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JANUARY 30, 2025

Emergency Operations Plans Workshop

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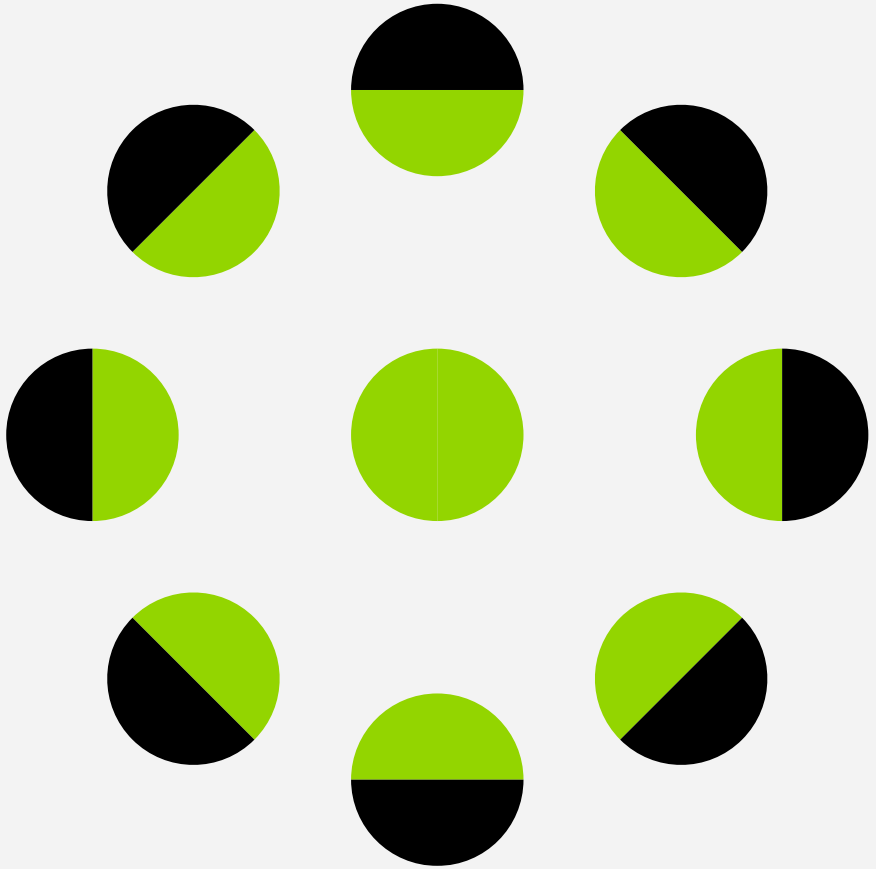
State & Local Government and ES&I Solutions

outwit complexity™

Emergency Operations Plans Workshop



Guidehouse PUCT EOP Team

Today's Moderators

Matthew Moore

Director, Guidehouse

Matt Moore is a Director in Guidehouse's ES&I Solutions practice. Matt previously served as a manager of Enforcement and Regulatory Compliance for WECC. He provided project oversight on EOP reviews and presented findings to the Board of Commissioners in September 2024.

Brent Read

Associate Director, Guidehouse

Brent Read is an Associate Director in Guidehouse's ES&I Solutions practice. Previously the Risk Assessment Manager at Texas RE and Sr. Compliance Engineer at WECC, Brent is an experienced compliance and risk professional. He provided project oversight and presented the report findings to the Board of Commissioners in September 2024.

Dan Bradley

Partner, Guidehouse

Dan Bradley is a Partner with Guidehouse based in Austin, TX. Dan leads the State Energy team which supports state and local clients in the energy and water sectors. Dan has more than 25 years experience with Guidehouse supporting energy clients.

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Introduction

Emergency Operations Plans Workshop

EOP Workshop

Purpose and Goals

Provide clarity on EOP filing expectations, share best practices, and offer lessons learned.

After attending this workshop, you should have a better understanding of ways to improve future EOP filings and submissions, strengthen your entity's internal planning efforts, and understand other entities' approaches to preparing for severe weather. We will review requirements of 16 TAC *§* 25.53 and discuss identified measures that are above and beyond the requirements. Additionally, the Public Utility Commission of Texas (PUCT) will share its findings from Hurricane Beryl and approach to emergency management.

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Current State of EOPs

Emergency Operations Plans Workshop

16 TAC § 25.53 Requirements

Requirements for Electrical Entities

On February 25, 2022, the PUCT adopted 16 TAC § 25.53 . The rule implemented standards for EOPs for applicable entities, including the filing of EOPs to the PUCT and submission to ERCOT. The standards set forth in the rule focus on required content and filing criteria for the EOPs. The rule also requires a bi-annual report to be provided to the PUCT and Texas legislature.


Public Communications Plan


Pre-Identified Supplies for Emergency Response


Emergency Staffing Plan


Weather Emergency Identification
(includes extreme heat, cold, floods, hurricanes, and drought)


Training and Emergency Drills


Situational Awareness


Activation of EOP


Hurricane Annex, if applicable per TDEM


Wildfire Annex


Water Shortage Annex (Generation facilities only)


Load Shed Annex (Transmission & Distribution)

Filing Requirements - All Entities

Filing and Submission Requirements for All Reporting Entities

16 TAC § 25.53	Description
(c) (1) (A) (i)	Executive Summary
(c) (3)	Continuous Maintenance of EOP
(c) (4) (A)	Record of Distribution
(c) (4) (B)	Emergency Contacts
(c) (4) (C)	*Signed Affidavit from Entity's Highest-Ranking Representative Affirming the Following:*
(c) (4) (C) (i)	Relevant Personnel are Familiar With and have Received Training on the EOP
(c) (4) (C) (ii)	Reviewed and Approved by Appropriate Executives
(c) (4) (C) (iii)	Drills Have Been Conducted to the Extent Required
(c) (4) (C) (iv)	Distributed to Local Jurisdictions
(c) (4) (C) (v)	Business Continuity Plan
(c) (4) (C) (vi)	Personnel Training (IS-100, IS-200, IS-700, IS-800 NIMS)

16 TAC § 25.53	Description
(d) (1) (A)	Approval and Implementation Section Introduction
(d) (1) (A)	Outline of Applicability
(d) (1) (B)	List of Individuals Responsible for Maintaining and Implementing EOP
(d) (1) (B)	List of Individuals who Can Change EOP
(d) (1) (C)	Revision Control Summary
(d) (1) (D)	Dated Statement of Approval Adopting the Plan and Superseding Previous Plan
(d) (1) (E)	Most Recent Approval Date
(d) (2)	Communication Plan
(d) (3)	Plan to Maintain Pre-identified Supplies for Emergency Response
(d) (4)	Staffing During Emergency Response
(d) (5)	Identification of Weather-related Hazards and Activation of EOP
(f)	Annual Drill Information

Filing Requirements - Transmission & Distribution

Filing and Submission Requirements for Transmission & Distribution Facilities

Transmission and Distribution Facilities (T&D) includes Electric Utilities, Transmission and Distribution Utilities, Municipally Owned Utilities, and Electric Cooperatives. These annexes encompass various types of severe weather and non-severe weather threats to a T&D facility's continued operation.

16 TAC § 25.53	Description
(e) (1) (A) (i)	Weather Emergency Annex Operational Plans
	Cold Weather
	Hot Weather
(e) (1) (A) (ii)	Weather Emergency Annex Checklists
	Cold Weather
	Hot Weather
(e) (1) (B)	Load Shed Annex
(e) (1) (C)	Pandemic and Epidemic Annex
(e) (1) (D)	Wildfire Annex
(e) (1) (E)	Hurricane Annex
(e) (1) (F)	Cyber Security Annex
(e) (1) (G)	Physical Security Annex
(e) (1) (H)	Annex for the use of PURA Facilities
(e) (1) (I)	Additional Annexes as needed or appropriate

Filing Requirements - Generation

Filing and Submission Requirements for Generation Facilities

Generation facilities include Electric Cooperatives, Electric Utilities and Municipally Owned Utilities that operate a generation resource in Texas; and Power Generation Companies (not including generation resources authorized under PURA § 39.918). These annexes encompass various types of severe weather and non-severe weather threats to a generation facility's continued operation.

16 TAC § 25.53	Description
(e) (2) (A) (i)	Weather Emergency Annex Operational Plans
	Cold Weather
	Hot Weather
(e) (2) (A) (i)	Verification of Adequacy and Operability of Fuel Switching Equipment
(e) (2) (A) (iii)	Weather Emergency Annex Checklists
	Cold Weather
	Hot Weather
(e) (2) (B)	Water Shortage Annex
(e) (2) (C)	Restoration of Service Annex
(e) (2) (D)	Pandemic and Epidemic Annex
(e) (2) (E)	Hurricane Annex
(e) (2) (F)	Cyber Security Annex
(e) (2) (G)	Physical Security Annex
(e) (2) (H)	Additional Annexes as needed or appropriate

Filing Requirements – Retail Electric Providers

Filing and Submission Requirements for Retail Electric Providers

Retail Electric Providers (REPs) are required to submit annexes for pandemics, hurricanes, cyber-security, and physical security. If the REP is located outside of a hurricane evacuation zone per TDEM, the REP must include a statement explaining why the annex is not included.

16 TAC § 25.53	Description
(e) (3) (A)	Pandemic and Epidemic Annex
(e) (3) (B)	Hurricane Annex
(e) (3) (C)	Cyber Security Annex
(e) (3) (D)	Physical Security Annex
(e) (3) (E)	Additional Annexes as needed or appropriate

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EOP Report Findings

Emergency Operations Plans Workshop

Weather Emergency Preparedness Report Overview

Methodology and Findings

Electric Entity Type and Risk Categorization

- Categorized entities by power region and service description.
- Categorized entities by inherent risk to the electric grid

16 TAC § 25.53 Compliance

- Developed comprehensive checklist of16 § TAC 25.53 regulatory requirements
- Reviewed EOPs filed in 2024 by Texas electric entities

Emergency Preparedness Assessment

- Defined indicators* and maturity ratings to assess entities' preparedness and response to weather emergencies
- Reviewed sample of EOPs using the preparedness framework

** The Emergency Preparedness Framework was developed by Guidehouse and focuses on measures that exceed the requirements of 16 TAC § 25.53. The data points included in the framework and subsequent industry best practices are note requirements in 16 TAC § 25.53.*

Weather Emergency Preparedness Report Overview

Methodology and Findings

Findings and Recommendations

- Summarized findings
- Recommendations and best practices to improve emergency preparedness and response by Texas electric entities

Industry Best Practices

- Identified best practices to improve EOPs*
- Developed an EOP template recommended for future filings

** The Emergency Preparedness Framework was developed by Guidehouse and focuses on measures that exceed the requirements of 16 TAC § 25.53. The data points included in the framework and subsequent industry best practices are note requirements in 16 TAC § 25.53.*

Entity Risk Categorization

Table 1 – Criteria Used to Assess Risk for Each Entity Category

Entity Type	High	Medium	Low
Investor-Owned Utility (IOU)/Transmission and Distribution (TDU)	T: Owns and/or Operates assets greater than 200 kV D: Greater than 200,000 customers	T: Owns and/or Operates 100 kV to 200 kV assets D: 50,000 to 200,000 customers	T: Owns and/or Operates assets less than 100 kV D: Less than 50,000 customers
Power Generation Companies (PGC)	Total generation portfolio capacity is greater than 2,500 MW or Generation includes a nuclear site	Total generation capacity is between 1,000 - 2,500 MW	Total generation capacity is less than 1,000 MW
Municipally Owned Utilities (MOUs) & Electric Cooperatives (COOPs) & River Authorities (RA)	Greater than 200,000 customers	50,000 to 200,000 customers	Less than 50,000 customers
Retail Electric Providers (REPs)	Not Applicable	Greater than 50,000 customers	Less than 50,000 customers

16 TAC § 25.53 Adherence Results

Highlighted Results and Findings

693 Number of EOPS reviewed and assessed using the compliance checklist

70% Of registered electric entities filed EOPs or an affidavit stating there were no material changes since previous submission

95% Of PGCs included the required Cold Weather Emergency Annex

83% Of T&D entities included the required Cold Weather Emergency Annex

89% Of all entities included information on identifying weather-related hazards and EOP activation procedures

84% Of all entities included the required Executive Summary

Emergency Preparedness Framework

Criteria that demonstrates an entity's level of preparedness and response to severe weather

Guidehouse developed 12 indicators, including some beyond the scope of EOP requirements, informed by industry best practices on emergency preparedness. These indicators are critical to an effective emergency response to ensure service is provided to customers and improve the overall reliability of the electric grid in an emergency.

The Emergency Preparedness Framework was developed by Guidehouse and focuses on measures that exceed the requirements of 16 TAC § 25.53.

Emergency Preparedness Framework

Indicators

ICS Structure

- Includes a formal emergency management governing body
- Focus on communication, resource coordination, and operational effectiveness in system emergencies
- Defines roles and reporting relationships via a hierarchical structure for effective command, control, and coordination of emergency response efforts

Asset Management and Inspections

- Includes asset management strategies and protocols help ensure optimal performance, reliability, and safety of utility infrastructure during adverse weather conditions
- Include procedures to maintain preidentified supplies for an emergency response
- Processes are defined and implemented to optimize utility infrastructure inspections and timely maintenance and repairs.

Emergency Preparedness Framework

Indicators

Risk Management

- Includes risk management plans for critical infrastructure, and preventative mitigation actions to be performed in advance of an adverse weather season

Staffing

- EOP has a detailed resource planning and acquisition must be sufficient for response to system emergencies

Emergency Preparedness Framework

Indicators

Mutual Assistance and Support

- Includes information on mutual aid agreements to lead and assist an effective response to a large-scale emergency
- Demonstrates an entity's ability to ensure restoration of equipment and electric service to their customers through assistance with outside entities

Training and Emergency Drills

- Includes training that prepares personnel to respond to emergency situations
- Includes performance of drills (above and beyond basic regulatory requirements) to address all types of system emergencies
- Includes after action review of emergency procedures and enhances the emergency procedures

Emergency Preparedness Framework

Indicators

Situational Awareness

- Has documented ability to recognize and monitor extreme weather conditions in advance of a potential emergency
- Has the ability to monitor changing system conditions leading up to, during, and after emergency events (restoration)

System Design and Hardening

- Describes implemented efforts to achieve short-term and long-term reliability solutions, minimizing the negative impacts of adverse weather to their customers.

Emergency Preparedness Framework

Indicators

Communication System

- Utilizes multiple methods of communication to ensure all staff are aware of emergency updates
- Includes communication capabilities amongst personnel to communicate while responding to an emergency

Activation of EOP

- Has a defined process to activate operational protocols in the event of adverse weather, including identifying the decision-makers that have the authority to activate an emergency response within the organization.

Emergency Preparedness Framework

Indicators

Emergency Management and Planning Systems

- Utilizes automation and/or advanced systems and technologies in emergency situations
- Improves efficiency and effectiveness of their response with systems and technologies
- Has the capability to improve on every step of emergency preparedness and response
- Focuses on minimizing power losses and impact on their customers and the public

Public Communication

- Effectively communicates in emergency situations
  - Direct and indirect customers and stakeholders,
  - Public officials,
  - Fuel suppliers,
  - Reliability coordinator (RC),
  - Regulatory entities, and
  - Media
- Fosters transparency

Maturity Framework

Maturity Rating Matrix

Indicators that evaluate the maturity of the EOP filings

Using a statistically significant random sampling methodology to identify EOPs to evaluate using the maturity framework, Guidehouse evaluated EOP content based on the 12 indicators. The maturity framework provided the evaluation team with a consistent methodology to assess entities' maturity ratings across 12 indicators, allowing comparisons of the EOPs against industry best practices.

The Maturity Framework and indicators were developed by Guidehouse and focuses on measures that exceed the requirements of 16 TAC § 25.53. The data points included in the framework and subsequent industry best practices are note requirements in 16 TAC § 25.53.

Maturity Framework

Elements of the Maturity Rating Matrix

1. **Indicator:** Criteria that should be demonstrated in an emergency operations plan.

2. **Maturity Rating:** Based on information in the EOP, maturity level correlates to ability to respond to adverse weather scenarios.

   High: Displays advanced level of preparedness, incorporating all criteria for indicator.
   Medium: Elements of good business practices for severe weather response are present, but some elements may be missing.
   Low: Required indicator content is not present, or minimal details are provided.

3. **Indicator Details:** Specific requirements based on industry best practices the EOP should cover to meet the maturity rating.

Maturity Framework

Elements of the Maturity Rating Matrix

1

2

Indicator	High (3)	Medium (2)	Low (1)
Indicator 1 – ICS Structure	• ICS structure and governance are explicitly defined and fully integrated. • Continuous improvement framework to track and address lessons learned is established. • Revisions to the plan are tracked, and actions to address updates are recorded.	• ICS structure and governance are defined. • Continuous improvement framework to track and address lessons learned is not established. • Revisions to the plan are not shown to be tracked, and actions to address updates are not shown as recorded.	• Plan does not include ICS and governance structure used during an emergency response.
Indicator 2 – Asset Management and Inspections	• Plans include multiple practices in place to ensure that critical infrastructure will properly operate during adverse weather events. • Plans include procedures to maintain preidentified supplies for an emergency response. • Critical assets are identified and listed. • Potential points of failure and plans for quick remediation are well defined. • Process is set up for how critical supplies and backup equipment are inventoried and strategically deployed.	• Plan includes some system inspection practices (e.g., vegetation management). • Critical assets and potential points of failure are not identified. • Plans for quick remediation during an emergency are not defined. • Process is not set up for how critical supplies and backup equipment are inventoried and strategically deployed for weather events. • Procedures to maintain preidentified supplies for an emergency response are missing.	• Plan includes very limited, if any, asset management and inspections practices. • Procedures to identify potential points of failure and plans for quick remediation during an emergency are not established.

3

What Makes a Strong EOP?

These qualities were exhibited across strong EOPs

Detailed Responses

- Detailed responses to EOP requirements ensure electric entities will be able to respond appropriately to severe weather and ensure delivery to customers
- Information beyond the original 16 TAC § 25.53 requirement text shows a level of effort to craft a strong, detailed EOP

Organization

- All required elements are clearly and uniquely identified
- Table of contents accurately reflects the order of documentation and is unique to the EOP document
- Information is logically organized and standardized
- Multiple facilities are clearly identified, if applicable

Consistent Naming Conventions

- Following naming conventions listed in the code ensures EOP content is easy to follow
- Improves overall EOP readability and organization
- Ensures compliance with 16 TAC § 25.53 requirements

What Makes a Strong EOP?

Detailed Responses

Be Specific

Provide as much specificity as possible in your responses. EOPs should be a working document and should not a high-level compliance document.

Example - Staffing during emergencies

Some plans included the following information when discussing staffing for emergency situations and severe weather events:

- A detailed staffing plan and incident command structure
- Defined roles and responsibilities
- Call-out procedures, contact information, and a comprehensive communication plan

What Makes a Strong EOP?

Detailed Responses

Explain Applicability

Provide specific details regarding applicability of annexes. If an annex is not applicable provide a response with an explanation.

Example – Hurricane Annex

"The hurricane annex requirement does not apply to *Entity*. *Entity* does not have facilities located within a hurricane evacuation zone, as defined by the Texas Division of Emergency Management (TDEM)."

16 TAC § 25.53 (d) Information to be included in the emergency operations plan.

"If a Provision in this section does not apply to an entity, the entity must include in its EOP an explanation of why the provision does not apply."

What Makes a Strong EOP?

Detailed Responses

Include Process Details

Provide a full view of emergency response efforts. Avoid limiting the EOPs to bare bones requirements of 16 TAC § 25.53.

Example

An EOP stated "*Entity* adheres to it's load shedding plan (*Procedure for Shedding Firm Load*)" and then provided the full plan as an addendum in its EOP filing. This provides a full process understanding by including the supporting documentation within the EOP filing.

What Makes a Strong EOP?

Detailed Responses

Include Applicable Reliability Measures

Include insights into additional reliability efforts, like system hardening efforts. Include information linking other regulatory requirements (16 TAC § 25.55, NERC, etc.) to create a comprehensive EOP. EOPs filings should not be focused on minimal adherence to 16 TAC § 25.53 but should instead be focused on improving reliability. The information provides additional assurance that an entity is able to provide adequate electric service through an emergency.

Some EOPs included additional system hardening information, such as undergrounding efforts, pole inspection programs, and pole changeout programs. These EOPs provided additional details demonstrating the entities additional focus on system preparedness and resiliency.

What Makes a Strong EOP?

Organization

A strong EOP is organized in a way that works for the entity and is mapped, either through a detailed table of contents or an additional table specifically highlighting the required information in the EOP.

Some of the better examples included the following:

- All required elements are clearly and uniquely identified using the language and paragraph numbers of 16 TAC § 25.53
- A comprehensive table of contents was developed that highlighted each of the individual sections and accurately reflected the order of documentation
- Multiple facilities were included in the EOP and each had it's own separate documentation. The documentation was clearly marked for each facility and identified all of the required information.

What Makes a Strong EOP?

Consistent Naming Conventions

The majority of the EOPs consisted of different processes and procedures across multiple lines of business, and often with multiple subsidiaries or individual sites. Strong EOPs included a consistent naming convention for subsidiaries, individual sites, facilities, processes, and tools.

Naming conventions also aligned with the exact names registered with the PUCT. Internal naming and vernacular were removed so that the naming convention was uniform throughout the stronger EOPs.

Areas of Improvement

Suggestions for improving future EOP filings

Fully Develop Content

- Including detailed responses in future EOPs demonstrates an entity's ability to respond effectively to severe weather
- Demonstrates an entity's proactive response planning and ensures compliance with administrative code requirements

Develop Uniform Procedures for Subsidiaries and/or Facilities

- Entities operating multiple facilities or locations should have uniform procedures (as applicable) to ensure all facilities meet EOP standards
- Unique procedures can be applied based on facility location or type, as needed (ex: facilities located in hurricane zone will have hurricane annex)

Overall Findings

Results of the review of weatherization preparedness and response

Overall Findings

Weather Emergency Preparedness Report 2024

Texas electric entities are largely prepared for extreme weather events

- 2024 EOP filings closely adhered to 16 TAC *§* 25.53 requirements

- Entities have operating plans in place to prepare and respond to weather emergencies

PUCT DICE

Presented by:

John B. Lajzer

Director, Division of Compliance & Enforcement

Public Utility Commission of Texas

Guidehouse

EOP Panel Discussion

Electrical Entity Spotlight

Panel Members

Gabe Vazquez

Vice President & Associate General Counsel

Vistra Corp.

Gabe has been with Vistra since 2008 and is responsible for managing legal support for the business operations of Vistra's national generation and retail energy businesses. As lead crisis coordinator, Gabe also facilitates the execution of Vistra's crisis program.

Jennifer Frederick

Director, Regulatory Services

AEP Texas

Jennifer has been with AEP since 2013, taking on the role of AEP Texas Director of Regulatory Services in June 2024. Jennifer's team is responsible for regulatory filings with the PUC, including but not limited to regular compliance filings and rate adjustment requests.

Stacy Lee

Electric Compliance Officer

City of College Station

Stacy has been with the City of College Station Electric Utility since 1997, beginning the compliance phase of her career in 2007. Stacy currently manages the Compliance Division and oversees the electric safety and regulatory compliance programs for College Station Utilities.

EOP Panel Discussion

1

What is your organization's overall process for developing, reviewing, and revising EOPs?

2

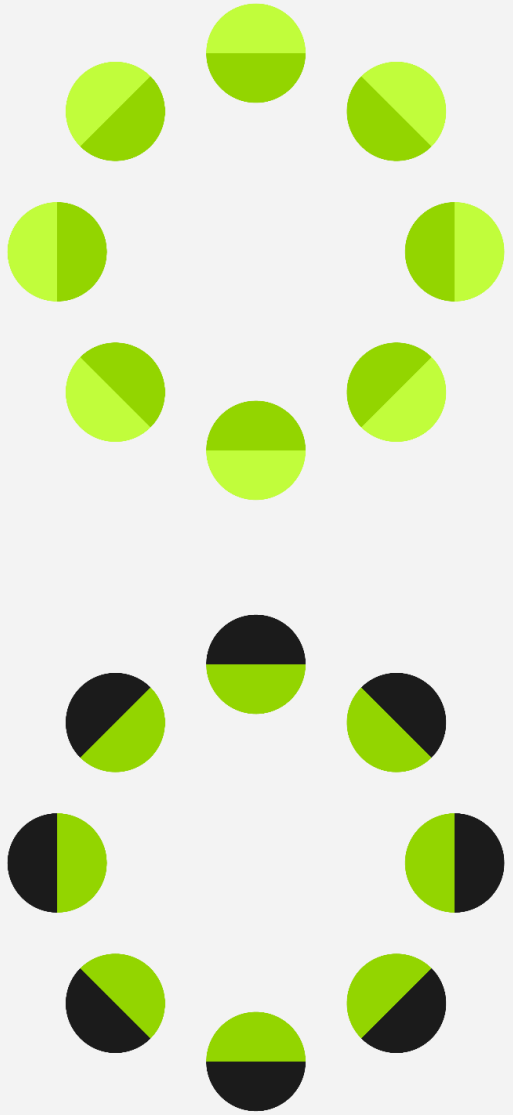
What is your organization's overall process for filing of EOPs to PUCT and ERCOT?

3

What is your organization's process for reviewing and updating the EOPs after events and system changes?

4

Do you have any tips, recommendations, or best practices to share with us?



- Fortune 500 company based in Irving, Texas
- Integrated retail electricity and power generation
- Products and services in 18 states and Washington D.C., including all major competitive wholesale markets in the U.S.
- Serving approx. 5 million residential, commercial, and industrial customers
- More than 50 renewable energy plans

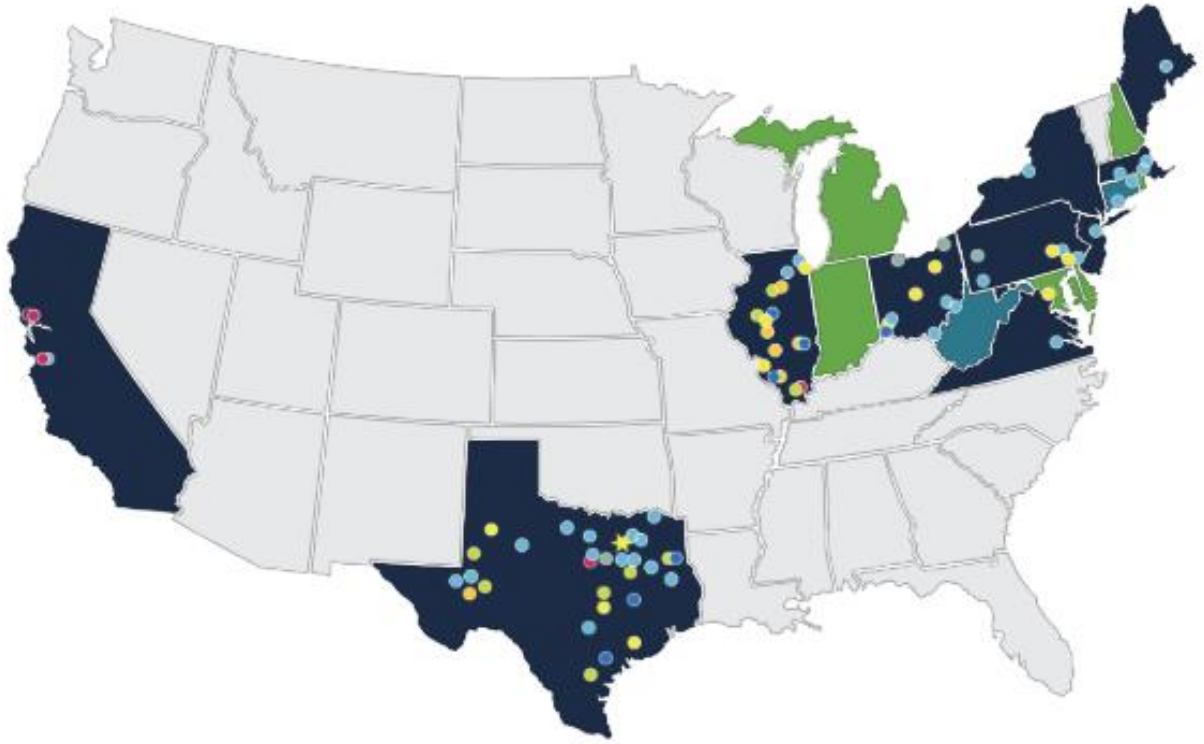
- Largest competitive power generator in U.S.
- 41,000 MW of generation powered by a diverse portfolio of natural gas, nuclear, coal, solar, and battery energy storage
- Second-largest competitive nuclear power fleet in the U.S.
- Owns and operates one of the largest battery energy storage facilities in the world
- Growing portfolio of renewables and energy storage

Power Plants*
- Natural Gas
- Coal
- Other

*Note: Does not include plants previously announced to be retired

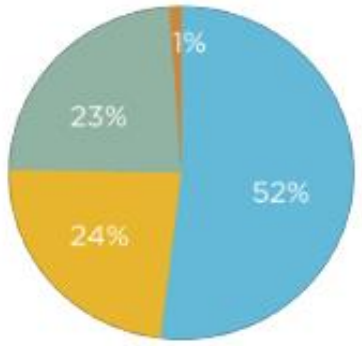
Vistra Zero
- Nuclear
- Solar / Batteries
- Solar (under development)
- Batteries (under development)

Operations
- Retail Operations
- Plant Operations
- Retail and Plant Operations
- Regional Office
- Company Headquarters



Generation Mix by Actual Production*

216.7 TWh



Gas Coal Nuclear Renewables

*2023 Combined Vistra and Energy Harbor Production

VISTRA

What is your organization's overall process for developing, reviewing, and revising EOPs?

- Prior to the new EOP requirements established in 16 TAC § 25.53, Vistra had developed an Enterprise Crisis Program which consolidated various documented emergency plans, processes, and responses, including defined roles and responsibilities.
- Vistra reviewed its existing Crisis Program to meet the new EOP requirements established in 16 TAC § 25.53 and incorporated EOP requirements to ensure effective adoption across our nationwide generation fleet, retail operations and corporate offices.
- EOPs and other emergency-related documents are accessible only to crisis team members ensuring protection of sensitive company information and critical infrastructure data.
- EOPs and all other emergency-related documents undergo a detailed review annually in preparation for the March 15th filing deadline and updates are made throughout the year as needed (see details on next slide).

What is your organization's overall process for submittal of EOPs to PUCT and ERCOT?

- Beginning in January, Vistra's Legal & Compliance team formally kicks-off the annual review process with Crisis Program/EOP document owners across the business reviewing 16 TAC § 25.53 requirements, in-scope documents/processes, and deadlines up to the March 15th filing.
- By mid-February, every document/process is reviewed and approved by the identified owner and the owner's direct manager and reporting executive.
- Legal & Compliance, in consultation with external counsel, reviews any updated filing requirements and all proposed changes to determine materiality.
- In early March, executive approval and final CEO approval is received after being presented with the background and requirements of 16 TAC § 25.53, a summary of the completed annual review process, a summary of all document/process changes, and all Crisis Program and EOP documents.
- Legal & Compliance then works with external counsel to file the EOP documents with appropriate confidentiality treatment, where necessary.

What is your organization's process for reviewing and updating the EOPs after events and system changes?

- Vistra routinely undergoes tabletop exercises testing its Crisis Program and EOP practices. Any changes and/or updates are documented and tracked by Legal and Compliance.
- The PUCT and/or TDEM are provided notice and opportunity to participate in an annual exercise of Vistra's emergency operations.
- Since creation of its enterprise-wide Crisis Program covering multiple states, jurisdictions, and business activities, Vistra has:
  - regularly initiated a "crisis readiness" posture before potential weather events to be prepared to implement its full EOP, if needed, and
  - activated certain EOP processes after isolated events for specific business units or specific locations.
- The Crisis Program and EOPs are reviewed by Legal and Compliance and updated with executive approval as required after events.

Do you have any tips, recommendations, or best practices to share with us?

- Every organization is different, create emergency documents and processes that work for your business.
- Every emergency will be unique, have a plan that is adaptable to fit different crisis events and allows you to act quickly and communicate effectively.
- Clearly define roles and responsibilities of identified employees and teams in the event of an emergency. Routinely train on their roles and responsibilities.
- Routinely test your emergency operations looking for identification of key issues and opportunities for improvement.
- Document and know your regulatory reporting requirements in the event of an emergency and prepare external notifications/communications for possible emergencies.

What is your organization's overall process for developing, reviewing, and revising EOPs?

- Identify appropriate SMEs responsible for the processes and procedures applicable under the EOP.
  - This core team is re-engaged each year to review the current EOP to determine if updates are necessary.

- The EOP is circulated to the core team in January each year to determine if there are material changes.
  - If changes to individual procedures impact the language already included in the EOP, that is considered a "Material Change" and an update would be filed.
  - If there are no "Material Changes" to the EOP, then an affidavit is filed.

- Once the core team has determined whether an update is needed or not, leadership is updated on whether an update or an affidavit is necessary.
  - As part of the review process the document goes through multiple layers of review to ensure accuracy starting with the SMEs and going all the way through to the Company President.

What is your organization's overall process for filing of EOPs to PUCT and ERCOT?

- The regulatory consultant managing the annual update will set up a timeline review and update in order to meet the March 15th filing deadline dictated by under the PUC Rule.

- The EOP is submitted by the Regulatory Services Team through the PUCT Interchange and the ERCOT MIS. Both systems are monitored to make sure the submission is posted by the filing deadline.

What is your organization's process for reviewing and updating the EOPs after events and system changes?

- After any major event each Section Leader conducts an "After Event Review " to determine any changes that need to be made to procedures. As part of the January review any changes that impact what is included in the EOP will be incorporated.

- There could be circumstances where a change is impactful enough to make an immediate filing.

Do you have any tips, recommendations, or best practices to share with us?

- Establish strong communication procedures with the SMEs to make sure their feedback is incorporated as necessary.
- Continuously evaluate how filings impact your EOP (for example: System Resiliency Filings).
- Have an established schedule for evaluating and updating.

Tips, Recommendations, Best Practices

City of College Station

- Have multiple layers of review to aid in identifying and correcting inaccuracies.
- Implement a tracking system to stay on top of all compliance reporting requirements.
- Centralize the reporting responsibility for consistency within your organization.
- Cross-reference the regulations within the EOP.
- If submitting two different EOPs (redacted PUCT and unredacted ERCOT), try to simplify the submittal as much as possible.
  - PUCT Submittal (redacted) – generic EOP that references confidential documentation as being provided to ERCOT.
  - ERCOT Submittal (unredacted) – PUCT generic EOP with the additional confidential documentation inserted as Appendices.

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BREAK

15 MINUTES – RETURN BY 11:00 AM

GUIDEHOUSE ES&I AND STATE AND LOCAL GOVERNMENT

Hurricane Beryl Report

Presented by:

John B. Lajzer

Director, Division of Compliance & Enforcement

Public Utility Commission of Texas

Hurricane Beryl Report

Hurricane Beryl

- Cat. 1 storm
- July 8, 2024
- Landfall in Matagorda Bay
- 2.7 million customers without power

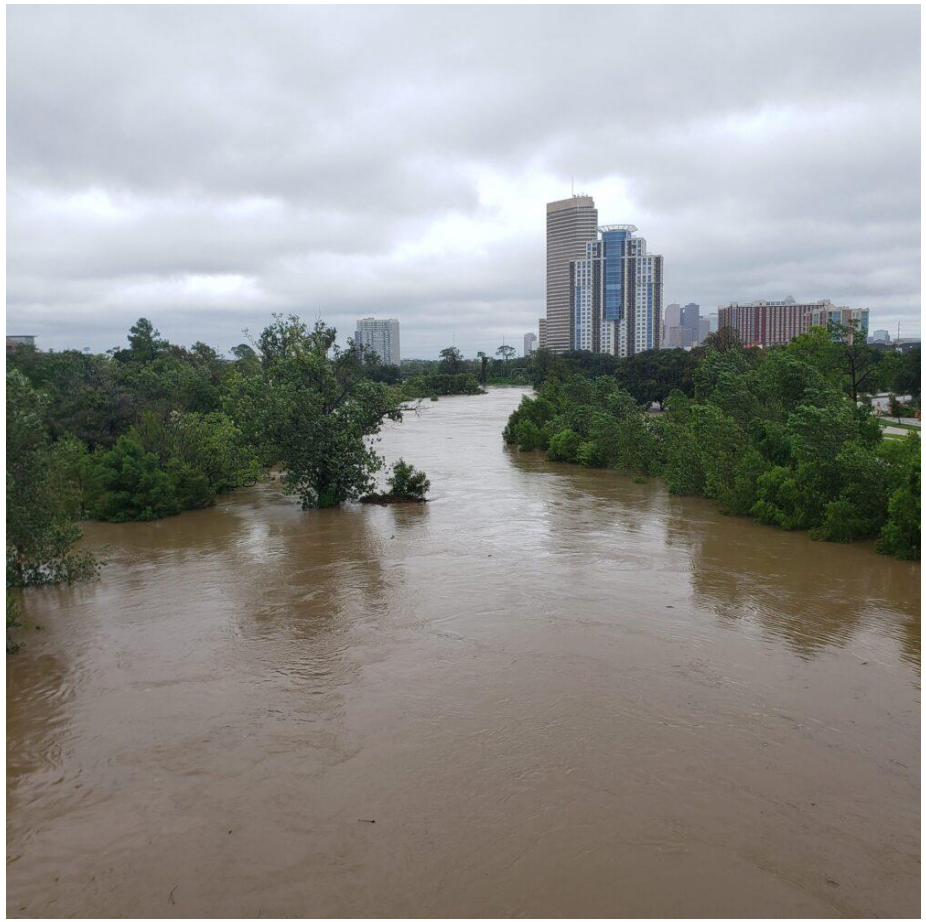


Photo Credit: Houston Public Media, David Smith

Hurricane Beryl Report

Photo Credit: AP Photo, David J. Philip

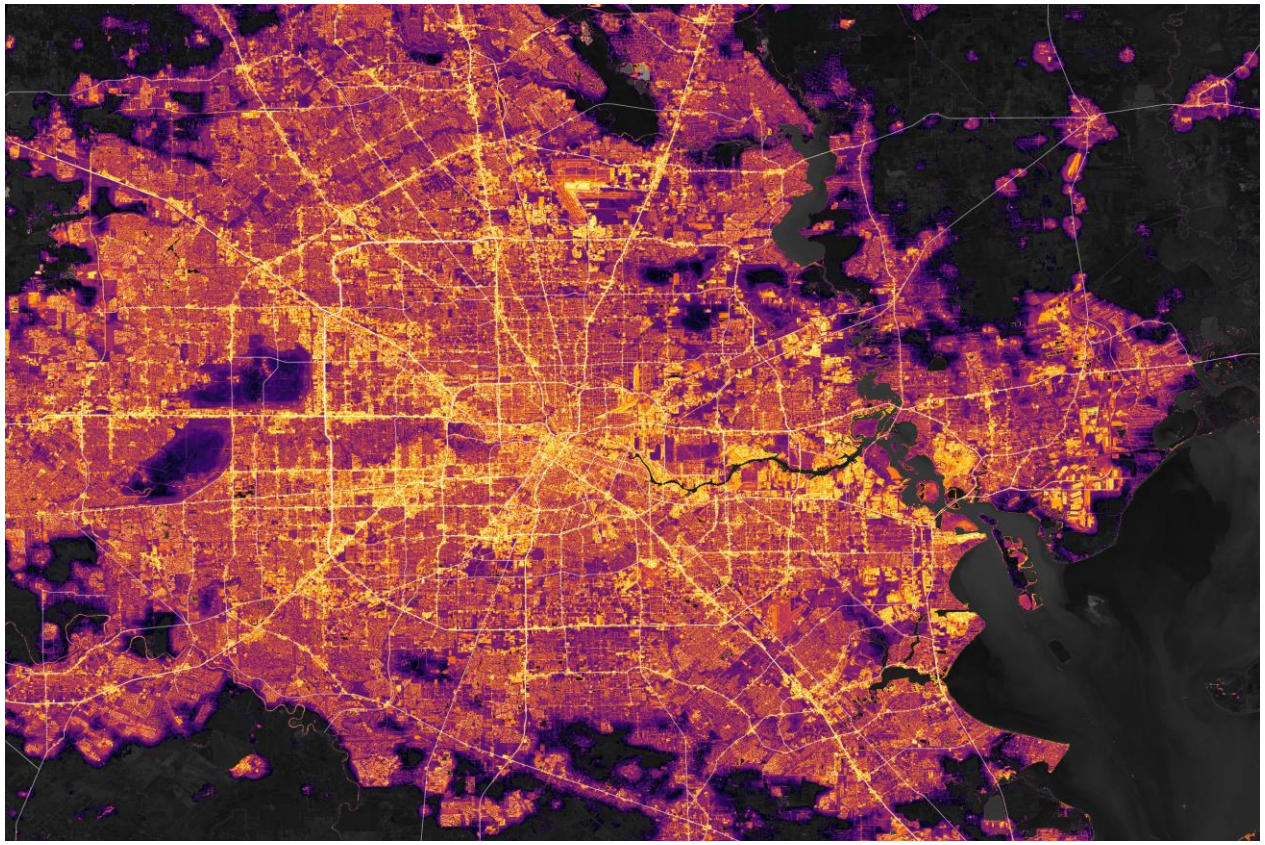
2024 Derecho Event

- May 16, 2024
- Expansive, Fast Moving Thunderstorms
- 100 mph peak, 75 mph sustained wind speeds
- Straight-Line Wind

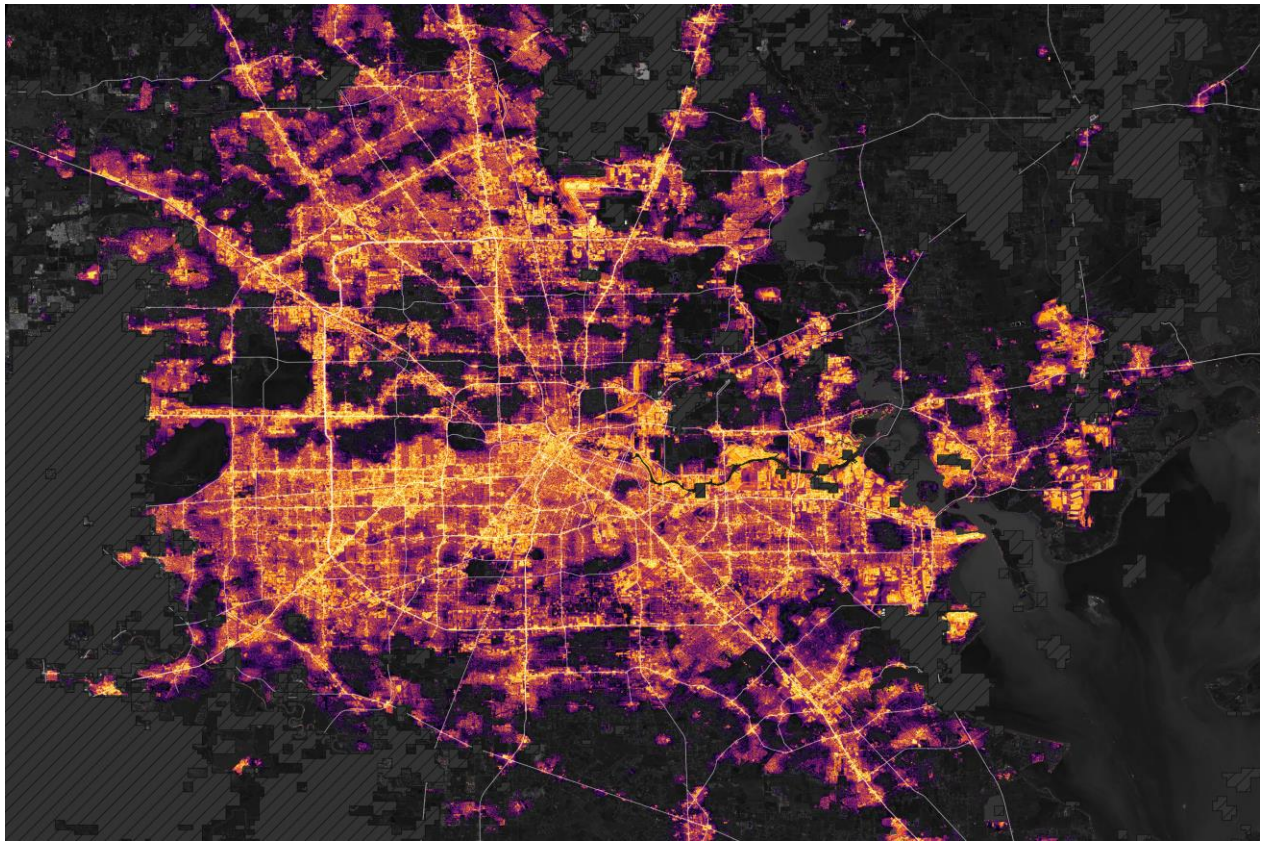
14 transmission lines damaged

1.05 million customers without power

April 24, 2024



May 18, 2024



Images from the VIIRS Sensor on the NASA-NOAA Suomi NPP Satellite, NASA Earth Observatory

Hurricane Beryl Report

Goals of the Report:

- Assess utility preparedness for and response to severe weather events.
- Develop recommendations to reduce the length and affect of service outages following future severe weather events.

Methodology

- 120+ RFIs submitted to electric service providers in the affected area.
  - 5 Electric Utilities
  - 32 Electric Cooperatives
  - 28 Municipalities
- 19 RFIs submitted to large water utilities serving GHA.
- 16 RFIs submitted to telecom utilities in Harris and Montgomery counties.

Common Issues with Drills

Internally-Managed Exercises

Restricted Participation

Static Drill Conditions

Common Issues with Communication Strategies

Lack of Proactive Communications

Inconsistent and Inaccurate Messaging

Communication Plan Exceeded Staffing Capabilities

Recommendations

Increase external participation in drills.

Test outage trackers as part of pre-storm preparations.

Secure Resilient Emergency Communication Resources

Incorporate outage tracker disruptions and increase user traffic in drills.

Review and enhance pre-storm communications with local governments and critical loads.

Thank You!

Contact:

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PUC.TEXAS.GOV

Guidehouse

Process Improvement Opportunities

Emergency Operations Plan Workshop

EOP Executive Summary Template

To support continuous improvement in future EOP filings, a template was developed to assist with the required Executive Summary submission for all EOPs. Use of the template is recommended but not required.

- Will be provided by the PUCT
- Template includes the following:
  - Entity Information
  - 16 TAC § 25.53 EOP requirement mapping
  - Provides standardized table to list applicable documents and corresponding pages
  - Ability to fulfill the requirement to “include a reference to specific sections and page numbers of the entity’s EOP that correspond with the requirements of this rule.”

EOP Executive Summary Template

Executive Summary

16 Texas Administrative Code (TAC) § 25.53 requires all Texas electric entities to file an Emergency Operations Plan (EOP) annually. This rule establishes requirements for the annual EOP filing. As part of the annual EOP filing, entities must file an executive summary that provides entity information, summarizes EOP content, and includes a signed affidavit affirming personnel training, business continuity, and other requirements as detailed in 16 TAC § 25.53.

In accordance with 16 TAC § 25.53, ***Entity Name*** ("***Acronym***") hereby files its updated Emergency Operations Plan ("EOP").

Entity Information

Entity Legal Name: Click or tap here to enter text.

Entity Registration Number[1]: Click or tap here to enter text.

Entity Type: Choose an item.

Entity Power Region[2]: Choose an item.

EOP Executive Summary Template

Joint Filing

If the filing is a joint filing for multiple entities registered with the Public Utility Commission of Texas, provide a list of all jointly filing entities in **Attachment 1**. If this does not apply, write **N/A** in the attachment.

Generation Facilities

If the filing includes multiple generation facilities within a single registration, provide a list of all applicable generation facilities that are included in the EOP filing in **Attachment 2**. If this does not apply, write **N/A** in the attachment.

Generation Facility Changes

Note any changes in Generation facilities occurred since the previous filing (ex: changes in generation output, purchasing or selling of assets), complete **Attachment 3** with a description of changes. If no changes were made, write **N/A** in the attachment.

EOP Executive Summary Template

EOP Filing Requirement Mapping

The table below includes the 16 TAC § 25.53 requirements required by all reporting entities.

Instructions: *Complete the below EOP roadmap to fulfill the requirements to include a reference to specific sections and page numbers of the entity's EOP that correspond with the requirements of this rule.*

16 TAC § 25.53	Description	Applicable Document(s)	Page(s)
(c) (1) (A) (i)	Executive Summary		
(c) (3)	Continuous Maintenance of EOP		
(c) (4) (A)	Record of Distribution		
(c) (4) (B)	Emergency Contacts		
(c) (4) (C)	*Signed Affidavit from Entity's Highest-Ranking Representative Affirming the Following:*		
	Relevant Personnel are		

EOP Executive Summary Template

EOP Filing Requirement Mapping – Transmission and Distribution

The table below includes the 16 TAC § 25.53 annex requirements specific to electric utilities, transmission and distribution utilities, municipally owned utilities, and electric cooperatives.

Instructions: *Complete the below EOP roadmap to fulfill the requirements to include a reference to specific sections and page numbers of the entity's EOP that correspond with the requirements of this rule.*

16 TAC § 25.53	Description	Applicable Document(s)
(e) (1) (A) (i)	Weather Emergency Annex Operational Plans	
	Cold Weather	
	Hot Weather	

EOP Filing Requirement Mapping – Generation

The table below includes the 16 TAC § 25.53 annex requirements specific to electric cooperatives, electric utilities and municipally owned utilities that operate a generation resource in Texas; and Power Generation Companies (not including generation resources authorized under PURA § 39.918).

Instructions: *Complete the below EOP roadmap to fulfill the requirements to include a reference to specific sections and page numbers of the entity's EOP that correspond with the requirements of this rule.*

16 TAC § 25.53	Description	Applicable Document(s)	Page(s)
(e) (2) (A) (i)	Weather Emergency Annex - Operational Plans		
	Cold Weather		
	Hot Weather		

EOP Executive Summary Template

EOP Filing Requirement Mapping – Retail Electric Provider

The table below includes the 16 TAC § 25.53 annex requirements specific to Retail Electric Providers.

Instructions: *Complete the below EOP roadmap to fulfill the requirements to include a reference to specific sections and page numbers of the entity's EOP that correspond with the requirements of this rule.*

16 TAC § 25.53	Description	Applicable Document(s)	Page(s)
(e) (3) (A)	Pandemic and Epidemic Annex		
(e) (3) (B)	Hurricane Annex (gen, T&D, REP)		
(e) (3) (C)	Cyber Security Annex		
(e) (3) (D)	Physical Security Annex		
(e) (3) (E)	Additional annexes as needed or appropriate to the entity's particular circumstances		

Record of Distribution

Instructions: *Complete* ***Attachment 4*** *to fulfill the requirement to complete a record of distribution of the EOP to all applicable* ***Entity Name*** *personnel.*

Affidavit

Instructions: *Include a signed affidavit from the entity's highest-ranking representative that confirms the requirements in 16 TAC §25.53(4)(C) have been met. 16 TAC §25.53(4)(C) is referenced in the Executive Summary requirements description above.*

EOP Executive Summary Template

Attachment 1. Joint Filing Entity Names

If the filing is a joint filing for multiple entities registered with the Public Utility Commission of Texas, provide a list of all registered entities included in the EOP filing in the table below.

Note: If the joint filing contains more than ten (10) entities, add more rows to the table as needed to accommodate the number of entities in the filing. There should be one (1) row for each legal entity.

Legal Entity Name	Entity ID Number(s)	Entity Type	Entity Power Region(s)

Attachment 2. Power Generation Facilities

If the filing includes multiple generation facilities within a single registration, provide a list of all applicable generation facilities that are included in the EOP filing in the table below.

Note: If the joint filing contains more than fifteen (15) facilities, add more rows to the table as needed to accommodate the number of generation facilities in this filing. There should be one (1) row per generation facility.

Generation Facility Name	Generation Facility Location

EOP Executive Summary Template

Attachment 3. Generation Facility Changes

Provide a list of all changes in Generation facilities from previous filing. This includes the purchasing or selling of assets, changes in generation output, or change of a facility to mothball or decommissioned status. There should be one (1) change per row. If there are no changes, enter N/A in the first line. Add more lines to the table, as needed.

Generation Facility Name	Generation Facility Change

Attachment 4. Record of Distribution

Instructions: *Complete the table below to fulfill the requirement to complete a record of distribution of the EOP to all applicable* ***Entity Name*** *personnel.*

Note: Please add additional rows to the record of distribution table, as needed. There should be one (1) row per distribution.

Record of Distribution		
Distributed To	**Date Distributed**	**Approved By**

EOP Filing Tips and Tricks

Recommendations to improve the overall EOP filing process

Set a Review Schedule and Process

Create an annual review schedule to ensure your entity's EOP is accurate and up to date and avoid a last-minute rush to update content. Implement trigger points for conducting a review in addition to annual review.

Digitize and PDF

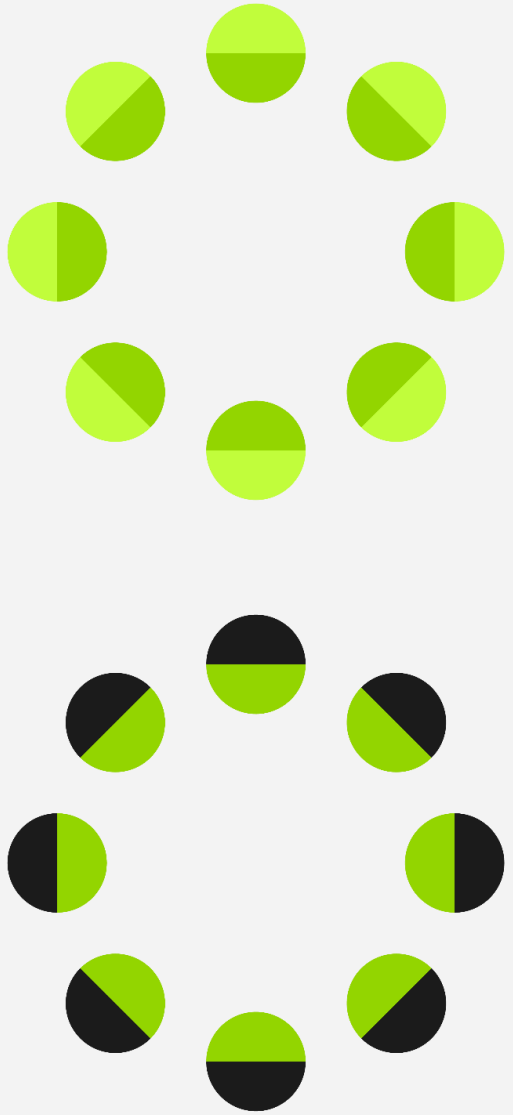
Digital documents can be more secure and easier to access than a paper EOP. Saving your EOP as a PDF can make it easier for your team to search for necessary portions and support review and compliance efforts.

Organize your EOP Logically

The EOPs should have mapping that reflects the requirements listed in the administrative rule but should also logically organize the EOP's content based on how your organization would most likely use it in an emergency.

Document Lessons Learned

Incorporate lessons learned from past severe weather events and best practices gathered from the industry to enhance your EOP's content and ensure it is up-to-date.



EOP Filing Tips and Tricks

Formalize Review Process

Create an annual review schedule to ensure your entity's EOP is accurate and up to date and avoid a last-minute rush to update content. Implement trigger points for conducting a review in addition to annual review

Annual EOP filings are required to be filed no later than March 15.

It is recommended that EOPs be filed January 1 through March 15 of each calendar year

EOPs are required to be continuously maintained.

EOP Filing Tips and Tricks

Formalize Review Process

Implement a Formal Review and Filing Process

A formal review and revision process will document all reviews and create a process to assist in completing reviews and filing of EOPs prior to the mandatory deadline of March 15. A formalized review process will also document the maintenance of the EOP documents even if no revisions are made

- Set annual review and filing schedule
- Create formal review control documentation
- Create a formal filing process and schedule
- Include availability of personnel for review and approval to prevent last minute rushing

EOP Filing Tips and Tricks

Formalize Review Process

Implement Trigger Points for Reviews

EOP documentation should be reviewed above and beyond an annual scheduled review if there are changes that impact the EOP. These reviews should be initiated by a determined set of criteria by each individual entity. Some examples are:

- System events
- Lessons learned
- Industry alerts
- Changes in personnel
- Changes in processes and tools
- Changes in equipment or system configuration
- Changes in regulatory requirements

EOP Filing Tips and Tricks

Organize EOP Logically

The EOPs should have mapping that reflects the requirements listed in the administrative rule but should also logically organize the EOP's content based on how your organization would most likely use it in an emergency.

Create an Organizational Structure for EOPs

16 TAC § 25.53 requires specific information to be included in EOPs but *does not prescribe a required structure for EOP filings*. EOPs should primarily be organized logically based on operational needs of each individual organization.

Where possible, EOPs should consider regulatory requirements and structure the EOP filings to reflect the regulatory requirements.

EOP Filing Tips and Tricks

Organize EOP Logically

Implement Mapping for the EOP

Develop a comprehensive mapping for the EOP filings. Use of mapping will allow entities to identify EOP requirements and map them to specific documents, sections, and pages of the EOPs to ensure all necessary information is included.

Implement Uniform Documentation

EOP filings often contain multiple process documents and checklists for an organization. Where possible, implement a uniform templated approach to the process documents and templates. This will create uniformity across an entity/organization and allow a streamlined approach to reviewing and revising documentation.

EOP Filing Tips and Tricks

Digitize and PDF EOP Filings

Digital documents can be more secure and easier to access than a paper EOP. Saving your EOP as a PDF can make it easier for your team to search for necessary portions and support review and compliance efforts.

Include bookmarks for specific references

Bookmarks make it easy to maneuver through the document. Bookmarks should point directly to the major areas of the filing documents and will save time during reviews and revision efforts.

Combine Documents into a Single Filing

If you’re filing multiple documents, combine them into a single document for filing purposes. Combined documents with bookmarks and references create a single source document for the full EOP filing.

EOP Filing Tips and Tricks

Document Lessons Learned

Document Lessons Learned

Utilize lessons learned through developing, implementing, and reviewing EOP documentation. A robust lessons learned process includes a comprehensive review that focuses on all aspects of the EOP documentation, not just when an event occurs. Incorporate a lessons learned approach to all aspects of the EOP documentation.

Industry Best Practices

Best Practices for Weather Emergency Preparedness

The following best practices will support improved future emergency operation plans. Best practices were informed by Guidehouse's review of the submitted EOPs, combined with Guidehouse's experience working independently with electric utilities across North America. The best practices, if properly implemented, could significantly improve the level of preparedness of Texas electric entities for future adverse weather events. For a full list of best practices provided, please refer to the Emergency Weather Preparedness report.

The included best practices are measures that exceed the requirements set forth in 16 TAC § 25.53 and are not required.

The 2024 Weather Emergency Preparedness Report can be found on the PUCT website under Filing Control Number 53385, Item Number 2537
Link: 53385_2537_1429189.PDF

Industry Best Practices

General Best Practices

- Define organizational emergency preparedness and response levels based on expected level of impact on business operations and customers
- Develop response based on these levels
- Incident commanders and those responsible for EOP development should host and attend workshops to expand and share knowledge to improve emergency planning and share lessons learned

Industry Best Practices

1 – ICS Structure

- Define accountability and reporting hierarchical structure with an incident commander.
- Provide uniform, corporate-wide approach for managing emergencies.
- Set expectations for reliability, operational performance, and safety.
- Establish performance metrics and benchmarks to assess the effectiveness of preparation, response, and restoration efforts.
- Formally and regularly document continuous improvement process to update plans and procedures and adopt lessons learned.

Industry Best Practices

2 – Asset Management and Inspections

- Develop comprehensive asset management and inspections plans to include, but not limited to, periodic plant and pole inspections, vegetation management, and conducting aerial patrols to maintain T&D lines.
- Identify and prioritize systems and components that are particularly vulnerable during adverse weather events.
- Maintain back-up and maintenance equipment.

Industry Best Practices

? 3 – Risk Management

- Develop comprehensive summer and winter weatherization checklists.
- Develop checklists for preparing for and detecting any potential system issues prior to severe weather, such as floods or hurricanes.
- Schedule routine readiness inspections, repairs, and weatherization activities in advance of extreme weather.
- Test units that have been offline for as significant amount of time to ensure readiness.

Industry Best Practices

4 – Staffing

- Specify resources needed and types of skills/roles that would be needed to effectively respond to various levels of an emergency and when resources should be increased or reduced.
- Prepare alternate staff in the event primary personnel are unable to be present.
- Ensure enhanced staffing measures are in place prior to extreme weather seasons.
- Prepare to mobilize a restoration workforce and set up robust and strategic logistics plan.

Industry Best Practices

5 – Mutual Assistance & Support

- Set up agreements with mutual aid organizations.
- Pre-negotiate contracts with restoration vendors.
- Incorporate mutual assistance plans in the EOP, including procedures to request additional equipment if backup equipment is not sufficient.
- Become a member of multiple regional mutual assistance organizations, such as Texas Mutual Assistance Group and Midwest Mutual Assistance Group.
- Develop and share coordination, communication, and training plans with mutual aid groups.

Industry Best Practices

6 – Training and Emergency Drills

- Ensure primary and alternate staff are trained and participate in drills at least once per year.
- Expand readiness drills beyond companies to encourage collaboration and include past scenarios.
- Specify which types of training and drills are performed in the EOP.
- Observe other utilities' drills.
- Operators should be trained on freeze protection monitoring, methods to check insultation integrity and reliability, and output of heat tracing.

Industry Best Practices

7 – Situational Awareness

- Define a process to recognize an adverse weather event to proactively activate emergency operations.
- Incorporate use of advanced technologies to predict, detect, and monitor adverse weather events (ex: LiDAR detection to track spread of wildfires)
- Develop plans to include maintenance of additional fuel reserves, fuel inventory solicitation process, and ability to dispatch plants early in advance of extreme weather to improve situational awareness.

Industry Best Practices

8 – System Design and Hardening

- Develop short and long-term system design and hardening plans to prepare energy infrastructure to withstand extreme weather conditions.
- Move overhead lines underground when cost effective.
- Install synchronization and black start relay systems. Replace existing electromechanical relays with microprocessor-based relays that feature event reporting ability.
- Add automated switches with fault detection isolation and restoration capability.

Industry Best Practices

9 – Communication System

- Identify backup communication methods and ensure appropriate communications protocols are established.
- Install new or upgrade wide area and field area communications; add a mobile, containerized backup command center.
- Establish primary, secondary, and tertiary communication methods in advance of severe weather.
- Install and maintain permanent backup generation at service centers and communication facilities.

Industry Best Practices

10 – Activation of EOP

- Define which roles/personnel can decide to activate the EOP.
- Define roles and responsibilities for the response activation.
- Develop weather-based event categorization table to prescribe levels of activation based on potential weather impact.
- Define specific criteria and procedures that require activation of the EOP for each type of hazard (ex: flood, wildfire, extreme cold) and level of potential risk or impact.

Industry Best Practices

11 – Emergency Management and Planning Systems, Technology, and Automation

- Modernize system inspections and reporting to move away from paper-based inspections and towards automated processes using a software to generate automatic reports.
- Adopt technologies to improve monitoring of critical equipment.
- Adopt use of emergency management software to track staff, responsibilities, actions, metrics, and benchmarks during an emergency software.
- Use unmanned aerial vehicles to assist in damage assessment.

Industry Best Practices

12 – Public Communications

- Use multiple channels for customer communications before, during, and after adverse weather events using text, automatic phone calls, emails, social media, and more.
- Identify roles and responsibilities for communications officers and liaisons to coordinate with local officials and stakeholders
- Provide daily updates via email to Government portal sites (where applicable) that include localized outage and restoration information.

Texas Emergency Management Overview for Utilities

Olivia Hemby

Critical Infrastructure Planner

Critical Infrastructure Security & Risk Management Division

Overview

- Intro to NIMS implementation in Texas
- State-level Emergency Management Activities
- Connecting Industry EOPs & Government EM processes
- State Processes & Priorities
- Questions

National Incident Management System in TX

- *Presidential Policy Directive – 8: National Preparedness*
- Gov. Rick Perry: RP-40, Feb 2005 adoption of NIMS for Texas
- Texas Government Code Chapter 418: Emergency Management (Texas Disaster Act of 1975)

  "…provide the authority and mechanism to respond to an energy emergency." –Sec. 418.002

State Planning

- *Threat & Hazard Identification and Risk Assessment* (THIRA) and *Stakeholder Preparedness Reports*
- *State Hazard Mitigation Plan*
- *State Homeland Security Strategic Plan 2021-2025*
- *State of Texas Emergency Management Basic Plan & Annexes* (State's EOP)
- Agency or Departmental Emergency Operations Plans and/or Hazard-Specific Plans
- Continuity of Operations Plans (Continuity of Government)

Training, Exercise, & After-Action Cycle

- Incident Command Systems (ICS), NIMS training
  - State Training Officer under TDEM
  - Online and local opportunities
- Homeland Security Exercise & Evaluation Program (HSEEP) standards
- After-Action Reports & Improvement Plans

Integrating into local preparedness & response processes

- Preparedness, Planning, Training & Exercises
  - Emergency Management Offices/Coordinators
  - Local Emergency Planning Committees (LEPCs)
  - Council of Governments– Regional THIRA/SPR, HSSP-IP, UASI, Regional Planning (transportation, development, economic, etc.)
  - State level
  - Federal: FEMA Region VI, multi-state initiatives, DOE

Intent of an Emergency Operations Plan

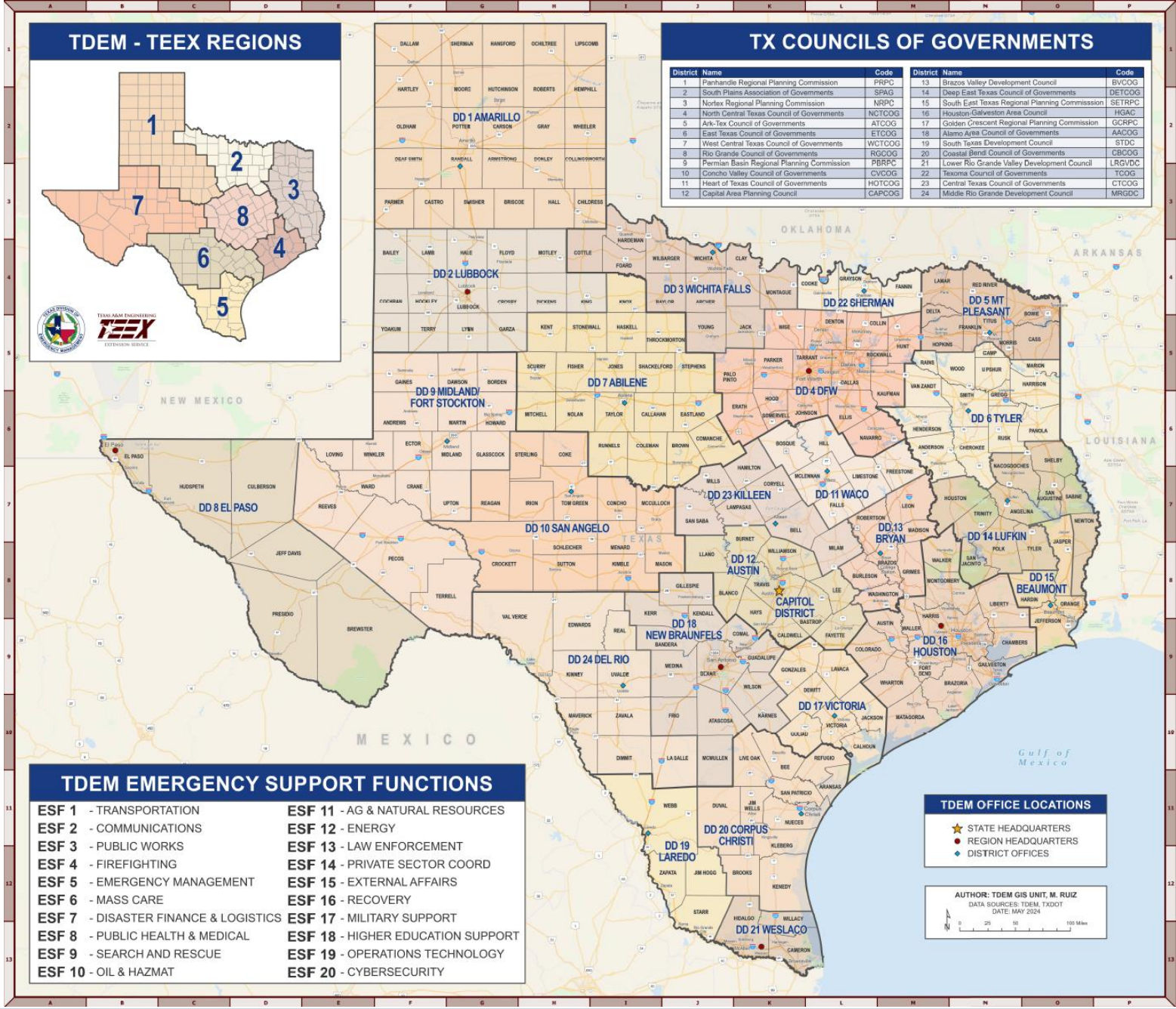
FEMA “Comprehensive Planning Guide 101”:

- The process of planning is just as important as the resulting document.
- Plans are not scripts followed to the letter, but are flexible and adaptable to the actual situation.
- Effective plans convey the goals and objectives of the intended operation and the actions needed to achieve them.

The WHY is important.

Response

- Local Emergency Management
  - Local Emergency Operations Centers
  - Incident Command Posts
- 8 Disaster Regions
  - Regional EOCs
- 24 Disaster Districts + Capitol District
  - DD EOCs
- State Operations Center
- FEMA Region VI



Emergency Support Function 12 & the State Operations Center

- SOC Operations according to ESF model
- Logistics & Information Machine

Emergency Support Function 12 & the State Operations Center

- American Red Cross
- Public Utility Commission of Texas
- Railroad Commission of Texas
- State Comptroller of Public Accounts
- Texas A&M AgriLife Extension Service
- Texas A&M University System
- Texas A&M Engineering Extension Service
- Texas A&M Forest Service
- Texas Animal Health Commission
- Texas Commission on Environmental Quality
- Texas Commission on Fire Protection
- Texas Department of Agriculture
- Texas Department of Criminal Justice
- Texas Department of Family and Protective Services
- Texas Department of Housing and Community Affairs
- Texas Department of Information Resources
- Texas Department of Insurance
- Texas Department of Licensing and Regulation
- Texas Department of Motor Vehicles
- Texas Department of Public Safety
- Texas Department of State Health Services
- Texas Department of Transportation
- Texas Division of Emergency Management
- Texas Education Agency
- Texas Facilities Commission
- Texas General Land Office
- Texas Health and Human Services Commission
- Texas Military Department
- Texas Office of the Attorney General
- Texas Parks and Wildlife Department
- Texas State Auditor's Office
- Texas State University System
- Texas Tech University System
- Texas Voluntary Organizations Active in Disaster
- Texas Workforce Commission
- The Salvation Army
- University of Houston System
- University of North Texas System
- University of Texas System

Emergency Support Function 12 & the State Operations Center

- Situational Awareness & Reporting
  - Outages: duration, location, restoration estimation
  - Critical infrastructure & loads
  - Interdependencies
- Stakeholder coordination
  - Utilities
  - Other ESFs & Critical Infrastructure

Emergency Support Function 12 & the State Operations Center

- Public Information
- Governor & Elected Official requests
- Operational Coordination
- After-Action Process

State Priorities (EM perspective)

- Wildland fire/Urban Area Interface
- Extreme heat/drought
- Extreme winter weather/cold
- Flood
- Hurricanes
- Cybersecurity
- Black Start

State Priorities

Expectation Management & Community Lifelines

- Life Safety & Health – “Consequence Management”
- Communications
- Public Information
- Economic impacts & long-term resiliency

Questions?

Thank You!

Contact:

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PUC.TEXAS.GOV

Guidehouse

Closing Remarks

Questions?

Thank You!

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