

Filing Receipt

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BRAZOS ELECTRIC POWER COOPERATIVE, INC. P.O. Box 2585, Waco, Texas 76702-2585 7616 Bagby Ave., Waco, Texas 76712 (254) 750-6500

April 18, 2022

To:	Public Utility Commission of Texas
Attention:	Filing Clerk via online filing system
Re:	PUC Project No. 53385 - Emergency Operations Plan Submission ("EOP") for
	Brazos Electric Power Cooperative, Inc. ("Brazos Electric")

Dear Filing Clerk:

In accordance with the Subst. R. §25.53, Brazos Electric hereby submits its Emergency Operations Plan ("EOP"). The details of this submission are contained in Appendix 1 of Brazos Electric's redacted EOP, attached hereto. Additionally, a complete copy of Brazos Electric's EOP is filed confidentially.

Please contact me should you have any questions at <u>sheino@brazoselectric.com</u> or 254-750-6295.

Respectfully submitted,

Shari Heino Chief Risk & Compliance Officer Brazos Electric Power Cooperative, Inc.

BRAZOS ELECTRIC POWER COOPERATIVE, INC. EMERGENCY OPERATIONS PLAN ("EOP")

REDACTED VERSION for filing

Version: 2022-1

Revision Date: April 18, 2022

This April 18, 2022 EOP supersedes all prior versions of the EOP.

i

Change History:

Version	Description of change	Date
Ver. 2012-1	Initial release with new version numbering format. Updates include changes to ERCOT Load Shed Table in section 3, changes in sections 2-6 for SERC region procedures and changes in section 7 for weatherization preparedness.	05-10-2012
Ver. 2013-1	Update to all sections to incorporate content from Emergency Load Shedding Process, Under-frequency Load Shedding Process, Control Center Backup Process, Emergency Operations Process, Sabotage Event Response Process and Disturbance Response Process into this document and retires those processes from use. This change does not result in substantive revisions to any of the procedures described in the EOP or incorporated processes.	03-07-2013
Ver. 2013-1.1	Revised Section 3 with ERCOT Load Shed Table and SERC Load Shed Table updates; Section 5.5 update for test of power sources and security at backup site.	06-12-2013
Ver. 2014-1.0	 The following sections have been updated: Section 3 - for ENTERGY LBA in SERC region; Section 5 - two-hour notification time, test of equipment power sources and security at backup site, contacts, critical facility list Section 6 - for new EOP-004 requirements. Section 7 - minor updates Section 8 - new patrolman area Section 9 - pandemic team members Exhibit F - update operations coordination and contact information 	01-01-2014
Ver. 2014-1.1	Update to Exhibits A, B, C, D, E	02-25-2014
Ver. 2014-1.2	The following sections have been updated Section 2.4, Additional procedures Section 3, Table 3-1 Section 5, Exhibit 5-2 and 5-4 The following Exhibits have been updated Exhibit A Exhibit E	09-03-2014
Ver. 2015-1.0	The following sections have been updated Section 2 – add reference to geomagnetic disturbance plan in 2.4 Section 3 – Tables 3-1and 3-2 Section 4 – support personnel list Section 5 – Exhibit 5-2 and Exhibit 5.5 Section 8 - Table Section 9 – various edits throughout entire section Exhibits A, B, C, E	02-11-2015
Ver. 2015-2	The following sections updated for PUCT severe weather requirements Sections 1,4,7 and Exhibit H	05-26-2015

Version	Description of change	Date
Ver. 2016-1	The following sections have been updated	02-16-2016
	Section 1 – Updates related to generation desk operations	
	Section 2 – Updates related to generation desk operations	
	Section 3 – Update Table 3-1 and 3-2	
	Section 4 – Update support personnel list	
	Section 5 – Updates related to generation desk operations	
	Section 6 – Updates related to generation desk operations	
	Section 8 undate Table and other minor edits	
	Exhibits A B C F	
Ver. 2017-1	The following sections have been updated	02-15-2017
	Section 1 – Various edits throughout section	
	Section 2 – Various edits throughout section	
	Section 3 – Various edits throughout section	
	Section 4 – Update support personnel list	
	Section 5 – Updates exhibits 5-2A and 5-2B	
	Section $6 - Various$ edits throughout section	
	Section $9 - various constitution group section Exhibits A B C E E$	
	LAMONS A, D, C, L, F	
Ver. 2017-2	Minor updates to clarify backup control transition time frame and	03-01-2017
	decision to transition	
Ver. 2018-1	The following sections have been updated	2-7-2018
	Section 1 – minor edits	
	Section 2 – no edits	
	Section 3 – minor edits and update tables	
	Section 5 formatting and undate tables	
	Section $6 - \text{minor edits}$	
	Section 9 – minor edits and formatting	
	Exhibits A, B, C, E, F	
Ver. 2019-1	The following sections have been updated	2-1-2019
	Section 1 – no edits	
	Section 2 – minor edits	
	Section 3 – minor edits and update tables	
	Section 4 – update tables	
	Section 6 minor edits and undate tables	
	Section 7 $-$ minor formatting edit	
	Section 8 – undate table	
	Section 9 – minor edits and formatting	
	Exhibits A, B, C, D, E, F	
Ver. 2020-0	The following sections have been updated	2-1-2020
	Section 1 – minor edits	
	Section 2 – minor edits	
	Section 3 – minor edits and update tables	
	Section 4 – update tables	
	Section 6 minor edits and under tables	
	Section $7 = \text{minor edits and formatting}$	
	Section 8 – undate table	
	Section 9 – minor edits and formatting	
	Exhibits A, B, C, D, E	

Version	Description of change	Date
Ver. 2021-1	The following sections have been updated	3-1-2021
	Section 1 – minor edits	
	Section 2 – minor edits	
	Section 3 – minor edits	
	Section 4 – update tables	
	Section 5 – update tables	
	Section 6 – minor edits and update tables	
	Section 7 – minor edits and formatting	
	Section 8 – update table	
	Section 9 – minor edits and formatting	
	Exhibits A-F	
Ver. 2022-0	The following sections reviewed and updated as follows:	2-15-2022
	Section 1 – no edits	
	Section 2 – minor edits	
	Section 3 – minor edits, update tables	
	Section 4 – update tables	
	Section 5 – update tables	
	Section 6 – minor edits and update tables	
	Section 7 – multiple edits	
	Section 8 – no edits	
	Section 9 – multiple edits	
	Exhibits A-F	
	Exhibits I and J deleted	
Ver. 2022-1	Revised to reflect new PUCT Subst. R. 25.53 requirements. Sections 3-	4-18-2022
	9 were moved to their own annexes, and other annexes, created from	
	existing procedures, were as needed to comply with the rule. Exhibits	Approved by
	were incorporated into annexes or appendices. Various conforming	Johnny York
	changes were made, but no substantive changes to operating	(VP –
	procedures were made.	Transmission)
		on this date

This EOP shall be reviewed at least once per calendar year and shall be updated within 60 days of the date of any significant change in Brazos Electric's facilities, Brazos Electric's operational processes or NERC Reliability Standards or other applicable rules or laws which affects the EOP. Revisions to the EOP shall be provided to the PUCT and other appropriate entities as required by NERC Reliability Standards and ERCOT Protocols.

For privacy and security concerns of Brazos Electric's members and wholesale customers, any distribution of phone lists and Load Shed Priority Lists is limited to this EOP's active operational and communications personnel. All numbers shall be treated as confidential and used only for the implementation of this EOP. Current copies of these lists are maintained in a document folder accessible by control room personnel.

1.0 EMERGENCY OPERATIONS PLAN OVERVIEW

PURPOSE

The purpose of this Emergency Operations Plan ("EOP") is to specify the organization, responsibilities and actions to be taken during generation short supply and system emergencies that may arise impacting Brazos Electric. System emergencies include adverse operating situations due to severe weather or other causes that pose a threat to the reliable operations of Brazos Electric generation and transmission system facilities. Portions of this EOP may also be enacted due to a Security Alert as under Annex C4.

ORGANIZATION AND RESPONSIBILITIES

A full table of contents and summary of the various annexes of the EOP are provided in Appendix 1.

The Vice President - Transmission is responsible for the conduct of this EOP and approves all changes. The Manager Transmission System Operations and other personnel in the Transmission System Operations Department shall provide support. The Manager of Transmission System Operations and the Chief System Operator shall be responsible to maintain, update, and manage revision control, as needed the EOP and all associated files. This plan is developed with input from various Brazos Electric organizational units including the Engineering, Transmission Maintenance, System Operations, Generation and Power Supply departments. Comments concerning this EOP and requests for copies may be addressed to the System Operations department.

The Load Shed Priority Lists for emergency load shed shall be updated annually on or about February 1 to reflect the previous year's peak for the forthcoming season and to make the Load Shed Priority Lists current.

The Brazos Electric System Operations control room is currently staffed with at least one on-duty System Operator for each desk, transmission (SYSOPS) and generation (QSE). If conditions warrant, additional System Operators may be called. If there is a potential issue with communications or with control system equipment, the associated support staff may be put on alert or called to service as deemed necessary by the on duty System Operator. The Brazos Electric System Operators shall take steps to ensure that only required support and management personnel are present in the System Operations Control Center during a capacity or energy emergencies.

COORDINATION

Brazos Electric is a generation and transmission electric cooperative providing wholesale power to its sixteen distribution electric cooperative members in a service area covering 68 counties throughout Texas. Brazos Electric does not serve any retail customers. The manner in which the EOP will be coordinated with Brazos Electric's member cooperatives and other wholesale customers is presented in Section 2.0 below. Any communications by Brazos Electric with the public that may be necessary during system emergencies are addressed in Annex C1.

Brazos Electric personnel shall coordinate its emergency plans with ERCOT as required by applicable rules and laws.

Brazos Electric shall render all available emergency assistance per established agreements to others as requested, provided that the requesting entity has implemented its comparable emergency procedures, unless such actions cannot be physically implemented or would violate safety, equipment, or regulatory or statutory requirements.

ACTION

Operation of the Brazos Electric system during emergency or adverse conditions shall be conducted in accordance with operational procedures of the ERCOT and SERC reliability regions, as applicable. Brazos Electric shall comply with reliability directives issued by ERCOT or other authorized entity unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances, ERCOT or other authorized entity shall be immediately informed of the inability to perform the directive so that alternate actions can be implemented. ERCOT or other authorized entity and any other potentially impacted neighbors shall be informed of real-time or anticipated emergency conditions, and take actions to avoid, when possible, or mitigate the emergency. Brazos Electric shall comply with the directives of ERCOT or other authorized entities, based on the next day assessments in the same manner in which Brazos Electric would comply during real time operating events.

Detailed plans and procedures cannot anticipate all possible scenarios; therefore, the guidelines presented in this EOP may be adapted as necessary to resolve the emergency at hand. System Operators will issue instructions to field personnel as needed to perform any necessary actions. Some controlling actions taken by Brazos Electric operating personnel may include, but are not limited to:

• Disconnection of an affected facility or reconfiguration of transmission system if an overload on Brazos Electric's transmission facility or abnormal voltage or reactive condition persists and its equipment is endangered. ERCOT and all neighbors impacted by the disconnection or reconfiguration shall be informed prior to switching, if time permits, otherwise, immediately thereafter.

- Updating planned transmission outage details in the ERCOT Outage Scheduler when outages are cancelled or recalled by ERCOT. Brazos Electric shall also notify neighboring transmission entities that may be impacted by the cancellation or recall of a planned transmission outage.
- Restoration of the reactive power balance, to the extent capable, using reactive transmission devices or by direction to generators.
- Manual load shedding actions.

During system emergency operating conditions or emergency short supply conditions, the Brazos Electric control center operator responsible for the generation desk shall make available to ERCOT all uncommitted resources available in the time frame of the emergency. The control center operator shall not remove a resource from service without coordinating the removal with ERCOT.

When emergency load shed operations are foreseen or have been directed by either ERCOT or SERC regional grid operators, Brazos Electric's System Operator shall notify the Chief System Operator, General Manager, the Vice President of Transmission and the Manager of Transmission System Operations. If media appeal for voluntary load reductions during implementation of ERCOT or SERC system emergency conditions is likely, the Brazos Electric System Operator shall contact the Vice President of Transmission who, as needed, may call division and support personnel to report to Brazos Electric's headquarters. The Vice President of Transmission will request the Manager of Transmission System Operations and other support personnel to contact the managers of member cooperatives and other wholesale customers to advise them of conditions. Should a media appeal for voluntary load reductions be required, such media appeal will be communicated by the Manager of Transmission System Operations and support personnel in accordance with Annex C1.

If firm load shed under system emergency conditions becomes a high probability, the Vice President of Transmission will so advise the General Manager.

During a system emergency event, Brazos Electric may be requested by the PUCT or other regulatory agencies to provide periodic updates on the status of operations, outages, and restoration efforts until all event-related outages are restored or unless otherwise notified by the requesting agency. The PUCT or other agencies may also request submission of an event action report or lessons learned report.

Brazos Electric maintains additional procedures in other annexes of this EOP to address operating emergencies. Additional operating procedures for System Operators are maintained in the control room that address system black start restoration, geomagnetic disturbance operating plan, emergency ties, block load transfers and generation desk operations. If required, procedures to address remedial action plans or plans to address Interconnection Reliability Operating Limits (IROLs) or Generic Transmission Limits (GTLs) associated with Brazos Electric facilities would be developed and made available in the control room for the System Operators.

The Brazos Electric System Operators have the authority to take or direct timely and appropriate real time actions, up to and including the shedding of firm load without obtaining approval from higher level personnel to prevent or alleviate system emergency conditions.

2.0 COORDINATION WITH MEMBER COOPERATIVES

For compliance purposes with P.U.C. SUBT. Rule 25.53, Brazos Electric must coordinate its EOP with each of its member cooperatives and other wholesale customers referred to herein as a Distribution Service Provider ("DSP"). Each year Brazos Electric will request from these DSPs a priority list of substations and feeder circuits to participate in emergency load shed actions during system emergency conditions. In addition, the requested information should include identification of those circuits that serve "critical loads", if any, as that term is defined by each DSP, subject to any applicable statutes, rules, standards or regional market or reliability rules. The information provided will be used by Brazos Electric in developing an emergency load shed action plan that recognizes these customers and will also be used in planning automatic underfrequency relay ("UFR") load shed protection. Further, Brazos Electric sends a letter each year requesting its DSPs to notify Brazos Electric of any changes to each DSP's priority load shed list as such changes occur. Each DSP shall also notify Brazos Electric whether the DSP intends to perform its own load shed obligations or that Brazos Electric personnel will perform such actions on such DSP's behalf.

During any system emergency event, Brazos Electric's direct communication will be only with the DSPs and with the media to broadcast voluntary conservation appeals. Communications with retail customers will be done only by the DSPs except for those cases where Brazos Electric has been authorized to contact specified large loads regarding voluntary curtailment.

Brazos Electric will continue to plan for, keep current on, and include critical loads in Brazos Electric's EOP load shed and under-frequency relay protection plans. System conditions may warrant load shed at substations not listed in the EOP for the current year.

Based on the information provided by its DSPs, Brazos Electric will maintain a list of substation and feeder circuits which serve life-sustaining and critical loads including, without limitation, gas compressor station (third party or BEPC owned) loads used to provide gas to the power plants. This information will be used, when possible, to determine priorities for restoring service. In an actual system emergency condition, however, Brazos Electric will rely on the DSPs to provide information about problems with such life-sustaining and critical loads because of their closer proximity to the local situation.

Copies of the Brazos Electric EOP shall be sent to each DSP after approval by Brazos Electric senior management. A meeting shall be scheduled each year as necessary between Brazos Electric and the DSPs to review the EOP and train personnel with emergency response procedures and preparedness activities.

2.1 ERCOT Region Load Shed Obligation

Each year Brazos Electric shall establish the load shed obligation for each DSP that will be utilized for allocating the total Brazos Electric system load shed obligation requested by ERCOT. This load shed obligation shall be based on the DSP's load ratio to the total Brazos system load at the time of the previous year's ERCOT 4CP peak demand. See Annex T4 for additional detail.

2.2 SERC Region Load Shed Obligation

Brazos Electric loads in the SERC region are served through network transmission service provided by the Entergy transmission system. The Midcontinent Independent Transmission System Operator ("MISO") operates the power markets for the SERC region where the Brazos Electric loads are located (MISO-South region). MISO also functions as the Balancing Authority and Reliability Coordinator for this area and Local Balancing Authority services for the Brazos Electric loads are provided by contract with the Entergy Local Balancing Authority ("Entergy LBA"). Each year Brazos Electric shall review and determine requirements for load shed obligation for its DSPs operating in the SERC region and coordinates its under-frequency and emergency load shed plans with those entities as may be required by operating agreements or regulatory requirements. It is recognized that the Entergy LBA, Entergy Transmission Operator or MISO has authority to issue directives in response to system emergencies or adverse operating conditions that potentially impact the Brazos Electric system or require Brazos Electric action. See Annex T4 for additional detail.

2.3 EOP Communications

A phone conference system shall be installed and maintained by Brazos Electric between the Brazos Electric control center and each DSP to support the communications undertaken during system emergency conditions. Each DSP shall have one phone line assigned to the phone system. The DSP can request additional lines if the phone system can accommodate the additional lines. The cost for the phone lines shall be the responsibility of the DSP requesting the phone lines.

A simulated quarterly load shed test shall be conducted by Brazos Electric with all DSPs. The purpose of this test is to verify operation of the ring-down phone system and exercise the operational communications between Brazos Electric and the DSP's personnel that occur during system emergencies involving load shed conditions. Each DSP shall be required to voice-

acknowledge during the load shed test such DSP's simulated load shed obligation. The results of each simulated test shall be maintained for management review.

A phone system test shall be conducted by Brazos Electric each week to verify proper telephone equipment operation.

Communications with ERCOT are conducted on a hot-line phone or through dedicated phone system circuits. Alternate communications can be conducted over commercial land line circuits or a satellite phone maintained in the control center. Communications with Entergy LBA, Entergy Transmission Operator or MISO are conducted over commercial land line circuits or the satellite phone. Communications with other operating entities are conducted over private microwave phone circuits or commercial land line circuits.

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
1	Corporate	Approval and implementation	25.53(d)(1)(B)	Individuals responsible for maintaining and implementing the EOP, and those who can change the EOP			Body of EOP, Section 1.0	5
2	Corporate	Approval and implementation	25.53(d)(1)(C)	Revision control summary that lists the dates of each change made to the EOP since the initial EOP filing			Body of EOP, Change History Section	2-4
3	Corporate	Approval and implementation	25.53(d)(1)(D)	Dated statement that the current EOP supersedes previous EOPs			Body of EOP, Title Page	1
4	Corporate	Approval and implementation	25.53(d)(1)(E)	Date the EOP was most recently approved by the entity			Body of EOP, Change History Section	4
5	Corporate	Approval and implementation	25.53(d)(1)(A)	Introduces the EOP and outlines its applicability			Body of EOP, Section 1	5
6	Corporate	Executive Summary (EOP Table of Contents, Requirement Mapping and Summary)	25.53(c)(1)(A)(i)(I)	Description of the contents and policies contained in the EOP	This document		Appendix 1	11-17
7	Corporate	Executive Summary (EOP Table of Contents, Requirement Mapping and Summary)	25.53(c)(1)(A)(i)(II)	Reference to specific sections and page numbers of the entity's EOP that correspond with the requirements of this rule	This document		Appendix 1	11-17

APPENDIX 1 – <u>PUCT Subst. R. 25.53</u> EOP Table of Contents, Requirement Mapping and Summary

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
8	Corporate	Executive Summary (EOP Access, Distribution and Training)	25.53(c)(1)(A)(i)(III)	Record of distribution required under paragraph (4)(A). A record of distribution that contains the following information in table format: (i) titles and names of persons in the entity's organization receiving access to and training on the EOP; and (ii) dates of access to or training on the EOP, as appropriate			Appendix 2	18-19
9	Corporate	Executive Summary (Affidavit)	25.53(c)(1)(A)(i)(IV)	Affidavit required under paragraph (4)(C) signed by entity's highest- ranking representative			Appendix 3	20
10	Transmission	Load Shed Information	25.53(e)(1)(B)	Priority load shed list	Referenced in Annex T4	Yes	Appendix 4	21-52
11	Transmission	Critical facility list	25.53(e)(1)(l)	List of critical Brazos Electric transmission facilities	Referenced in Annex T6	Yes	Appendix 5	53

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
12	Corporate	Contacts	25.53(c)(1)(4)(B)	Emergency contacts, including identification of specific individuals who can immediately address urgent requests and questions from the commission during an emergency		Yes	Appendix 6	54-76
13	Corporate	Communications	25.53(d)(2)(A&B)	Procedures during an emergency for handling complaints and for communicating with the public, the media, the commission, OPUC, local and state governmental entities, officials, emergency operations centers, reliability coordinator (ERCOT). For generation, this also includes fuel suppliers.	Brazos Electric does not have customers (including critical load customers); therefore the plan does not include customer communications		Annex C1	77-82
14	Corporate	Pandemic and epidemic	Trn: 25.53(e)(1)(B) Gen: 25.53(e)(2)(D)	Pandemic and epidemic plan	Pandemic response is a corporate-wide program.		Annex C2	83-91
15	Generation	Cyber security	Trn: 25.53(e)(1)(F) Gen: 25.53(e)(2)(F)	Cyber security plan	Cyber security is a is a corporate- wide program.		Annex C3	92-93
16	Generation	Physical security incident (Event Reporting)	Trn: 25.53(e)(1)(G) Gen: 25.53(e)(2)(G)	Physical security incident plan	Physical security incident response is a is a corporate-wide program.		Annex C4	94-102

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
17	Transmission	Pre-identified supply plan	25.53(d)(3)	A plan to maintain pre- identified supplies for emergency response.			Annex T1	103- 104
18	Transmission	Staffing plan	25.53(d)(4)	A plan that addresses staffing during emergency response.			Annex T2	105- 106
19	Transmission	Plan for weather –related hazard identification	25.53(d)(5)	Addresses tornadoes, hurricanes, extreme cold weather, extreme hot weather, drought, and flooding, and the process the entity follows to activate the EOP			Annex T3	107- 114
20	Transmission	Weather Emergency	25.53(e)(1)(i)	Operational plans for responding to a cold or hot weather emergency, distinct from the weather preparations required under §25.55			Annex T3	112- 113
21	Transmission	Weather Emergency	25.53(e)(1)(ii)	Checklist for personnel to use during cold or hot weather emergency response that includes lessons learned from past weather emergencies to ensure necessary supplies and personnel are available through the weather emergency			Annex T3	111- 114
22	Transmission	Wildfire	25.53(e)(1)(D)	Wildfire plan			Annex T3	113- 114

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
23	Transmission	Load Shed	25.53(e)(1)(B)(i)	Procedures for controlled shedding of load			Annex T4	115- 126
24	Transmission	Load Shed	25.53(e)(1)(B)(ii)	Priorities for restoring shed load to service			Annex T4	119
25	Transmission	Load Shed	25.53(e)(1)(B)	SERC Region Emergency Operations Coordination Summary	Provided by Entergy; contains contact information	Yes	Annex T4, Exhibit A	124- 126
26	Transmission	Hurricane	25.53(e)(1)(E)	Evacuation and re- entry procedures if facilities are located within a hurricane evacuation zone, as defined by the Texas Division of Emergency Management (TDEM)			Annex T5	127- 131
27	Transmission	Backup Control Plan	25.53(e)(1)(l)	Any additional annexes as needed or appropriate – Backup control center plan			Annex T6	132- 141
28	Generation	Pre-identified supply plan	25.53(d)(3)	A plan to maintain pre- identified supplies for emergency response.			Annex G1	142
29	Generation	Staffing plan	25.53(d)(4)	A plan that addresses staffing during emergency response.			Annex G2	143
30	Generation	Plan for weather —related hazard identification	25.53(d)(5)	Addresses tornadoes, hurricanes, extreme cold weather, extreme hot weather, drought, and flooding, and the process the entity follows to activate the EOP			Annex G3 (See also Annex T3)	144- 149

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
31	Generation	Weather Emergency	25.53(e)(2)(A)(i)	Operational plans for responding to a cold or hot weather emergency, distinct from the weather preparations required under §25.55 of this title			Annex G3 (See also Annex T3)	144- 149
32	Generation	Weather Emergency	25.53(e)(2)(A)(ii)	Verification of the adequacy and operability of fuel switching equipment, if installed			Annex G3	147
33	Generation	Weather Emergency	25.53(e)(2)(A)(iii)	Checklist for generation resource personnel to use during a cold or hot weather emergency response that includes lessons learned from past weather emergencies to ensure necessary supplies and personnel are available through the weather emergency			Annex G3	148- 149
34	Generation	Water shortage	25.53(e)(2)(B)	Addresses supply shortages of water used in the generation of electricity			Annex G3	147- 148
35	Generation	Restoration of Service	25.53(e)(2)(C)	Plans intended to restore to service a generation resource that failed to start or tripped offline due to a hazard or threat			Annex G4	150
36	N/A	Communications	25.53(d)(2)(C)	(C) A REP must describe	N/A. Not a REP		N/A	N/A

#	Function	ltem	PUCT rule cite	Summary	Notes	Confidential?	Location	Pages
37	N/A	Communications	25.53(d)(2)(D)	(D) ERCOT must describe []	N/A. Applies to ERCOT		N/A	N/A
38	N/A (Transmission)	Load Shed	25.53(e)(1)(B)(iii)	A procedure for maintaining an accurate registry of critical load customers, [] directly served, if maintained by the entity. []	N/A. Brazos Electric does not directly serve customers.		N/A	N/A
39	N/A (Transmission)	PURA §39.918(b)(1) and (2) facilities	25.53(e)(1)(H)	Utility that leases or operates facilities under PURA §39.918(b)(1) or procures, owns, and operates facilities under PURA §39.918(b)(2) - plan for the use of those facilities	N/A. Brazos Electric does not lease or operate such facilities		N/A	N/A
40	N/A (Generation)	Hurricane	25.53(e)(2)(E)	Evacuation and re- entry procedures if facilities are located within a hurricane evacuation zone, as defined by TDEM	N/A. Brazos plants are not located in a hurricane evacuation zone		N/A	N/A
41	N/A (Generation)	Additional annexes	25.53(e)(2)(H)	Additional annexes as needed or appropriate	N/A. No additional annexes needed for generation.		N/A	N/A

APPENDIX 2 EOP DISTRIBUTION, ACCESS AND TRAINING

The following personnel are provided with access and/or training on new versions of the EOP upon approval of the new version.

Training for the most recent EOP shall be provided no later than three months after adoption.

Names, titles and training date confirmation will be provided to the Commission upon completion.

Brazos Staff (electronic access and/or paper copies, training as needed by role):

Name - Title	Access Date
Clifton Karnei – Executive VP & General Manager	April 19, 2022
Kyle Minnix - Manager Communications/Key Accounts	April 19, 2022
Wayne Bolton – Chief System Operator	April 19, 2022
All system operators	April 19, 2022
Tony Kroskey - Manager Transmission - System Operations	April 19, 2022
Ruben Padilla - Supervisor - Operations Coordinator	April 19, 2022
Johnny York – VP - Transmission	April 19, 2022
Tim Hartz - Manager - Transmission Engineering	April 19, 2022
Shari Heino – Chief Risk & Compliance Officer	April 19, 2022
Josh Clevenger – VP – Power Supply	April 19, 2022
Khaki Bordovsky – VP - Services	April 19, 2022
Debra Wendrock – Manager – Human Resources	April 19, 2022
Rod Little – Manager - Network Services	April 19, 2022
Kevin Brown - Southern District Manager	April 19, 2022
David Webb - Northern District Manager	April 19, 2022
David Albers - Manager System Planning	April 19, 2022
Jeff Stebbins - Manager Transmission Maintenance	April 19, 2022
Dean Thrall – VP - Generation	April 19, 2022
Mark Pavelka – Manager – Generation Engineering	April 19, 2022
Marc Burns -	April 19, 2022
Wes Walker – Plant Manager (Jack Co.)	April 19, 2022
Jeff Morgan – Operation Superintendent (Jack Co.)	April 19, 2022
David Cole – Maintenance Superintendent (Jack Co.)	April 19, 2022
Carl Curry – Plant Manager (Miller)	April 19, 2022
Mark Edwards – Operation Superintendent (Miller)	April 19, 2022
Woody Hall – Maintenance Superintendent(Miller)	April 19, 2022
Joe Booth – Plant Manager (Johnson Co., NAES employee)	April 19, 2022
Vince Hawkes – Operation Superintendent (Johnson Co., NAES employee)	April 19, 2022
Danny Nichols – Maintenance Superintendent (Johnson Co., NAES employee)	April 19, 2022

Name	Title	Member Coop	Distribution Date
Bryan Lightfoot	General Manager	Bartlett Electric Coop	April 19, 2022
Alan Lesley	General Manager	Comanche County EC	April 19, 2022
Donnie Clary	General Manager	CoServ	April 19, 2022
Kendall Montgomery	General Manager	Fort Belknap Electric Coop	April 19, 2022
Cody Lasater	General Manager	Hamilton County EC	April 19, 2022
Brandon Young	General Manager	Heart of Texas EC	April 19, 2022
Thomas Cheek	General Manager	Hilco EC	April 19, 2022
Shane Wiley	General Manager	J-A-C EC	April 19, 2022
Kerry Kelton	General Manager	Mid-South EC	April 19, 2022
Billy Jones	General Manager	Navarro County EC	April 19, 2022
Steve Jones	General Manager	Navasota Valley EC	April 19, 2022
Neil Hesse	General Manager	PenTex Energy	April 19, 2022
Dale Ancell	General Manager	South Plains EC	April 19, 2022
Darryl Schriver	General Manager	Tri-County EC	April 19, 2022
Cameron Smallwood	General Manager	United Cooperative Services	April 19, 2022
Rayce Cantwell	General Manager	Wise EC	April 19, 2022

Brazos Electric Members (distribution via hard copies, no training):

APPENDIX 3 Brazos Electric Power Cooperative, Inc. Emergency Operations Plan Affidavit

STATE OF TEXAS § COUNTY OF MCLENNAN §

BEFORE ME, the undersigned authority, on this day personally appeared Clifton Karnei, who, having been placed under oath by me, did depose as follows: "My name is Clifton Karnei. I am of legal age and a resident of the State of Texas. I am the Executive Vice President and General Manager for Brazos Electric Power Cooperative, Inc. ("BEPC"). I affirm that the following statements are true and complete, to the best of my knowledge and belief:

- 1. I am the highest-ranking representative, official, or officer with binding authority for BEPC;
- 2. Relevant BEPC operating personnel are familiar with and have received training on the applicable contents and execution of the EOP, and such personnel are instructed to follow the applicable portions of the EOP except to the extent deviations are appropriate as a result of specific circumstances during the course of an emergency;
- 3. The BEPC EOP has been reviewed and approved by the appropriate executives;
- 4. Drills have been conducted to the extent required by subsection (f) of PUCT Subst. R. 25.53;
- 5. The BEPC EOP or an appropriate summary has been distributed to local jurisdictions as needed;
- 6. BEPC maintains a business continuity plan that addresses returning to normal operations after disruptions caused by an incident; and
- 7. BEPC's emergency management personnel who are designated to interact with local, state, and federal emergency management officials during emergency events have received or will receive no later than June 30, 2022, the latest IS-100, IS-200, IS-700, and IS-800 National Incident Management System training.

SH

SUBSCRIBED AND SWORN TO BEFORE ME by the said Clifton Karnei this 18th day of April 2022.



Candare Menter

Notary Public, State of Texas

Appendices 3-6 (pp. 21-76) redacted due to containing individual contact information and critical load shed information

ANNEX C1

COMMUNICATIONS ANNEX

(Corporate-wide)

The following individuals are designated support personnel to assist in phone communications with Brazos Electric's DSPs should this EOP be implemented by the Vice President of Transmission.

Phone Communications Support
John Abel
Jesse Calvillo
Julie Frazier

The individuals will be contacted in the order shown. Each individual will be responsible for his/her own transportation to the Brazos Electric headquarters building. If necessary and possible, Brazos Electric will assist with providing transportation.

Insofar as possible, the order of individuals on the list will be rotated after each implementation of the EOP (which may be for more than one day) or annually, whichever occurs first. In addition, other key Brazos Electric personnel may be called upon to support implementation of the EOP. A copy of the key personnel contact list is shown in **APPENDIX 6** and a current electronic copy of the list is maintained by the Chief System Operator in a document folder accessible by the control room personnel.

It may become necessary for Brazos Electric to issue media appeals for voluntary conservation or to communicate with the public as a result of system emergencies. Any such media appeals or public communications shall be under the direction and coordination of the Vice President of Transmission and the Manager of Transmission System Operations. Sample scripts for media appeals for voluntary conservation and load shed are provided in **TABLE 1** and the priority lists for calling radio and TV stations is provided in **TABLE 2**. For other system emergency situations, scripts for communications to the public would be developed as needed.

Regulatory and emergency coordination contacts (*e.g.*, PUCT, OPUC, local and state governmental entities, officials, emergency operations centers) will be notified as deemed necessary by the Vice President of Transmission or his designee. Current contact information is available on these entities websites.

Fuel supplier contact information is not maintained within the EOP because fuel providers change over time. The Brazos Electric Power Supply Division, ACES and the Purchasing Department handle fuel supply coordination. *Note: Contact with ERCOT (reliability coordinator) personnel is addressed throughout the EOP and varies based on the emergency conditions present.*

TABLE 1A SAMPLE MEDIA SCRIPT MESSAGES (For ERCOT Region Only)

CONDITION/SCRIPT INITIAL NOTICE – COOPERATIVES CITY MANAGERS

ERCOT is encountering abnormal operations that has placed the ERCOT electric grid in an insecure state and has issued an ______ (Advisory, Watch, Emergency Notice). ERCOT has instructed Brazos Electric [(1) that a load shed event may be imminent (2) to shed _____ MWs of load] that affects service to our Member Cooperatives and other wholesale customers.

END OF CONDITION – COOPERATIVES MANAGERS

ERCOT has recovered from the abnormal operations condition and has rescinded the _____ (Advisory, Watch, or Emergency Notice). All loads have been restored.

REQUEST FOR REDUCED CONSUMPTION – RADIO AND TV STATIONS

All consumers of electricity are asked to reduce their use of electricity between the hours of _____ am/pm and _____ am/pm

ERCOT has implemented the emergency load shed plan to reduce electrical demand because of a temporary decrease in available electricity supply.

Your cooperation in reducing the use of electricity, particularly for _____ (heating or cooling), is requested.

FOR WORSENING CONDITIONS – RADIO AND TV STATIONS

It is critical that electric consumers reduce all use of electricity and _____ (lower or raise) their thermostats. ERCOT has implemented advanced Levels of the emergency load shed plan to reduce electrical demand because of a temporary decrease in available electricity supply.

PAST CRITICAL STAGE – RADIO AND TV STATIONS

It appears that the worst of ERCOT's temporary decrease in available electricity supply (or high power demand) has passed. ERCOT appreciates the conservation efforts of the Texas electricity consumers. Consumers may resume necessary use of electricity but should do so sparingly for the rest of today and, especially, this evening.

END OF CONDITION – RADIO AND TV STATIONS

ERCOT thanks those electricity consumers who responded to yesterday's request to reduce the use of electricity.

Electric power supply conditions have improved significantly and consumers may return to normal usage. If conditions should change, further announcements will be made on this station.

TABLE 1B SAMPLE MEDIA SCRIPT MESSAGES (For SERC Region Only)

CONDITION/SCRIPT INITIAL NOTICE – COOPERATIVES MANAGERS

Grid Operators are encountering abnormal operations that has placed the electric grid in an insecure state and has issued an ______ (advisory, watch, emergency notice). Brazos Electric has been instructed [(1) that a load curtailment event may be imminent (2) to shed _____ MWs of load] that affects service to our Member Cooperatives and other wholesale customers.

END OF CONDITION – COOPERATIVES MANAGERS

Grid Operators have recovered from the abnormal operations condition and has rescinded the _____ (advisory, watch, or emergency notice). All loads have been restored.

REQUEST FOR REDUCED CONSUMPTION – RADIO AND TV STATIONS

All consumers of electricity are asked to reduce their use of electricity between the hours of _____ am/pm and _____ am/pm

Grid Operators have implemented its emergency load curtailment plan to reduce electrical demand due to [(1) a temporary decrease in available electricity supply (2) electric grid reliability problems].

Your cooperation in reducing the use of electricity, particularly for _____ (heating or cooling), is requested.

FOR WORSENING CONDITIONS – RADIO AND TV STATIONS

It is critical that electric consumers reduce all use of electricity and ______ (lower or raise) their thermostats. Grid Operators have implemented its emergency load curtailment procedure to reduce electrical demand due to [(1) a temporary decrease in available electricity supply (2) electric grid reliability conditions].

PAST CRITICAL STAGE – RADIO AND TV STATIONS

It appears that the worst of the temporary decrease in available electricity supply (or high power demand) for the electric grid has passed. Grid Operators appreciate the conservation efforts by all electricity consumers. Consumers may resume necessary use of electricity but should do so sparingly for the rest of today and, especially, this evening.

END OF CONDITION – RADIO AND TV STATIONS

Grid Operators express their thanks those electricity consumers who responded to yesterday's request to reduce electricity usage.

Electric power supply conditions have improved significantly and consumers may return to normal usage. If conditions should change, further announcements will be made on this station.

TABLE 2A

PRIORITY LIST RADIO AND TELEVISION

PAGE 1 OF 2

PRIORITY 1 (BROAD AREA COVERAGE)			
Station	City	Telephone	Coops / Cities Covered
WBAP	Arlington	214-765-5296 (News room)	All
		214-526-2400 (Switchboard)	
		972-708-4140(Fax)	
WTAW	Bryan	979-695-9595	Mid-South, Navasota Valley
		979-695-1933 (Fax)	
KRLD	Dallas	214-525-7000 (News room)	All
		214-525-7449 (Direct to News Room)	
		214-443-0450 (Fax)	
KWTX (TV)	Waco	254-741-5828 (News Room)	Bartlett, Comanche,
		254-776-3242(Direct to News Room)	Hamilton, HILCO, HOT,
		254-776-1330 (Switchboard)	Navarro, Navasota Valley
		254-776-4010 (Fax)	

PRIORITY 2 (HIGH LOAD AREAS)				
Station	City	Telephone	Coops / Cities Covered	
M & M	Waco	254-662-0973(Fax)	UCS, Tri-County, HILCO	
Broadcasters		254-772-0930 (Office)		
KGAF	Gainesville	940-668-0398 (Hot line) call first	Sanger, Whitesboro, PenTex,	
		940-665-5546 (Studio line)	Wise, CoServ-Denton area	
		940-665-1580 (Fax)		
KSTV	Stephenville	254-968-2141	Granbury, Tri-County, UCS,	
		254-968-6221 (Fax)	Comanche, Hamilton	
		Boots Elliot Boots@villecom.net		
		254-967-2389 (After Hrs.)		
KTAM	Bryan	979-776-1240 (Office)	Hearne,	
		979-776-0123 (Fax)	HOT – Belfalls District,	
KBTX (TV)	Bryan	(same as above)	Mid-South,	
			Navasota Valley	
KSTAR		936-788-1035		
		936-588-5585 (Fax)		
KSAM	Montgomery	936-295-2651(Office)	Mid-South	
	Huntsville	936-295-8201 (Fax)	Navasota Valley	
		979-703-8404 (Office)		
KAGS (TV)	Bryan/College	979-703-8409 (Fax)		
	Station			
KCEN (TV)	Temple	254-859-5481 News Room	HOTEC – McLennan	
		Email news@kcentv.com		
		254-859-5831 (News Fax)		
		254-859-4004 (News Fax)		

TABLE 2B

PRIORITY LIST RADIO AND TELEVISION

PAGE 2 OF 2

PRIORITY 3 (LOW LOAD AREA)				
Station	City	Telephone	Coops / Cities Covered	
KFWR	Weatherford	817-332-0959 (Office) 817-348-8373 (Fax)	Mineral Wells, Granbury, Weatherford, Stephenville Tri-County UCS	
КСОМ	Comanche	325-356-2558 Office 325-356-3120 (Fax)	Comanche UCS Hamilton	
KAND	Corsicana	903-874-7421 (Business line) 903-493-7234(Fax) 903-875-5205 Diane Raymond	Navarro HILCO Navasota Valley	
KTEM	Belton	254-771-1400 (Office) 254-773-0115 (Fax) 254-773-5252 (Office call first)	HOTEC Bartlett City of Bartlett	
KSEY	Seymour	940-889-2637 (Main line) 940-889-2665 (Control Room) Baylor County Emergency Contact	Seymour Tri-County (BK District) J-A-C Ft. Belknap	
KMIL	Cameron	254-697-6633 (Office) 254-697-6330 (Fax)	Bartlett HOT – Belfalls District	
KBRQ	Waco	254-776-3900 (Waco) (Use code name AM/FM) 254-652-3399 (After hours)	HILCO	
KNTX	Bowie	940-872-2288 (Business line) 940-872-2289 (Control Room line) 940-872-1228 (Fax) 940-872-0150 (Emergency number Windy Hill)	Wise	

ANNEX C3

PANDEMIC ANNEX

(Corporate-wide)

The Brazos Electric Pandemic Action Plan establishes a Pandemic Steering Committee ("PSC") as well as a Pandemic Response Team ("PRT") and outlines the roles of team members leading up to and during a pandemic response. A pandemic is a global or widespread disease outbreak.

The Pandemic Action Plan consists of the response action steps contained in this annex and may incorporate other procedures from the Brazos Electric Emergency Response Plan ("ERP"). The objective of the Pandemic Action Plan is to provide the most efficient and effective response to an identified pandemic outbreak. Resources for PSC and PRT members involved in planning and executing components of this plan may be found in the ERP.

Additionally, the Pandemic Action Plan directs cooperation with state and county health care officials and maintains the effective delivery of health services for the company. It is impossible to anticipate every situation in which this plan may be utilized; therefore, the PRT may adjust the plan as is reasonable and necessary in the event of an actual pandemic.

Pandemic Steering Committee Members

PSC members include the following employees, with an alternate representative designated by the responsible department/division when necessary:

Division/Department	Representatives
Human Resources	Debra Wendrock
Risk and Compliance	OPEN (Team Coordinator)
Power Supply	Wade Snider
Generation	Mark Pavelka
Services	Rod Little
Transmission	Tony Kroskey

The PSC Team Coordinator is the designated representative of the Risk & Compliance division. The PSC shall meet as necessary to review and make recommendations to update this plan, verify threat information, update procedural actions or identify additional company objectives.

Pandemic Response Team Members

The PRT is composed of members of the Senior Staff as well as the Human Resources Manager and the PSC Team Coordinator, as follows:

Division/Department	Representatives
Executive	Clifton Karnei – EVP and GM
Risk and Compliance	Shari Heino – CRCO
	PSC Team Coordinator
Power Supply	Josh Clevenger – VP Power Supply
Generation	Dean Trall – VP Generation
Services	Khaki Bordovsky – VP Services
	Debra Wendrock – Manager HR
Transmission	Johnny York – VP

The key response phases for the Pandemic Action Plan are outlined below and described in more detail in the following sections. Note that phases may be activated due to a pandemic threat alert issued by the World Health Organization ("WHO"), but will typically be activated by the PRT members based on a more local/regional threat.

- 1. Planning and Control Evaluate and develop response guidelines based on planning criteria and assumptions.
- 2. Monitoring and Assessment Monitoring and assessment of current pandemic indicators.
- 3. Prepare for Plan Implementation This phase may be enacted when WHO issues a Phase 5 Alert, but the final determination will be made at the discretion of the PRT.
- 4. Plan Implementation This phase may be enacted when WHO issues a Phase 6 Alert, but the final determination will be made at the discretion of the PRT.
- 5. Recovery Begins when the number of cases of infection returns to normal, pre-pandemic levels at a local and regional level. This phase deals with returning to "business as usual" and assessing the impact of the pandemic and evaluating the pandemic response.

A. Planning and Control

The objective for the Planning and Control response phase is to provide the overall response guidelines for the PSC and the planning assumptions for developing various response scenarios. Pandemic planning assumptions include the following:

1. The timing of the outbreak of a pandemic is uncertain and depends on many factors.

- 2. Once human to human transmission begins, the disease is expected to spread very rapidly around the world within three to eight weeks.
- 3. Attack rate for the general population is expected to be in the range of 25 percent and these people would be very ill for up to a week.
- 4. Absentee rates for employees may be in the range of 35 percent for the duration of the pandemic due to illness and other factors such as needing to take care of family members. The pandemic could last for 6 months or more. Absentee rates will not likely be uniform across an organization and will be caused by employee illness as well as family care issues, inability to get to work, etc.
- 5. Persons who contract the pathogen are not expected to contract it a second time due to a development of immunity. However, if the pathogen mutates, recurrences for the same individual could be possible.
- 6. Personnel will need to be managed differently to conduct essential business processes and to minimize the spread of the pathogen.
- 7. It is likely that not enough medicines or vaccines will be available for the entire population. There may be none in the early stages and then limited quantities for select populations. Additionally, effectiveness and side effects may not be well studied and appropriate dosages not yet well determined.
- 8. A pandemic will likely strike in at least two waves, each lasting six to eight weeks. The first wave will peak in three to four weeks. The second wave will be three to six months after the first and will likely be stronger than the first. There may also be a third wave with characteristics similar to the second.
- 9. It will be important to provide accurate and timely information distribution to employees, labor organizations and government before and during the pandemic.
- Interdependencies with other segments of the electricity sector (generators, transmission operators, distribution providers) and other critical infrastructures (Communications, nuclear, natural gas, petroleum, transportation, emergency services, etc.), as well as contractors and suppliers, will likely be severely tested during the pandemic.

Potential impacts to Brazos Electric include the following:

- Large numbers of staff absent, difficult to maintain operations
- Loss of services from suppliers
- Operational breakdown of facilities and services
- Leave policies and work hours may need to be flexible
- Brazos Electric might consider allowing work from home (Brazos Electric mandates that sick employees stay home)
- Employees may need to participate in cross training sessions

An additional helpful planning tool are checklists developed by the CDC that identify important activities for businesses to consider when preparing for a pandemic situation. See https://www.cdc.gov/nonpharmaceutical-interventions/tools-resources/planning-guidance-checklists.html.

Phase	Consequences For Businesses	Brazos Electric Response Phase
Phase 1 Pandemic Alert	Governments, owners, and operators are notified a pandemic is possible and preparedness plans should be reviewed and updated.	Planning and Control Monitoring and Assessment
Phase 2 Pre- Pandemic	Localized outbreaks are occurring with human-to-human transmission. Governments and electricity sector entities begin to assign resources, prepare staffing, and implement contingency plans. Begin an information distribution program to promote appropriate responses by employees.	Prepare for Plan Implementation Continue with: Planning and Control Monitoring and Assessment
Phase 3 Pandemic Outbreak	General outbreaks across borders and continents. Implement response plans.	Plan Implementation Continue with: Planning and Control Monitoring and Assessment
Phase 4 Maximum Disruption	High absentee rates would occur (35 percent) and fatalities would begin to impact the workforce. This phase could last for several months.	Plan Implementation Continue with: Planning and Control Monitoring and Assessment
Phase 5 Prolonged Recovery	Recovery will be slow and the underlying economy will weaken. Altered business conditions will be prevalent for large and small firms. This phase will last for at least three months and possibly up to six months.	Plan Implementation Recovery Continue with: Planning and Control Monitoring and Assessment

The PRT shall meet as needed due to pandemic threat situations to develop and review pandemic response plans. The PRT members will be responsible for coordinating with various departments within the division it represents.

The following outlines the steps to be used for developing pandemic response plans:

- Identify key business functions and impacts
- Implement preparation efforts for key business functions
- Develop procedures to maintain key business functions

- Develop policy modifications to maintain key business functions
- Identify impacts and response for non-key business functions

B. Monitoring and Assessment

The monitoring of pandemic notification information shall be done by a designated member of the PRT. This should provide adequate lead time to assess pandemic information. Any significant increase in the level of contagious disease activity would be reported to the PRT, who would then be responsible for determining if specific action related to the activation of a pandemic response is required.

The following chart shows WHO Phases and corresponding Federal Government response stages for a pandemic situation. Note that the NERC phases shown in the previous section do not align exactly with the WHO phases. The PRT will make the final determination concerning the need to enact the Pandemic Response Plan at any given time during a potential pandemic outbreak.

WHO Phases for Pandemic Influenza		Fe Re	deral Government sponse Stages
IN	INTER-PANDEMIC PERIOD		
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PA	NDEMIC ALERT PERIOD		
3	Human infection(s) with a new subtype, but no human-to- human spread, or at most rare instances of spread to a close contact	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
4	Small cluster(s) with limited human-to-human transmission, but spread is highly localized, suggesting that the virus is not well adapted to humans.	2	Confirmed human outbreak overseas
5	Larger cluster(s) but human-to-human spread still localized suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America

W	HO Phases for Pandemic Influenza	Fe Re	deral Government sponse Stages
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

During this phase the following actions may be taken:

- 1. Collect current pandemic threat and planning information and assess situation. The following organizations provide pandemic indicators and planning information for monitoring pandemic outbreaks: NERC, CDC, WHO, Texas Department of State Health Services and others.
- 2. Inform the PRT if situation gets worse, evaluate existing pandemic response plans and consider additional measures.
- 3. Provide employee training on the Pandemic Plan as situations elevate.
- 4. If deemed beneficial, "Social Distancing", "Masking", "Cover Your Cough" and "Proper Hand Washing" programs can be instituted and maintained.
- 5. Provide updated information for employees.

C. Prepare for Plan Implementation

This phase is enacted when evidence of significant human-to-human transmission of pathogen, but spread is localized. Response will be determined by location of the sickness and its potential to affect Brazos Electric operations. If the localized area would be within Brazos Electric service region, the plan would automatically be implemented.

During this phase, if the localized area is within the Brazos Electric service region, the following actions may be taken:

- 1. The PRT shall review existing plans, policies and procedures following the key actions identified in the planning template.
- 2. Communicate information to employees.
- 3. Ensure all needed materials and supplies are available and verify service contracts are in place (if required).
- 4. Verify essential employees and backups are available.
- 5. Try to determine, with the assistance of state entities when the next phase will be enacted in the Brazos Electric region.
- 6. Continue actions for the Monitoring and Assessment Phase.

The following template of key actions may be utilized by the PRT members for developing response plans for the <u>Prepare for Plan Implementation Phase</u>. These recommended action items and additional planning criteria or actions may be considered depending on the situation.

Key Actions during Prepare for Plan Implementation Phase	Assigned Responsibility
Limit face-to-face meetings.	All
Limit travel to affected areas.	All
Review key supplier preparedness.	All
Update and/or develop pandemic response actions based on	PRT
latest pandemic threat information and planning assumptions.	
Review policies related to sick leave with possible impacts from	Human Resources
a pandemic in mind:	
• The possibility of mandatory leave for employees	
with symptoms of illness.	
• A set of return to work guidelines to prevent	
employees from returning while still contagious.	
• Some guidance on the handling of missed time for	
employees that do not wish to come to work for	
fear of exposure.	
Review and or activate the Remote Work Policy for non-	Human Resources
essential personnel and/or positions approved to work from	
home to minimize contact during a pandemic.	A 11
Review guidelines to minimize business travel and face-to-face	All
contact during a pandemic.	
Educate and communicate pandemic-related messages to	Human Resources & R&C
employees.	LL
Schedule opportunities for employees to get vaccinations and	Human Resources
encourage employees to participate.	Samiaas Division
supplies to maintain a sanitary environment will be kept on hand	Services Division
disinfactant spray rubbar glovas masks	
disinteetant spray, tubber groves, masks.	
Check fuels and other supplies.	Services Division
Consider IT requirements to support work from home	Services Division
employees.	

The following template of key actions may be utilized by the PRT members for developing response plans for the <u>Plan Implementation Phase</u>. These recommended actions items and additional planning criteria or actions may be considered depending on the situation.

Key Actions during the Plan Implementation Phase	Assigned Responsibility	
Suspend face-to-face meetings.	All	
Suspend non-critical business travel.	All	
Review key supplier preparedness.	All	
Key Actions during the Plan Implementation Phase	Assigned Responsibility	
--	-------------------------	--
Examine key business functions to determine if changes are	All	
necessary to cover a contagious disease pandemic.		
Determine essential employees needed to maintain key business	All	
functions.		
Cross-train employees in job functions related to key business	All	
processes.		
Recommend policies and procedures to be implemented by the	PSC	
PRT.		
Develop and approve policies and procedures to be implemented.	PRT	
Communicate changes in policy and/or practices for sick leave	Human Resources	
during a pandemic.		
Communicate changes in policy and/or practices for work from	Human Resources	
home during a pandemic.		
Communicate changes in policy and/or practices for business	Human Resources	
travel and face-to-face contact during a pandemic.		
Educate and communicate pandemic-related messages to	Human Resources & R&C	
employees.		
Schedule opportunities for employees to get vaccinations and	Human Resources	
make a concerted effort to vaccinate all employees.		
Coordinate with local health district for priority access to	Human Resources	
vaccination of essential employees.		
Tracking of and coordination regarding employees missing work	Human Resources and R&C	
due to pandemic-related illness or exposure.		
Supplies to maintain a sanitary environment will be kept on hand	Services Division	
and deployed, as necessary, including: hand sanitizer,		
disinfectant spray, rubber gloves, masks.		
Provide respiratory masks and rubber gloves for employees as	Services Division	
needed.		
Continue to stockpile fuels and other critical supplies.	Services Division	
Implement work from home for employees if necessary.	Services Division	

D. Plan Implementation

This phase is enacted when the state entities have enacted this phase in the Brazos Electric region, or as deemed necessary by the PRT. At a minimum, the Team Coordinator will continuously monitor the situation and assemble the PSC to share any pertinent information concerning the potential event. Communication with employees will be maintained using whichever means is available. It is projected there will be two to three waves during the pandemic phase. After each wave, reevaluate the situation and modify the pandemic plans if needed. Recognize that situations may change and the plans may have to be updated to fit the situation, stay flexible.

During this phase the following actions may be taken:

1. The PRT shall adopt the key actions and changes to plans, policies and procedures developed during the Prepare for Plan Implementation Phase.

- 2. Human Resources and R&C will implement approved key actions, plans, policies and procedures.
- 3. The PRT will communicate information to employees (messaging from the General Manager whenever possible).
- 4. Ensure all needed materials and supplies are available and verify service contracts are in place (if required).
- 5. Begin cross-training for essential employees.
- 6. Continue actions for the Monitoring and Assessment Phase and Prepare for Plan Implementation Phase as needed.

E. Recovery

Recovery begins when the number of cases is manageable. Recovery efforts may need to be retracted during subsequent pandemic waves. This phase deals with returning to "business as usual", dealing with any service backlogs, assessing the impact of the pandemic and evaluating the pandemic response.

During and following the pandemic, all procedures and policies related to pandemic response will be examined for effectiveness and modified to prepare for a similar event in the future. The PRT shall have a meeting to close out all open action items and to evaluate the effectiveness of the plan. A follow up meeting will help, as necessary, to ensure the actions created in the evaluation phase have been completed.

The following should be considered during this phase:

- 1. Identify and apply the steps necessary to return to essential business operations.
- 2. Determine the required employee positions that are needed so essential services can be provided.
- 3. Evaluate the Pandemic Plan to identify deficiencies. If modifications are needed complete them and ensure employees understand them.
- 4. Restock materials and supplies if required.
- 5. Maintain normal surveillance and look for indications of an unexpected return of the pandemic.

Annex C3 Cyber Security Plan Annex

A. INTRODUCTION

This annex applies to all Brazos Electric facilities and summarizes best practice information and procedures designed to mitigate the risk of cyber security attack.

Brazos Cyber Security Posture:

- Comprehensive program: In addition to its corporate cyber security program, Brazos Electric complies with NERC Critical Infrastructure Protection standards in effect covering topics such as network protection, physical security, information protection, training, vulnerability assessments and incident response plans.
- Brazos Electric SMEs participate in many working groups at the national and state level regarding cyber security.
- Brazos Electric monitors multiple sources to anticipate and identify new threats.

B. LAYERS OF CYBER SECURITY

Brazos Electric implements the following layers of security for its systems:



C. INDUSTRY RECOMMENDATIONS AND BRAZOS ELECTRIC'S RESPONSES

Recommendation	Homeland Security	NERC	Implemented by Brazos Electric
Implement Application Whitelisting	X		X
Implement Patch and Configuration Management	X		X
Manage Authentication	X		X
Monitor And Respond	X		X
Reduce Your Attack Surface	X		X
Build Security Trust Rings	X	Х	X
Implement Secure Remote Access	X	Х	X
Develop secondary communication strategies		Х	X
Drill scenarios where individuals can interact with an HMI		Х	X
Review ability to rapidly disable remote access		Х	X
Review Response Plans		Х	X
Employee Training Program			X
Maintain Good Backups			X
Memory Protection			X
Phish Testing/Training Program			X
Security Awareness Program			X
Use Next Generation Firewall Features to Block regions and applications			X

Brazos Electric implements the following best practices:

D. ADDITIONAL PROTECTIONS

Brazos cyber security posture is constantly evolving in the face of new threats. Additional measures taken include:

- Vet Files Check hash and scan files from 3rd parties before moving to the control network
- Review PoLP for Administrative System Tools Review access and ensure application of the PoLP (principle of least privilege) for control system administrative tools
- Abnormal Activity Monitoring
- Regular phishing awareness campaigns for employees
- Procurement of a cyber insurance policy which includes forensics and recovery support in the event of an attack

ANNEX C4

EVENT REPORTING AND PHYSICAL SECURITY ANNEX

Brazos Electric will be prepared to coordinate with ERCOT or SERC, and other governmental and law enforcement authorities, when there is a disturbance or potential terrorist/sabotage activity, or war affecting the United States mainland, in the event this causes a threat to the bulk power system or national security. During these types of events, the planned security procedures (the "Security Alert Plan") and additional measures, depending on the situation, will be implemented and continued as necessary. The actions taken in the Security Alert Plan includes prescribed preparation levels, and the criteria for implementing those levels, depending on the nature of the event. Details of specific actions taken may not be described here due to sensitive nature of the information. Procedures are provided for Brazos Electric operating personnel to report and coordinate sabotage and disturbance information for its facilities.

A. Physical Security

Brazos Electric physically secures its facilities via a number of methods. These include, but are not limited to, the following;

- 1. Permissions This control method allows access to authorized individuals by electronic badges, keys or both.
- Authentication The control method includes the ability to positively identify the individual requesting or gaining access. For the most critical locations, dual methods of authentication shall be used. For locations in the field, authorized individuals must notify appropriate personnel prior to entry.
- Monitoring The control method provides for the ability to alarm, with immediate notification to appropriate personnel, attempts at unauthorized access through the access point or provide for human observation of the access point.
- 4. Logging The control method provides for logging information that can uniquely identify individuals gaining access through access points and the time of access on a 24/7 basis.

B. Security Alert Plan

The ERCOT ISO maintains an ERCOT regional Security Alert Plan and coordinates implementation through warning level notifications and by communications with members of the ERCOT System Security Response Group ("SSRG"). The warning levels are similar to those implemented and maintained by NERC and the Department of Homeland Security ("DHS"). Brazos Electric has established two representatives for the SSRG; one is for the Transmission Distribution Service Provider ("TDSP") and the second for the Qualified Scheduling Entity ("QSE"). The Brazos Electric members of the ERCOT SSRG group are identified in the below communications procedure.

In the SERC region, Brazos Electric is not a member of a similar type regional security response group like the ERCOT SSRG. Brazos Electric will rely on security threat information made available by the grid operators for Entergy Local Balancing Authority, Entergy Transmission, or MISO-South and applicable DHS security advisory levels information as described below. The security advisory levels utilized by NERC and DHS are posted on the NERC Electric Information Sharing and Analysis Center website located at <u>www.eisac.com</u> or on the DHS website. Advisory levels encompass both physical and cyber security and in general the definitions of the advisory levels are as follows:

<u>Advisory Level – Bulletin</u> Applies when no known threat exists of terrorist activity or only a general concern exists about criminal activity, such as vandalism, which warrants only routine security procedures. Any security measures applied should be maintainable indefinitely and without adverse impact to facility operations. This level is equivalent to normal daily operations and describes current developments or general trends regarding threats of terrorism.

<u>Advisory Level – Elevated Alert</u> Applies when a credible threat exists of terrorist or increased criminal activity against the United States. Additional security measures are recommended, and they should be maintainable for an indefinite period of time with minimum impact on normal facility operations.

<u>Advisory Level – Imminent Alert</u> Applies when a general threat exists of terrorist or criminal activity directed against the United States. Implementation of additional security measures is expected. Such measures are anticipated to last for a defined period of time.

<u>Advisory Level – Imminent Alert (Electric Utility Specific)</u> Applies when a credible threat exists of terrorist or criminal activity directed against the electric industry. Additional security measures have been implemented. Such measures may be anticipated to last for a defined period of time.

Suggested actions that individual entities may take for each of these alert levels are listed in the ERCOT and Brazos Electric Security Alert Plans document located in the Brazos Electric Control Center. The ERCOT SSRG coordinated with the member electric utilities and inform them of specific alert warning levels and action steps.

In the event that a primary Brazos Electric SSRG representative named above is not available then the alternate Brazos Electric SSRG representative shall coordinate action steps.

C. Sabotage and Event Reporting Procedures

The procedures as described in this section provides for recognition of sabotage and other reportable events, communication to operating personnel to make them aware of events on Brazos Electric's facilities and multi-site sabotage affecting larger portions of the ERCOT, Eastern, or Western electric system networks in North America (each system network is referred to as an "Interconnection"); communication to appropriate parties of the applicable Interconnection; response guidelines; and communication to the Federal Bureau of Investigation ("FBI") and other local authorities. Notifications of reportable events are communicated per requirements of the NERC Reliability Standards and other regulatory agencies.

Sabotage Recognition

"Sabotage" is defined as intentional destructive or obstructive action carried out by a person or persons that hinder the safe and reliable operation of the Bulk Electric System ("BES").

Sabotage may occur at a Brazos Electric facility, on a Brazos Electric computer system/network, or may be multi-site, affecting larger portions of the BES. Potential or actual acts of sabotage shall be reported to the Brazos Electric control center operator. If in doubt whether an incident is considered sabotage then personnel shall report it to the Brazos Electric control center operator. All suspicious acts (such as trespass, vandalism and theft) should be reported so that appropriate individuals can determine whether sabotage is involved.

Reportable events, including sabotage and other disturbances are identified in **Table 1** and **Table 2** below with appropriate reporting contact information. All disturbances on Brazos Electric transmission and generation facilities that affect the BES, shall be identified, evaluated, monitored, and recorded by the control center operators. A disturbance caused by sabotage may be difficult to identify, and Brazos Electric control center operators shall look for suspicious events or combinations of suspicious events.

All applicable Brazos Electric staff are to be mindful of their respective work areas to recognize potential sabotage. All applicable personnel will be aware of suspicious or unclaimed packages and communicate occurrences to their immediate supervisor. All applicable personnel are to challenge unfamiliar persons in controlled areas, requesting identification and purpose, reporting confrontations to their immediate supervisor. All applicable personnel should report anything out of the place or suspicious to their immediate supervisor. The immediate supervisor shall notify the Brazos Electric control center operator of suspicious activities.

Operating personnel may become aware of multi-site sabotage affecting larger portions of the applicable Interconnection through various means of communication contacts: ERCOT, SERC, various security advisory groups like the ERCOT SSRG, communication with other operating entities, or from Brazos Electric Management.

Sabotage Response

In the event of suspected sabotage or breach of physical security, the Brazos Electric control center operators on duty shall obtain and document in appropriate logs all information available pertaining to the suspected incident including but not limited to;

- 1. Location and equipment or facilities involved
- 2. Date and Time
- 3. Names of reporting or investigating personnel
- 4. Description of damage or potential damage
- 5. Safety and System Security
- 6. Any notifications made
- 7. Any instructions received

If the safety of personnel, general public, equipment and facilities, or system security is at risk, the Brazos Electric control center operators on duty will take all actions necessary to correct or mitigate exposure immediately. When either safety or BES security is jeopardized, the Brazos Electric control center operators on duty will take appropriate actions deemed necessary to preserve the integrity of evidence that may be used for further investigation. If a sabotage threat call is received an attempt should be made to keep the caller talking and complete the Bomb/Sabotage Threat Checklist (or similar form) to the extent possible. A copy of this checklist is included in Exhibit G and a paper copy in all control rooms.

The Brazos Electric control center operators on duty will notify and provide all available information to the Brazos Electric SSRG primary or back up representative of any suspected sabotage incident.

After confirmation of information and evaluation of the incident, additional actions as deemed appropriate shall be taken by the SSRG representative or by a delegated representative, to inform internal Brazos Electric personnel, law enforcement agencies, ERCOT Security Desk or Entergy Operations, other operating entities, and the FBI, and submitting applicable reports to the Electric Information Sharing and Analysis Center ("E-ISAC") and to the Department of Energy ("DOE").

Communication

Operating personnel shall implement the following steps of communication, where applicable, for an actual or suspected reportable event. Reporting requirements for sabotage and disturbance events and applicable contact information is provided in **Table 1** and **Table 2** below.

- 1. Contact the Brazos Electric control center operator as soon as possible.
- 2. The control center operator will communicate the event to the Brazos Electric SSRG primary representative or to the SSRG backup representative if the primary representative is unavailable.
- 3. Brazos Electric SSRG personnel shall implement remedial actions including, but not limited to the following communication to authorities and Brazos Electric operating personnel, where applicable, for a reportable event:
 - A. Communicate the event to appropriate Brazos Electric operating personnel which may include but is not limited to the below listed personnel. Contact information is available on the company intranet or internal phone lists.
 - Control Center operating personnel
 - Control Center technical support personnel
 - Plant Operators
 - Patrolmen
 - District Managers
 - B. Communicate event to Brazos Electric Management.
 - C. Communicate event as necessary to neighboring affected entities as listed with contact information in the Brazos Electric Emergency Operations Plan.
 - D. Communicate event to ERCOT Security Desk, when applicable.

- E. Communicate event to Entergy Transmission Operations and Entergy Local Balancing Authority, when applicable.
- F. Communicate suspected sabotage event to local law enforcement for affected area (911).
- G. Communicate suspected sabotage event to the FBI.
- H. If applicable, complete DOE form OE-417. If the incident is having a critical impact on operations, a telephone notification to the DOE Operations Center is acceptable, pending submission of the completed form OE-417. Electronic submission via an on-line web-based form is the preferred method of notification. However, electronic submission by facsimile or email is acceptable.
- I. Report to NERC and to the applicable regional entity: Texas Regional Entity (TRE) or SERC Reliability Corporation (SERC).

D. Disturbance Reporting Procedures

The types of disturbance events that may include Sabotage Events which must be reported and analyzed pursuant to NERC and the DOE requirements include loss of control center, load shed, loss of customers, and others. A detailed listed is provided in **Table 1**.

The Brazos SSRG representative is responsible for submitting disturbance reports detailed in **Table 1** and **Table 2**. Coordination with other personnel to perform additional analysis and reporting as may be required or requested by an authorized entity pursuant to NERC or DOE requirements. Under certain adverse conditions, *e.g.*, severe weather, it may not be possible to assess the damage from a disturbance within 24 hours. In such cases, Brazos Electric shall provide as much information as is available to the applicable entities at the time reporting is required and shall then provide timely, periodic verbal updates until adequate information is available to issue a full written report.

REPORTING OF INCIDENTS AND DISTURBANCES

(PAGE 1 OF 2)

TRIGGER	REPORTING ACTIONS	
1. Actual physical attack that causes major interruptions or impacts to critical infrastructure facilities or to operations	Time Frame: 1 hour (Submit to NERC, SERC and TRE within 24 hrs)	
2. Actual cyber event that causes major interruptions of electrical system operations	DOE Form: OE-417, Alert Notice (Schedule 1) http://www.oe.netl.doe.gov/oe417.aspx	
3. Complete operational failure or shut-down of the transmission and/or distribution electrical system	Submit to: DOE, NERC (E-ISAC) ERCOT, TRE or SERC	
4. Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system	Be sure to save a PDF of the online report provided to NERC, TRE, SERC and ERCOT. Make a note of the event ID for later updates.	
5. Uncontrolled loss of 300 Megawatts (MW) or more of firm system loads for more than 15 minutes from a single incident	Contact Information: DOE: 202-586-8100; Email: doehqeoc@hq.doe.gov NERC 24 Hotline: (404) 446-9780	
6. Load shedding of 100 MW or more implemented under emergency operational policy	NERC Fax: 404-446-9770	
7. System-wide voltage reductions of 3 percent or more	NERC (non-cyber): <u>systemawareness@nerc.net</u>	
8. Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system	ERCOT: <u>shiftsupervisors@ercot.com</u> TRE: rapa@texasre.org	
	SERC: <u>Reporting_line_sit@list-serc1.org</u> SERC Phone: 877-644-7372	
9. Suspected physical attacks that could potentially impact electric power system adequacy or reliability; or vandalism which targets components of any security systems	Time Frame: 6 hours DOE Form: OE-417, Alert Notice (Schedule 1) <u>http://www.oe.netl.doe.gov/oe417.aspx</u>	
10. Suspected cyber event that could potentially impact electric power system adequacy or vulnerability	Submit to: DOE, NERC, ERCOT, TRE or SERC Be sure to save a PDF of the online report provia to NERC, TRE, SERC and ERCOT. Make a note of the event ID for later updates.	
11. Loss of electric service to more than 50,000 customers for 1 hour or more		
12. Fuel supply emergencies that could impact electric power system adequacy or reliability	Contact Information: See above.	

REPORTING OF INCIDENTS AND DISTURBANCES

(PAGE 2 OF 2)

If OE-417 Schedule 1 submitted (as required above) [Additional detail about event]	 Time Frame: 48 hours DOE Form: OE-417, Alert Notice (Schedule 2) http://www.oe.netl.doe.gov/oe417.aspx Submit to: DOE, NERC, ERCOT, TRE or SERC Be sure to save a PDF of the online report provided to NERC, TRE, SERC and ERCOT. Make a note of the event ID for later updates. Contact Information: See above.
See Table 2 below for events identified in EOP- 004 Attachment 1 BUT not already reported in OE-417(see list above). Events must be reported to applicable entities within 24 hours of recognition of meeting an event type threshold for reporting or by the end of the next business day if the event occurs on a weekend (which is recognized to be 4 PM local time on Friday to 8 AM Monday local time).	Time Frame: 24 hours DOE Form: EOP-004 Attachment 1 (NERC form page 8) http://www.nerc.com/files/EOP-004-1.pdf Submit to: NERC Be sure to save a PDF of the online report provided to NERC, TRE, SERC and ERCOT. Make a note of the event ID for later updates. Contact Information: See above.
Additional Contact Information (INTERNAL): See Appendix 6.	Additional Contact Information (EXTERNAL): Entergy TO: 844-543-9313 501-228-2158 Entergy Local BA: 281-297-2152; 281-297-2153 MISO-South RC: 501-378-4231 ERCOT Taylor Location: 512-248-3030 ERCOT Bastrop Location: 512-874-5030 FBI: 254-772-1627 (WACO) 210-225-6741 (SAN ANTONIO) 972-559-5000 (DFW) 713-693-7000 (HOUSTON)

EOP-004 ATTACHMENT 1 REPORTABLE EVENTS FOR BEPC

Event Type	Threshold for Reporting
Damage or destruction of a	Damage or destruction of a Facility within Transmission Operator Area that results
Facility	in actions to avoid a BES Emergency.
Damage or destruction of its	Damage or destruction of its Facility that results from actual or suspected
Facility (intentional)	intentional human action. It is not necessary to report theft unless it degrades
	normal operation of its Facility.
Physical threats to its Facility	Physical threat to its Facility excluding weather or natural disaster related threats,
	which has the potential to degrade the normal operation of the Facility. OR
	Suspicious device or activity at a Facility.
Physical threats to its BES	Physical threat to its BES control center, excluding weather or natural disaster
control center	related threats, which has the potential to degrade the normal operation of the
	control center. OR
	Suspicious device or activity at a BES control center.
BES Emergency requiring	Public appeal initiated by BEPC for load reduction event.
public appeal for load reduction	
BES Emergency resulting in	System-wide voltage reduction of 3% or more.
System-wide voltage reduction	
BES Emergency resulting in	Firm load shedding ≥ 100 MW (manual or automatic).
firm load shedding	
BES Emergency resulting in	Observed within its area a voltage deviation of $\geq 10\%$ of nominal voltage sustained
Voltage deviation on a Facility	for ≥ 15 continuous minutes.
BES Emergency resulting in	Loss of firm load for ≥ 15 Minutes from a single incident:
Uncontrolled loss of firm load	\geq 300 MW for entities with previous year's demand \geq 3,000 OR
	\geq 200 MW for all other entities
System separation (islanding)	Each separation resulting in an island $\geq 100 \text{ MW}$
Generation loss	Total generation loss, within one minute, of \geq 1,400 MW for entities in the ERCOT
	Interconnection
Transmission loss	Unexpected loss within its area, contrary to design, of three or more BES Facilities
	caused by a common disturbance (excluding successful automatic reclosing).
Unplanned BES control center	Unplanned evacuation from its BES control center facility for 30 continuous
evacuation	minutes or more.
Complete loss of Interpersonal	Complete loss of Interpersonal Communication and Alternative Interpersonal
Communication capability at	Communication capability affecting its staffed BES control center for 30 continuous
its staffed BES control center	minutes or more.
Complete loss of monitoring or	Complete loss of monitoring or control capability affecting its staffed BES control
control capability at its staffed	center for 30 continuous minutes or more.
BES control center	

Annex T1 Transmission Pre-Identified Supplies

The following describes a plan for the Brazos Electric SWAT group (listed below) to consider actions to identify supplies that may be needed to support emergency response. Supplies include materials, goods and services that are anticipated to support event preparation activities. This would be based on the type of event and should take into consideration the anticipated event duration and magnitude. Typically, additional supplies and fuel may be procured and strategically located to prepare for response actions.

The SWAT group should discuss with warehouse operations personnel the material needs and discuss vehicles to be used to transport quantities of materials to field support personnel locations or to any pre-determined staging areas. Additional staging sites can be established as necessary. Vehicles should be restocked while the crews are on rest time at their rest locations. Traveling stores trucks can also be set up at any location as an emergency storeroom.

Whenever additional quantities of materials are required warehouse and purchasing personnel should be called in to assist. Emergencies of long duration may require 24 hour operation and SWAT should determine personnel needed to assist warehouse operations and appoint a Material Coordinator, if necessary, to be the central point of on-site contact to coordinate material supply requirements during the event.

When materials are in short supply, warehouse personnel will provide Brazos Electric's purchasing department personnel with additional requirements. Supplier emergency phone numbers are maintained and emergency purchase orders will be issued to suppliers as needed. The SWAT group (or the Material Coordinator, if assigned) should be updated of status as needed.

Additional actions or procedures specific to pre-arranged supplies for transmission and generation facilities are described in other Annexes of the EOP. The check list on the following page can serve as a guide to the SWAT group for organizing and implementing this action step.

Check List for Pre-Identified Supply

SWAT Group members

Johnny York – Vice-President Transmission Tony Kroskey – Transmission System Operations Manager Wayne Bolton – Chief System Operator Ruben Padilla –Operations Coordinator Supervisor Jeff Stebbins –Transmission Maintenance Manager David Webb – Northern District Manager Kevin Brown – Southern District Manager Doug Breshears – System Technician Superintendent Aaron Wentworth – Purchasing Manager

- 1) Determine materials or additional quantities of materials needed for each area
- 2) Designate a Material Coordinator to work with and coordinate with Purchasing department
- 3) Material Coordinator arranges for acquiring pre-identified supplies

4) Material Coordinator arranges for distributing supplies for each area with the District Managers

- 5) District Managers distribute supplies to field crews as needed
- 6) SWAT Team group meets as needed to discuss and revise planned actions for supplies

Annex T2 Transmission Staffing During Emergency Responses

The following describes a plan for the Brazos Electric SWAT group (see below) to consider actions to determine the necessary staffing level planned to maintain facility operations in each area to be impacted by emergency weather event. This staffing level is dynamic and staffing levels may not be the same for multiple events. Staffing levels are based upon the type of anticipated event, expected magnitude and duration, etc.

Typically, the number of personnel comprising the SWAT group will often be further increased during the event preparation phase once event response actions have been determined. Field personnel may be secured, assigned, and possibly staged as a part of the preparation phase. Also, Brazos Electric's SWAT may open a coordination center office to be staffed during the event.

Staffing levels and resource needs should also take into consideration the anticipated event duration and magnitude. In general and when possible, for events that are anticipated to last for more than a few days the following duty rotations are desirable:

Field personnel schedule: 16 hour on-duty and 8 hour off-duty Supporting management schedule: 12 hour on-duty and 12 hour off-duty Assignment duration: Rotate and relieve duty personnel every 7 days or as needed

The Brazos Electric SWAT will consider identifying and arranging for staging areas on an eventby-event basis in order to best meet anticipated needs. Travel time and geographic isolation (e.g., inaccessible roads, etc.) are concerns when considering static staging areas. Typically, the district office locations in Waco and Tolar would be a staging area for crews and materials.

Given the size of the Brazos Electric service area, it is unlikely that pre-arranged staging sites will be at the most optimum locations to support actual events. This practice will be reconsidered if staging ever appears to be a possible constraint.

Check List for Staffing During Emergency Response

SWAT Group members

Johnny York – Vice-President Transmission Tony Kroskey – Transmission System Operations Manager Wayne Bolton – Chief System Operator Ruben Padilla –Operations Coordinator Supervisor Jeff Stebbins –Transmission Maintenance Manager David Webb – Northern District Manager Kevin Brown – Southern District Manager Doug Breshears – System Technician Superintendent

Activities:

1) Review and determine staffing levels needed for each area based on the event

2) Determine if event would need a coordination center office

3) Determine if there should be a planned duty rotations

4) District Managers coordinate status of field crew(s) with Operations Coordinator Supervisor and Chief System Operator

5) SWAT Team group meets as needed to discuss and revise planned actions for staffing

ANNEX T3

SEVERE WEATHER AND WILDFIRE ANNEX

The purpose of this annex EOP is to address certain requirements in P.U.C. SUBT. Rule 25.53 and ERCOT Protocol Section 3.21 concerning emergency operations plans to address emergency/severe weather conditions or other abnormal circumstances that pose a threat to the reliable operations of generation and transmission system facilities. As previously stated, Brazos Electric is a generation and transmission electric cooperative providing wholesale power to its sixteen distribution electric cooperative members (*i.e.*, Brazos Electric does not serve any retail customers) in a service area covering 68 counties throughout Texas. This annex describes Brazos Electric's processes/procedures to respond to adverse operating situations. Severe weather conditions may be experienced that could impact Brazos Electric's generation and transmission facility operations that range from extreme cold winter, extreme hot summer, snow, ice, tornadoes, thunder storms, drought, floods, and hurricanes.

This annex provides a basic plan and guidelines for actions to prepare and respond to potentially severe weather events, and, as such, Brazos Electric's operations personnel may find it necessary to make adjustments or deviate from the written procedures as conditions warrant, but the end objective is to maintain or restore operation of the generation and transmission facilities as safely and efficiently as possible. The procedures in this annex include the following:

- General actions performed by transmission and generation operating personnel to identify and communicate potentially severe weather conditions to Brazos Electric's and other relevant personnel, general preparation actions, staffing during severe weather events and considerations for pre-arranged supplies for emergencies. Severe weather conditions include, but not limited to, tornadoes, hurricanes, severely cold weather, severely hot weather, floods, drought, or wildfire conditions.
- Procedures specific to the operations of transmission facilities including appropriate measures for switching, maintenance and outage coordination during severe weather and wildfire mitigation efforts.
- 3) Procedures specific to the operations of generation facilities including appropriate measures for severely cold weather and severely hot weather operations, plan to address any known critical failure points, including any effects of weather design limits, emergency shortage of water, checklists for generating facility personnel to address emergency events, summary of alternative fuel and storage capacity, alternative fuel testing and priorities for recovery of generation capacity.

This annex shall be reviewed and updated annually or as necessary by Brazos Electric's Transmission and Generation department staff to verify facility information, procedural actions or incorporate additional company strategies. Any significant change to the plans and guidelines shall be communicated to the

PUCT or other appropriate entities within 30 days after the change takes effect. Brazos Electric will assess, review and modify plans based on lessons learned from activation of the EOP or after conducting drills or training exercises with its operating personnel.

A. GENERAL ACTIONS FOR SEVERE WEATHER EVENTS

This section describes general actions common to either of Brazos Electric's generation or transmission facility operations that address the identification of potentially severely cold or hot weather events, staffing during severe weather events and emergency supplies inventory. These actions are to be performed in advanced of an approaching event to evaluate the possible operating challenges that may develop and plan initial response actions.

A.1 Identification and Communications of Severe Weather Events

Brazos Electric's generation and transmission control center operators maintain awareness of weather threats and weather related emergency declarations by monitoring of notices communicated by the National Weather Service ("NWS"), local, state or federal authorities or various media sources. Operational notifications are also issued through ERCOT and/or SERC grid operators to inform of forecasted or actual weather conditions that may impact Brazos Electric's electrical grid operations.

Alerts for severe weather/environmental conditions provide an early indication to operating personnel that system conditions may require implementation of portions of this EOP. The decision to implement response actions described in this annex may be based on any condition, combination of conditions, or threat(s) to the system that, in the opinion of the Brazos Electric operations management could result in significant threat to continued reliable operations of the system. The process for identifying and communicating potentially severe weather events is as follows:

- The Brazos Electric control center operators shall inform the operations supervisor and/or operations management personnel of the severe weather threat notices, however, those alerts that are projected to be localized in nature or are for hurricanes or geomagnetic disturbances are dealt with through separate plans or operating procedures.
- 2) After receipt of a severe weather related notice, the Brazos Electric operations supervisor and/or operations management personnel shall assess the weather information and utilize the following criteria to identify if the situation warrants activation of this portion of the EOP:
 - a) Severely cold weather conditions expected to persist for an extended period with forecasted temperatures staying below 20°F along with severe wind chill factors for which the effects may severely jeopardize the security of the system. Concerns include adequate capacity and operating reserve, forced outages due to galloping conductors, freezing equipment, etc.

- b) Severely hot weather conditions expected to persist for an extended period with forecasted high temperatures staying above 105°F for which the effects may severely jeopardize the security of the system. Concerns include adequate capacity and operating reserve, forced outages due to equipment overload failures, etc.
- c) Severe thunderstorms, intense lightning storms, tornados, ice/snow accompanied with high winds and flooding conditions that are projected to develop and impact a large area of Brazos Electric's service area.
- d) Drought and wildfire conditions in areas of the Brazos Electric system where key transmission facilities are located or generation facilities. Concerns include endangered transmission/generation facilities, water shortages, contamination on insulators, evacuation orders, etc.
- e) A weather/environmental event or condition that is judged to pose an imminent threat to the system.
- 3) Brazos Electric's operations management will assemble a Severe Weather Action Team ("SWAT") to coordinate and communicate response actions that include initial activation of this portion of the EOP. The SWAT will consider implementation of event preparation activities and coordinating response actions as outlined below:
 - a) Communicate activation of the EOP to operating personnel. An initial communications will be made with the intent to raise the level of awareness and preparation for a potential event. Follow up communications will occur when severe weather is imminent and poses a significant threat to one or more parts of the transmission and generation system. Voice or email communications will be utilized.
 - b) Prepare a list of potential response actions based on assessment of forecasted and actual weather conditions. Event preparation conference calls with relevant Brazos Electric personnel will be conducted to discuss staffing, preparedness, communication, strategies, and other preparation topics. Additional actions or procedures specific to transmission facilities are described in later parts of this annex.
 - c) Comparing assessments and potential actions with neighboring entities and ERCOT operations. The potential list of response actions can be discussed and various preparedness issues and possible strategies can be discussed so actions can be consistent. Brazos Electric personnel are to observe codes of conduct as appropriate.

- d) Coordinate response actions and maintain situational awareness for operating personnel. Provide operating personnel with the planned response actions and assign personnel to be a point-of-contact for coordinating implementation of response actions. Additional actions or procedures specific to transmission facilities are described in later parts of this annex.
- e) Determine when event conditions have diminished and operations can be returned to normal. Communicate a return to normal condition to operating personnel after notice by ERCOT that the event is over. Conduct an after event assessment to discuss activities and to identify areas for possible improvement. Based on the assessment, a report should document the results and what policies or procedures, if any, that may be revised in order to improve performance during future events.

The following timeline for communication of weather-related alerts and/or notices to personnel is provided below. The timelines shown are understood to be estimates as conditions may rapidly change or the event diminishes or not materialize. Also the timeline is not applicable to a hurricane/tropical storm event.

OCN (approximately 5 days before forecasted event arrives to region) Send email and/or SMS text to Transmission Team Send email to LSEs/DSPs represented by Brazos Operation management determine if SWAT group should be convened

ADVISORY (approximately 3 days before forecasted event arrives to region) Send email and/or SMS text to Transmission Team Send email to LSEs/DSPs represented by Brazos Operation management determine if SWAT group should be convened, if not already done so

WATCH (approximately 1 day before forecasted event arrives to region) Send email and/or SMS text to Transmission Team Send email to LSEs/DSPs represented by Brazos Operation management determine if SWAT group should be convened, if not already done so

EMERGENCY (ERCOT has issued an Emergency conditions notice) Send email and/or SMS text to Transmission Team Send email to LSEs/DSPs represented by Brazos Operation management determine if SWAT group should be convened, if not already done so

Should the SWAT group be convened the planned response actions would be identified for the event and implemented as soon as practicable. The possible event actions are described in further detail in the next section.

If communications with the public become necessary, the procedures outlined in the Communications annex of the EOP would be utilized. Brazos Electric does not directly serve retail customers, however its emergency management personnel who are designated to interact with local, state, and federal emergency management officials during emergency events plan to receive the latest Federal Emergency Management Agency (FEMA) National Incident Management System (NIMS) training, specifically IS-100, IS-200, IS-700, and IS-800.

Reporting event information to other entities may become necessary and the procedures outlined in the Event Reporting annex of the EOP may be utilized.

A.2 Event Preparation Actions

The Brazos Electric SWAT group shall coordinate conference calls or meetings with division/department personnel responsible for operations and maintenance of facilities to discuss preparedness, staffing, communication, strategies, and other preparation topics. The purpose is to develop a list of potential response actions and to outline a time line for activities based on the type of potentially severe weather event identified. Typical actions to be considered in the preparation phase include:

Assign event coordinators Continued weather monitoring Continued preparation conference calls, discussions, and meetings Review potential actions as may be recommended by ERCOT Assess availability of key resources Staging and/or packing of internal resources for possible travel Communicating with contractors and determining available resource levels Placing contractors on notice, on standby, or staged at specific locations Contact motels, restaurants, fuel, and other services, as appropriate, to monitor status Contact media and civic authorities as appropriate Assess need/timing to open or keep open an event coordination center office Assess possible staging of repair crews to other Divisions

Initial preparation actions may include testing of backup communications equipment (radios), emergency generators, fuel supply and batteries. Additional specific actions or preparations for various weather event types impacting transmission operations are described in later parts of this annex.

B. TRANSMISSION FACILITY PREPAREDNESS ACTIONS

The Brazos Electric SWAT and operations management will coordinate and communicate response actions that include initial activation of this portion of the EOP. During the event preparation phase, the SWAT will continue to assess the potentially severe weather conditions and possible response actions.

Specific actions to consider for different weather threats that may have severe impact to transmission facilities include, but are not limited to, those outlined below.

B.1 Severe Storms

The following is a list of potential actions that may be implemented for severe storms threats such as thunderstorms, intense lightning storms, tornados, ice and snow accompanied with high winds, or flooding conditions:

- a) Review plans to determine if any scheduled or in progress maintenance or testing on monitoring and control for transmission equipment can be deferred or cancelled, unless such maintenance will result in improved monitoring, control and reliability.
- b) In an area where severe weather is projected, return automatic reclosing schemes to active, as applicable.
- c) In an area where tornados are reported and automatic reclosing scheme fails to restore the impacted transmission facility, ensure that the transmission facility can be safely returned to service or that additional maintenance or repair is performed before restoration.

B.2 Severely Cold Weather

The following is a list of potential actions that may be implemented for a potentially severe cold weather conditions:

- a) Review control room staffing levels to ensure appropriate staffing is available to manage conditions should ERCOT experience system adequacy issues.
- b) Defer or cancel maintenance and testing activities of any critical transmission facility or nonessential planned maintenance, tree trimming, remote terminal unit (RTU) work, protection and control testing, etc., unless such maintenance will result in improved monitoring, control and reliability.
- c) Return planned outages/maintenance on equipment to service if possible.
- d) Suspend all work on critical computer systems and telecommunication equipment utilized by the control room, unless such maintenance will result in improved monitoring, control and reliability.
- e) Enforcing and /or supplementing physical security measures.
- f) Prepare for the implementation of other emergency procedures.

B.3 Severely Hot Weather

The following is a list of potential actions that may be implemented for potentially severe, hot weather conditions:

- a) Review control room staffing levels to ensure appropriate staffing is available to manage conditions should ERCOT experience system adequacy issues.
- b) Defer or cancel maintenance and testing activities of any critical transmission facility or nonessential planned maintenance, tree trimming, RTU work, protection and control testing, etc., unless such maintenance will result in improved monitoring, control and reliability.
- c) Return planned outages/maintenance on equipment to service if possible.
- d) Suspend all work on critical computer systems and telecommunication equipment utilized by the control room, unless such maintenance will result in improved monitoring, control and reliability.
- e) Enforcing and /or supplementing physical security measures.
- f) Prepare for the implementation of other emergency procedures.

B.4 Drought and Wildfire Threats

The following is a list of potential actions that may be implemented for drought and related wildfire threat conditions.

- a) Monitor red flag warnings issued by NWS or other agencies. Identify transmission facilities that may be impacted in the wildfire threat area. Concerns include endangered transmission/generation facilities, water shortages, contamination on insulators, evacuation orders, etc. Collect reports of conditions from field personnel.
- b) Notify and alert all critical personnel to prepare for possible extended working hours and mobilizing crews to pre-determined locations where advantageous. Have personnel that are assigned vehicles to top off fuel tanks. Determine if staging of washing rigs and response crews at pre-determined locations as a proactive operational measure is to be utilized.
- c) Personnel who live in affected areas should make preparations for family to evacuate and then find safe quarters for themselves until conditions improve or called upon to respond to the emergency.
- d) Verify that two-way radios are operational with Base-to-Mobile and Mobile-to-Base radio communications. Verify that back-up generators at mobile radio communication tower sites and microwave tower sites are in working order and fuel levels topped off.

- e) Determine if any transmission lines currently out on clearances should be brought to in-service condition or remain de-energized for safety when necessary. Determine if any open switches for contingency plans should be made ready for service.
- f) Prepare for extended stay in control center including stocking of essentials items such as water, personal hygiene items, food, etc.

APPENDIX T4

EMERGENCY LOAD SHED ANNEX

This annex describes procedures for performing emergency load shed actions for ERCOT and SERC regions and general operational guidelines during load shed actions that control room personnel should be familiar with. Additional control room personnel may be called in by the Chief System Operator as needed to assist during system emergencies or prior to anticipated emergencies.

If a directive to shed customer load is issued by an ERCOT or MISO-South grid operator, Brazos Electric shall implement the directive utilizing the steps set forth in this annex. After taking all other remedial steps, including, when time permits, coordinating with ERCOT or MISO-South, if insufficient transmission capacity exists, Brazos Electric shall shed customer load rather than risk uncontrolled failure of components or cascading outages of the Interconnection. If there is insufficient time or the inability to coordinate with ERCOT or MISO-South grid operators, Brazos Electric shall shed additional load.

Brazos Electric is capable of implementing load shedding in a timeframe adequate for responding to the emergency. Brazos Electric operating personnel shall identify the amount of time required to implement its load shed reduction plan and notify ERCOT or MISO-South grid operators as applicable.

The Brazos Electric automatic load shedding scheme considers frequency and the automatic load shed protection is coordinated with other automatic load shedding schemes on Brazos Electric's system, tripping of shunt capacitors, and other automatic actions that will occur under abnormal frequency, voltage, or power flow conditions. Brazos Electric does not have automatic under-voltage load shed protection and therefore does not have under-voltage set points.

A. ERCOT Region

ERCOT as the Single Control Area Authority will initiate and coordinate the implementation of emergency load shed in accordance with Energy Emergency Alert (EEA) procedures as described in Section 4 of the ERCOT Operating Guides.

ERCOT will endeavor to maintain transmission lines operational and energized, if at all possible. This will: (1) permit rendering the maximum assistance to an area experiencing a deficiency in generation, (2) minimize the possibility of cascading loss to other parts of the ERCOT system, and (3) assist in restoring ERCOT operation to normal.

Brazos Electric control room personnel shall follow the procedures described below to communicate implementation of emergency load shed actions to the DSPs when in ERCOT EEA. Control room personnel shall follow the procedure in Section C when a local emergency exists that requires emergency load shed actions. Communications shall be conducted over a phone conference system or other available voice circuits. In addition, Brazos Electric may, as time and circumstances allow, utilize email messages

to communicate EEA status conditions to DSPs. The phone system is the primary system for communications of EEA implementation and status updates.

A copy of the designated DSP personnel contact list is shown in **Appendix 6** and each DSP's Load Shed Priority List is shown in **Appendix 4**. A copy of a list of specific industrial loads as provided by the DSPs is shown in **Appendix 6**. A list of other loads of a sensitive nature such as gas compressor station loads are maintained in an electronic spreadsheet accessible by control room operations personnel. Current electronic copies of these lists are maintained by the Chief System Operator in a document folder accessible by the control room personnel.

Pre-EEA conditions:

Brazos Electric shall monitor its system operating conditions to determine in advance of the potential need to implement any ERCOT EEA load shed actions. This determination will be made based on available grid operating condition and advisory or watch notices provided by ERCOT. Brazos Electric will initiate a phone call to DSPs when ERCOT issues a media appeal for voluntary energy conservation or when ERCOT issues a WATCH for ERCOT Physical Responsive Capability below 2500 MWs with the potential for load shed actions at a high probability level.

During the phone call, as time and circumstances allow, the following items shall be discussed: available grid operating conditions, instructions for any preparatory actions to be taken including any media appeals, and the timing of those actions prior to anticipated EEA implementation.

Each DSP shall report to Brazos Electric control room staff on the status of any DSP preparatory actions when such actions are implemented. Brazos Electric may, as time and circumstances allow, send an email message summarizing the current ERCOT EEA status conditions to the DSP's designated emergency contact person(s).

EEA Conditions:

EEA Level 1 – Maintain ERCOT Steady State Frequency near 60 Hz and Maintain Physical Responsive Reserves above 1750 MW

Brazos Electric shall initiate a phone call to DSPs and inform the DSPs that ERCOT has issued an EEA Level 1 condition notification. Brazos Electric shall describe the current ERCOT grid operating conditions available from ERCOT and any specific actions requested by ERCOT such as public appeal for voluntary load curtailment. The DSPs and Brazos Electric shall discuss any other actions to be taken and the timing of those actions deemed appropriate for the situation including any media appeals. Each DSP shall provide a voice acknowledgement of receipt of the verbal notification during a roll call at the end of the phone call. Brazos Electric will attempt to contact by various means those DSPs not present on the phone call and inform them of the EEA notification. Brazos Electric may, as time and circumstances

allow, send an email message summarizing the current EEA status conditions to each DSP's designated emergency contact person(s).

EEA Level 2 – Maintain ERCOT System Frequency at a minimum of 59.91 Hz and maintain ERCOT Physical Responsive Reserves above 1375 MW

Brazos Electric shall initiate a phone call to DSPs and inform the DSPs that ERCOT has issued an EEA Level 2 condition notification. Brazos Electric shall describe the current ERCOT grid operating conditions available from ERCOT, general EEA Level 2 actions such as voltage reduction or block load transfer and any other specific actions requested by ERCOT. ERCOT instructs QSEs to deploy available contracted Emergency Response Service (ERS) resources and/or deploy RRS supplied from Load Resources (controlled by high-set under-frequency relays). ERCOT may deploy ERS or RRS without deploying the other, and may deploy both services simultaneously or separately, and in any order. DSPs and Brazos Electric shall discuss any other actions to be taken and the timing of those actions deemed appropriate for the situation. Each DSP shall provide a voice acknowledgement of receipt of the verbal notification during a roll call at the end of the phone call. Brazos Electric will attempt to contact by various means those DSPs not present on the phone call and inform them of the EEA notification. Brazos Electric may, as time and circumstances allow, send an email message summarizing the current EEA status conditions to each DSP's designated emergency contact person(s). Implementation of any Block Load Transfers will be discussed with applicable DSPs.

EEA Level 3 - Maintain System Frequency at a minimum of 59.91 Hz or Greater and recover 1000 MW of Physical Responsive Reserves

Brazos Electric shall initiate a phone call to DSPs and inform them that ERCOT has issued an EEA Level 3 condition notification. Brazos Electric shall describe the current ERCOT grid operating conditions available from ERCOT and shall inform them of the quantity of load to be shed for the Brazos Electric system. Brazos Electric shall refer to the load shed obligation share for each DSP shown in **Table 1** below to then verbally direct the load shed obligation amount to be allocated to each DSP and request that each DSP take immediate steps to perform load shed actions as soon as possible. Each DSP shall provide a voice acknowledgement of its respective load shed obligation amount. Brazos Electric will attempt to contact by various means those DSPs not present on the phone call and inform those DSPs of their respective load shed obligation. Brazos Electric may, as time and circumstances allow, send an email message summarizing the current EEA status conditions to the DSP's designated emergency contact person(s). Each DSP shall provide Brazos Electric a status of feeder load shed activities, amount of load shed achieved and location as soon as practicable. Brazos Electric shall notify ERCOT of time required to shed firm load and amount.

Based on prevailing circumstances, ERCOT or Brazos Electric system conditions may warrant or require emergency load shed at substations not listed in the EOP for the current year.

Brazos Electric shall coordinate the restoration of shed load with DSPs only after restoration instructions have been given by ERCOT. The DSPs shall be contacted by a phone call from Brazos Electric and informed of ERCOT notification of current EEA Level 3 conditions and restoration instructions. Brazos Electric shall inform each DSP of the quantity of load to be restored for the Brazos Electric system. The Brazos Electric System Operator shall follow the general load shed guidelines described in Section C to ensure system integrity during restoration.

B. SERC Region

Brazos Electric control room personnel shall follow the procedures described below to communicate and implement emergency actions with affected DSPs when informed by the Entergy LBA, the local Entergy Transmission Operator or the MISO-South grid operators of emergency or adverse operating conditions and load shed actions that are required. Control room personnel shall follow the procedure in Section C when a local emergency exist that requires emergency load shed actions. Brazos Electric shall promptly communicate any load shed directives to the affected DSPs and coordinate emergency operations with the Entergy LBA, Entergy Transmission Operator, MISO-South grid operator and the DSPs. Communications shall be conducted over a phone conference system or other available voice circuits. In addition, Brazos Electric may, as time and circumstances allow, utilize email messages to communicate emergency condition status to affected DSPs. The phone system is the primary system for communications of emergency operations implementation and status updates. Brazos Electric should reference Appendix 4 and follow the general load shed guidelines described in Section C to ensure system integrity during emergency load shed operations. A copy of the DSP personnel contact list is shown in Appendix 6 and each DSP's Load Shed Priority List is shown in Appendix 4. A copy of a list of specific industrial loads as provided by the DSPs is shown in Appendix 6. Current electronic copies of these lists are maintained by the Chief System Operator in a document folder accessible by the control room personnel.

Based on prevailing circumstances, Entergy LBA, MISO-South or Brazos Electric system conditions may warrant or require emergency load shed at substations not listed in the EOP for the current year.

Attached in **EXHIBIT** A is a copy of the section in the Entergy LBA Emergency Operating Plan that describes operational coordination in the event of a system emergency or adverse operating condition.

C. General Load Shed Guidelines

The following guidelines shall be utilized by the Brazos Electric System Operator in the event it becomes necessary for Brazos Electric to perform emergency feeder load shed actions should a DSP not be able to implement such actions.

1. In the DSP Load Shed Priority Lists, the Brazos Electric System Operator shall have the right to exercise discretion as to the magnitude of the load to shed, time available for action, and availability of supervisory control ("SCADA") equipment and switchmen.

- 2. The following substations and loads will be given special recognition in emergency load shed planning:
 - a) Substations and feeder circuits which serve customers with special in-house life-sustaining equipment
 - b) Substations which serve entire cities (because of hospitals, police stations, fire stations, critical water and wastewater facilities, and other essential services)
 - c) Substations with under-frequency relays
 - d) Sensitive or critical loads
- Loads interrupted for emergency load shed should generally be returned to service in approximately 15 to 30 minutes. If the need for emergency load shed continues, loads should be interrupted on a rolling basis, but, if possible, no more than once per hour.
- 4. As the necessity for load shed occurs, each DSP will be contacted by phone to determine if such DSP needs to make any modifications to its Load Shed Priority List.
- 5. To the extent possible it may be required that Brazos Electric System Operators reduce customer loads by reducing distribution voltage or other load management measures.
- 6. Priorities for restoration of service are listed below:
 - a) Facilities necessary to restore the ERCOT or SERC electric grid, as applicable, or Brazos Electric utility systems
 - b) Public safety organizations and public health facilities
 - c) Public communication facilities
 - d) All remaining customers

D. Under-Frequency Load Shed

Brazos Electric implements its UFLS program, including maintenance, testing and reporting, in accordance with applicable NERC Reliability Standards and regional program requirements. The following describes the practice for remote operation of distribution feeder circuits automatically tripped by under-frequency relays.

Many of the Brazos Electric DSPs have SCADA which enables them to remotely access and operate their respective distribution circuit reclosers. This ability has proven to be a very valuable asset for the DSPs' daily operations. However, with this ability comes responsibilities and caution. One area of caution is the ability that the DSPs have to reset and/or reclose a distribution feeder circuit recloser that may trip as a result of an under-frequency relay operation.

For reliability purposes a utility may have determined and established the need to install automatic load shedding using under-frequency relays on distribution feeder circuit reclosers as a way to arrest frequency decay during system emergencies. Under-frequency relays are triggered whenever the demand for electricity exceeds the capability of generators on line to meet that demand. The sudden loss of a generator(s) results in an instantaneous frequency spike or decline which could ultimately lead to the automatic operation of distribution feeders armed with under-frequency relays.

In the ERCOT region there are requirements for three "stages" or "types" of automatic under-frequency relays installed on the distribution system for automatic load shedding. See ERCOT Nodal Operating Guides Section 2.6 "Requirements for Under-frequency Relaying". The relays are set at three different settings as follows:

Type 1	59.3 Hz,	5% of the ERCOT load
Type 2	58.9 Hz,	10% of the ERCOT load
Type 3	58.5 Hz,	10% of the ERCOT load

In the SERC region there are requirements for three "stages" or "types" of automatic under-frequency relays installed similar to the ERCOT program, except each stage is selected for shedding 10% of the entity's load. Included in **Appendix 4** are a list of substation locations in the SERC region which have automatic under-frequency relays installed and a copy of the SERC UFLS program guidelines.

Each DSP receives annually information indicating the location and the type of under-frequency relay installed on circuit reclosers in their respective areas. This information is contained in the annual update request for information relative to the Brazos Electric EOP. Each DSP should identify these circuits and, if possible, label their respective SCADA displays with the relay type installed on that circuit along with a caution or warning to contact the Brazos Electric System Operator whenever the circuit recloser trips on under-frequency.

Currently two different circuit recloser control types are equipped with the under-frequency relays and are in use on the Brazos Electric system.

Cooper Form 5 Control Schweitzer 351 Control

Of these two type controls, the Schweitzer 351 is the only control that will require the SCADA operator to reset the relay before the circuit recloser can be remotely closed. The Cooper controls can be remotely closed without a prior relay reset operation. At no time should a circuit recloser that has tripped by the under-frequency relay be closed back without the permission of the Brazos Electric System Operator and

only then after the Brazos Electric System Operator has been given permission by the ERCOT or SERC regional grid operator, as applicable.

If a loss of load occurs due to the operation of under-frequency relays, the Brazos Electric System Operator, using caution, may rotate the physical load interrupted to minimize the duration of interruption experienced by individual customers or to restore the availability of under-frequency load-shedding capability. However, in no event shall the initial total amount of load without service be decreased without the approval and direction of the applicable regional grid operator. The Brazos Electric System Operator as directed by the applicable regional grid operator shall make every reasonable attempt to restore load, either by automatic or manual means, to preserve system integrity. This will allow load equipped with under-frequency relays to be available for interruption should there be a subsequent under-frequency event. Extreme caution should be exercised in restoring load so that the capability limits of generating units and transmission lines are not exceeded.

Prior to restoring load after any automatic or manual load shed event, the Brazos System Operator should receive instructions or request permission from the regional grid operator to restore load. Before restoring loads a coordinated effort will be made by the Brazos System Operator through a phone call to the affected DSPs. Any instructions given by the regional grid operator will be communicated to the affected DSPs along with the load amount to be restored by the entity. This procedure will continue until all loads have been restored. Be aware that cold load pickup can be an issue depending on the length of time the load has been off and the type of load being restored. Cold load pickup can involve inrush currents of 10 or more times the normal load current depending on the nature of the load being picked up. This will generally decay to about two times normal load current in two to four seconds and remain at a level of 150% to 200% of pre-shutdown levels for as long as thirty minutes. Each DSP should report back to the Brazos System Operator the amount of load has been restored.

Whenever possible, Brazos Electric System Operators shall not manually drop load connected to underfrequency relays during system emergency conditions. An example would be during the implementation of Level 3 of the ERCOT EEA.

Note that if remote operation of distribution circuit reclosers is unavailable, then Brazos Electric's and DSPs' personnel will need to be dispatched to perform the task of manually resetting and closing of the circuit reclosers tripped by under-frequency relays. The following is the procedure for each type of control:

Cooper Form 5 Control: This control requires no resetting. After checking relay targets to verify no simultaneous fault occurred at the time of the under-frequency trip, the recloser can then be closed.

Schweitzer 351 Control: To close the circuit recloser after an under-frequency trip:

- 1. Turn "Remote" Off
- 2. Press "Aux #2" button (may be labeled "UF")
- 3. Circuit recloser is now reset and can be closed
- 4. Turn "Remote" On

ERCOT LOAD SHED OBLIGATION SHARE

		% LOAD SHED	BRAZOS ELECTRIC MW LOAD SHED OBLIGATION FOR FRCOT 1000
DSP	CP DEMAND MW (1)	OBLIGATION	MW REQUEST (2)
BARTLETT	45.975	1.32%	0.676
COMANCHE	42.455	1.22%	0.624
COSERV	1,516.194	43.61%	22.286
FT. BELKNAP	17.939	0.52%	0.264
HAMILTON	18.160	0.52%	0.267
HILCO	136.288	3.92%	2.003
НОТ	97.783	2.81%	1.437
JAC	17.264	0.50%	0.254
MID-SOUTH	38.968	1.12%	0.573
NAVARRO	81.830	2.35%	1.203
NAVASOTA VALLEY	72.416	2.08%	1.064
PENTEX	73.599	2.12%	1.082
SOUTH PLAINS	69.115	1.99%	1.016
TRI-COUNTY	674.058	19.39%	9.908
UCS	456.175	13.12%	6.705
WISE	118.290	3.40%	1.739

(1) Load values are based on the DSP's hourly demand coincident with the ERCOT 4CP peak load that occurred on August 24, 2021 at hour ending 1700. This excludes distribution meter points and non-ERCOT loads.

(2) Per ERCOT Nodal Operating Guide Section 4.5.3.4, the current Brazos Electric system load shed obligation is 5.11% of the total ERCOT load shed request. For a 1,000 MW ERCOT load shed request, the total Brazos Electric load shed obligation will be 51.1 MW.

ANNEX T4, EXHIBIT A

SERC REGION

EMERGENCY OPERATIONS COORDINATION

Remaining pages of Annex T4, Exhibit A, redacted due to containing contact information and emergency procedures of a third party
Facilities	County	Customer	Brazos first responders
San Miguel – Elm Creek –	Atascosa, Wilson,	None	Belton Patrolman
Marion 345 KV Line	Guadalupe, Comal		Belton Line crew
Floresville MW	Atascosa	None	Belton Patrolman
			Belton Line crew
Lavernia MW	Wilson	None	Belton Patrolman
			Belton Line crew
*Deer Lake Sub	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
*Dobbin Sub	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
*Fish Creek Sub	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
*Rabon Chapel	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
*Spring Branch Sub	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
*Woodhaven Sub	Montgomery	Mid South	Montgomery Patrolman
			Belton Line crew
Montgomery MW	Montgomery	Mid South	Montgomery Patrolman
			So. District Comm. Techs
Keith MW	Grimes	Mid South	Montgomery Patrolman
* 3.64 77	337.11		So. District Comm. Techs
*Mt. Zion,	Walker	Mid South	Montgomery Patrolman
Sondy			Betton Line crew
Mt. Zion MW	Walker		Montgomery Patrolman
	Walkel		So District Comm Techs
Huntsville MW	Walker	Mid South	Montgomery Patrolman
	Walker	Wild Boduli	So District Comm Techs
Bedias Sub	Grimes	Mid South	Montgomery Patrolman
		inite Bound	Belton Line crew
Carlos Pump Sub	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Crutchfield	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Gibbons Creek	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Hwy 6 Sub	Brazos	Mid South	Montgomery Patrolman
			Belton Line crew
Iola Switch	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Keith Sub	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Keith Switch	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
Roans Prairie Sub	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew
*Sota Sub	Grimes	Mid South	Montgomery Patrolman
			Belton Line crew

* Denotes substations served by ENTERGY transmission lines

B. Pre-Hurricane Activities

The following actions may be performed in advanced of an approaching hurricane. Usually the corresponding NWS hurricane warning level is at Watch stage.

- Brazos Electric's System Operators should inform Chief System Operator and transmission division management of approaching hurricane and current warning levels.
- Contact Brazos Electric's DSPs in areas that may be impacted to apprise of forecasted weather conditions. These DSPs should remind residents or electric customers in their respective service areas on life support systems to make arrangements in case of a prolonged power outage. Residents with special needs should be advised to make arrangements to evacuate well in advance of an approaching storm to avoid power interruption. Any Brazos Electric personnel who reside in potentially affected areas should make preparations for their families to evacuate and then find safe quarters for themselves until either the storm passes or such personnel are dispatched to respond to trouble areas.
- Remind Brazos Electric's personnel about safety in anticipation of high winds, lightning and heavy rains that occur when a hurricane makes landfall. Personnel should be cautious of all downed lines in impacted areas. It is difficult to distinguish between power, cable and phone lines so it is advisable to assume that any line seen on the ground as energized and remain a safe distance away.
- Brazos Electric's Transmission Division management team shall evaluate conditions and determine other actions that may be taken such as directing crews and equipment to be on standby and considering contingency plans to bring in additional resources if needed. Additional supplies and fuel may be procured and strategically located to prepare for restoration efforts. Test backup communications equipment (radios), emergency generators, fuel supply and batteries.
- Additional System Operator personnel will be scheduled to work during the initial storm event to assist with potential line and substation interruptions.
- Any transmission lines or high voltage equipment that is out of service for maintenance or construction should be returned to service if possible before storm conditions prevail.

C. Activities during a Hurricane

When a hurricane has arrived and impacts are occurring in the service area the following actions may be performed. Usually the corresponding NWS hurricane warning level is at Warning stage.

- Brazos Electric's System Operators shall monitor facilities and maintain communications with Chief System Operator, transmission management and DSPs keeping them informed of conditions.
- Maintain communications with other operating entities.
- To the extent that it can be done safely, efforts will be made to maintain electric service throughout the storm; however, crews may not be sent out until after the storm has passed.
- Continue to remind personnel about safety during the storm. High winds, tornados, lightning and flooding pose personnel threats. All power lines should be considered energized and dangerous.
- Brazos Electric's Transmission Division management team shall evaluate conditions and determine other actions that may be taken such as directing crews and equipment to specific locations in preparation of restoration activities. If storms appear to be extremely destructive in nature, consider creating work orders in advance to collect all time and materials charges.

D. Post-Hurricane Activities

After hurricane conditions have past the following actions may be performed.

- As a storm passes and before restoration efforts can begin, a check of available communications to field personnel, DSPs and with other operating entities should be verified and established. Crews can then be mobilized to restore power as soon as safely possible. Brazos Electric crews working in a disaster area will need to carry and possibly display their Brazos Electric identification cards. Brazos Electric personnel in these areas will need to be vigilant for looters or suspicious activities and report them to the local law enforcement agency or communicate back to Brazos Electric's System Operations who can report the incident.
- The EOP calls for restoring power as quickly as possible in the event of an outage. Key facilities such as hospitals, water treatment plants, fuel delivery to generating plants and public service facilities will receive top priority for power restoration, followed by major lines and circuits servicing large numbers of customers.

- Communication with the media, via website or communications center shall be made about restoration progress if deemed necessary. A listing of radio and television stations are maintained in the Communications Annex that could be contacted to inform about system restoration plans. If necessary, a designated member of the Brazos Electric Transmission Division staff will be assigned to handle communications during times of a hurricane disaster.
- Brazos Electric's Transmission Division management team shall evaluate conditions and determine other actions that may be taken such as deploying other contingency resources to assist existing crews with restoration activities. If deemed necessary, both still pictures and videos of facility damage shall be made to assist with making damage repair estimates more realistic and to show FEMA and/or state emergency management personnel of storm conditions that caused damage to Brazos Electric's system.

ANNEX T6 BACKUP CONTROL PLAN ANNEX

This Backup Control Plan ("Plan") outlines procedures for re-establishing control center operating functions for Brazos Electric at the Whitney backup control center location in the event of loss of the Waco primary control center facility. The goal of this Plan is to describe response actions and identify key coordination activities that would guide emergency response personnel in re-establishing the minimum control center operating functions necessary to continue safe and reliable system operations.

A Brazos Electric System Operator has authority to initiate this plan, although consultation with the Chief System Operator or Manager of System Operations may be sought, prior to implementation, if practical.

This Plan shall be reviewed and updated at least annually by Brazos Electric's control center operations management staff to ensure that it sufficiently supports key control center operating functions in accordance with requirements of ERCOT, SERC, NERC, or PUCT, and prudent utility practices. Brazos Electric personnel involved with implementing and supporting response actions identified in this Plan shall be trained and support systems shall be tested on a periodic basis to ensure operational readiness.

Brazos Electric understands emergencies do happen. Events such as fires, explosions, natural disasters, and acts of vandalism and terrorism that may potentially affect the control center are contingencies for which preparations must be made in order to respond to such events if and when they occur. By planning ahead, Brazos Electric endeavors to minimize delays in restoring key control center operating functions.

The response procedures described in this Plan serve as a guide and, as such, the control center operators and emergency response personnel may find it necessary to make adjustments or deviate from the written procedures as conditions warrant, but the end objective is to restore key control center operating functions as quickly and efficiently as possible. The procedures in this Plan, at a minimum, include the following:

- 1) general steps to assess loss of control center operating functions and to mobilize personnel to respond,
- 2) procedures to be followed by the control center operators prior to leaving the primary site and after arrival to the backup site,

- 3) procedures to restore communications to internal company facilities and with ERCOT, SERC regional grid operators and other operating entities,
- 4) procedures to guide the emergency response personnel with restoring vital facilities needed to resume control center operating functions,
- 5) procedures to address readiness training of personnel and backup systems equipment.

A. General Procedures

The following describes general procedures to be followed by the control center operators and emergency response personnel in the event of the loss of the primary site facility. Provided in **Exhibits 1-3** below are check lists that should be used by personnel to coordinate and document the steps followed to enact this Plan.

- 1) Survey and evaluate damage to primary site operational support systems (phones, EMS, radio, power supply). Evacuate the premise if danger exists and take the emergency kit if possible.
- 2) Contact appropriate personnel and entities to inform them of the situation. This includes ERCOT and SERC regional grid operators, key Brazos Electric personnel, other operating entities, and local fire, emergency and law enforcement agencies (911 services). The control center operator shall make use of cell phones, satellite phone or other available communications. This should be done, if possible, within 2 hours of loss of the primary site facility. Contact phone numbers are listed in Appendix 6.
- 3) Brazos Electric Management shall direct emergency response personnel to assemble and coordinate activities of Brazos Electric personnel to setup and activate voice and data communications at the designated backup facility. A list of the emergency response personnel is provided in Appendix 6. The list shows a primary and alternate emergency response coordinator ("Emergency Response Coordinator") that serves as a main point-of-contact for the emergency response personnel.
- 4) After communications are established at the backup site, the control center operator will resume key operating functions at the backup site. These functions include monitoring and control of critical transmission facilities, generation control (except to the extent performed by ERCOT), voltage control (except to the extent performed by ERCOT), time and frequency control, control of critical substation devices, and logging of significant power system events. A list of the backup site phone numbers is shown in Appendix 6. If unable to resume the key operating functions at the designated backup

facility in the expected time frame, contact appropriate entities of this status (ERCOT grid operator, SERC grid operator, other operating entities).

- 5) The emergency response personnel shall activate/implement the communications and control systems facilities that are to be utilized by the control center operators at the designated backup facility. A list of critical facilities is shown on Appendix 5. The control center operator will be kept informed by the Emergency Response Coordinator of the status of voice and data communications systems and other restoration efforts. Both the control center operator and the Emergency Response Coordinator shall keep appropriate ERCOT and SERC personnel informed of the backup plan implementation status.
- 6) Under normal conditions, the transition is expected to take two hours or less. If, due to unforeseen circumstances, it is expected to take more than two hours to implement this plan, the following interim procedures must also be followed:
 - a) When contacting ERCOT initially, notify ERCOT when Brazos Electric expects to be able to commence operations from Brazos Electric's backup site and request that ERCOT monitor Brazos Electric's system and notify Brazos Electric of any concerns,
 - b) periodically contact ERCOT to provide updates on status of implementation of this plan,
 - c) notify the ERCOT Outage Coordinator by phone, fax and/or email of outage requests and status, and
 - d) perform power system operation by phone dispatch.

B Control Center Operator Procedures

Upon arrival at the backup site facility, the control center operator shall check and test the availability of the following voice and data communications systems:

Landline and cellular phone services Microwave phone services Radio communication services SCADA console Operations PC consoles Equipment power supplies and site security system

The control center operator, with assistance from the emergency response personnel, shall contact all appropriate field personnel, power plants, and neighboring operating entities to inform them of the activation of the Backup Control Plan, and to confirm the phone numbers to be used to reach the Brazos Electric control center operators at the backup site. After communications and control systems have been confirmed as operational, the control center operator shall monitor and operate system facilities using available SCADA console, radio console, landline phone system, microwave phone system, Operations PC consoles, and hardcopy system operational information. Otherwise, the control center operator can only perform power system operation by phone dispatch.

During initial backup site operations, there shall be at least two control center operators on-duty around the clock. As conditions warrant, the normal shift schedule shall be resumed. At all times the control center operators shall exercise appropriate caution and ensure the safety of themselves and other personnel as the case may be.

C ERCOT and SERC Communications Procedures

Following the loss of the primary site facility, the Brazos Electric control center operator shall utilize cellular or land-line phone service to contact the ERCOT and SERC regional grid operators to inform them of the situation and provide the status of Backup Control Plan implementation efforts. Once voice communications are established at the backup site, the Brazos Electric control center operator shall inform the ERCOT and SERC regional grid operators about the phone numbers to be used to reach the Brazos Electric control center operator at the backup site.

For ERCOT communications the procedure should also include these two steps:

- Initially, because the ERCOT private Wide Area Network ("WAN") may not be available, the Brazos Electric control center operator shall notify the ERCOT Outage Coordinator by phone, fax and/or email of outage requests and status. Normal outage scheduling procedures shall be resumed using the ERCOT portal after the ERCOT private WAN is re-established.
- 2) The Emergency Response Coordinator shall contact appropriate ERCOT technical support personnel to update them on the status of the Inter-Control Center Communications Protocol ("ICCP") data link communications. The ERCOT technical support personnel shall be informed of the condition of the ERCOT private WAN communication equipment at the primary site and the status of the WAN communications equipment used at the backup site. A request shall be made, if necessary, to ERCOT communications network staff to switch the active WAN connections over to the Brazos backup site location.

For SERC communications the procedure should also include these two steps:

- 1) The Brazos control center operator shall notify the SERC regional grid operator by phone, fax and/or email about the loss of the SCADA RTU communications.
- 2) The Emergency Response Coordinator shall contact appropriate Entergy technical support personnel to update them on the status of the SCADA RTU communications. The Brazos Electric control center operator shall notify the SERC regional grid operator by phone, fax and/or email of any outage requests and status.

Both the Brazos Electric control center operator and the Emergency Response Coordinator shall periodically inform the ERCOT regional grid operator, the SERC regional grid operator and their technical support personnel as to the status of the backup plan implementation activities.

D. Emergency Response Personnel Procedures

The Brazos Electric control center operator or other operations support personnel shall contact the emergency response personnel as soon as practical. The emergency response personnel shall meet at the backup site or other designated location and will begin the implementation process of the Backup Control Plan. The emergency response personnel shall assess the primary site damage and determine if the loss of the primary site is expected to be of a short-term (several days), intermediate-term (up to 4 weeks), or long-term (over 4 weeks) duration. Based on this evaluation the emergency response personnel can plan the level of service restoration needed for the backup site.

The Emergency Response Coordinator shall be the main point-of-contact for activities of the emergency response personnel. The following outlines the activities for the emergency response personnel.

- Contact communications engineers, communications technicians, and SCADA/EMS technical support personnel and direct them to the backup site to begin startup of voice and data communications systems and check equipment power supplies and site security system. If necessary, direct appropriate staff to the location of switching equipment for the EMS system and to stand by to switch EMS over to operation from the backup site.
- 2) Contact ERCOT technical support personnel and inform them of the loss of the primary site, ICCP data link, and ERCOT private WAN facilities. Inform ERCOT of the condition of ERCOT WAN equipment at the primary site and request ERCOT to switch its WAN circuit connections to the Brazos backup site if the loss of the primary site shall be intermediate or long-term.

- 3) If necessary, contact the SERC regional grid operator and Entergy technical support personnel and inform them of the loss of the primary site and SCADA RTU data link and status of response efforts.
- 4) Assist the control center operators with contacting other entities as required.
- 5) Maintain a checklist of response status of the Backup Control Plan.
- 6) Inform control center operators and other Brazos Electric personnel of the status of response actions.
- 7) Determine additional response actions needed and respond appropriately. Other Brazos Electric or contractor personnel may be required to assist with response actions.
- 8) Evaluate and plan procedures for restoring service to the primary site or increasing the level of service at the backup site for an extended period of time.
- 9) Plan and implement a relief schedule for all support personnel.
- 10) After recovery completion, review lessons learned for potential backup plan updates.

E Operational Readiness Procedures

Brazos Electric will require that this Backup Control Plan be reviewed by all of the control center operators and the emergency response personnel annually or within 60 days of any procedural change. In addition, other preparedness training will be provided annually to those personnel that would be involved with emergency response coordination in the form of a drill or table-top exercise. After conducting such preparedness training, a review will be done on the effectiveness of the plan, lessons learned, and improvements to be considered in future plan updates.

Copies of this Plan shall be maintained at the primary and backup sites as well as other key locations so that it is readily available to all personnel on a need to know basis. Approved changes shall be documented in the Plan as needed and copies distributed to appropriate personnel.

On a quarterly basis, voice and data communications equipment at the backup site shall be tested for readiness and technical support personnel shall review the startup and operational procedures for all equipment and spares, if any, to support the backup site. The backup site has an emergency standby generator sufficient to supply the power needs of the facility and is tested weekly. Cyber and physical security systems are in place at the backup site and test procedures for these elements are located in Brazos Electric NERC Cyber Security Process Manual. On a monthly basis, SCADA/EMS technical support personnel shall verify that the latest SCADA database, system displays and other operational databases are available on the SCADA console and Operations PC and confirm that the SCADA console and Operations PC applications can access the information.

EXHIBIT 1

CONTROL CENTER OPERATOR CHECKLIST (TRANSMISSION DESK)

Date:	Notes
Contact and inform the following:	
Chief System Operator	
ERCOT Regional Grid Operator	
SERC Regional Grid Operator	
System Operations Manager	
System Controller	
VP Transmission	
Transmission Maintenance Manager	
General Manager	
Verify operation of equipment at backup site:	
Landline phones	
Microwave phones	
Radio Communications	
SCADA console	
Operations PC consoles	
Equipment power supplies	
Site security system	
Contact and inform Brazos Electric field personnel of backup site operations:	
Patrolman (see internal list)	
Southern District Supt.	
Northern District Supt.	
Contact and inform neighboring entities of backup site operations:	
ONCOR BTU CSU	
LCRA STEC CPS	
AEPTNMPDME	
GPL/TMPA	
NextEra QSE Tenaska QSE Calpine QSE	
EDF QSEENTERGY TOENTERGY LBA	
BETM QSE	
Contact and inform Brazos Electric DSPs of backup site operations:	
see internal list	
Contact and inform ERCOT Outage Coordinator of backup site operations:	
see internal list	

EXHIBIT 2

CONTROL CENTER OPERATOR CHECKLIST (GENERATION DESK)

Date:	Notes
Contact and inform the following:	
Chief System Operator	
ERCOT Regional Grid Operator	
APM Real-Time Traders	
System Operations Manager	
System Controller	
VP Transmission	
VP Power Supply	
Manager Power Supply	
VP Generation	
Manager Generation Engineering	
General Manager	
Verify operation of equipment at backup site:	
Landline phones Microwave phones	
SCADA console Operations PC consoles	
Equipment power supplies	
Site security system	
Contact and inform Power Plants of backup site operations:	
Jack County Johnson County	
Miller Whitney Dam	
Verify operation of application functions at backup site:	
EMS Hourly Logs	
EMS telemetry	
AGC and unit control functions	
MOS functions	
ERCOT Portal functions	
Contact and inform ERCOT Outage Coordinator of backup site operations:	
see internal list	

EXHIBIT 3

EMERGENCY RESPONSE COORDINATOR CHECK LIST

Date:	Notes
Contact and inform the Emergency Response Personnel members (see list in Exhibit 3):	
VP Transmission	
System Operations Manager	
Chief System Operator	
Supervisor Operations Coordinator	
Communications and Controls Supervisor	
Southern Communications Tech. Supervisor	
EMS Engineer	
EMS Applications Administrator	
EMS Administrator	
Contact and inform regional grid technical support personnel about loss of:	
ERCOT Private WAN facilities	
ERCOT ICCP data link	
Entergy SCADA RTU data link	
Direct startup of voice/data communications equipment at backup site:	
Landline and microwave phones	
Radio communications	
Microwave circuits	
Landline ISP circuit	
SCADA Consoles, servers	
Equipment power supplies Site security system Operations PC consoles	
Operations fax	
ERCOT Portal connections	
Entergy SCADA RTU connections	
Establish relief schedule for operations and support personnel needed at backup site:	
Communications Technicians	
SCADA/EMS Support	
System Operators	
Ensure supplies and personal facilities needed for operations and support personnel at backup site:	
food, water, fuel	
office supplies	
restroom facilities	

ANNEX G1

GENERATION PRE-IDENTIFIED SUPPLY CHAIN

General procedures for addressing required supplies during emergency events. This generationspecific procedure is applicable to Brazos Electric's wholly owned generation facilities as listed below:

Jack County Power Plant in Jack County Jack County 2 Power Plant in Jack County Tenaska (Johnson County) Power Plant in Johnson County Miller Power Plant in Palo Pinto County

In general, the plants will perform annual checks for supplies required during various emergency conditions. The key focus will be to ensure food, water, cots, etc. are available for personnel that may be staying extended periods at the plants. In addition, options to rotate personnel will monitored as conditions allow.

Plant management will review any key items such as fuel oil, hydrogen, chemicals, etc. that may be required to carry through an emergency period during the pertinent seasonal readiness preparation. Arrangements will be made to support having items delivered during adverse weather conditions.

The extreme weather preparedness procedure contains specifics for these emergency conditions. Other emergencies will be handled via communications with personnel and BEPC management.

ANNEX G2 GENERATION STAFFING PLAN

General procedure for addressing staffing during emergency conditions. This generation procedure is applicable to Brazos Electric's wholly owned generation facilities as listed below:

Jack County Power Plant in Jack County Jack County 2 Power Plant in Jack County Tenaska (Johnson County) Power Plant in Johnson County Miller Power Plant in Palo Pinto County

Emergency events may require special staffing needs depending on the specifics of the emergency. Each plant has local procedures to handle the requirements for various emergency conditions. The emergencies include but are not limited to fires, severe storms, extreme hot weather, extreme cold weather, plant outages, etc. Each of these events will be reviewed for personnel skillsets, quantity, and duration to determine how to utilize existing and contractor resources.

ANNEX G3

GENERATION SEVERE WEATHER AND WATER SHORTAGE ANNEX

General procedures for addressing weather conditions are addressed in Annex T3. This generation-specific procedure is applicable to Brazos Electric's wholly owned generation facilities as listed below:

Jack County Power Plant in Jack County Jack County 2 Power Plant in Jack County Tenaska (Johnson County) Power Plant in Johnson County Miller Power Plant in Palo Pinto County

Recognizing that proper preparation and pre-planning is essential to the successful implementation of the EOP, Brazos Electric has established the following preparedness procedure to address power plant weatherization, fuel and storage capacity and generation capacity restoration priority.

A. Severe Weather Plans

Brazos Electric's plant management and maintenance personnel will conduct meetings seasonally and as needed to discuss, plan and prepare for the upcoming hot/cold weather season. A weather readiness evaluation list will be created and used by plant personnel that includes a list of critical equipment to be checked, repaired and or replaced. Upon completion, maintenance personnel will review and report on the maintenance activities performed and then the maintenance superintendent and plant manager will verify and sign off on the completed work.

Brazos Electric plant personnel will identify and address any known critical failure points, including those effects of weather design limits. A complete list of components and work orders will be generated each season for checking the operations of critical components and where needed the replacement of worn elements and related components such as wiring, connections, and insulation.

Plant management and maintenance personnel shall ensure seasonal plant readiness of critical operating systems (including items found in the previous paragraph), cooling and heating equipment, critical elements, personnel, supplies and weather related safety training. Plans are executed prior to May 16 annually for the summer months, typically right after the spring maintenance outages and again prior to December 1 for the upcoming winter months, typically right after the fall maintenance outages

Brazos Electric will monitor Lake Bridgeport and Lake Palo Pinto water levels and update ERCOT as needed of any shortages of water supplies that may affect the reliability of any of

Brazos Electric's owned resources. If an emergency shortage of water from municipalities is noticed, Brazos Electric will notify ERCOT as soon as possible.

Brazos Electric plant management will keep plans for addressing emergency events such as forced outage, sabotage, extreme heat or cold situations and injuries. These plans and associated procedures will include actions to be taken by plant personnel for each type of emergency event and emergency contacts.

Brazos Electric tests its alternative fuel supplies as part of its annual cold weather preparations prior to December 1. Annual testing of the fuel existing in tank and new fuel oil deliveries. The specific unit testing as to high sustainable limit (HSL) and ramping will be performed. Specific testing requirements will be maintained in the local plants' procedure(s).

The Brazos Electric generating facilities have a plan to address wildfire threats and conditions. As part of the plan during drought and fire related seasons plant personnel will monitor for wildfire and wildfire conditions including prevailing winds blowing toward the plant. Plant personnel will also monitor plant grounds and the immediate areas for warnings of wildfire conditions and by monitoring notification given by official authorities. Upon receipt of such notification or if a wildfire becomes present in the surrounding plant areas, the plant personnel will implement its wildfire plan that includes but not limited to plant shut down procedures, emergency contacts, system control center notifications, relocation point for plant employees upon the evacuation of the plant site.

B. Power Plant Weatherization

March:

- Survey fuel oil inventory and initiate purchasing procedures to fill storage tanks as needed to maintain appropriate levels determined by Brazos Electric management
- Test fuel oil for proper biocide and CFPP levels increase additives as necessary
- Review for extreme hot weather impacts review plant extreme hot weather items list as identified in each plant's procedures.

April:

- Complete a review of any outstanding winter issues that may have occurred during the previous winter period. Initiate efforts to resolve all extreme cold weather items by December 1
- Complete open items that support the extreme hot weather prior to May 15
- Update on any incomplete extreme hot weather preparedness efforts during weekly generation calls and provide expected completion time

May:

• Certify that the extreme hot weather readiness efforts are complete by May 1

- Verify proper staffing as may be required during the extreme hot weather period
- Initiate the plant procedures for extreme hot weather preparation. This includes HVAC units in equipment buildings, inlet cooling system, transformer top oil temperature monitored, equipment heating, etc.

June:

• (Summer run)

July:

• (Summer run)

August:

• (Summer run)

September:

- Complete open items that support the extreme cold weather prior to May 15
- Prepare work orders for needed work.
- Inventory fuel used for portable heaters; provision as necessary.
- Inventory freeze protection preparedness materials; order as necessary.

October:

- Verify any dual fuel unit can successfully switch between the two fuel sources
- Verify proper staffing as may be required during the extreme cold weather period

November:

- Initiate the plant procedures for extreme cold weather preparation. This includes heat-trace, windbreaks, heaters, shelters, etc.
- \bullet Initiate freeze protection checks when ambient conditions are expected to be below $40^\circ F$
- Check fuel oil systems on applicable units; test run the fuel systems
- Complete any incomplete work orders for extreme cold weatherization

December:

- Submit weatherization preparedness report
- Remain prepared to fire oil, at short notice, any time from mid-December to the second week in March.
- Continue use of freeze protection checks when ambient conditions are expected to be below 40°F.

January:

- Continue to monitor equipment for extreme cold weather impact
- Continue use of freeze protection checks when ambient conditions are expected to be below 40°F.

February:

- Continue to monitor equipment for extreme cold weather impact
- Recheck all enclosure heaters and freeze protection systems when ambient conditions are expected to be below 40°F.

Oil Firing:

- Call in extra operations and maintenance personnel as needed.
- Set up fuel oil spill watch.
- Document the following as accurately as possible.
 - Hourly generation:
 - On gas On oil

• Fuel oil inventories, daily update by tank measurement.

Additional Cold Weather Measures (when and where applicable):

- Close outside doors and windows.
- Turn off all vent fans.
- Check all boiler and duct air heater enclosures for security.
- Check operation of all freeze protection systems.
- Set up additional space heaters as needed
- Notify instrument and electrical personnel of cold weather watch.
- Sample dew point of instrument air dryers every 6 hours.
- Check air lines for moisture.
- Alternate service water pumps every 4 hours.
- Circulate fuel oil in preparation of the run period

In addition to the above specific work orders and/or preventive maintenance activities may be utilized to support the preparation process. The above schedule is for typical Texas climate and changes may be required to accommodate rapid changes in weather conditions.

C Alternative Fuel and Storage Capacity

Brazos Electric has provided for a dependable source of alternative fuel at RW Miller and Johnson County plants. Fuel oil capacity at the R. W. Miller Plant at Lake Palo Pinto is approximately four million (4,000,000) gallons and one million four hundred fifty thousand (1,450,000) gallons at the Johnson County Plant.

D. Water Shortages

RW Miller units 2 & 3: These two units use demineralized water for boiler makeup. Units use lake water for once through cooling. In the event Lake Palo Pinto recedes away from the water intakes at the plant, the once through cooling will be lost due to the quantity for water required. The units will be taken off line (systematically) after the water is no longer available at the plant intakes.

- RW Miller units 4 & 5: These two units use demineralized water for the evaporative coolers and NO_X control. In the event Lake Palo Pinto recedes away from the plant intakes, contacts with pipe and pump companies may take place to install a temporary pipeline and pump from the deeper section of the lake. The temporary system will pump water into the plant intakes at RW Miller allowing water to be available for making demineralized water.
- Jack County unit GT1, GT 2, and ST1: The units require water to be pumped from Lake Bridgeport. The water is used for the cooling towers and making demineralized water. If Lake Bridgeport level gets low, a floating pump platform is available (at the plant) to be deployed at Lake Bridgeport to support bringing water to the plant's holding pond. In the event Lake Bridgeport's level drops too low, Jack County units GT1, GT 2, and ST1 will be unavailable.
- Jack County unit GT3, GT4, and ST2: The units require water to be pumped from Lake Bridgeport. The water is used for the cooling towers and making demineralized water. If Lake Bridgeport level gets low, a floating pump platform is available (at the plant) to be deployed at Lake Bridgeport to support bringing water to the plant's holding pond. In the event Lake Bridgeport's level drops too low, Jack County units GT1, GT 2, and ST1 will be unavailable.
- Johnson: Johnson County (Tenaska): The plant gets two types of water from the City of Cleburne potable and effluent. The potable water is used to make demineralized water and support for the cooling towers, if required. The effluent water is used for cooling tower make-up. If the effluent water is lost, options to get potable is an option. If the potable water source is lost, the unit may be able to run for about a day based on onsite water storage but will not be able to maintain thereafter.

E Master Generation Weather Emergency Checklist

The Brazos Electric weather preparedness program contains detailed checklists for supplies and personnel during a weather emergency. Each checklist may have many additional sub-items in checklist to ensure the supplies and personnel are properly managed and not missed in the operations efforts. Plant-specific checklists must include, but are not limited to, the following:

- 1. Common (Summer and Winter)
 - a. Personnel schedules (temperature and time of day based)
 - b. Food and sleeping supplies
 - c. Fuel oil supply
- 2. Severe Winter Weather
 - a. Wind breaks
 - b. Portable heaters
 - c. Heat trace (period checks based on temperature change)

- 3. Severe Summer Weather

 - a. HVAC spares/portablesb. Spare cooling motors for large transformersc. Cooling water from water sources

ANNEX G4

GENERATION RESTORATION

Brazos Electric shall coordinate with ERCOT in the event of the need to restore generation that has been offline during an emergency. Current recovery priority of Brazos Electric generators, subject to ERCOT instructions and then-existing circumstances at the time of recovery steps is as follows:

- 1. RW Miller units 4 & 5 (110 MW each)
- 2. Jack County units GT1 & GT 2 (160 MW each) and JackCo unit ST1 (295 MW steam turbine)
- 3. Johnson (240 MW)
- 4. RW Miller units 2 and 3 (110 and 208 MW, respectively)
- 5. Jack County units GT3 & GT4 (170 MW each) and Jack County unit ST2 (300 MW steam turbine)