

Hurricane Harvey Update

10-17-2017



An **AEP** Company

BOUNDLESS ENERGYSM

Hurricane Harvey

- Category 4 hurricane made landfall in the Coastal Bend area of the AEP Texas service territory on August 25th
- At peak, 220,000 outages
 - Restored power to 96% by day 14
- Tremendous support from community leaders and the public in the impacted areas
- Collaborative efforts with other Texas utilities, ERCOT and Regional Mutual Assistance Groups



HURRICANE HARVEY RECAP:

September 2017

766



downed or
damaged
transmission
structures



Restored power to
219,000
customers

5,726



distribution
poles repaired
or replaced

4 million

Total feet of transmission and distribution
conductor replaced approximately 712 miles

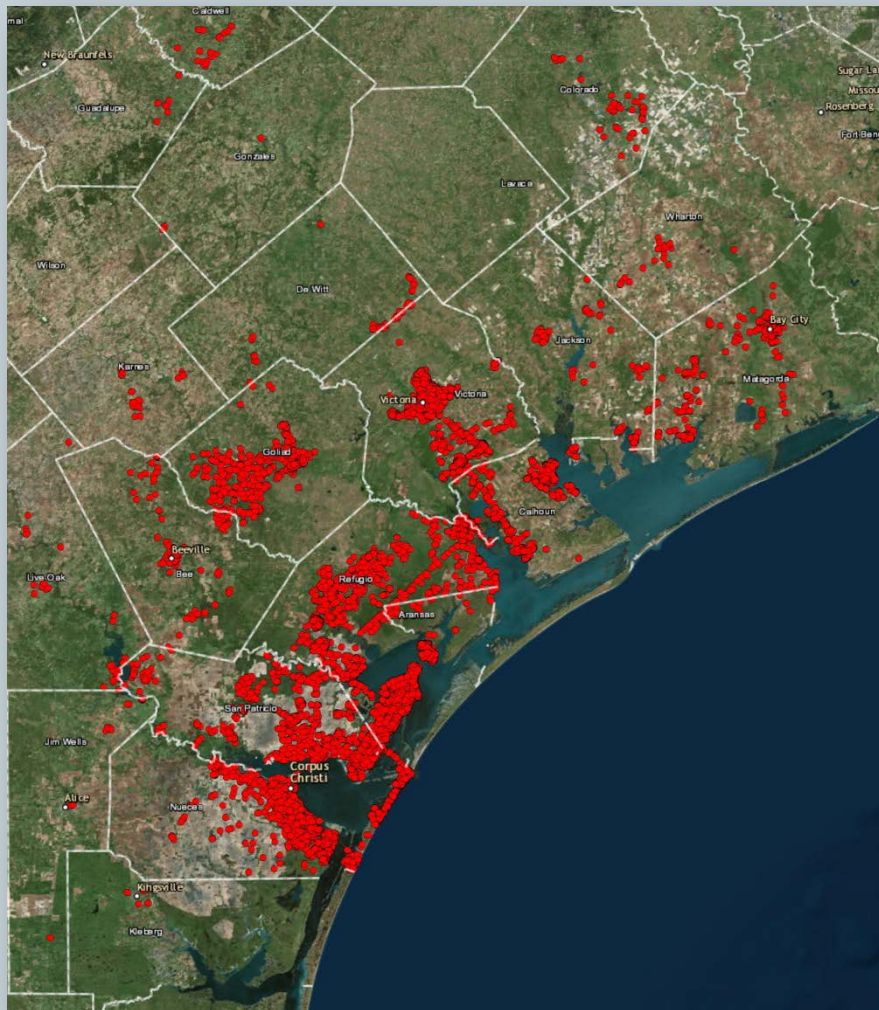


5,600

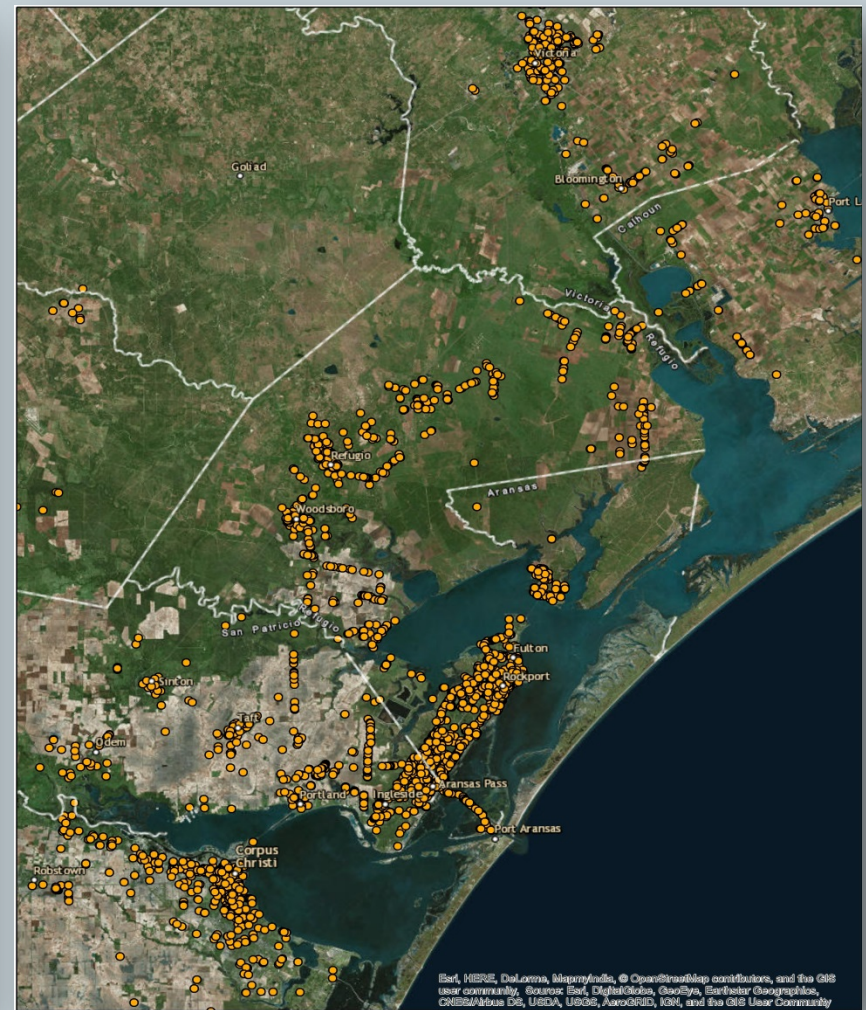
Total number of workers
participating at the peak
of the restoration effort

Communication Efforts

- State and Local Emergency Management coordinators and contact with key stakeholders
- Central FEMA Coordinator
- Participation in town hall and customer meetings
- Restoration updates, news releases and media interviews
- Social media – Facebook, Twitter
- AEP Texas website and outage map



Non-ping meters



Pole damage

Areas impacted by Hurricane Harvey included: Corpus Christi, Port Aransas, Aransas Pass, Rockport , Fulton, Refugio, Port Lavaca, Bay City and Victoria.



Flooding, mosquitos, as well as windy and muddy conditions created special challenges for work crews.



To address these challenges, specialized equipment and technology, such as drones, ATVs, pictometry and helicopters were utilized during the assessment and restoration efforts.

Special Thanks:

Many thanks to state and local leadership, as well as the PUCT staff for all of their help.

A special “Thanks” to the communities we serve and to the 5,600 workers who were able to restore service to 96 percent of those impacted within a two-week period of time.



Item 5.3.1
ERCOT Public



Appendix



Damage Summary

TRANSMISSION:

Substations impacted/restored	68
Transmission lines locked out during storm	61
Transmission line structures downed	549
Estimated conductor replaced (miles/feet)	333 miles or 1.8 million feet

DISTRIBUTION:

Distribution poles damaged or replaced	5,726
Transformers damaged or replaced	1,413
Breakers that locked open	270
Estimated conductor replaced (miles/feet)	379 miles or 2 million feet



STP-to-Whitepoint 345-kV transmission structures

Transmission Damage



Tatton Substation

Distribution Damage









Facebook posting examples

When I think of the challenge that presented itself to you right after Harvey's landfall, the only adjective that comes close is herculean. The task was unimaginable, and you worked with a rapidity that was nearly miraculous. Thank you. Thanks also for providing such constant communications. You set a few standards here, and I wanted to take a moment to express my gratitude.

Other Participants in the Restoration Effort

AEP Ohio	Disaster Resource Group	Pike Electric
AEP Appalachian Power	Empire District	Plaska
AEP Indiana Michigan Power	Evers Electric	Powerline Services
AEP Kentucky Power	Excel Energy	Power Secure
AEP Public Service Company of Oklahoma	Great Southwestern	ProForce
AEP Southwestern Electric Power Company	Hargrave Power Inc.	QUALITY POWER LINE
5 Star	Higher Power	Quanta Utility Services
Ameren Illinois	Hugo Garcia Electric	Quantum Hargrove
Ameren Missouri	INTREN Inc.	R&J Environmental
Asplundh	Irby Construction	RS Electric Utility Services
Associated Diversified Services	J F Electric Inc.	Safety Management Group (SMG)
Austin Energy	James Power Line	SAM Flight Operations
B&B Utility Contractors	Kansas City Power & Light	Service Electric Company
BBC Electric	Lewis Tree Service	SEC - Southern Electric Corp.
BHI Energy	LineTec	Storm Services
Base Logistics	Louisville Gas & Electric - Kentucky Utilities	Sumter Utilities
Bird Electric	LPE, Inc.	Sun Coast Resources
Bison Electric	Mammoth	SUN TECH ELECTRICAL
CANFER	MasTec	T&D Solutions LLC
Centerpoint	Mesa Line Services	Tech Serv Consulting
Chain Electric Company	MYR Group	Texas New Mexico Power
City Public Service	OG&E Electric Services	UC Synergetic
CT Drilling & Construction	Oncor Electric Delivery	Westar
Davey Resource Group	One Source Restoration	Willbros T&D Services
Davey Tree Company	One Source T&D	William E Groves Construction Inc.
David H. Elliot Company	Par Electrical Contractors	Wright Tree Services

Also, many thanks to Midwest Mutual assistance Group, Texas Mutual Assistance Group and Southeastern Electric Exchange