE	5364828809	BC	0	0	1	45440.62271	5/30/2024	8/19/1905		949099	NH387	F7 - Pole	252 - Rpld Pole - 1 Cust; 201 - Picked Up Sec W/O-Wire - 1 Cust; 693 - Street Light Found OK - No Svc Off	rpld rttn svc pole, transfered street light, cut vines
5/28/2024		5030117	SUG	C	1	WW03	WESTWOOD	LineCut - 155	ABC	0	0	27	45440.67831	5/30/2024	8/1/1907		951902		F7 - Pole	533 - Rpld/Rmvd Pole	replaced broke pole
5/28/2024		9616392.NC	CYP			TB43	TOMBALL	4873155580		0	0	0	45440.63192	5/29/2024	10/29/1904		939549	CP505	W2 - Strong Wind	533 - Rpld/Rmvd Pole	

STATE OF TEXAS §
§
COUNTY OF HARRIS §

AFFIDAVIT OF RANDAL M. PRYOR

BEFORE ME, the undersigned authority, on this day personally appeared Randal M. Pryor, who having been placed under oath by me did depose as follows:

1. "My name is Randal M. Pryor and my current position is Vice President, Distribution Operations and Service Delivery, for CenterPoint Energy Houston Electric, LLC."

2. "I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge."

3. "I have prepared the foregoing direct testimony, and the information contained in this document is true and correct to the best of my knowledge."

Further affiant sayeth not.

Randal M. Pryor

SUBSCRIBED AND SWORN TO BEFORE ME by the said Randal M. Pryor on this 24th day of April 2025.

Notary Public, State of Texas

My commission expires: 07/17/2027

ALICE S HART
NOTARY ID #130321-7
My Commission Expires
July 17, 2027

DIRECT TESTIMONY

OF

DAVID MERCADO

ON BEHALF OF

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

TABLE OF CONTENTS

EXECUTIVE SUMMARY OF DAVID MERCADO

CenterPoint Energy Houston Electric, LLC's ("CenterPoint Houston" or the "Company") Transmission Operations, Substation Operations, and Real Time Operations ("RTO") groups are responsible for the day-to-day operation of the Company's transmission and substation facilities and played an integral role in the Company's ability to respond to and restore service to customers after Hurricane Beryl and Winter Storm Enzo.

My testimony:

- provides an overview of the Company's transmission and substation facilities;
- describes the Transmission Operations, Substation Operations, and RTO groups;
- discusses the preparation measures taken by the Company prior to Hurricane Beryl landfall;
- discusses the damage caused by Hurricane Beryl and Winter Storm Enzo to the Company's transmission and substation facilities; and
- supports the reasonableness and necessity of transmission and substation costs incurred in support of the restoration efforts associated with Hurricane Beryl and Winter Storm Enzo.

Together with the testimony of other Company witnesses, my testimony demonstrates that the transmission costs incurred for the restoration of service in the aftermath of Hurricane Beryl and Winter Storm Enzo are reasonable, necessary, and representative of the costs to provide service to customers of CenterPoint Houston and thus, should be included in the determination of the Company's system restoration costs. This testimony does not address Hurricane Francine as the CenterPoint Houston transmission system was not impacted by that event.

DIRECT TESTIMONY OF DAVID MERCADO

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is David Mercado. I am the Vice President of High Voltage and System Operations for CenterPoint Houston in Houston, Texas. My business address is 1111 Louisiana St., Houston, Texas 77002.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PREVIOUS WORK EXPERIENCE.

A. I graduated from Rice University in 2003 with a Bachelor of Science degree in Electrical Engineering. I am a licensed professional engineer in the State of Texas, and I am certified with the North American Electric Reliability Corporation ("NERC") as a System Operator. I began my career with the Company in 2001. My positions within the Company have included Associate Engineer, Engineer, Senior Engineer and Staff Engineer in Transmission Planning, Lead Engineer and Supervising Engineer in Transmission System Protection, Supervising Engineer in Transmission Planning Special Studies, Manager of Real Time Operations Engineering and Director of Real Time Operations. I was named to my present position in 2022, at which time I assumed responsibility for High Voltage and System Operations of CenterPoint Houston. As Vice President of High Voltage and System Operations, my responsibilities include overseeing the installation, operation, and maintenance of the transmission and substation facilities, and overseeing the command-and-control function of the Company's transmission and distribution systems.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS OR ANY OTHER REGULATORY BODY?

A. Yes. I submitted testimony on behalf of the Company in its base rate proceeding filed in March of 2024, Docket No. 56211, in the Company's request for determination of storm costs involving two weather events in May of 2024, Docket No. 57271, and in the Company's 2025 Transmission and Distribution System Resiliency Plan ("SRP") filing in January of 2025, Docket No. 57579.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony describes and discusses the incurred transmission and transmission-related substation restoration costs due to damage caused by Hurricane Beryl and Winter Storm Enzo that occurred in July of 2024 and January of 2025, respectively. In this context, I describe CenterPoint Houston's transmission system, generally comprised of transmission and transmission-related substation facilities, and CenterPoint Houston's Transmission and Substation Operations organization. I then describe my organization's pre-storm preparations, how Hurricane Beryl and Winter Storm Enzo impacted CenterPoint Houston's transmission and transmission-related substation facilities, and the restoration of CenterPoint Houston's damaged transmission and substation facilities. Lastly, I explain the approximately $8 million in transmission system restoration costs associated with those preparation and restoration efforts and demonstrate the reasonableness and necessity of these costs.

III. OVERVIEW OF TRANSMISSION SYSTEM

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF CENTERPOINT HOUSTON'S GEOGRAPHIC FOOTPRINT AND COMMUNITIES SERVED BY THE COMPANY.

A. As discussed in more detail by Company witness Darin Carroll, CenterPoint Houston's service area includes the city of Houston, as well as cities and other areas located in twelve (12) counties along the Gulf Coast of Texas. CenterPoint Houston's service area covers approximately 5,000 square miles, accounting for approximately 2% of the geographic area of Texas, but approximately 25% of the Electric Reliability Council of Texas ("ERCOT") region's load. The CenterPoint Houston system is susceptible to hurricanes, damaging winds, and flooding due to its proximity along the Texas Gulf Coast and multiple bayous located throughout its service area.

Q. HOW WOULD YOU DESCRIBE THE GENERAL NATURE OF CENTERPOINT HOUSTON'S TRANSMISSION SYSTEM AND SUBSTATION FACILITIES?

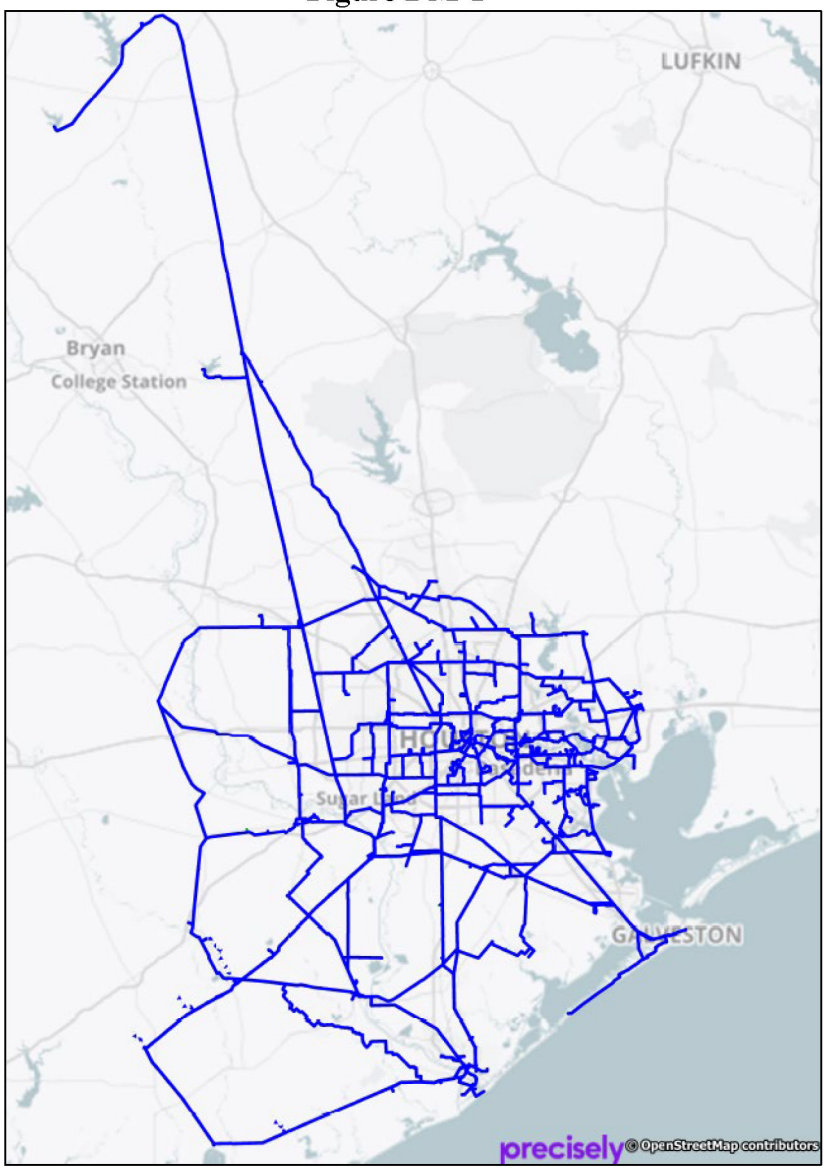
A CenterPoint Houston's transmission system is comprised of approximately 4,166 circuit miles of transmission voltage facilities and it comprises approximately 8% of the ERCOT system. CenterPoint Houston owns 265 substations connected to the transmission system, and there are approximately 200 substations owned by third parties that are also connected to the CenterPoint Houston transmission system.

The CenterPoint Houston transmission system is in the far southeast corner of the ERCOT system, bounded to the east by Entergy Texas, Inc. ("Entergy"),

which is not part of the ERCOT system, and to the south by the Texas Gulf Coast. There is one transmission interconnection directly between CenterPoint Houston and Entergy at CenterPoint Houston's Crosby Substation. This interconnection has been in place since 1958 and is normally open and can be closed only during an emergency event as declared by the Department of Energy. CenterPoint Houston and the rest of the ERCOT transmission system are connected through eleven major transmission connections. Six 345 kilovolt ("kV") circuits are connected to the ERCOT "North" zone, which is generally north and northwest of the CenterPoint Houston service area, and five 345 kV circuits are connected to the ERCOT "South" zone, which is generally southwest of the CenterPoint Houston service area.

With certain exceptions, CenterPoint Houston's transmission system is generally compact due to both its geographic size and the nature of the large load concentration located within its service area. The exceptions to the Company's transmission concentration include several long transmission lines that bring power into the Houston area from other areas of the state. A map of the Company's transmission system is shown below (Figure DM-1).

Figure DM-1



Q. WITH RESPECT TO TRANSMISSION LINES THAT BRING POWER INTO THE HOUSTON AREA, PLEASE DESCRIBE THE CAPACITY OF NATIVE GENERATION IN THE COMPANY'S FOOTPRINT.

A. There is limited capacity of native generation in the Company's footprint. As a result, the Company relies on its 345 kV import lines to serve up to approximately 70% of the system's total load on a day-to-day basis. Combining native generation in and around the Houston area with the capacity across the 345 kV import lines,

CenterPoint Houston can serve its growing customer load mix which has recently trended towards a higher proportion of ERCOT-connected large loads including industrial and manufacturing consumers, petrochemical refineries, oil & gas refineries, and green hydrogen production.

Q. HOW DO CENTERPOINT HOUSTON'S TRANSMISSION OPERATIONS, SUBSTATION OPERATIONS, AND RTO GROUPS FUNCTION TOGETHER?

A. Transmission Operations, Substation Operations, and RTO work together to build and operate high voltage assets within CenterPoint Houston's delivery system and perform monitoring and control functions of our transmission systems. Together they are responsible for delivering power from all over the ERCOT power region to high voltage industrial customers and CenterPoint Houston-owned switching substations and distribution substations, where CenterPoint Houston's distribution system then delivers the power to customers connected to the distribution system (e.g., residential and commercial customers). These three departments coordinate and collaborate daily to provide safe, robust, reliable, and resilient electric grid operations and electric service to our customers.

Q. HOW IS TRANSMISSION OPERATIONS ORGANIZED?

A. Transmission Operations is comprised of three separate work groups: Transmission Field Operations, Transmission Contracting Services, and Transmission Services. Transmission Field Operations is responsible for the reliable and safe operation of the electrical transmission system as well as providing support for operation of the distribution system and other essential equipment within the service area.

Transmission Contracting Services is responsible for conducting work scheduling and review of various aspects of transmission and distribution work performed by construction contractors to ensure compliance with specifications, safety rules, Occupational Safety and Health Administration Standards, and scheduled completion. Transmission Services is responsible for performing field inspections of transmission right-of-way facilities including working with contractors to resolve issues, monitoring work performed in the right of-way by other companies, and conducting analysis of internal and third-party documents relevant to Distribution construction or third-party pipelines.

Q. WHAT ARE THE PRIMARY FUNCTIONS OF SUBSTATION OPERATIONS?

A. Substation Operations' primary functions include operational oversight of all CenterPoint Houston-owned substations including the commissioning, maintenance, and repair of substations. Substation Operations is divided into two groups, Substation Construction and Substation Maintenance. Substation Construction functions consist of developing construction plans and scheduling substation construction projects for current and future years, as well as the procurement of electrical contractors for applicable projects. Substation Maintenance technicians are trained in varying aspects of technological applications which include, but are not limited to, transmission line protection, circuit breaker operation, transformer oil service and repair, diagnostic testing and Supervisory Control and Data Acquisition.

Q. HOW DOES THE RTO GROUP SUPPORT TRANSMISSION AND SUBSTATION OPERATIONS?

A. RTO is comprised of four separate work groups: RTO Engineering, Outage Scheduling, System Operations, and Grid Training. RTO Engineering provides engineering support to the various other work groups within the RTO department. Examples of engineering support actions include technical analysis of system events, coordination with ERCOT on system events and engineering solutions, outage analysis to support construction coordination, technical insight into training materials, and operational analysis of customer performance and events. Outage Scheduling is responsible for coordinating and managing transmission outages on CenterPoint Houston's system. The team coordinates with ERCOT, maintenance groups, and construction coordinators to secure outage times for both CenterPoint Houston-owned and transmission third party-owned assets. Systems Operations provides 24/7 monitoring and control of the transmission system. Grid Training oversees the onboarding of new controllers and the continuous training and NERC certification of controllers and RTO operations personnel.

Q. HOW DID THE TRANSMISSION AND SUBSTATION OPERATIONS AND RTO GROUPS FUNCTION IN THE CONTEXT OF HURRICANE BERYL AND WINTER STORM ENZO?

A The Transmission and Substation operations centers, working in coordination with Transmission control personnel, planned and directed transmission and substation restoration from CenterPoint Houston's High Voltage Department Operations Center ("HVDOC"). HVDOC is the cross-functional strategic team that provides

guidance regarding high voltage restoration priorities to RTO, Substation Department Operations Center ("SDOC"), and Transmission Department Operations Center ("TDOC") and compiles/communicates status updates regarding the current restoration strategy to the designated Emergency Operations Center ("EOC") Operations leader.

Q. DID THE TRANSMISSION AND SUBSTATION OPERATIONS AND RTO GROUPS FUNCTION AS INTENDED FOLLOWING HURRICANE BERYL AND WINTER STORM ENZO?

A. Yes. I will explain how those organizations functioned and performed in the wake of Hurricane Beryl and Winter Storm Enzo below.

Q. GENERALLY, WHAT PORTIONS OF THE COMPANY'S TRANSMISSION SYSTEM ARE AT RISK IN THE EVENT OF HIGH WINDS?

A. CenterPoint Houston proudly serves customers along the Texas Gulf Coast. The Company's service area is always at risk of experiencing high winds, and extreme weather events, and the potential for high winds along the Texas Gulf Coast is well documented and incorporated into the National Electric Safety Code ("NESC"), which is the industry standard for ice and wind loading design for coastal and inland areas. In general, the NESC wind loading requirements are higher the closer the facilities are in proximity to the coast.

Q. WHAT RISKS DO HIGH WINDS, FLOODING AND STORM SURGES POSE GENERALLY FOR THE COMPANY'S TRANSMISSION AND SUBSTATION SYSTEM?

A. The primary risks associated with an event that includes flooding or storm surge are the potential for floating debris impacting/damaging facilities, the potential for the water to erode the soil from around our facilities, and the potential for delayed restoration timelines due to compromised access to the site where restoration is needed. Similarly, flooding and storm surge have the potential to inundate substation facilities, causing damage.

Q. WHAT RISKS DO WINTER WEATHER CONDITIONS POSE FOR THE COMPANY'S TRANSMISSION AND SUBSTATION SYSTEM?

A. The two primary risks the transmission system experiences during a winter weather event include ice and/or wind and the potential for galloping conductors, that may result in transmission circuit lockouts. In general, galloping is a phenomenon caused by wind acting upon an asymmetrically iced conductor surface creating a wing-type effect where the conductors experience lift that causes the line to oscillate or "gallop." The primary risks for substation equipment during a winter weather event includes freezing of mechanical components and reduced gas pressures resulting in equipment malfunction. The Company performs periodic and routine inspections on substation equipment, including conducting training in advance of the ERCOT winter inspection periods, to ensure equipment operates as designed during winter weather conditions.

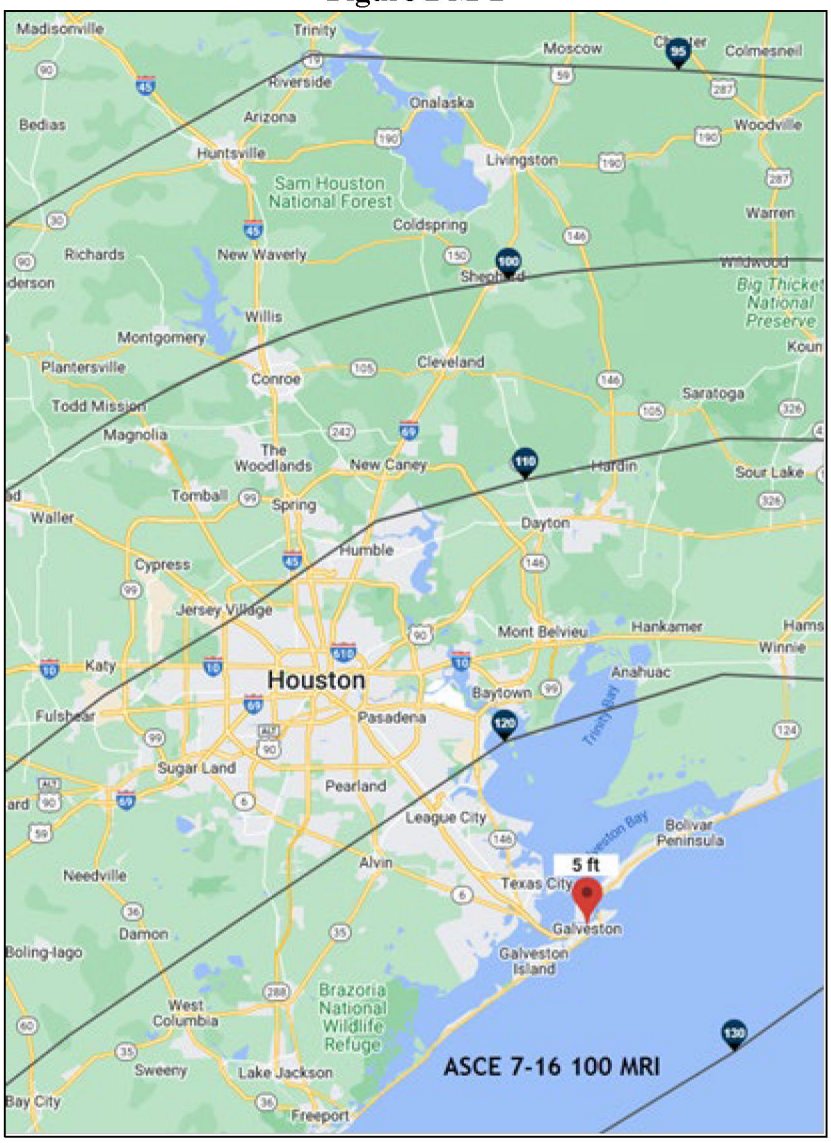
Q. PLEASE DESCRIBE HOW THE COMPANY DESIGNS ITS TRANSMISSION CIRCUITS AND TRANSMISSION LINES.

A. A transmission circuit is the sum of its individual components (e.g., structures, conductors, insulators, hardware, etc.) from one substation breaker to another substation breaker. CenterPoint Houston has consistently designed and built its transmission circuits to the latest industry standards including applicable NESC standards at the time of design for ice and wind loading design for coastal and inland areas. NESC standards are reviewed and updated every five years. CenterPoint Houston's practice of designing all new transmission lines to utilize Grade B loading requirements applies the highest geographically applicable NESC values for wind and ice loading as well as the highest safety overload factors.

Wind load analysis involves the computation of forces exerted by the wind on various structures and is critical in designing transmission circuits, including structures. In 2023, NESC adopted the American Society of Civil Engineers 7-16 (100-yr-MRI) wind map below (Figure DM-2), which has contour lines showing the wind speeds generally by geographical location over the Company's service territory. As shown in Figure DM-2, the Company's southeastern territory is currently being designed and built to withstand wind speeds of up to 120-130 miles per hour while CenterPoint Houston's northwestern service territory is being designed and built to withstand winds of up to 95 to 110 miles per hour.

MRI = Mean Recurrence Interval = average interval between events equaling or exceeding a given magnitude.

Figure DM-2



IV. HURRICANE BERYL'S IMPACT ON CENTERPOINT HOUSTON'S TRANSMISSION SYSTEM

Q. WHAT TRANSMISSION SYSTEM PREPARATION MEASURES WERE TAKEN PRIOR TO HURRICANE BERYL MAKING LANDFALL?

A. As described in greater detail by Mr. Carroll, the pre-landfall preparation measures included but were not limited to the evaluation of periodic weather updates to maintain communication with the Company's emergency storm responders regarding preparation and expectations, the cancellation of active transmission

construction outages in an effort to return the system to its normal configuration/topology, the determination of the need to secure and/or relocate resources and equipment, forecast the need for mutual assistance resources based on the historical need and the current internal and native contract resources available, and the creation of work orders to track storm costs.

Q. WHAT COMPONENTS OF CENTERPOINT HOUSTON'S TRANSMISSION SYSTEM (INCLUDING SUBSTATIONS) WERE IMPACTED BY HURRICANE BERYL?

A. The Company sustained damage to transmission circuits, transmission structures and substations.

Q. WHAT TRANSMISSION CIRCUITS AND TRANSMISSION STRUCTURES WERE DAMAGED DURING HURRICANE BERYL?

A. The total number of transmission circuits that were locked out due to Hurricane Beryl was 31 out of 389 total transmission circuits. The total number of transmission structures that were heavily damaged requiring replacement due to Hurricane Beryl was 20. The damage cause for these structures is attributed to high wind.

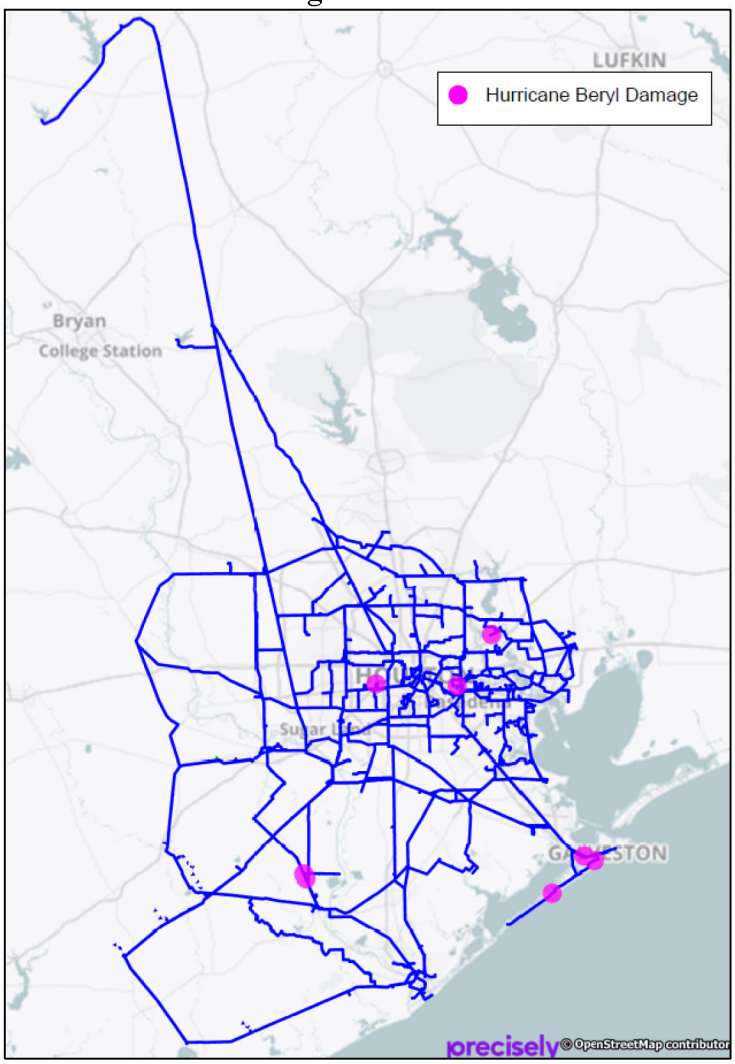
Q. WHERE ON THE COMPANY'S TRANSMISSION SYSTEM WERE TRANSMISSION STRUCTURES MOSTLY IMPACTED BY HURRICANE BERYL?

A. Hurricane Beryl heavily damaged a total of 20 transmission structures located in the following areas:

- Fourteen wood structures located in Brazoria County;
- Three wood structures located in Galveston County; and
- Three wood structures located in Harris County.

In addition, several other transmission structures sustained damage from Hurricane Beryl (e.g., bent lattice steel, broken insulator, damaged conductor/fiber, and damaged obstruction lighting) caused by wind and flying debris that still necessitated repair, replacement, and restoration work. The map below (Figure DM-3) shows where most of the damage to transmission structures occurred due to Hurricane Beryl in the context of the Company's transmission system as a whole.

Figure DM-3



The map below (Figure DM-4) depicts the transmission section where the 14 transmission wood structures were heavily damaged in Brazoria County at County Road 21 near Highway 36.

Figure DM-4

The maps below (Figures DM-5, DM-6, and DM-7) depict the transmission sections of the three transmission wood structures impacted in Galveston County near Termini San Luis Pass Road and FM-3005, near Avenue P ½ and 63rd Street, and near Harborside Drive respectively.

Figure DM-5

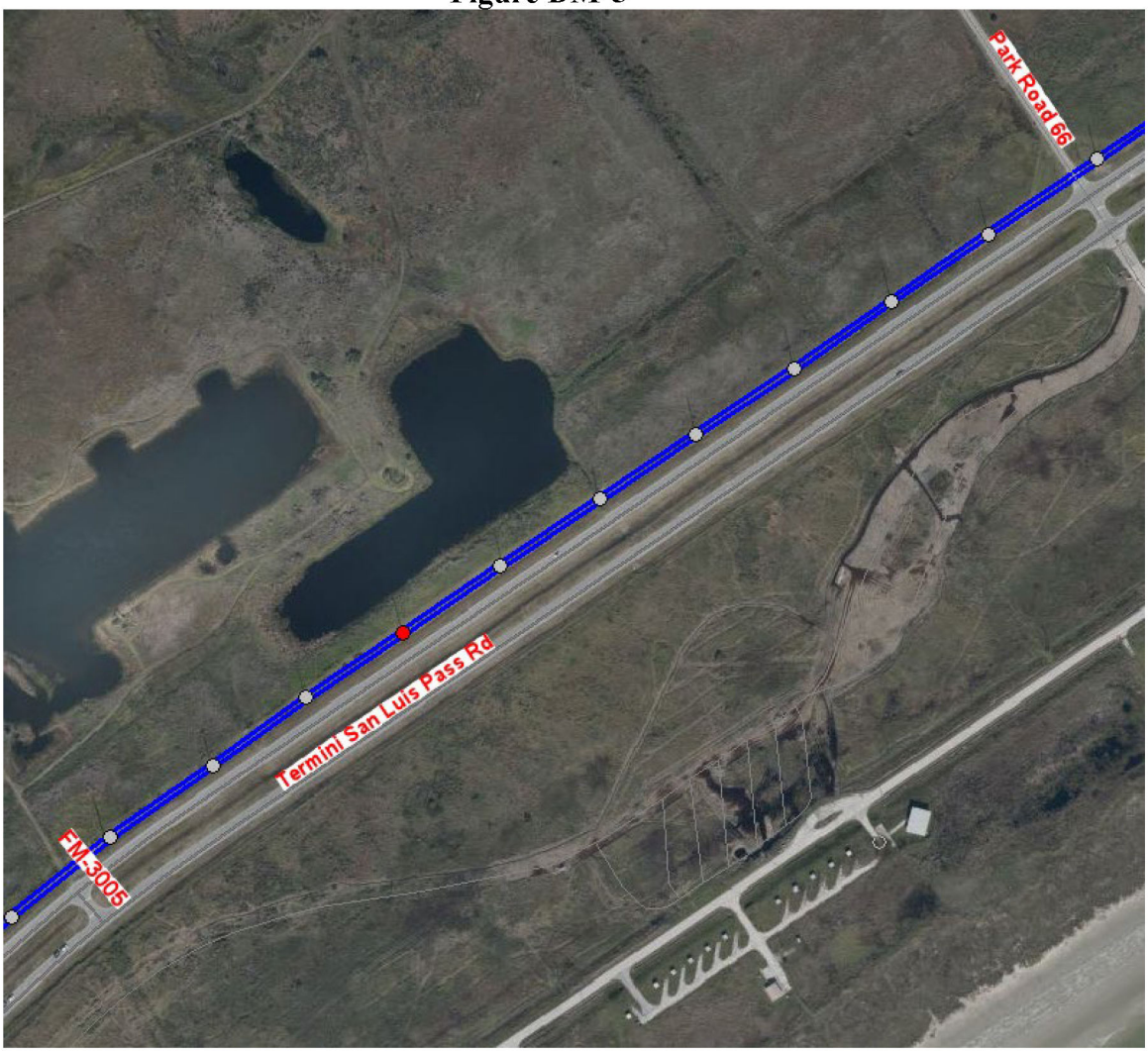


Figure DM-6

Figure DM-7

The maps below (Figures DM-8, DM-9, and DM-10) depict the transmission sections of the three transmission wood structures that were impacted in Harris

County near Fountain View Dr and Winsome Ln, between Mayo Shell Rd and S Main St, and near Beaumont Hwy and Johns Rd respectively.

Figure DM-8

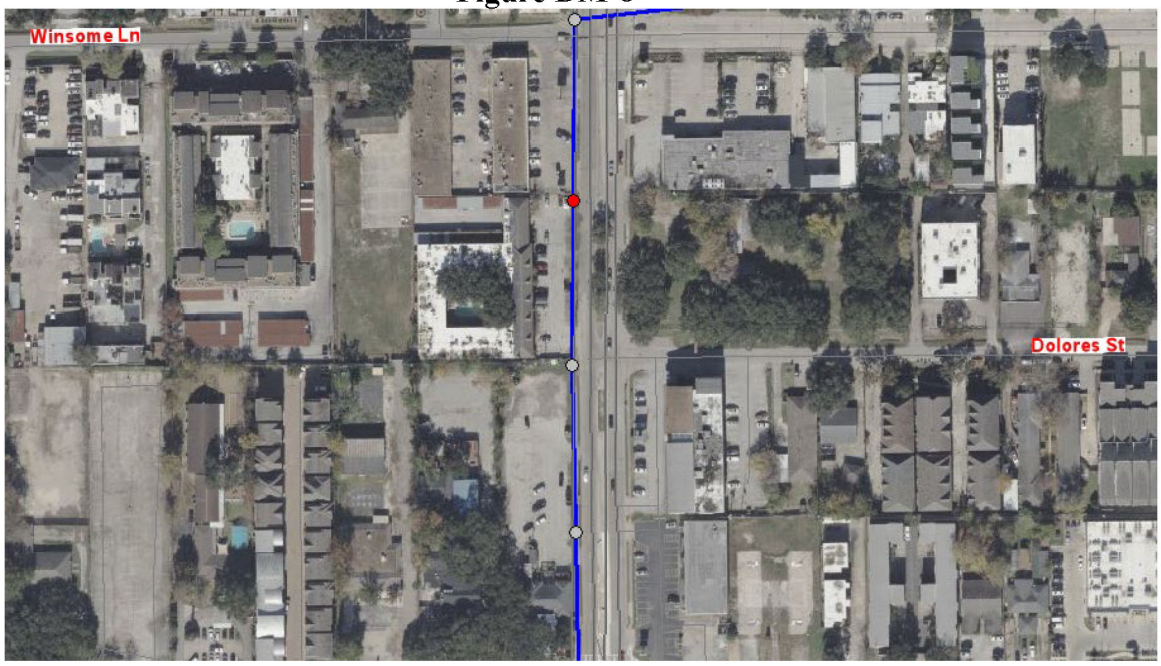


Figure DM-9

Figure DM-10

And, the pictures below (Figure DM-11 and Figure DM-12) are of the line of 14 heavily damaged wood structures in Brazoria County and one heavily damaged wood structure in Galveston County and the associated conductor, hardware, and insulators that Hurricane Beryl impacted.

Figure DM-11

Figure DM-12

Q. HAVE THE COMPANY'S HARDENING ACTIVITIES PROVIDED A BENEFIT TO ITS CUSTOMERS?

A. Yes. Since 2007, the Company has implemented a wooden transmission pole replacement program that has systematically reduced transmission wooden structure exposure by approximately 75% by using engineered materials, such as concrete and steel, to build and upgrade transmission lines on its system. The

Company's hardening activities have physically strengthened transmission structures against extreme wind events. Specifically, the Company has reconducted the circuits with the latest conductor and replaced wooden structures with concrete and/or steel structures that meet the current NESC extreme wind loading standards. For example, the Company hardened approximately 16 circuit miles of the 138 kV circuit from Angleton to West Columbia. The fourteen wood structures identified in DM-4 are in relatively close proximity to this location. Notably, the Angleton to West Columbia circuit did not sustain physical damage during Hurricane Beryl.

The Company's SRP proposes the replacement of all wood structures on energized transmission lines by the end of 2028. As of January 1, 2025, wood transmission structures make up approximately 7% of structures in CenterPoint Houston's transmission system. Wood transmission structures made up approximately 30% of structures in CenterPoint Houston's transmission system in 2008.

Q. WHAT SUBSTATIONS WERE IMPACTED BY HURRICANE BERYL?

A. Eight CenterPoint Houston-owned transmission system substations and sixteen customer-owned transmission system substations were completely de-energized as a result of transmission line outages caused by Hurricane Beryl. The Company-owned substations sustained fence damage and control cubicle roof damage and did not experience direct damage to their transmission-related substation equipment. These deenergized substations affected approximately 54,515 customers, because the transmission circuits feeding into these substations were impacted by Hurricane Beryl. These CenterPoint Houston substations were restored to normal operation

following the restoration of the transmission circuits that interconnect with them. Company-owned substations also sustained minor damage from Hurricane Beryl to some of the distribution-related substation equipment (e.g., distribution breakers, distribution capacitors, and distribution lightning arrestors). Customer-owned substations are maintained and operated by the customer. The Company's transmission system was ready to provide service to the sixteen customer-owned substations following the restoration of the transmission circuits that interconnect them.

Q. WHEN DID THE COMPANY REESTABLISH NORMAL OPERATIONS FOR THE TRANSMISSION SYSTEM AFTER HURRICANE BERYL?

A. The CenterPoint Houston transmission system is highly networked and designed to be able to typically withstand multiple transmission contingencies that exceed the criteria for contingencies applicable during stressed network conditions. This design transmission network flexibility was evidenced by our ability to quickly restore transmission service after Hurricane Beryl left the greater Houston area. Transmission service was restored to all Company-owned and Customer-owned substations that could receive service within 36 hours of when Hurricane Beryl left the greater Houston area and it was safe to begin work. The last transmission circuit was restored in its normal configuration/topology on July 13, 2024.

Q. BASED ON YOUR PERSONAL EXPERIENCE, HOW WOULD YOU COMPARE THE DAMAGE CAUSED BY HURRICANE BERYL TO OTHER STORMS?

A. Generally, each weather event is different and can pose a unique set of challenges to the transmission system that may need to be overcome. The weather event may include one or any combination of wind, water, flooding, drought, ice, or freezing rain. I have lived in and around Houston my entire life and have personally experienced many significant weather events prior to and during my career at CenterPoint Houston including hurricanes, tornados, wildfires, extreme drought, a derecho, and winter weather. Hurricanes Ike and Beryl were very similar storms. However, the transmission level damage caused by Hurricane Beryl was less in comparison to Hurricane Ike, in my opinion, due to the efforts of the Company since 2007 to replace wood transmission structures on the system. For example, Hurricane Beryl heavily damaged 20 out of 27,142 transmission structures, or less than 0.1% of the CenterPoint Houston total transmission structures, and locked out 31 transmission circuits. Hurricane Ike in 2008, on the other hand, heavily damaged 60 transmission structures and locked out 99 transmission circuits.

V. WINTER STORM ENZO IMPACT ON CENTERPOINT HOUSTON'S TRANSMISSION SYSTEM

Q. WAS CENTERPOINT HOUSTON'S TRANSMISSION SYSTEM (INCLUDING SUBSTATIONS) IMPACTED BY WINTER STORM ENZO?

A. Yes. As discussed below, the Company's transmission system experienced multiple operations and sustained damage to a certain component of a transmission circuit.

Q. WHAT WERE THE TOTAL NUMBER OF TRANSMISSION CIRCUITS AND TRANSMISSION STRUCTURES THAT WERE IMPACTED DURING WINTER STORM ENZO?

A. The total number of transmission circuits that were locked out due to Winter Storm Enzo was six out of 389 total transmission circuits. The cause for five of those locked out circuits is attributed to galloping conductors. The sixth transmission circuit sustained damage from wind and ice (specifically, damaged bond wire). No transmission structures were heavily damaged due to Winter Storm Enzo.

Q. WERE ANY SUBSTATIONS IMPACTED BY WINTER STORM ENZO?

A. Three customer-owned substations were completely de-energized during Winter Storm Enzo. The cause for these substation outages that affected three customers is attributed to the transmission circuit outages that directly interconnected these substations as a result of galloping conductors. Transmission service was restored to all customer-owned substations that could receive service following the restoration of the transmission circuits that interconnect with them.

Q. WHEN DID THE COMPANY REESTABLISH NORMAL OPERATIONS FOR THE TRANSMISSION SYSTEM AFTER WINTER STORM ENZO?

A. Transmission service was restored to all transmission level customer-owned substations that could receive service within 12 hours after Winter Storm Enzo left the greater Houston area and it was safe to do so. No CenterPoint Houston substations were affected.

VI. TRANSMISSION SYSTEM RESTORATION ACTIVITIES

Q. PLEASE DESCRIBE THE COMPANY'S TRANSMISSION RESTORATION PLAN AND HOW IT WAS IMPLEMENTED.

A. As discussed by Mr. Carroll, the Company activated its emergency operations plan for Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo, but as I discuss above, only Hurricane Beryl and Winter Storm Enzo caused damage to the Company's transmission and transmission-related substation facilities. CenterPoint Houston monitored and tracked transmission and substation operations and outages for both Hurricane Beryl and Winter Storm Enzo as they approached, entered and passed through our service territory. This information was used to guide and expedite the post-storm damage assessment process. For both Hurricane Beryl and Winter Storm Enzo, the damage assessment process quickly revealed the extent and location of the damage to our transmission and substation facilities. We then developed and implemented restoration plans for the damaged facilities utilizing a combination of internal resources and contract resources. No mutual assistance resources were needed as a result of Hurricane Beryl and Winter Storm Enzo for restoration of these facilities.

Q. WHAT WAS THE COMPANY'S STRATEGY TO RESTORE TRANSMISSION SERVICE AFTER HURRICANE BERYL AND WINTER STORM ENZO?

A. For Hurricane Beryl, CenterPoint Houston's strategy prioritized the restoration of transmission service to the eight CenterPoint Houston-owned substations and sixteen customer-owned substations that were completely de-energized. Company emergency personnel worked extended hours to repair the transmission circuits

necessary to restore service to all CenterPoint Houston-owned and customer-owned substations that could receive service within 36 hours after Hurricane Beryl left the Houston area. CenterPoint Houston then proceeded to prioritize the restoration of the remaining transmission circuits based on the results of the damage assessment and electric system needs.

For Winter Storm Enzo, CenterPoint Houston's strategy prioritized the restoration of transmission service to the three customer-owned substations that were completely de-energized. CenterPoint Houston worked extended hours to repair the transmission circuits necessary to restore service to all customer-owned substations that could receive service within 12 hours after Winter Storm Enzo left the Houston area. CenterPoint Houston then proceeded to prioritize the restoration of the remaining transmission circuits based on the results of the damage assessment and electric system needs.

Q. DID CENTERPOINT HOUSTON EVALUATE THE NEED FOR ADDITIONAL TRANSMISSION AND SUBSTATION RESOURCES FOR EITHER HURRICANE BERYL OR WINTER STORM ENZO?

A. Yes. The damage assessments for both weather events determined that the existing internal CenterPoint Houston substation personnel were sufficient to restore the impacted substations without mutual assistance and that the existing internal CenterPoint Houston transmission personnel supplemented by our native contract resources were sufficient to restore the impacted transmission circuits without mutual assistance.

Q. PLEASE EXPLAIN WHAT YOU MEAN BY "MUTUAL ASSISTANCE."

A. As also addressed in the testimonies of Company witnesses Randal Pryor, Carla Kneipp, and Derek HasBrouck, mutual assistance is a collaborative industry effort to share electric utility and contract resources alike to answer the call for emergency assistance in the form of personnel and equipment to aid in restoring electric utility service through mutual assistance agreements. CenterPoint Houston Transmission Operations maintains a mutual assistance resource strategy that identifies the anticipated mutual assistance resource needs based on storm strength and damage anticipated. However, as discussed above, the Company was able to restore service using its internal and native contract resources and did not need to call upon mutual assistance resources to support the Transmission and Substation restoration efforts after Hurricane Beryl and Winter Storm Enzo.

Q HOW DID THE COMPANY INITIALLY DETERMINE THE TRANSMISSION WORK ASSIGNMENTS IN HURRICANE BERYL AND WINTER STORM ENZO?

A. The Transmission and Substation Operations Centers, working in coordination with Transmission control personnel, planned and directed transmission and substation restoration from CenterPoint Houston's HVDOC. The initial work assignments were made based on the following factors: our current internal and native contract resources; the geographic proximity of assigned crews to currently assigned projects in relationship to subsequent restoration project locations; and, workspace availability to safely accommodate resources and perform the required restoration work safely. For example, TDOC re-deployed some of their internal and native

contract resources to assist in distribution system customer restoration efforts when possible.

Q. HOW WERE THE DAILY RESULTS OF TRANSMISSION AND SUBSTATION RESTORATION EFFORTS REPORTED?

A. The restoration strategy, including prioritization, is updated on a continuous basis by the HVDOC based on feedback from the EOC Operations leader and SDOC/TDOC field assessments and associated forecasted restoration timelines.

Q. HOW DID THE TEMPORARY TRANSMISSION STRUCTURES INSTALLED AFTER THE HOUSTON DERECHO IN MAY 2024 PERFORM DURING HURRICANE BERYL AND WINTER STORM ENZO?

A. Notably, there was no impact to the temporary structures installed after the Houston Derecho, which were designed and installed to meet our current wind and ice standards, in either Hurricane Beryl or Winter Storm Enzo. For a detailed description of those temporary structures, please refer to my direct and rebuttal testimonies in Docket No. 57271.

Q. ARE THERE ANY PENDING REPAIRS OR CAPITAL PROJECTS THAT STILL NEED TO BE ADDRESSED THAT WERE CAUSED BY HURRICANE BERYL AND WINTER STORM ENZO?

A. No. The permanent repairs to transmission infrastructure and substations caused by both weather events have been successfully completed.

VII. RESTORATION COSTS AND RESOURCES

Q. WHAT ARE THE TOTAL TRANSMISSION AND SUBSTATION COSTS THAT CENTERPOINT HOUSTON INCURRED AS OF MARCH 31, 2025, AS A RESULT OF THE RESTORATION EFFORT FOR HURRICANE BERYL AND WINTER STORM ENZO?

A. Not inclusive of carrying costs, CenterPoint Houston has incurred approximately $8 million in transmission and substation costs as of March 31, 2025, due to Hurricane Beryl and Winter Storm Enzo. These transmission costs reflect the payroll and contractor costs of restoring CenterPoint Houston's transmission circuits and the portion of the costs of restoring CenterPoint Houston's substation facilities that are discussed in more detail below. Company witness Russell Wright discusses these and other restoration costs in more detail in his direct testimony and explains how these costs were validated and functionalized.

Q. WHAT ARE THE ESTIMATED REMAINING TRANSMISSION AND SUBSTATION COSTS AS A RESULT OF THE RESTORATION EFFORT FOR HURRICANE BERYL AND WINTER STORM ENZO?

A. As discussed above, there are no pending repairs to the transmission system or substations that are still required because of Hurricane Beryl and Winter Storm Enzo.

Q WHAT ARE THE COST CATEGORIES THAT MAKE UP THE TOTAL INCURRED TRANSMISSION AND SUBSTATION COSTS?

A. As noted in Mr. Wright's testimony, the incurred transmission and substation costs through March 31, 2025, include the costs in the following table. I address certain components related to payroll and contract services below. The testimonies of

Ms. Kneipp, Mr. Pryor and Mr. Wright also address other cost components of the Company's total system restoration costs.

Transmission Costs for Hurricane Beryl (millions)		
Payroll	$	2.9
Contract Services		4.7
Total Incurred	**$**	**7.6**

Transmission Costs for Winter Storm Enzo (millions)		
Payroll	$	0.1
Contract Services		0.1
Total Incurred	**$**	**0.2**

A. Contractor Services

Q REGARDING THE CONTRACTOR SERVICES COST CATEGORY, PLEASE SUMMARIZE THE TOTAL NUMBER OF CONTRACTOR RESOURCES EMPLOYED BY THE COMPANY TO ADDRESS HURRICANE BERYL AND WINTER STORM ENZO AT THE TRANSMISSION LEVEL.

A. CenterPoint Houston utilized as many as 128 native contract resources for Hurricane Beryl and eight native contract resources for Winter Storm Enzo. Contract resources for both storms included line, access, clean-up. Following Beryl, the Company also utilized a native helicopter contract resource. No mutual assistance or foreign contractor resources were utilized for either storm.

Q WHICH CONTRACTORS DID CENTERPOINT HOUSTON USE TO OBTAIN LINE RESOURCES?

A. CenterPoint Houston maintains relationships with, and, for both Hurricane Beryl and Winter Storm Enzo, utilized a mix of native contractors to support our work including the installation of new structures, conductors, hardware, and insulators,

and the removal of damaged facilities including post-construction clean-up activities.

Q DO LINE CONTRACTORS PROVIDE BUCKET TRUCKS AND OTHER VEHICLES TO SUPPORT THEIR LINE WORK?

A. Yes. Our native line contractors provided their own and/or rented equipment and/or vehicles (e.g. bucket trucks, cranes, boom trucks, etc.) to support the restoration effort, which is in alignment with what is expected when they perform non-emergency work as well.

Q DOES THE COST CATEGORY FOR CONTRACTOR SERVICES INCLUDE THE COST FOR RENTAL AND LEASED EQUIPMENT?

A. Yes. This cost category includes the costs associated with renting and/or leasing equipment in support of restoration activities.

Q. WERE THE COSTS FOR CONTRACTOR SERVICES REASONABLE AND NECESSARY?

A. Yes. As explained by Ms. Kneipp and Mr. HasBrouck, the costs are in alignment with our native contractor emergency agreements and the services were necessary to restore power to customers as quickly and safely as possible.

B. Payroll/Internal Labor

Q. WHAT IS INCLUDED IN THE PAYROLL/INTERNAL LABOR COST CATEGORY?

A. The cost of labor to support the restoration efforts. Mr. Wright addresses payroll and labor costs in more detail in his direct testimony.

Q. HOW MANY CENTERPOINT HOUSTON TRANSMISSION AND SUBSTATION INTERNAL LINE PERSONNEL DID THE COMPANY USE IN THE RESTORATION EFFORTS FOR HURRICANE BERYL AND WINTER STORM ENZO?

A. Transmission Operations utilized 95 internal line personnel in support of the restoration efforts at its peak. Substation Operations utilized 250 internal line personnel in support of the restoration efforts at its peak.

Q. DID THE COMPANY RELY ON ANY CENTERPOINT HOUSTON NON-LINE INTERNAL PERSONNEL TO SUPPORT THE TRANSMISSION RESTORATION EFFORTS?

A. Yes, the Company relied on a combination of internal personnel for providing engineering, material acquisition, business analytics, inspections, and other critical functions in support of the Company's line resources in their restoration efforts. These resources worked extended hours in conjunction with our line personnel and were a critical part to restoring service to our customers as quickly and safely as possible.

Q. WHAT AFFILIATE LABOR DID THE COMPANY UTILIZE TO SUPPORT THE TRANSMISSION AND SUBSTATION RESTORATION EFFORT?

A. None. The Company did not need to utilize affiliate labor as part of its transmission or substation restoration efforts following Hurricane Beryl or Winter Storm Enzo.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

STATE OF TEXAS §
§
COUNTY OF HARRIS §

AFFIDAVIT OF DAVID MERCADO

BEFORE ME, the undersigned authority, on this day personally appeared David Mercado, who having been placed under oath by me did depose as follows:

1. "My name is David Mercado and my current position is Vice President of High Voltage and System Operations, for CenterPoint Energy Houston Electric, LLC."

2. "I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge."

3. "I have prepared the foregoing direct testimony, and the information contained in this document is true and correct to the best of my knowledge."

Further affiant sayeth not.

David Mercado

SUBSCRIBED AND SWORN TO BEFORE ME by the said David Mercado on this 24th day of April 2025.

Notary Public, State of Texas

My commission expires:_____

JANEETRA ASBERRY
Notary ID #130894754
My Commission Expires
September 18, 2028

DIRECT TESTIMONY

OF

CARLA KNEIPP

ON BEHALF OF

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF WORKPAPERS

EXECUTIVE SUMMARY OF CARLA KNEIPP

My testimony supports the reasonableness and necessity of the costs associated with the work of the Logistics Section as well as reflects the costs associated with other non-logistics support resources that are discussed in the testimonies of Company witnesses Darin Carroll and Randal M. Pryor related to CenterPoint Energy Houston Electric, LLC's ("CenterPoint Houston" or the "Company") restoration efforts following Hurricane Beryl in July 2024, as well as the preparation efforts in anticipation of restoration efforts needed from Hurricane Francine in September 2024 and Winter Storm Enzo in January 2025, in which the Company's Emergency Operations Plan ("EOP") was activated. My testimony:

- provides an overview of the Logistics Section within the Incident Command System ("ICS") structure and responsibilities of each Logistic Section Unit;
- describes the preparation activities that the Logistics Section performs in advance of extreme weather and non-weather-related emergency events;
- provides a summary of the Logistics Section's activities immediately in advance of Hurricane Beryl as well as through restoration and demobilization; and
- provides a summary of the Logistic Section's activities immediately in advance of Hurricane Francine and Winter Storm Enzo as well as through restoration and demobilization.

Together with the testimonies of Company witnesses David Mercado, Randal M. Pryor, and Russell Wright, my testimony demonstrates that the logistical and non-logistical support costs incurred for the preparation and restoration of service efforts in the aftermath of Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo are reasonable and necessary should be included in the Company's system restoration costs.

DIRECT TESTIMONY OF CARLA KNEIPP

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Carla Kneipp. I am the Senior Vice President Supply Chain and Workplace Services for CenterPoint Energy Service Company, LLC ("Service Company") in Houston, Texas. My business address is 1111 Louisiana St., Houston, Texas 77002.

Q. WHAT ARE YOUR RESPONSIBILITIES AS SENIOR VICE PRESIDENT SUPPLY CHAIN AND WORKPLACE SERVICES?

A. My duties include overseeing and managing the Supply Chain function, which includes Procurement; Materials Management; Warehouse & Logistics; Fleet, Shop Services & Radio Communications; and Supplier Diversity & Inclusion and Supply Chain Sustainability. I am also responsible for overseeing and managing the Workplace Services function, which includes real estate, facilities capital, facilities operations and maintenance, office services, and travel. Both functions support the needs of the business units that Service Company serves, which includes CenterPoint Houston.

For Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo, I was the Logistics Section Chief as part of the ICS for CenterPoint Energy, Inc. ("CNP"), which is discussed in more detail by Mr. Carroll. As Logistics Section Chief, I was responsible for supporting logistical needs such as facilities, services and materials. I am also responsible for the year-round preparation activities required of the Logistics Section to support CNP-related company response efforts for extreme weather and non-weather-related emergency events.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PREVIOUS WORK EXPERIENCE.

A. I graduated from Rice University with a Bachelor of Arts in 1994. Upon graduation, I joined Price Waterhouse, LLP and worked in both the external audit and tax departments. In 1995, I entered graduate school at Rice University and obtained a Masters of Accountancy in 1996. Upon graduation, I joined Coopers and Lybrand, LLP as a Tax Associate. I left Coopers & Lybrand, LLC in 1997 and joined BMC Software, Inc. as a Senior Tax Professional. I became the Assistant European Controller for BMC Software's European organization based in The Netherlands in April 1998. At the conclusion of this assignment, I returned to the United States in January 2000 and established the audit services function at BMC Software, Inc., fulfilling various positions of increasing responsibility, ultimately in the capacity of Vice-President - Internal Audit and Controls. I became a Certified Public Accountant in 1999 and a Certified Internal Auditor in 2002.

I began my career with CNP in May 2007 as the Vice President of Internal Audit. My positions with CNP have included: Vice President of Internal Audit, Vice President of Investor Relations, and Vice President and Treasurer. I became a Certified Treasury Professional in 2016. I was named as Senior Vice President of Supply Chain in 2020 with a primary focus to support CNP's natural gas and electric businesses. In late 2024, my responsibilities were expanded to include Work Place Services.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS ("COMMISSION") OR ANY OTHER REGULATORY BODY?

A. Yes. I presented testimony before the Commission on behalf of CenterPoint Houston in Docket No. 38339, the Company's 2010 base rate case, Docket No. 56211, the Company's 2024 base rate case, and Docket No. 57271, the Company's Determination of System Restoration Costs for the May 2024 EOP Storms.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I describe the Logistics Section preparedness for emergency situations. I also describe how the EOP Logistics activities were implemented in response to Hurricane Beryl, which caused significant damage to CenterPoint Houston's transmission and distribution system, as well as in response to Hurricane Francine and Winter Storm Enzo. The Company's EOP was activated for each of these weather events. These logistics activities include mobilizing, managing, and demobilizing staging sites, and sourcing items such as materials, fuel, vehicle and equipment rentals, and other supplies as well as providing services related activities such as environmental, telecommunications, and facilities. I address other logistical support efforts that were necessary as part of the Company's preparation for and response to Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo such as Staging Site and Service Center Logistics Coordinators, EOP Logistics Resource Backup Support, and EOP Logistics Financial Reporting. Mr. Carroll

addresses the responsibilities of non-logistics support resources roles that assisted in Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo including, but not limited to Government and State Liaisons, Communications, Customer Service, and Safety. Specifically, my testimony supports the reasonableness and necessity of the logistics; fleet, fuel, and transportation; and employee expenses as well as logistics section and non-logistics support resource costs related to payroll, contract services and materials and supplies costs. Within the Logistics category are costs related to supporting staging sites and service centers, lodging, bussing, security, telecommunications, and CenterPoint Houston's facilities.

The issues I address in this testimony are the same general issues I addressed in my testimony in Docket No. 57271 related to the Houston Derecho and strong thunderstorms in May 2024 ("May 2024 EOP Storms"), which caused damage and outages on the Company's system. For the weather events in this case, Hurricane Beryl, Hurricane Francine, and Winter Storm Enzo, the Logistics Section followed the same process that was used and was not challenged in Docket No. 57271.

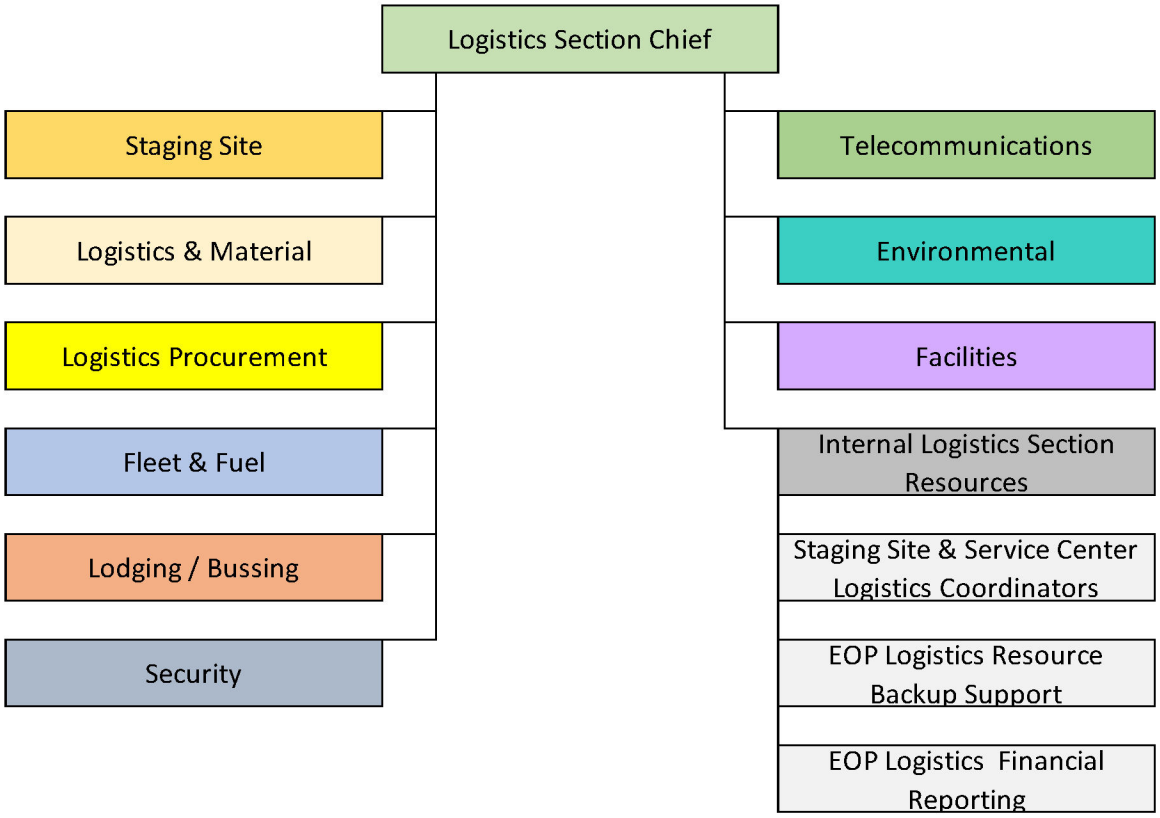
III. LOGISTICS SECTION

A. Logistics Section Structure and Responsibilities

Q. PLEASE DESCRIBE THE LOGISTICS SECTION WITHIN THE ICS STRUCTURE.

A. During Hurricane Beryl, Hurricane Francine and Winter Storm Enzo, the Logistics Section was led by the Logistics Section Chief and reported to the Incident Commander during emergency events as part of the Incident Commander's general staff. The Logistics Section was comprised of the logistics units shown in Figure CAK-1 below.

Figure CAK-1 – Logistics Section and Logistics Units



Q. HOW WAS THE LOGISTICS SECTION STAFFED?

A. To respond to a CenterPoint Houston restoration effort, CNP and CenterPoint Houston assigned emergency response roles to a significant number of Texas-area employees. The Logistics Section was staffed by employees of CNP and its affiliated companies. Additionally, depending on the severity of the storm, CenterPoint Houston utilized internal CNP resources from outside of Texas, as was the case for Hurricane Beryl.

To ensure the Logistics Section and Logistics Units were staffed with resources with the requisite skillsets, team members were deliberately assigned to roles that are either directly or closely correlated to their day-to-day skillsets, wherever possible. As a result, some logistics resources were from affiliated

entities; therefore, CenterPoint Houston incurred affiliate costs. Additionally, the Logistics Section uses contractors and suppliers to assist with the assigned responsibilities of the section.

Q. WHAT WERE THE LOGISTICS SECTION CHIEF RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Logistics Section Chief, as mentioned above, was a general staff member of the incident command structure and was responsible for overseeing the Logistics Units within the Logistics Section and their work activities to prepare, mobilize, respond and demobilize for an event, as well as the advanced planning that supports an emergency response. Key units of the Logistics Section are shown in Figure CAK-1 above and the responsibilities are detailed further in my testimony.

Q. WHAT WERE THE STAGING SITE UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Staging Site Unit was responsible for setting up, maintaining, and demobilizing all support facilities for staging sites, man-camps, and/or laydown yards.

Q. WHAT WERE THE LOGISTICS AND MATERIALS UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Logistics and Materials Unit was responsible for ordering, receiving, processing, storing and distributing restoration materials to staging sites, laydown yards, and in some cases, directly to a restoration site as well as setting up, maintaining, and demobilizing the materials held at staging sites and laydown yards.

Q. WHAT WERE THE LOGISTICS PROCUREMENT UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Logistics Procurement Unit was responsible for establishing new emergency related supplier contracts and leases or utilizing existing emergency contracts to support emergency response activities related to staging sites and restoration needs. This unit was not responsible for materials-related emergency purchases, which was handled by the Logistics and Material Unit detailed above. The types of sourcing activity the Logistics Procurement Unit facilitates during restoration efforts included, but were not limited to, line contractors, vegetation management ("VM") contractors, turn-key providers, equipment providers, and caterers. The unit was also responsible for food and beverage needs for the restoration efforts.

Q. WHAT WERE THE FLEET AND FUEL UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Fleet and Fuel Unit was responsible for servicing and fueling vehicles and equipment as well as rental of ground transportation and specialized equipment for various groups directly supporting restoration efforts, staging sites, and laydown yards. The Company is required to ensure that mechanic coverage is available during all field operations working shifts. The unit was also responsible for demobilization efforts related to fueling and leased ground transportation.

Q. WHAT WERE THE LODGING AND BUSSING UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Lodging and Bussing Unit was responsible for lodging and bussing crews and some employees assisting with the restoration efforts.

Q. WHAT WERE THE SECURITY UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Security Unit was responsible for providing security support at service centers, staging sites, man-camps, laydown yards, and in some cases, directly at a restoration site throughout set up, restoration and demobilization activities.

Q. WHAT WERE THE TELECOMMUNICATIONS UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Telecommunications Unit was responsible for providing telecommunications equipment and/or material used to set up command trailers as well as providing telecommunications support at staging sites and man-camps throughout set up, restoration and demobilization activities.

Q. WHAT WERE THE ENVIRONMENTAL UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Environmental Unit was responsible for providing environmental support at all system restoration facilities throughout set up, restoration and demobilization activities. Additionally, the Environmental Unit provided support for CenterPoint Houston oil spill clean-up and served as the environmental liaison for governmental agencies.

Q. WHAT WERE THE FACILITIES UNIT RESPONSIBILITIES FOR AN EMERGENCY RESPONSE?

A. The Facilities Unit was responsible for providing maintenance and repair of CenterPoint Houston service center facilities and related support throughout restoration efforts. The Facilities Unit was also responsible for addressing storm damage to ensure CenterPoint Houston service center facilities were operational and for repairing any damage to staging sites caused during restoration efforts.

Q. WHAT SERVICES DID THE INTERNAL LOGISTICS SECTION RESOURCES GROUP PROVIDE FOR AN EMERGENCY RESPONSE?

A. The Internal Logistics Section Resources group was comprised of three groups that provided employee resources to support the Company's response to emergency events. Each of these groups' responsibilities included providing services through set up, restoration and demobilization activities.

- Staging Site & Service Center Logistics Coordinators ("Logistics Coordinators") – Responsible for the oversight and management of contracted logistical services to ensure quality of services and to supply resources to support efforts at CNP facilities, service centers and staging sites (except for fuel, restoration materials, information technology ("IT") equipment and perimeter security). Examples of Logistics Coordinators' responsibilities included:
  - Monitoring catering set-up and staffing resources for meal coordination;
  - Monitoring trash and port-o-lets;
  - Documentation for invoicing (meals, laundry, etc.);
  - Monitoring and staffing resources for showers & cots; and
  - Monitoring laundry service and staffing resources for coordination.

- EOP Logistics Resource Backup Support – Responsible for finding resources when storm response groups need additional resources. This team was also responsible for finding substitute resources when assigned employees are not able to report to their assigned storm role, which happens for a variety of reasons including but not limited

to employee illness, FMLA leave, or a personal matter such as a life event.

- EOP Logistics Financial Reporting – Responsible for capturing and reporting Logistics Section forecasted costs, in collaboration with the Logistics Unit leaders, to keep the CNP Finance organization apprised of storm-related cost estimates.

B. Logistics Section Preparations in Advance of Extreme Weather and Non-Weather-Related Emergency Events

Q. WHAT DOES THE LOGISTICS SECTION DO TO PREPARE YEAR-ROUND, IN ADVANCE OF EXTREME WEATHER AND NON-WEATHER-RELATED EMERGENCY EVENTS?

A. The Logistics Section prepares for extreme weather and non-weather-related emergency events through the following efforts:

- Pre-establish multi-year agreements with turn-key providers to quickly and efficiently mobilize staging sites.
- Establish lease agreements with landowners for pre-identified properties to utilize as staging sites, man-camps and/or laydown yards during an event.
- Prepare layout site maps for staging sites and man-camps to help facilitate stand up of necessary restoration facilities.
- Maintain staging site material kits and other emergency restoration materials as well as long-lead time materials, also known as long-lead time facilities under Tex. Util. Code § 39.918(b)(1)-(2), in inventory to ensure materials are on-site and/or readily available. Some of these materials are maintained in staging site material kits, which are kits that are maintained "on the shelf" to facilitate timely delivery of materials and are designed to have adequate material to begin restoration in the immediate aftermath of an event that damages the Company's system.
- Pre-establish emergency response agreements with suppliers for services and equipment to enable activation of providers upon notice of a support need. Examples include, but are not limited to, contractor linemen and VM resources, fuel, environmental services, fleet and equipment, telecommunications, security, and logistics transportation.
- Participation in three regional mutual assistance groups: the Southeastern Electric Exchange ("SEE"), Texas Mutual Assistance Group ("TxMAG") and Midwest Mutual Assistance Group ("MMAG") and as a result has the ability to

request peer utility material support during an emergency restoration event to help fulfill critical materials for restoration efforts.

- Construct and hold on-hand electrical grounds which are devices used by line crews to protect against electric shock.
- Logistics Section and Logistics Unit leaders assign personnel from within CNP and affiliate companies to the numerous Logistics Section roles.
- Conduct in-person and on-line Logistics unit-focused training to ensure team members are prepared to respond to an emergency event, understand expectations and are fully aware of responsibilities.
- Hold periodic Logistics Section meetings to ensure Logistics Units leaders are prepared to respond to emergency events, aware of and understand expectations and responsibilities, and discuss any resource needs or concerns.
- Maintain Company-owned specialty equipment to support event variability (e.g., mobile command centers, boats, swamp buggies, mobile generation).

Q. WHAT SERVICES DOES A STAGING SITE/MAN-CAMP TURN-KEY PROVIDER PROVIDE?

A. A turn-key provider is a supplier that can readily and promptly provide services and support for staging sites and temporary man-camp accommodations. Equipment utilized at a turn-key site includes, but is not limited to, tents, cooking facilities, tables, chairs, fencing, command trailers, lodging trailers, washstands, port-o-lets, shower trailers, laundry facilities, generators, light towers, matting, dumpsters, and various other needs as identified in the course of operating the staging site or man-camp.

Q. WHAT FUNCTION DOES A STAGING SITE SERVE?

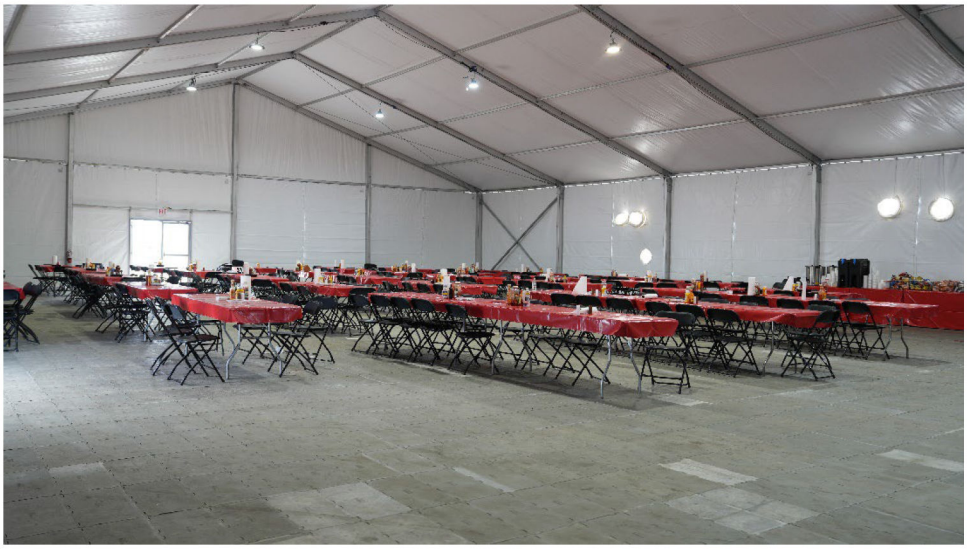
A. A staging site is a temporary area used to facilitate restoration activities and serves as a place for checking in crews, receiving work assignments, and picking up materials. Staging sites are set up in close proximity to an emergency event, typically close to a nearby service center. A staging site is where mutual assistance ("MA") linemen (linemen from other utilities) and contractor linemen (jointly

referred to as "linemen"), damage assessors ("DA") and/or VM crews are assigned to support an emergency restoration event. Staging sites are also where crews get their meals, receive lodging assignments, and are transported to/from lodging. Below are photos of staging site activities.

Figure CAK-2 Beryl - Berry Center Aerial of Food Tent and Parking

Figure CAK-3 Beryl - Lone Star Tomball HVAC Food Tent

Figure CAK-4 Beryl - Reed Road Inside of Food Service Tent



Q. WHAT ARE THE STAGING SITE CLASSIFICATIONS?

A. There are three staging site levels of support: Level I Staging Site, Level II Staging Site, and Level III Staging Site. Depending on the type and scale of restoration efforts, the Logistics Section provides varying levels of service at the staging site, which are defined below.

Q. WHEN YOU REFER TO A "LEVEL I STAGING SITE," WHAT DO YOU MEAN BY THAT TERM?

A. A level I Staging Site, also referred to as a full-scale staging site, is a temporary area used to facilitate the restoration activities, generally set up with full-scale logistics resources to support a large scale EOP restoration response. A Level I Staging Site provides fueling for vehicles and equipment, materials from the laydown yards, security, telecommunications, food, lodging assignments, bussing to/from lodging facilities, laundry services, overnight parking for vehicles/equipment, and other human needs. Breakfast and dinner are served at a staging site, and a boxed lunch is provided to be picked up by the crews, typically

at breakfast. Level I Staging Sites were utilized for the Hurricane Beryl and Winter Storm Enzo restoration efforts and in preparation for the Hurricane Francine anticipated restoration efforts, which I address in detail in the following testimony.

Figure CAK-5 Beryl - AMC Staging Site Overnight Parking

Figure CAK-6 Beryl - Brazoria Country Fair Grounds

Q. WHEN YOU REFER TO A "LEVEL II STAGING SITE," WHAT DO YOU MEAN BY THAT TERM?

A. A Level II Staging Site, also referred to as a self-contained staging site, is a temporary area used to facilitate the carrying out of restoration activities where a peer utility/contractor brings their logistical support resources and CenterPoint Houston is responsible for providing the site and core logistics resource needs to support EOP restoration response, no matter the size or scale of the storm. For a Level II Staging Site, a CenterPoint Houston operations manager manages the site. The Company typically provides core logistics resource needs such as materials for and management of the laydown yards, security, telecommunications, overnight parking for vehicles/equipment, fueling for vehicles and equipment and other human needs; while the peer utility/contractor provides food, lodging (typically man-camps), shower trailers, and/or laundry services. Level II Staging Sites were utilized for Hurricane Beryl but not Hurricane Francine or Winter Storm Enzo, which I address in detail below.

Q. WHEN YOU REFER TO A "LEVEL III STAGING SITE," WHAT DO YOU MEAN BY THAT TERM?

A. A Level III Staging Site is a temporary area used to facilitate the carrying out of restoration activities, generally set up with core logistics resource needs to support a medium to smaller scale EOP restoration response. A Level III Staging Site is managed by a Company operations manager and staging site manager and typically provides core logistics resource needs such as materials for and management of the laydown yards, security, telecommunications, overnight parking for

vehicles/equipment, and other human needs and may provide fueling for vehicles and equipment. A Level III Staging Site will generally not provide food, lodging (bussing or man-camps), shower trailers, and/or laundry services. As I address below, Level III Staging Sites were utilized for Hurricane Beryl, and for the post storm restoration effort throughout the month of August. Utilization of this site type gave the Company the ability to expedite necessary resiliency work across the footprint. No Level III Staging Sites were utilized for Hurricane Francine or Winter Storm Enzo.

Q. TO SUPPORT A STAGING SITE, WHAT ROLES ARE NEEDED ON EITHER A PERMANENT OR ROTATIONAL BASIS?

A. To support a staging site, the following roles are examples of those needed on either a permanent or rotational basis. As no two storms are the same, it is possible other roles can be needed to support a restoration effort.

- Operations Manager
- Foreign Crew Coordinators
- Check-in personnel
- Safety Coordinators
- Staging Site Manager
- Fuel Coordinators
- Logistics Coordinators
- Material Handlers
- Lodging and Bussing coordinators
- Cooking crews
- Security
- Maintenance crews
- Environmental coordinators
- Materials drivers
- Janitorial staff
- IT staff - Telecommunications and field end user support

Q. HOW ARE STAGING SITES ORGANIZED?

A. The staging site manager is responsible for the overall layout and structural coordination of their assigned staging site, which includes site layout, parking, personnel check-in, material laydown yards, caterers, and bus transportation. Staging site managers are also responsible for coordinating with the Logistics Procurement Unit for any sourcing needs. Additionally, the staging site manager is responsible for coordinating with the other Logistics Units regarding the services provided or performed at the staging site. The operations manager assigned to a specific staging site works in partnership with the corresponding staging site manager to ensure the staging site functions at its optimal level, especially fueling coordination. The operations manager is responsible for managing the operational activity that is performed out of the staging site, including safety, work order allocation, crew performance and operational issues that arise at the staging site.

Q. TO SUPPORT A STAGING SITE AND/OR MAN-CAMP, WHAT TYPES OF EQUIPMENT ARE NEEDED ON EITHER A PERMANENT OR ROTATIONAL BASIS?

A. Staging sites are established to support the linemen and VM crews visiting to support the Company's restoration efforts. As such, the sites are established to support the feeding of the crews (served breakfast, box lunches and dinner), provision of ice and drinks (water and energy drinks), collection of materials, vehicle/equipment/trailers refueling, overnight vehicle and equipment storage, laundry services, and transportation for offsite lodging. Equipment utilized to support a staging site and/or man-camp can include the following:

- Water/energy drinks/ice pallets
- Dining/prep tents/tables/chairs – enclosed with HVAC
- Food storage trucks
- Hotshot trucks
- Semi-trucks
- Refrigeration trucks
- Light Towers
- Restroom trailer and port-o-lets
- Hand wash stations
- Dumpsters and trash cans
- Telecommunication equipment
- Hardware equipment – monitors, desktop docking stations, keyboards/mice, printers
- Satellite communication solutions
- Command trailers
- Forklifts
- Materials tent approx. size 50 ft. x 100 ft.
- Golf carts or UTVs
- Tents for check ins and security personnel
- Generators for equipment
- Bobtail wet-hosing and tankers
- Fencing
- Traffic signage and cones
- Waste bins for poles and construction debris
- Spill kits for minor spills or releases
- Laundry facilities if restoration is longer than 7 days
- Sleeper trailers with linen kits (for man-camps)
- Showers with shower kits (for man-camps)

Q. WHAT TYPES OF EQUIPMENT DO CREWS BRING TO STAGING SITES?

A. Examples of equipment brought by crews include the following, which is typically fueled and safeguarded at the staging sites at night:

- Bucket Trucks
- Digger Derricks
- Digger Derricks - Rear Lots
- Pickups
- Equipment Trailers
- Pole Trailers
- Hydrovac Trucks

Q. WHAT DO YOU MEAN BY THE TERM "MAN-CAMP"?

A. Man-camps are temporary housing encampments that are set up at or near staging sites to provide secure, safe, and reliable sleeping accommodations for foreign electric line crews and VM crews. Man-camps are set-up in the absence of hotel availability or high demand due to the large quantities of foreign crews needed to restore the power quickly and safely. Man-camps provide beds, showers, port-o-lets, and security. Depending on the length of a restoration event, they can include laundry facilities. Transportation is provided to crews to transport them from Staging Sites to and from man-camps. As I address further below, four man-camp sites were established to support Hurricane Beryl (in Tomball, at Pasadena Memorial Stadium, at the Lake Jackson Rec Center, and at Freedom Field in Iowa Colony), but none were established for Hurricane Francine or Winter Storm Enzo.

Q. WHAT IS A LAYDOWN YARD?

A. A laydown yard is a location where the Company stores materials and supplies needed for the restoration effort which can be located at a staging site or at a stand-alone location. Material is delivered to laydown yards by the Materials group from existing Company storage locations and/or directly by suppliers. Laydown yards are manned by Materials personnel and material will be distributed to Line Crews from these locations. Laydown yards are purposefully located near restoration efforts to give the Company the ability to expedite necessary restoration work across the footprint.

Q. WHAT TECHNOLOGY IS SET UP AT STAGING SITES?

A. Utilizing a standardized telecommunication staging site kit, when a staging site is mobilized, a staging site is set up to connect to the Company network to provide access to all Company applications to support the restoration activities.

Q. WHAT TECHNOLOGY IS MAINTAINED IN A TELECOMMUNICATION STAGING SITE KIT?

A. The Company maintains standard telecommunication staging site kits to facilitate set up. Each telecommunication staging site kit is equipped with four small generators, four StarLink deployable satellite solutions, twelve LTE (wireless broadband communication for mobile devices) mobile hotspots, three Cellular on Wheels ("COWs"), and four CradlePoint units, all maintained within the CNP IT inventory. Currently twenty-one telecommunication staging site kits are maintained to be able to scale to various emergency response events.

Following activation, coordination with AT&T FirstNet and Verizon occurs to ensure the deployment of priority communication solutions across the Greater Houston area. These deployable assets are strategically positioned post-storm, guided by LTE coverage assessments to prioritize CNP restoration locations. Mobilized staging sites received continuous support from IT ICS branch Subject Matter Experts (SMEs) until demobilization is authorized.

Q. WHY ARE COMMAND CENTERS ESTABLISHED AT STAGING SITES?

A. Each staging site has a command center that provides a safe location for staging site personnel to execute their daily tasks and is also connected to the Company network to better facilitate the distribution of crew work packets, report of daily

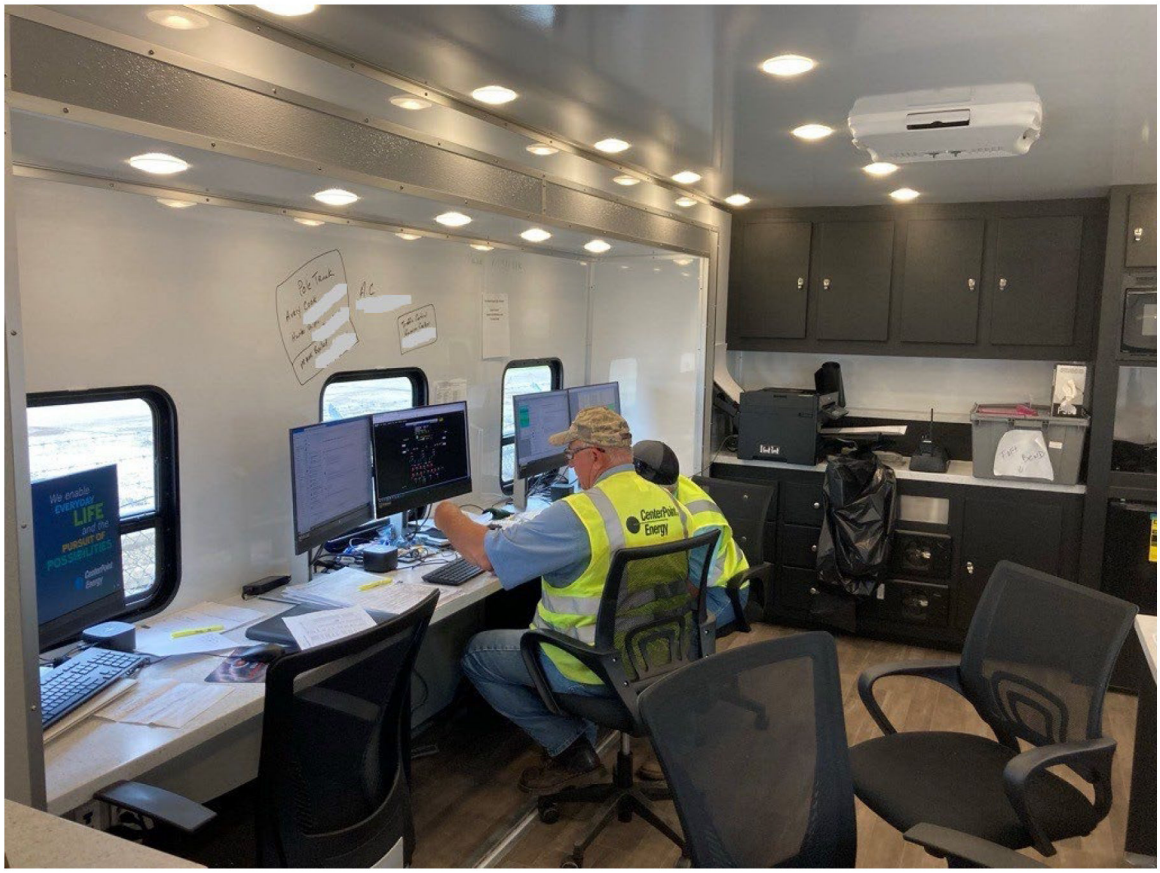
progress, and general staging site coordination. The command centers are established by deploying at least one command trailer equipped with supporting technology and office furniture, including, but not limited to, docking stations, monitors, desktop accessories, worktables, and printers.

Figure CAK-7 Beryl - 2920 Staging Site Command Trailer 1

Figure CAK-8 Beryl - BASF Staging Site Command Trailer

Figure CAK-9 Beryl - Fort Bend Staging Site Inside the Command Trailer

Figure CAK-10 Beryl - Fort Bend Staging Site Command Trailer Working



Q. HOW ARE COMMUNICATION CHANNELS ESTABLISHED AT STAGING SITES IN SUPPORT OF EMERGENCY RESPONSE?

A. Communication channels at staging sites are established through the deployment of advanced communication equipment. Upon the Logistics Section's mobilization, AT&T FirstNet and Verizon are engaged to coordinate priority deployable solutions, which are strategically positioned to address areas with limited cellular coverage across the Greater Houston region.

During the mobilization process, LTE coverage maps are evaluated to identify and prioritize communications at restoration locations. Deployable solutions, including mobile hotspots and satellite systems, are then deployed to ensure uninterrupted communication in affected areas of the Company's service

territory and staging site locations identified. Mobilized staging sites remain operational and are continuously monitored by Telecommunications Unit team members until demobilization is authorized, ensuring sustained support throughout the emergency response effort.

Q. WHAT KIND OF STAGING SITE TECHNOLOGY DOES THE COMPANY PUT IN PLACE TO ENSURE CONNECTIVITY AMONG THE WORKFORCE DURING EMERGENCY RESPONSE?

A. The Telecommunications Unit implements a comprehensive and adaptive technology setup at staging sites, tailored to meet the unique requirements of each location, including occupancy, command trailer placement, quantity, and design specifications. The following technologies are deployed to ensure seamless connectivity among the Company workforce and third-party suppliers during emergency response operations:

Communication Technology – Scalable Network Hardware:

- Microwave Radio: Provides reliable point-to-point communication.
- CNP Network Backhaul: Ensures robust and high-capacity data transmission.
- Cellular on Wheels (COW): Mobile cellular units to enhance coverage in underserved areas.
- CNP Network Backhaul Redundancy: Dual pathways to maintain connectivity in case of failure.
- Starlink (SAT): Satellite-based internet for remote or hard-to-reach locations. Wi-Fi Calling and Satellite Internet Redundancy: Ensures continuous communication even in areas with limited cellular coverage.
- CradlePoint (LTE): LTE-based routers for secure and scalable connectivity.
- Bonded Portable LTE Data Network (PDN): Combines multiple LTE connections for enhanced speed and reliability.
- Bonded Cellular Solution Internet Redundancy: Multiple cellular connections to ensure uninterrupted service.

- MiFi (HOTSPOT): Portable wireless routers that create mobile Wi-Fi hotspots for on-the-go connectivity.

Computing Solutions:

- Panasonic Field Toughbook with Activated LTE Data Plans: Rugged laptops equipped with LTE connectivity for field operations in challenging environments.

This technology suite ensures that the workforce remains connected and operational, enabling efficient coordination and response during emergency events by the Telecommunications Unit.

Figure CAK-11 Beryl - Humble Staging Site Telecom Structure

C. Logistics Section Activities Immediately in Advance of Hurricane Beryl through Restoration

Q. HOW DID THE LOGISTICS SECTION PREPARE FOR HURRICANE BERYL?

A. The preparation by the Logistics Section in advance of extreme weather and non-weather-related emergency events and the timely decision to mobilize the Logistics Section and related support resources was critical to enabling the Logistics Section

to commence mobilization to support the Hurricane Beryl restoration efforts as soon as it was safe to commence staging site set up on Monday, July 8, 2024. In addition to preparation activities in advance of extreme weather events that I described earlier, the Logistics Section monitored Hurricane Beryl and mobilized according to protocol as outlined below to ensure logistics preparedness for Hurricane Beryl, and in a consistent approach as was followed for the May 2024 EOP Storms.

Q. WHAT IS A SUMMARY TIMELINE OF THE HURRICANE BERYL ADVANCED PREPARATION ACTIVITIES PERFORMED BY THE LOGISTICS SECTION?

- **June 28:**
  - During a regularly scheduled Logistics Section bi-monthly touchpoint meeting, Logistics Section leadership was put on notice that Invest 95L had become Tropical Depression #2
- **July 2:**
  - Contacted turn-key providers to understand resource availability and provided standby notice
- **July 5:**
  - Logistics Section Leadership notified of expected mobilization
  - Revalidated of turn-key provider resource availability and confirmed standby status
  - Contacted all other logistics providers to provide standby notice, e.g. fuel, vehicle rentals, security, facility
- **July 6:**
  - Full Logistics Section notification of mobilization
  - Mobilization notice provided to turn-key providers for four staging sites
- **July 7:**
  - Four staging site locations secured with landowners; six additional staging sites on standby
  - Turn-key providers assigned to staging sites
  - Mobilization of all other logistics providers
  - Company activation of Emergency Operations Center ("EOC")

Q. WHEN WAS THE LOGISTICS SECTION LEADERSHIP INITIALLY NOTIFIED THAT THEY MAY BE NEEDED TO SUPPORT HURRICANE BERYL RESTORATION EFFORTS?

A. During a regularly scheduled Logistics Section bi-monthly touchpoint meeting on Friday, June 28, 2024, members of the Logistics Section leadership were put on notice of a tropical depression having formed.

Q. WHEN WERE TURN-KEY PROVIDERS NOTIFIED THAT THEY MAY BE NEEDED TO SUPPORT HURRICANE BERYL RESTORATION EFFORTS?

A. On Tuesday, July 2, 2024, the Logistics Procurement Unit contacted two turn-key providers to understand their availability if Hurricane Beryl made landfall and to put them on standby. As the trajectory of Hurricane Beryl continued to move toward the Company's service territory, additional turn-key providers were contacted about a potential need to support restoration efforts.

Q. WHEN WAS THE FULL LOGISTICS SECTION LEADERSHIP NOTIFIED OF AN ANTICIPATED NEED TO SUPPORT HURRICANE BERYL RESTORATION EFFORTS?

A. A subset of members of the Logistics Section leadership was monitoring the weather for potential support needs throughout the week of July 1, 2024. On Friday afternoon, July 5, 2024, I notified the full Logistics Section leadership that our team would likely be mobilized. At that time, I asked each Logistics Unit leader to be on alert for mobilization and to affirm full resource availability. In turn, each Logistics Unit leader notified their support resources to be prepared to mobilize at

that time. The Logistics Unit leaders notified additional storm-related suppliers (non-turn-key providers) of the anticipated Company EOP activation, (e.g., fuel, vehicle rental, security, facility).

Q. WHAT OCCURRED IMMEDIATELY IN ADVANCE OF EOP BEING ACTIVATED FOR HURRICANE BERYL?

A. On Friday, July 5, 2024, the Logistics Procurement Unit contacted turn-key providers to reconfirm availability and to put them on standby. Additionally, the Staging Site Unit personnel were notified to go on stand-by to support when called. The suppliers confirmed they would start preparing their teams to mobilize quickly, if needed. On July 6, 2024, at the request of the Operations Section of the ICS, four staging sites were determined to be needed based on weather predictions and potential system impacts that were available at that time. As a result, the Staging Site Unit leaders and I conferred about likely sites and turn-key providers. During the course of the next days, extensive planning occurred with the Staging Site Unit leaders and their team members on potential size and location of needed resources, leveraging the predefined staging site maps.

Figure CAK-12 Beryl – Staging Site Map Fort Bend County Fairgrounds

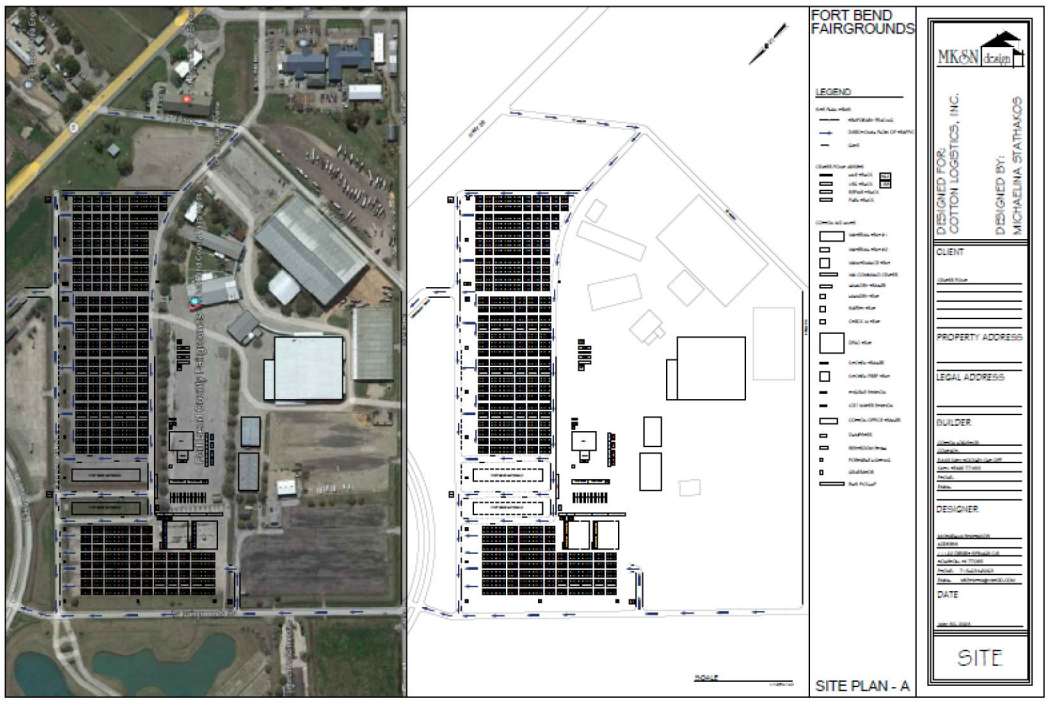
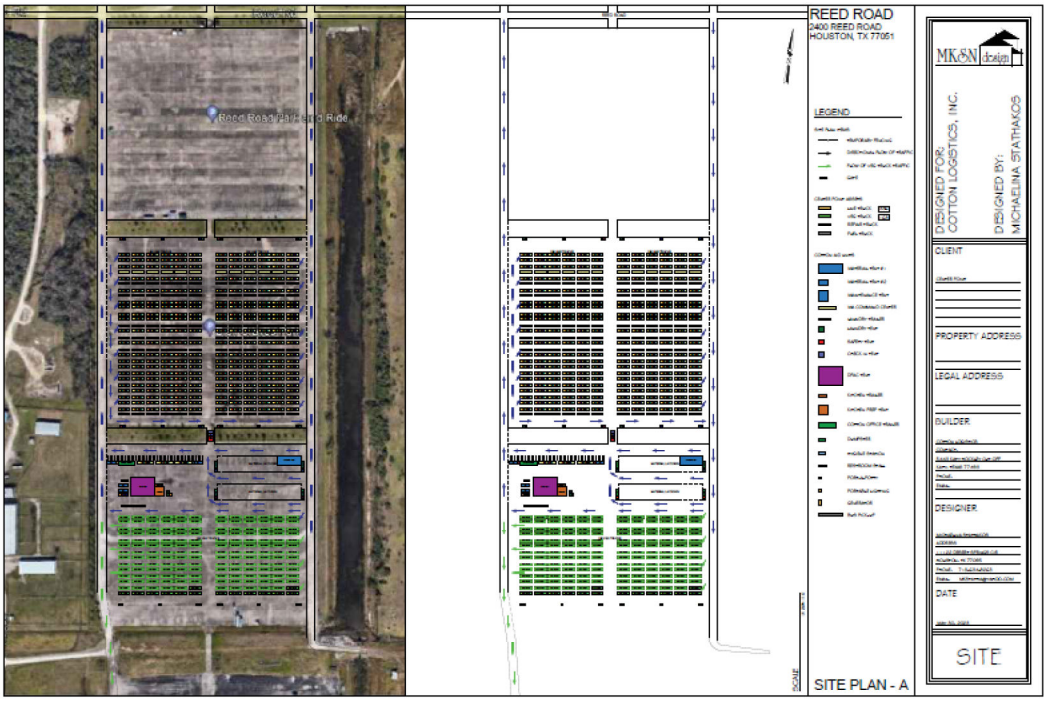


Figure CAK-13 Beryl – Staging Site Map Reed Road



Q. WHEN WAS THE FULL LOGISTICS SECTION LEADERSHIP NOTIFIED OF OFFICIAL LOGISTICS MOBILIZATION TO SUPPORT HURRICANE BERYL RESTORATION EFFORTS?

A. On a Logistics Section preparation call on July 6, 2024, I notified the Logistics Section leadership team of official logistics mobilization notice, in advance of the Company activation of the EOC on July 7, 2024.

Q. HOW DID THE LOGISTICS SECTION PERSONNEL PLAN TO SUPPORT RESTORATION EFFORTS FROM DAMAGE CAUSED BY HURRICANE BERYL?

A. By the evening of July 7, 2024, the Logistics Section was prepared to support restoration efforts with the notification to all Logistics Section team members, mobilization of four staging sites with landowner and turn-key providers; Standby notification for six additional staging sites with landowners and turn-key providers; coordination of hotel assignment activities; and mobilization of all other logistics providers, e.g. fuel, vehicle rental, security, facility. Only waiting on the passing of the storm and notice of safety clearance to begin providing support which was anticipated to be mid-day/early afternoon on July 8, 2024. However, resources were on-call throughout the evening of July 7, 2024, and overnight to make any necessary adjustments.

Q. WHEN DID THE LOGISTICS SECTION BEGIN MOBILIZING STAGING SITES TO SUPPORT HURRICANE BERYL RESTORATION EFFORTS?

A. At approximately 10:20 a.m. on July 8, 2024, CenterPoint Houston began loading staging site material kits from the central warehouse and departed for the first four

staging sites within one hour. The initial turn-key providers began arriving onsite with personnel, equipment and materials and began staging site set-up once the 'all clear' safety notice was received. By the afternoon of July 8, 2024, the first four staging sites were "check-in and dispatch" ready. Depending on crew arrival times, food was arranged as either boxed lunches or dinner.

As storm damage assessments were made on Monday, July 8, through Thursday, July 11, 2024, additional staging sites were requested by the Operations Section Chief. As a result, by July 12, 2024, CenterPoint Houston had twenty-two total staging sites to allow for strategic deployment of crews and material.

- **July 8:**
  - Morning: CenterPoint Houston began loading staging site materials at approximately 10:20 AM and departed for the first four staging sites in approximately one hour.
  - Afternoon: First four staging sites were "check-in and dispatch" ready
- **July 9:** 14 additional staging sites were "check-in and dispatch" ready
- **July 10:** Staging sites continued operations
- **July 11:** One additional staging site was "check-in and dispatch" ready
- **July 12:** Three additional staging sites were "check-in and dispatch" ready
- **Post July 12:** Continued operating staging sites in strategic locations

Exhibit CAK-1 to my testimony provides additional details related to the Staging Sites.

Figure CAK-14 Beryl - Sam Houston Race Track Aerial

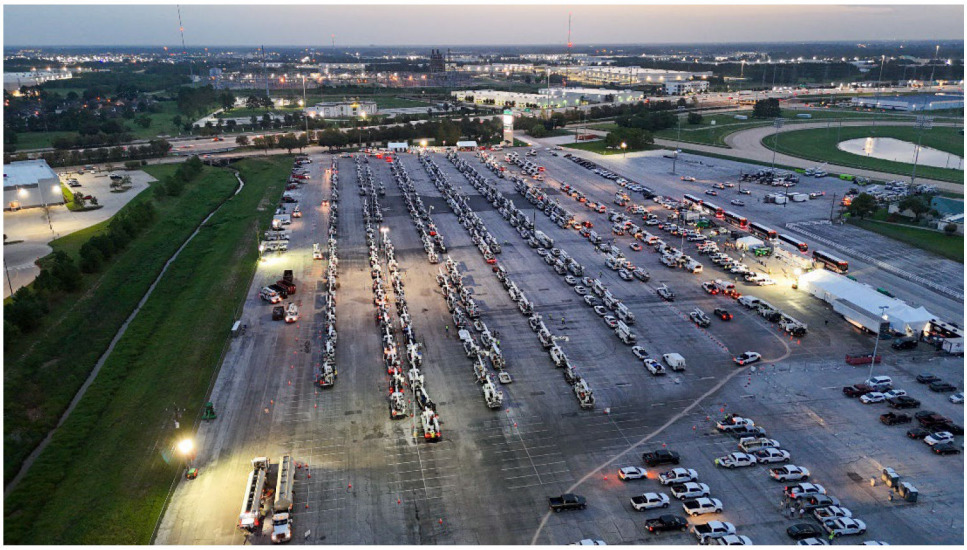


Figure CAK-15 Beryl - BASF Staging Site Aerial

Figure CAK-16 Beryl - Humble Civic Center Aerial Overnight Parking

Figure CAK-17 Beryl - Pearland High School Staging Site Aerial Overnight Parking

Q. IF HURRICANE BERYL WAS ANTICIPATED TO MAKE LANDFALL IN HOUSTON ON JULY 8, 2024, WHY DID THE LOGISTICS SECTION NOT MOBILIZE STAGING SITES PRIOR TO THE STORM'S IMPACT?

A. During the advanced planning to support restoration efforts regarding Hurricane Beryl, the Logistics Section leadership evaluated and debated the benefits and risks of standing up staging sites in advance of land fall (pre-staging). Potential pre-staging activities that were discussed included the set-up of command trailers, the delivery of restoration materials, and the set-up of staging site infrastructure, e.g., tents and port-o-lets. On the Company command trailers, there was concern whether they could effectively withstand hurricane-force winds if they were set up in advance of the storm. There were significant concerns regarding the delivery of materials, both restoration materials and staging site infrastructure, prior to the storm, particularly related to the ability to adequately protect them from storm impacts such as high wind, and potential theft. Ultimately, the safety and property damage concerns to the community and potential risks to materials associated with flooding and high winds outweighed the benefit of pre-staging.

Q. WHICH LOGISTICS UNITS WERE MOBILIZED FOR HURRICANE BERYL RESTORATION EFFORTS?

A. All Logistics Units were mobilized for Hurricane Beryl restoration efforts.

Q. DID THE LOGISTICS SECTION FOLLOW RESPONSE ACTIVITIES FOR HURRICANE BERYL CONSISTENT WITH THE MAY 2024 EOP STORM RESPONSE EFFORTS?

A. Yes, the approach followed for Hurricane Beryl emergency response was consistent with the approach followed for the May 2024 EOP Storms. Additionally, the approach for Hurricane Francine and Winter Storm Enzo was consistent with the approach of Hurricane Beryl.

1. Staging Site Unit

Q. WHEN DID THE STAGING SITE UNIT BEGIN STAGING SITE MOBILIZATION IN SUPPORT OF HURRICANE BERYL RESTORATION EFFORTS?

A. Although the Staging Site Unit had been in communications with turn-key providers since July 2, 2024 and on standby notice, the final confirmation to turn-key providers was made on the afternoon of July 7, 2024, to mobilize staging sites in preparation for the arrival of linemen, DA and VM crews.

Figure CAK-18 Beryl - Sam Houston Crews Arriving

Figure CAK-19 Beryl - Crew Safety Brief

Figure CAK-20 Beryl - Sam Houston Directing Traffic

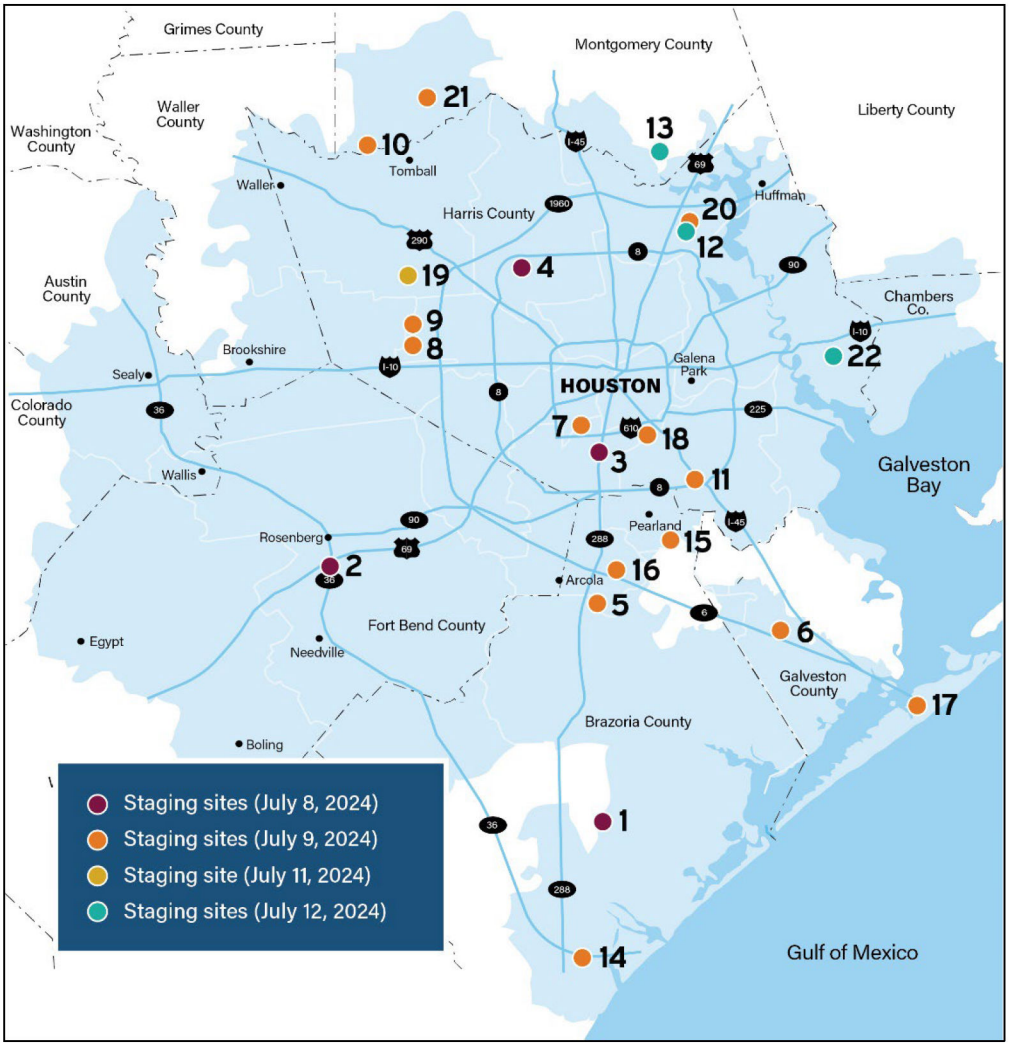
Q. HOW MANY STAGING SITES DID CENTERPOINT HOUSTON ESTABLISH IN SUPPORT OF HURRICANE BERYL RESTORATION EFFORTS?

A. In total, twenty-two staging sites were set up to support Hurricane Beryl restoration efforts. One of the staging sites, Barnett Stadium, was stood up and fully functional but had to be very quickly shut down due to the safety concerns for Company employees and third-party support such as turn-key providers, construction contractors, security personnel. A map of the sites is detailed in Figure CAK-21:

1. Brazoria County Fairground
2. Fort Bend County Fair Grounds
3. Reed Road
4. Sam Houston Racetrack
5. Freedom Field
6. Galveston County Fairgrounds
7. NRG – Yellow
8. Legacy Stadium
9. Rhodes Stadium
10. Tomball ISD
11. AMC Gulf Pointe 30 Theater

12. Humble Civic Center
13. Lone Star College
14. BASF
15. Pearland ISD
16. Manvel ISD
17. Moody Gardens
18. Barnett Stadium*
19. Berry Stadium
20. George Turner Stadium
21. 2920 Spring-Klein Multi-Purpose Center
22. Stallworth Stadium

Figure CAK-21– Site Map of the Hurricane Beryl Staging Sites



Q. FOR HURRICANE BERYL RESTORATION EFFORTS, WHEN WERE THE STAGING SITES ESTABLISHED, AND WHAT WAS THE CREW CAPACITY?

A. The table below (Figure CAK-22) shows the date each staging site was established in preparation for Hurricane Beryl restoration efforts and the capacity of each site.

Figure CAK-22 – Hurricane Beryl Staging Site with Crew Member Check in Count

	Staging Site Name	Check in & Dispatch Ready	Crew Checked In
1	Brazoria Country Fairgrounds	7/8/2024	1,066
2	Fort Bend County Fairgrounds	7/8/2024	850
3	Reed Road	7/8/2024	1,202
4	Sam Houston Race Park	7/8/2024	704
5	Freedom Field	7/9/2024	806
6	Galveston County Fair and Rodeo Grounds	7/9/2024	517
7	NRG Yellow Lot	7/9/2024	437
8 & 9	Legacy/Rhodes Stadium	7/9/2024	2,174
10	Tomball ISD Stadium	7/9/2024	551
11	AMC Theater - Gulf Point 30	7/9/2024	720
12	Humble Civic Center	7/9/2024	501
13	Lonestar College Tomball	7/9/2024	453
14	BASF Property	7/9/2024	892
15	Pearland ISD Stadium	7/9/2024	419
16	Manvel ISD Stadium	7/9/2024	230
17	Moody Gardens	7/9/2024	570
18	Barnett Stadium*	7/9/24*	0
19	Berry Stadium	7/11/2024	534
20	George Turner Stadium	7/12/2024	357
21	2920 Spring - Klein Multi Purpose Center	7/12/2024	415
22	Stallworth Stadium	7/12/2024	214
		Total Staging Site Headcount	**13,612**

* Due to safety concerns, the Barnett Stadium staging site was demobilized and relocated to Berry Stadium staging site. Barnett Stadium continued to be used for materials pickup through July 12, 2024. Capacity of the Barnett Stadium site was up to 400 individuals.

2. Logistics and Materials Unit

Q. HOW MANY DEDICATED LAYDOWN YARDS DID CENTERPOINT HOUSTON ESTABLISH FOR HURRICANE BERYL RESTORATION EFFORTS?

A. Nine dedicated pole laydown yards, in addition to the staging sites, supported restoration efforts for Hurricane Beryl. They included Algoa, Almeda,

Conoco/Phillips, Kuykendahl, Little York Substation, Needville, W. Columbia, NRG Purple lot, and Twin Wood Substation. Upon activation of a laydown yard, materials were delivered to the laydown yard to support the restoration efforts.

Figure CAK-23 Beryl - Pole Laydown Yard

Q. WHAT DID THE COMPANY DO TO HAVE AND MAINTAIN ADEQUATE MATERIALS FOR THE HURRICANE BERYL RESTORATION EFFORT?

A. Upon activation of a staging site, staging site material kits were delivered to the staging site materials laydown area to support the restoration efforts. These kits are "on the shelf" to facilitate timely delivery of materials and are designed to have adequate material to begin restoration in the immediate aftermath of an event that damages the Company's system. As soon as a replacement need was identified, the Company reordered materials under a "Storm Order" status, which are prioritized orders with manufacturers and distributors. The materials at the staging

sites were replenished from inventory in CenterPoint Houston warehouses as requested by material handlers stationed at the staging sites.

Q. DID THE COMPANY MAINTAIN STAGING SITE MATERIAL KITS FOR DISTRIBUTION TO STAGING SITES FOR HURRICANE BERYL RESTORATION EFFORTS?

A. Yes. CNP has a long-standing practice of maintaining on-the-shelf material staging site kits to enable quick deployment. Prior to July 8, 2024, CNP maintained eleven material staging site kits for deployment to staging sites. During the response to Hurricane Beryl, all eleven staging site material kits were delivered to the initial eleven staging sites. Additionally, standard system materials such as conductor, splices, insulators, transformers and fuses were distributed to remaining staging sites to support the restoration efforts.

Figure CAK-24 - Material Staging Site Kit – Central Warehouse Sea Spray Kit 1

Figure CAK-25 - Material Staging Site Kit – Central Warehouse Storm Kit 1

Figure CAK-26 - Material Staging Site Kit – Central Warehouse Wire Kit

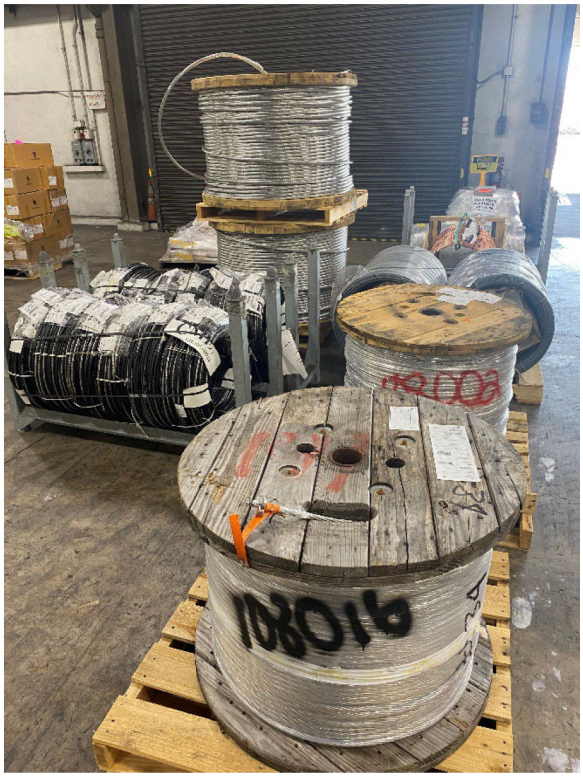


Figure CAK-27 - Material Staging Site Kit – Storm Kit Containers

Figure CAK-28 - Material Staging Site Kit – Storage Container 13

Figure CAK-29 - Material Staging Site Kit – Storage Container Storm Kit 4

Figure CAK-30 - Material Staging Site Kit – Storage Container Storm Kit 12

Figure CAK-31 - Material Staging Site Kit – Storage Container Storm Kit 12

Q. DID THE COMPANY HAVE DIFFICULTLY DELIVERING MATERIALS TO THE STAGING SITES FOR THE HURRICANE BERYL RESTORATION EFFORT?

A. Generally, no. Upon receiving notice of a new staging site, the Logistics and Materials Unit provided standard system materials for a staging site to support restoration efforts. If materials other than the standard system materials were needed, they were delivered from the Company's central warehouse, a materials distributor, or a Company Service Center.

Figure CAK-32 Beryl – Brazoria Staging Site Materials Area

Figure CAK-33 Beryl – Brazoria Staging Site Materials Area

Q. DID MATERIAL SUPPLIERS ASSIST WITH PRIORITIZING HURRICANE BERYL STORM ORDER REPLACEMENTS WITH MANUFACTURERS?

A. Yes, Irby Utilities, the Company's primary materials distributor, had personnel supporting the Company on site at the Company's central warehouse in South Houston with the Materials Management team to work to prioritize and expedite any materials needed for restoration for the duration of the restoration activities.

Q. DID THE COMPANY FACE ANY CHALLENGES PROCURING MATERIALS DURING HURRICANE BERYL?

A. Generally, the Company did not experience challenges procuring materials for Hurricane Beryl. The Company has established relationships and contracts with suppliers that gave the Company the ability to procure necessary materials for system restoration efforts. However, there was a small group of material types that the Company was concerned could be at risk of being out of stock, e.g. splices, fuse links, brackets.

Q. DOES THE COMPANY BELONG TO A MUTUAL ASSISTANCE EMERGENCY MATERIAL NETWORK?

A. Yes, the Company is able to make materials-related mutual assistance requests through three regional mutual assistance groups: SEE, TxMAG and MMAG.

Q. DID THE COMPANY MAKE A REQUEST TO THE MUTUAL ASSISTANCE EMERGENCY MATERIAL NETWORK FOR HURRICANE BERYL?

A. Yes, for Hurricane Beryl restoration efforts, CenterPoint Houston made a mutual assistance materials request.

Q. HOW MANY MATERIAL TYPES AND ITEMS WERE REQUESTED THROUGH THE MUTUAL ASSISTANCE EMERGENCY MATERIAL NETWORK FOR HURRICANE BERYL?

A. For Hurricane Beryl restoration efforts, CenterPoint Houston made a mutual assistance materials request for four material types with specification differences for a total of seventeen material items.

As a reference point, there were a total of 1,454 discrete material items used in the Hurricane Beryl restoration efforts. Of that number, the Company made a mutual assistance request for less than 1.2% of all the material types used for restoration efforts.[1]

Q. WERE MEMBER COMPANIES ABLE TO SUPPORT THE MUTUAL ASSISTANCE REQUEST FOR HURRICANE BERYL?

A. Yes. Once the mutual assistance request was filled, the Company had no further issues securing materials in support of restoration efforts and the risk of not having materials for restoration efforts was alleviated.

[1] The material types for Hurricane Beryl are shown in Workpaper CAK-1.

Q. HOW DID THE COMPANY RECEIVE MATERIALS IN SUPPORT OF HURRICANE BERYL RESTORATION EFFORTS?

A. Material used to replenish staging site material kits was delivered to the Company's central warehouse located in South Houston and distributed to the staging sites as needed. When those requests were made, materials were loaded onto CenterPoint Houston-owned trucks and third-party logistics trucks to be distributed to the assigned staging sites. Materials were also distributed directly to distribution line contractors from Company warehouses.

Q. HOW DID THE COMPANY DISTRIBUTE MATERIAL TO THE CREWS AT THE STAGING SITES IN SUPPORT OF HURRICANE BERYL RESTORATION EFFORTS?

A. Material handlers were assigned to each of the staging sites to facilitate the distribution of material to the crews at staging sites based on the type of work the crews expected to encounter in the field.

Figure CAK-34 Beryl - Lone Star Staging Site Material Area

Figure CAK-35 Beryl - Legacy Rhodes Stadium Staging Site Material Area