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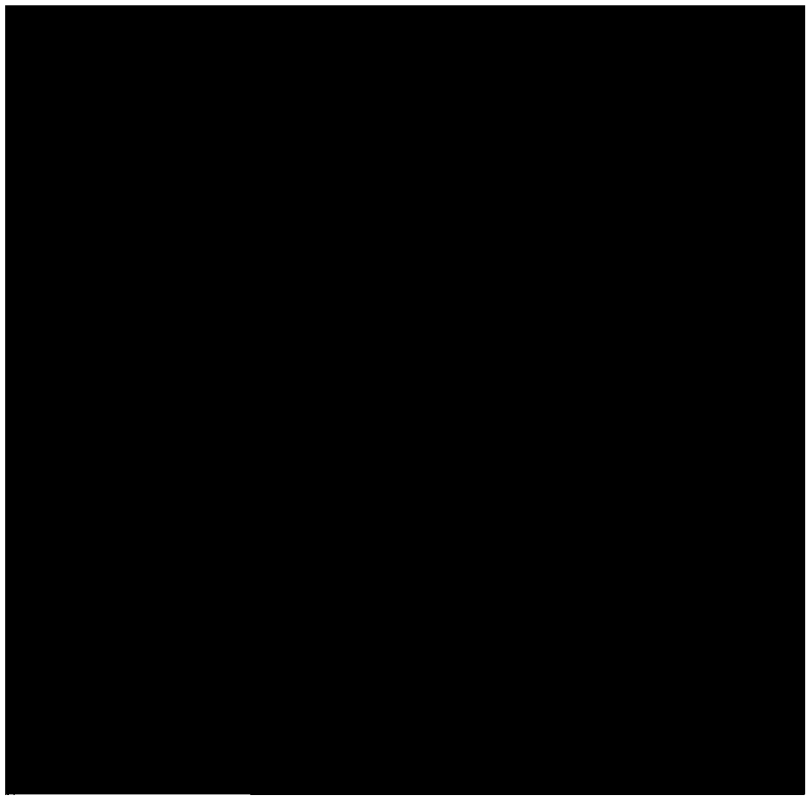

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2. PURPOSE

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[1] ERCOT Nodal Operating Guide, Section 4 Emergency Operations and Section 3: ERCOT and Market Participant Responsibilities

[2] EOP-008-2 R1

[3] ERCOT Nodal Operating Guide 3.7(3)

[redacted]

[redacted]

[redacted]

3. SCOPE / APPLICABILITY

[redacted]

[4] EOP-008-2 R 1.1

4. ROLES AND RESPONSIBILITIES

4.1. System Operator/Operations Center Manager

[redacted]

[redacted]

[redacted]

5. LOSS OF PRIMARY OPERATIONS CENTER FUNCTIONALITY[5]

[redacted]

[redacted]

[5] EOP-008-2 R1.6.2, ERCOT NOG 3.7 (3)
[6] EOP-008-2 R1.2.3

[redacted]

[7] ERCOT Nodal Operating Guide 3.7 (4)(c)
[8] COM-001-3 R10

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[9] EOP-008-2 R1.2.5

6. PRIMARY AND BACK-UP OPERATIONS CENTERS

6.1. Monitoring and Control of Transmission Facilities

[redacted]

6.2. Physical and Cyber Security

[redacted]

[redacted]

[redacted]

6.3. Power Sources to the OC and BOC Facilities

[redacted]

6.4. Voice and Data Communications

[redacted]

[redacted]

[redacted]

[redacted]

7. BACKUP OPERATIONS CENTER RELOCATION PLAN PROCEDURES[10]

[redacted]

[redacted]

[10] EOP-008-2 R1.6
[11] EOP-008-2 R6
[12] EOP-008-2 R1.2, R1.3
[13] EOP-008-2 R1.2.4
[14] EOP-008-2 R1.2.1
[15] EOP-008-2 R1.2.2
[16] EOP-008-2 R1.2.3
[17] EOP-008-2 R1.2.4
[18] EOP-008-2 R1.2.5

[redacted]

[19] EOP-008-2 R1.4
[20] EOP-008-2 R1.5
[21] EOP-008-2 R1.6.2
[22] EOP-008-2 R1.6.3
[23] EOP-008-2 R1.6
[24] EOP-008-2 R1.6.1

[redacted]

[25] EOP-008-2 R4
[26] EOP-008-2 R1.6

[redacted]

[27] EOP-008-2 R1.6.1

[redacted]

[redacted]

[28] EOP-008-2 R8

[redacted]

[29] EOP-008-2 R7
[30] EOP-008-2 R7.1
[31] EOP-008-2 R7.2
[32] EOP-008-2 R1.3

[redacted]

[redacted]

[redacted]

8. OPERATIONS REVIEW

[redacted]

9. DOCUMENT REVIEW AND DISTRIBUTION

[redacted]

[redacted]

[redacted]

[33] EOP-008-2 R5
[34] EOP-008-2 R5.1
[35] EOP-008-2 R2

[redacted]

[36] ERCOT Nodal Operating Guide Section 3.7 ERCOT Market Participant Responsibilities

10. EVIDENCE

[redacted]

[redacted]

11. ASSOCIATED DOCUMENTS

The following procedural, requirements and training documents are governed by or associated with this policy.

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12. DOCUMENT HISTORY

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Operations	Operations Center Manager	Andy Stephens	

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Distribution List

Division	Title	Name
Amarillo	Primary Operations Center	Procedure Portfolio
Amarillo	Backup Operations Center	Procedure Portfolio
Amarillo	Operations Center Manager	Andy Stephens
Amarillo	Compliance Engineer	Dillan Vigil
Amarillo	Director of Infrastructure & Information Security	Cody Webb
Amarillo	Manager, End User Computing & IT Member Services	Jon Hedke
ERCOT	ERCOT System Operations	ERCOT Secure Web Portal

13. DOCUMENT APPROVAL

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Operations	X  SHANE MCMINN DIRECTOR, POWER DELIVERY Date: 2/20/2023

ATTACHMENT 1: RELIABILITY STANDARDS AND REQUIREMENTS REFERENCE

NERC Standards

Standard	Requirement	Section in This Document	Section Number
COM-001-3	R10	5. Loss of Primary Operations Center Functionality	5.5.4
EOP-008-2	R1	2. Purpose	2.4
EOP-008-2	R1.1	3. Scope / Applicability	3.2
EOP-008-2	R1.2	7. Backup Operations Center Relocation Plan Procedures	7.1
EOP-008-2	R1.2.1	7. Backup Operations Center Relocation Plan Procedures	7.1
EOP-008-2	R1.2.2	7. Backup Operations Center Relocation Plan Procedures	7.1.3
EOP-008-2	R1.2.3	7. Backup Operations Center Relocation Plan Procedures	7.1.4
EOP-008-2	R1.2.4	7. Backup Operations Center Relocation Plan Procedures	7.1.5
EOP-008-2	R1.2.5	7. Backup Operations Center Relocation Plan Procedures	7.1.6
EOP-008-2	R1.3	7. Backup Operations Center Relocation Plan Procedures	7.1, 7.13.1.4
EOP-008-2	R1.4	7. Backup Operations Center Relocation Plan Procedures	7.2
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EOP-008-2	R5	9. Document Review and Distribution	9.1
EOP-008-2	R5.1	9. Document Review and Distribution	9.4
EOP-008-2	R6	7. Backup Operations Center Relocation Plan Procedures	7.1
EOP-008-2	R7	7. Backup Operations Center Relocation Plan Procedures	7.13.1
EOP-008-2	R7.1	7. Backup Operations Center Relocation Plan Procedures	7.13.1.1
EOP-008-2	R8	7. Backup Operations Center Relocation Plan Procedures	7.12

ERCOT Nodal Operating Instructions and Nodal Protocols

Document	Section	Section in This Document	Section Number
ERCOT Nodal Operating Guide	Section 4 Emergency Operations	2. Purpose	2.1, 2.5
ERCOT Nodal Operating Guide	Section 3.7 ERCOT Market Participant Responsibilities	9. Document Review and Distribution	9.7
ERCOT Nodal Operating Guide	Section 3.7 ERCOT Market Participant Responsibilities	5. Loss of Primary Operations Center Functionality	5, 5.5

ATTACHMENT 2: NOTIFICATION LIST

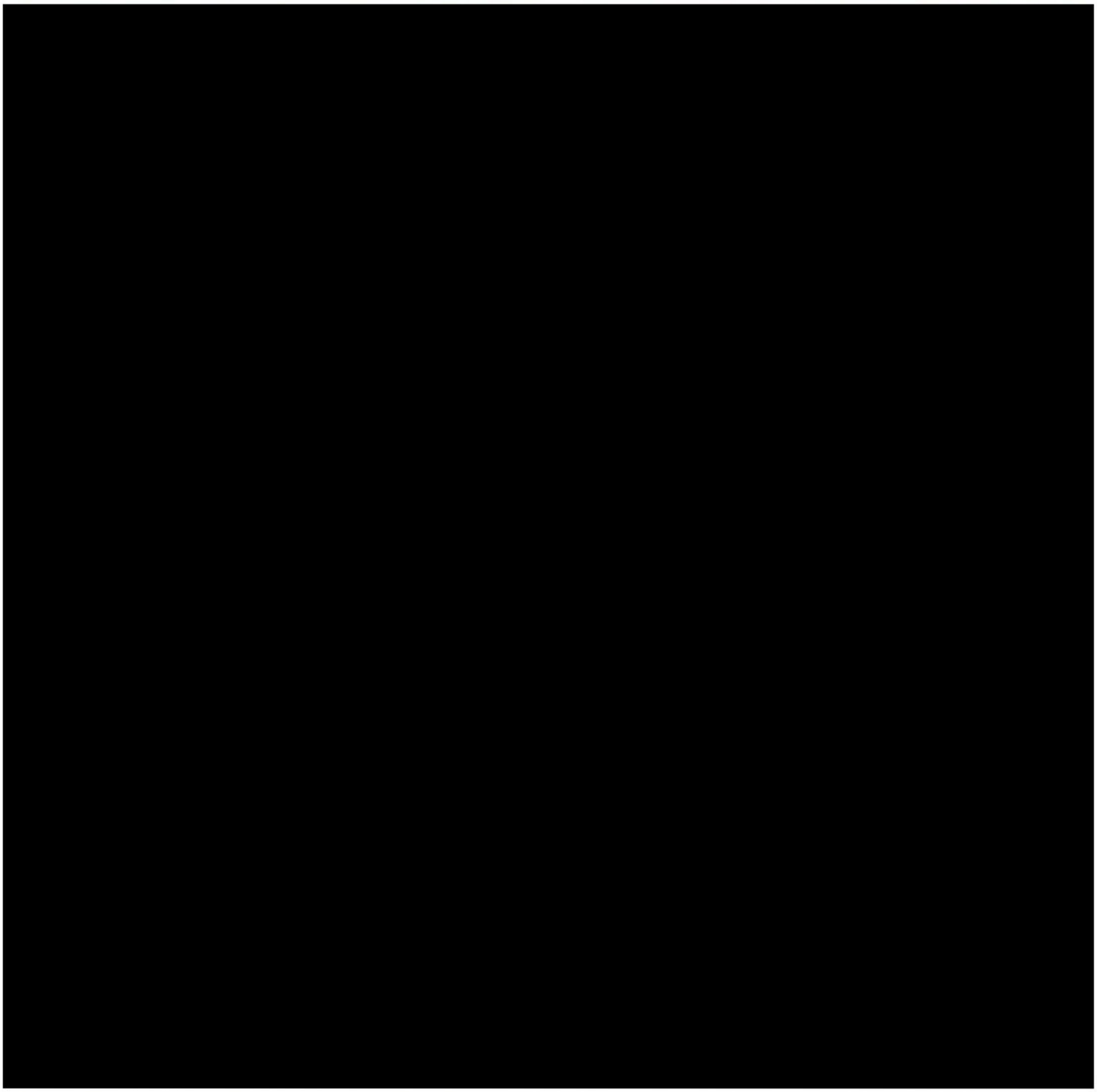
[redacted]

ATTACHMENT 3: DIRECTIONS AND MAP TO THE BOC

ATTACHMENT 4: BOC TEST CHECKLIST

[redacted]

ATTACHMENT 5: BOC TEST EVENT



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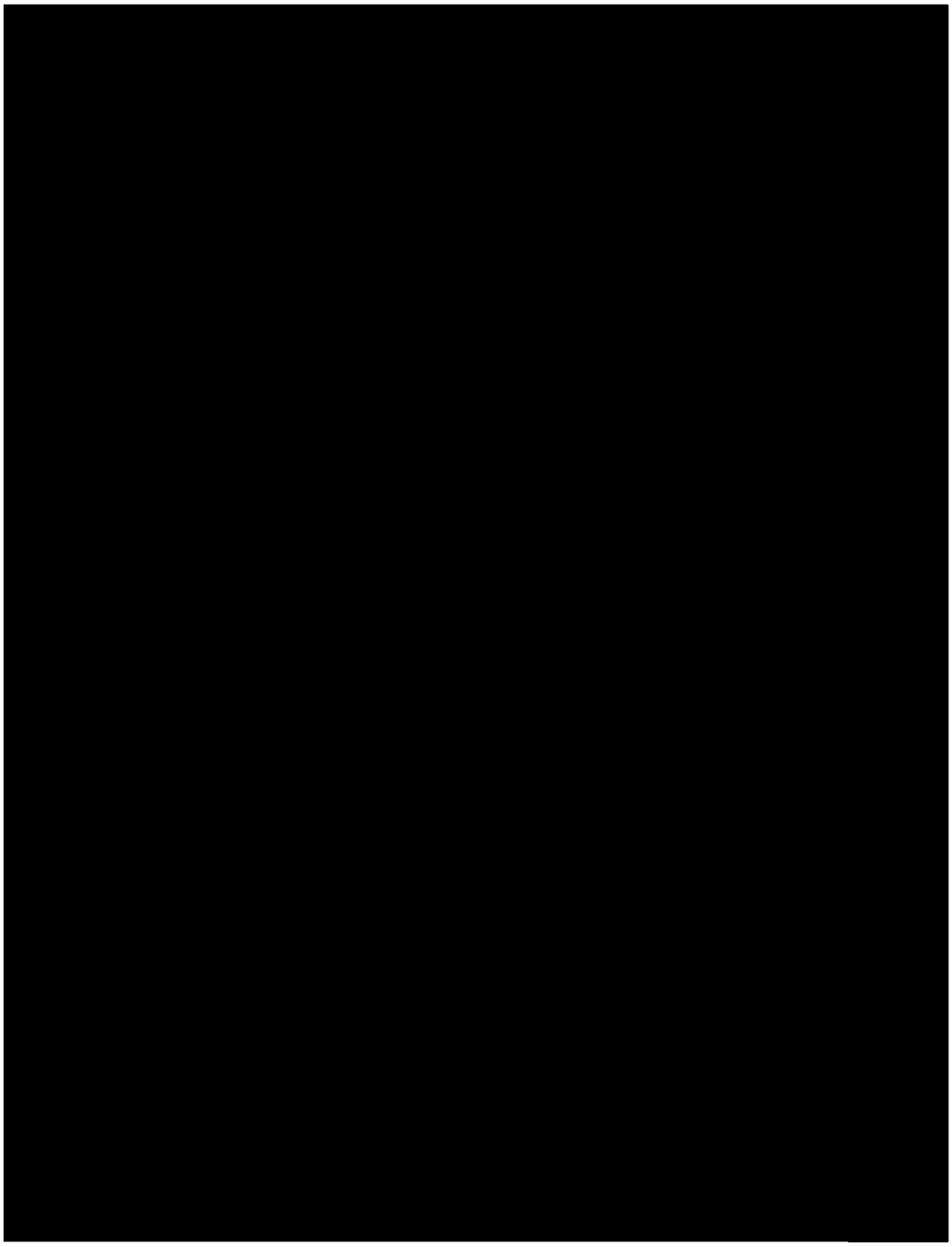
ATTACHMENT 6: DIRECTION AND MAP TO THE LUBBOCK GSEC HEADQUARTERS (SPEC)



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2. PURPOSE

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[1] ERCOT Nodal Operating Guide, Section 4: Emergency Operations 4.5.3.4, Load Shed Obligations.

[2] ERCOT Nodal Operating Guide, Section 2: System Operations and Control Requirements 2.6.1: Automatic Firm Load Shedding.

[3] NERC PRC-006-3

3. SCOPE

[4] NERC TOP-001-4 R1

4. ROLES AND RESPONSIBILITIES

4.1. System Operator:

[redacted]

4.2. ERCOT

[redacted]

[5] ERCOT Nodal Operating Guide, Section 4: Emergency Operations 4.5.3(8)

4.3. Field Personnel:

[redacted]

5. AUTOMATED FIRM LOAD SHEDDING

[redacted]

6. LOAD SHEDDING INSTRUCTIONS AND NOTIFICATIONS

6.1. Instructions

[redacted]

[redacted]

6.2. Notifications and Logging

[redacted]

7. LOAD SHEDDING PROCEDURE

7.1. Manual Load Shedding (ERCOT Directed or GSEC Self-Directed)

[redacted]

[redacted]

[redacted]

[6] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3.3(3)(a) EEA Levels

[7] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3.4, Load Shed Obligation

[redacted]

7.2. Initiate Manual Load Shed due to EEA3 Event by Communicating to Member Cooperatives

[redacted]

7.3. Initiate Manual Load Shed Using SCADA

[redacted]

[redacted]

[8] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3(7)(a), Implementation

[redacted]

7.4. Initiate Manual Load Shed Using Dispatch of Personnel:

[redacted]

[redacted]

[9] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3(7)(b), Implementation

7.5. Load Restoration

[redacted]

7.6. Initiate Manual Load Restoration Using SCADA

[redacted]

[10] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3.5(2)(d)

[11] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3.5(2)(c)

[redacted]

7.7. Initiate Manual Load Restoration by Dispatch Personnel

[redacted]

7.8. Evidence Retention

[redacted]

8. ADHERENCE

[redacted]

9. DOCUMENT REVIEW AND DISTRIBUTION

[redacted]

10. ASSOCIATED DOCUMENTS

The following procedural, requirements and training documents are governed by or associated with this policy.

11. DOCUMENT HISTORY

Document Owners

Department	Authority	Name	Review Date
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Amarillo	Compliance Engineer	Dillan Vigil

12. DOCUMENT APPROVAL

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ATTACHMENT 1: RELIABILITY STANDARDS AND REQUIREMENTS REFERENCE

NERC Standards

Standard	Requirement	Section in This Document	Section Number
PRC-004-4	All	2. Purpose	2.2
TOP-001-4	All	3. Scope	3.2

ERCOT Nodal Operating Instructions and Nodal Protocols

Document	Section	Section in This Document	Section Number
ERCOT Nodal Operating Guide	Section 4: Emergency Operations 4.5.3.4, Load Shed Obligations.	2. Purpose	2.1.1
ERCOT Nodal Operating Guide	Section 2: System Operations and Control Requirements 2.6.1, Automatic Firm Load Shedding.	2. Purpose	2.1.2
ERCOT Nodal Operating Guide	Section 4: Emergency Operations 4.5.3(8)	4. Roles and Responsibilities	4.1.6
ERCOT Nodal Operating Guides	Section 4: Emergency Operation 4.5.3.3(3)(a) EEA Levels	7. Load Shedding Procedure	7.1.5
ERCOT Nodal Operating Guide	Section 4: Emergency Operation 4.5.3.4, Load Shed Obligation	7. Load Shedding Procedure	7.1.8
ERCOT Nodal Operating Guide	Section 4: Emergency Operation 4.5.3(7)(a), Implementation	7. Load Shedding Procedure	7.3.1
ERCOT Nodal Operating Guide	Section 4: Emergency Operation 4.5.3(7)(b), Implementation	7. Load Shedding Procedure	7.4.1
ERCOT Nodal Operating Guide	Section 4: Emergency Operation 4.5.3.5(2)(d)	7. Load Shedding Procedure	7.5.1
ERCOT Nodal Operating Guide	Section 4: Emergency Operation 4.5.3.5(2)(c)	7. Load Shedding Procedure	7.5.4

ATTACHMENT 2: ERCOT LOAD SHED OBLIGATION TABLE (SUMMER AND WINTER)

ERCOT Load Shed Table	
Transmission Operator	**2021 Total Transmission Operator Load (% MW)**
AEP Texas Central Company	8.41
Brazos Electric Power Cooperative Inc.	4.85
Brownsville Public Utilities Board	0.37
Bryan Texas Utilities	0.52
CenterPoint Energy Houston Electric LLC	25.89
City of Austin DBA Austin Energy	3.54
City of College Station	0.28
City of Garland	0.73
City of Lubbock	0.58
CPS Energy (San Antonio)	6.44
Denton Municipal Electric	0.48
GEUS (Greenville)	0.14
Golden Spread Electric Cooperative Inc.	0.36
Lamar County Electric Cooperative Inc. dba LEC	0.07
LCRA Transmission Services Corporation	5.89
Oncor Electric Delivery Company LLC	35.47
Rayburn Country Cooperative Inc.	1.34
South Texas Electric Cooperative Inc.	1.92
Texas-New Mexico Power Company	2.72
ERCOT Total	**100**

* Lamar County Electric Cooperative is a registered TO not on the ERCOT Hotline, City of Garland receives all their calls.

See Winter Load Shed Obligation Table (next page)

ERCOT Winter Load Shed Table	
Transmission Operator	**2023 Winter Total Transmission Operator Load (% MW)**
AEP Texas Central Company	9.52
Brazos Electric Power Cooperative Inc.	5.24
Brownsville Public Utilities Board	0.41
Bryan Texas Utilities	0.56
CenterPoint Energy Houston Electric LLC	22.22
City of Austin DBA Austin Energy	3.46
City of College Station	0.26
City of Garland	0.68
City of Lubbock	0.54
CPS Energy	6.86
Denton Municipal Electric	0.37
GEUS	0.13
Golden Spread Electric Cooperative	0.41
Lamar County Electric Cooperative Inc. dba LEC	0.09
LCRA Transmission Services Corporation	8.00
Oncor Electric Delivery Company LLC	34.31
Rayburn Country Cooperative Inc.	1.74
South Texas Electric Cooperative Inc.	2.56
Texas-New Mexico Power Company	2.64
ERCOT Total	**100**

* Lamar County Electric Cooperative is a registered TO not on the ERCOT Hotline, City of Garland receives all their calls.

ATTACHMENT 3: STEP-BY-STEP INSTRUCTIONS FOR EEA3 MANUAL LOAD SHED

[redacted]

[12] ERCOT Nodal Operating Guides, Section 4: Emergency Operation 4.5.3.3(3)(a) EEA Levels

[redacted]

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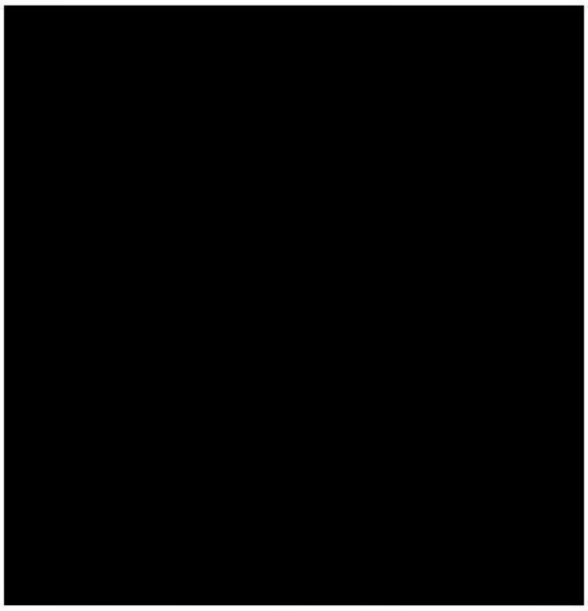

[redacted]

2. PURPOSE

[redacted]

[redacted]

[redacted]

2.4. ERCOT-Directed Load Shedding

[redacted]

[redacted]

[1] ERCOT Nodal Operating Guide 4, Emergency Operations, Section 4.5.3.4, Load Shed Obligations.

3. SCOPE / APPLICABILITY

[redacted]

4. ROLES AND RESPONSIBILITIES

4.1. ERCOT Planning Coordinator UFLS Responsibilities

[redacted]

[redacted]

[2] PRC-006-3 R1

[3] PRC-006-3 R3

4.2. GSEC UFLS Responsibilities

[redacted]

[4] PRC-006-3 R8
[5] PRC-006-3 R9
[6] PRC-006-3 R10

[redacted]

[7] PRC-006-3 R14

5. ERCOT-DIRECTED MANUAL LOAD SHEDDING

[redacted]

6. AUTOMATED FIRM LOAD SHEDDING

6.1. ERCOT Requirement for Automated Firm Load Shedding (ERCOT Nodal Operating Guide 2.6.1)[8]

[redacted]

6.1.1. At least 25% of the ERCOT system load shall be equipped at all times with provisions for automatic Under-Frequency Load Shedding (UFLS) as described in this paragraph. In the event of an under-frequency event, GSEC (TO) and its Member Cooperatives shall provide Load relief by shedding the required percentage of its Distribution Service Provider (DSP)-connected Load and transmission-level Customer Load using automatic under-frequency relays, as specified in the table below. For the purposes of this paragraph, GSEC Load will be the amount of Load being served by the DSPs that the TO represents, as well as the TO's transmission-level Customer Load, when the ERCOT frequency drops to the 59.3 Hz threshold. As such, the amount of the GSEC Load relief will not include any Load that has already been shed prior to the 59.3 Hz frequency threshold. The under-frequency relays shall be set to provide Load relief as follows:[9]

Frequency Threshold	Load Relief
59.3 Hz	At least 5% of the TO Load (Total 5%)
58.9 Hz	A total of at least 15% of the TO Load (Total 15%)
58.5 Hz	A total of at least 25% of the TO Load (Total 25%)

[8] ERCOT Nodal Operating Guide 2.6.1
[9] ERCOT Nodal Operating Guide 2.6.1(1)

6.1.2. ERCOT will, prior to the peak each year, survey GSEC's compliance with the automatic Load shedding requirements described in paragraph (1) above and report its findings to the Technical Advisory Committee (TAC). For purposes of determining a GSEC's compliance with this annual survey requirement, GSEC Load will be the total amount of Load being served by the DSPs that the GSEC represents, as well as the GSEC's transmission-level Customer Load, at the specified time of the survey. GSEC shall identify those circuits armed with under-frequency relays, the corresponding amount of Load, and identify the frequency threshold. GSEC and its Member Cooperatives shall not equip the entirety of its Load shed obligation in any one tier and should endeavor to shed in controlled amounts that equal the difference between the TO Load relief required for each tier. If ERCOT identifies potential reliability issues related to distribution of Load shed across the tiers, ERCOT may require the TO to redistribute Load relief closer to the minimum amount required after submitting ERCOT's proposal to redistribute Load relief to the TO and considering any comments submitted by the TO regarding the proposal. Compliance with this annual survey does not excuse GSEC from compliance with the requirements of paragraph (1) above in an actual frequency event. To assist TOs, ERCOT will provide the TO's inventory, including substation and capacity amounts, of registered Load Resources in its area within ten Business Days of receiving a request in writing from a TO.[10]

6.1.3. Additional under-frequency relays may be installed on Transmission Facilities with the approval of ERCOT provided the relays are set at 58.0 Hz or below, are not directional, and have at least 2.0 seconds time delay. A DSP may by mutual agreement arrange to have all or part of its automatic load shedding requirement performed by another entity. ERCOT will be notified and provided with the details of any arrangement before implementation.[11]

[redacted]

[10] ERCOT Nodal Operating Guide 2.6.1(2)
[11] ERCOT Nodal Operating Guide 2.6.1(3)

6.2. Automatic Underfrequency Load Shedding Training

[12] ERCOT Nodal Operating Guide 2.6.1(4)
[13] ERCOT Nodal Operating Guide 2.6.1(5)

[redacted]

6.3. Analyze and Document UFLS Performance after an Event:

[redacted]

6.4. Enforcement

[redacted]

6.5. Exceptions

[redacted]

7. DOCUMENT REVIEW AND DISTRIBUTION

[redacted]

[redacted]

7.4. Data Retention

[redacted]

7.5. Facility Distribution

[redacted]

8. ADHERENCE

[redacted]

9. ASSOCIATED DOCUMENTS

The following procedural, requirements and training documents are governed by or associated with this policy.

[redacted]

10. DOCUMENT HISTORY

Document Owners

Department	Authority	Name	Review Date
Operations	Operations Center Manager	Andy Stephens	

Document Management

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Amarillo	Operations Center Manager	Andy Stephens
Amarillo	Compliance Engineer	Dillan Vigil

11. DOCUMENT APPROVAL

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ATTACHMENT 1: RELIABILITY STANDARDS AND REQUIREMENTS REFERENCE

NERC Standards

Standard	Requirement	Section in This Document	Section Number
PRC-006-3	All	Purpose	2.1
PRC-006-3	R1	5. Roles and Responsibilities	4.1.1
PRC-006-3	R3	5. Roles and Responsibilities	4.1.2
PRC-006-3	R8	5. Roles and Responsibilities	4.2.1
PRC-006-3	R9	5. Roles and Responsibilities	4.2.3
PRC-006-3	R10	5. Roles and Responsibilities	4.2.5
PRC-006-3	R14	5. Roles and Responsibilities	4.2.7

ERCOT Nodal Operating Instructions and Nodal Protocols

Document	Section	Section in This Document	Section Number
ERCOT Nodal Operating Guide	4.5.3.4, Load Shed Obligations.	Purpose	2.4.1

Golden Spread Electric Cooperative (GSEC)

Blackstart and Restoration Plan

Effective date: 01/01/2023

Golden Spread Electric Cooperative
12-6-2022