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Quick Accounting Reference Guide for FEMA Reimbursable Disasters

(A) CATEGORIES: FEMA authorizes re-imbursement by preparing one or several Project Worksheets (PW) per category:

Category A: Emergency Work – debris removal

Category B: Emergency Protective Measures – protection of public health

Category F: Permanent Work on Distribution Lines – full conformity to applicable standards

(B) BACK-UP DOCUMENTS: Back-up documents by work site are required for ALL costs. Undocumented and un-locatable costs WILL NOT be reimbursed.

Back-up documents should be collected daily for Labor (internal and contract; and approved by supervisors), Equipment (e.g. vehicles), and Materials.

Payroll calculations for the duration of the disaster should be available for the FEMA audit. The cooperative must be able to verify that dollars paid match amounts claimed for cooperative employee's payroll.

(C) TIME SHEETS AND WORK SHEETS: The line crew should use the Emergency Time Sheets and the Time Sheets shall reference either the Emergency Site Work Sheets or Work Order Staking Sheets that have been prepared by United. Each completed sheet should be verified by a supervisor. Recording of construction and retirement units is critical.

(D) MONITORS: Work done by contractors are required to have a United "monitor" to assure that reimbursable work was performed.

(E) SUMMARY RECORDS: The accounting department will use daily back-up documents to complete Force Account Summaries for Labor, Equipment, and Materials per FEMA guidelines (see FEMA Applicant Handbook, Appendix D).

**FEMA****DISASTER ASSISTANCE**

FACT SHEET

9580.5

ELEMENTS OF A PROJECT WORKSHEET

Overview

This Fact Sheet outlines the types of and order in which necessary documentation should be compiled to support a Project Worksheet (PW). It will be used to promote consistency in PW preparation by Public Assistance staff nationwide. The provision of timely, thorough, and accurate documentation will facilitate PW uniformity and expedite data entry, Quality Assurance/Quality Control (QA/QC), the obligation of funds, and eventual project closeout. States may require additional documentation applicable to sub-grantees.

PW Documentation

To facilitate efficient review and processing of PWs by Joint Field Office (JFO) staff, PW writers should compile all PW documentation (refer to Figure 1 and subsequent explanations) in the same order. Every PW must contain the required support documentation to substantiate the scope of work being funded. The scope of work documents "*work completed*" and/or "*work to be completed*."

Records for eligible "*work completed*" costs incurred should be included in summary format, and may include: labor, materials from inventory, materials purchased, equipment owned, equipment rented, services purchased (e.g., engineering), labor benefits, labor policies, etc. The format should follow (and must include all of the information indicated on) FEMA Forms 90-123 through 90-128, even if the Applicant elects not to use the FEMA forms. Source documentation, such as copies of time sheets, payroll records, and invoices should not be attached to a PW; instead, the PW writer should sample and note in the general comments section the percentage of source documents verified and percentage of errors. However, source documentation must be available for final closeout, audits, or other required follow-up actions. An Applicant is responsible for maintaining support documentation per 44 CFR Part 13.

Records for "*work to be completed*" should include detailed information that supports the estimated costs.

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ELEMENTS OF A PROJECT WORKSHEET

Documentation for the PW should be compiled in the following order:

1. **Project Worksheet Cover** – FEMA Form 90-91. The PW is the primary form used to document the project and includes the location, damage description and dimensions, scope of work, and cost estimate for each project.
 - a. **Location**
 - i. Identifies location of all damages using addresses and/or proximity to landmarks.
 - ii. Includes latitude and longitude of the project, if known.
 - b. **Damage Description**
 - i. Describes the damage, including the cause of the damage.
 - ii. Quantifies specific disaster-related damages or emergency services provided.
 - iii. Quantifies specific non-disaster-related damages, if applicable.
 - c. **Scope of Work**
 - i. Describes the work necessary to remove and dispose of disaster-related debris, conduct emergency response measures, or repair or replace a disaster-damaged facility to pre-disaster condition.
 - ii. Documents the percentage of “work completed” and/or “work to be completed.”
 - iii. Describes the basis for the cost estimate.
 - iv. Quantifies eligible costs.
 - v. Describes any Special Considerations that affect the scope of work.
 - vi. Documents ineligible work and associated costs.
 - d. **Cost Estimate**
 - i. Summarizes actual costs incurred or expected for the project.
 - ii. Identifies unit prices.
 - iii. Documents total project cost.
2. **Damage Description and Scope of Work Continuation Sheet** – FEMA Form 90-91A. Used, if necessary, to expand the PW blocks for damage quantities and description, scope of work, and cost extensions.
3. **Project Worksheet – Cost Estimating Continuation Sheet** – FEMA Form 90-91B. Includes Cost Estimating Format (CEF) worksheets for large permanent work projects. If the CEF is not applicable, the basis for the cost estimate should be clearly denoted in the scope of work.

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ELEMENTS OF A PROJECT WORKSHEET

4. **Special Considerations Questions** – FEMA Form 90-120.
5. **Hazard Mitigation Proposal (HMP)** – FEMA Form 90-61. Hazard mitigation applies to Categories C through G. In addition to the HMP itself, the proposal should include any documentation supporting the recommendation.
6. **Force Account Labor Summary Record** – FEMA Form 90-123.
7. **Applicant's Benefits Calculation Worksheet** – FEMA Form 90-128.
8. **Force Account Equipment Summary Record** – FEMA Form 90-127.
9. **Rented Equipment Summary Record** – FEMA Form 90-125.
10. **Materials Summary Record** – FEMA Form 90-124.
11. **Contract Work Summary Record** – FEMA Form 90-126.
12. **Contract Documentation** – Minimum documentation for contracted work should include: contract cover sheet or sheets, those portions of the contract defining principal parties, units of work bid, unit costs, and any other contract stipulations affecting scope of work or costs. Any addendums or extra work orders should be included, as well as procurement documentation indicating scope of work of the contract, number of bidders, and unit cost or lump sum bid by each bidder. If a bidder is disqualified, include an explanation. Frequently, a large portion of the contract defines general conditions. This portion of the contract is not required as an attachment, but should be maintained by the Applicant as source documentation.
13. **Insurance Information** – Attach only the information specific to the PW. This may include the Detailed Adjuster's Report, Statement of Loss, binders, settlement offers, insurance estimates, technical/engineering reports prepared by insurance company or adjuster, etc. In cases where several projects are covered by the same insurance policy, the information should be cross-referenced in the PW and the policy maintained in the Applicant's central file.
14. **Project Worksheet Maps and Sketches Sheet** – FEMA Form 90-91C. Used, as needed, to illustrate disaster-related damages, completed work, and proposed repairs. Limit attachments to 8.5 x 11-inch pages. If pages larger than 8.5 x 11 inches are required, they should be identified in the PW (title, date, preparer, number of sheets, etc.). Include a copy of the Flood Insurance Rate Map (FIRM) location and other site location maps.
15. **Project Worksheet Photo Sheet** – FEMA Form 90-91D. Used, as necessary, to illustrate and describe general project site conditions, disaster related damages, site irregularities, conditions relating to

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ELEMENTS OF A PROJECT WORKSHEET

damaged elements, facility identification (e.g., front gate or building signs), and completed work, or to demonstrate the presence of an immediate threat.

16. **Other Documentation** – Other information as required (e-mails, communications, etc.).
17. **Do Not Copy/Scan Sheet** – Back up documentation behind this sheet is not scanned into the database.
18. **Materials Back up Documentation** – If applicable, may include:
 - a. Engineering/technical reports that were considered in eligibility determinations. Reference such reports in the PW's scope of work by title, subject, date, preparer, pages, etc.
 - b. Source documentation sampled by the PW writer, such as copies of time sheets, payroll records, and invoices.
 - c. Applicable codes and standards, if a code upgrade is triggered. A copy of the code/standard, a copy of the legal action (resolution, ordinance, etc.) formally adopting the code/standard, and/or amendments or annexes to the code/standard should be submitted and referenced in the PW scope of work.
 - d. Lease or rental agreements for facilities rented *by* an eligible Applicant or rented *to* an eligible Applicant. If insurance is required as part of the agreement, refer to the insured item.
 - e. Facility maintenance records are required for: roads (if condition or usage is questionable), engineered channels (other than flood control works), debris basins and reservoirs where debris removal is contemplated, beaches where repair to an engineered beach is contemplated, and other facilities requiring maintenance to ensure proper function or that capacity has been maintained.
 - f. Facility inspection/safety reports for bridges.
 - g. Mutual aid agreements (referenced in the body of the PW).

For more information on writing and compiling documentation for a PW, please refer to FEMA's *Public Assistance Program Project Worksheet Development Guide*.



Carlos J. Castillo
Assistant Administrator
Disaster Assistance Directorate

12/17/08
Date

Attachment

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ELEMENTS OF A PROJECT WORKSHEET

Attachment

ELEMENTS OF A PROJECT WORKSHEET	Attached	
	Yes	No
1. Project Worksheet Cover – FEMA Form 90-91		
2. Damage Description and Scope of Work Continuation Sheet – FEMA Form 90-91A		
3. Project Worksheet – Cost Estimating Continuation Sheet – FEMA Form – 90-91B		
4. Special Considerations Questions – FEMA Form 90-120 (as applicable)		
5. Hazard Mitigation Proposal – FEMA Form 90-61 (as applicable)		
6. Force Account Labor Summary Record – FEMA Form 90-123		
7. Applicant's Benefits Calculation Worksheet – FEMA Form 90-128		
8. Force Account Equipment Summary Record – FEMA Form 90-127		
9. Rented Equipment Summary Record – FEMA Form 90-125		
10. Materials Summary Record – FEMA Form 90-124		
11. Contract Work Summary Record – FEMA Form 90-126		
12. Contract Documentation		
13. Insurance Information		
14. Project Worksheet Maps and Sketches Sheet – FEMA Form 90-91C		
15. Project Worksheet Photo Sheet – FEMA Form 90-91D		
16. Other Documentation		
17. Do Not Copy/Scan Sheet		
18. Materials Back up Documentation		



PUBLIC ASSISTANCE: CONTRACTING REQUIREMENTS CHECKLIST

FEMA's Public Assistance (PA) program provides supplemental assistance to states, tribes, and local governmental entities, as well as certain private non-profit organizations (hereinafter referred to as applicants) to assist them with recovering from emergencies and major disasters. FEMA's *Public Assistance Program and Policy Guide* (<http://www.fema.gov/public-assistance-policy-and-guidance>) provides comprehensive information regarding the types of assistance FEMA can provide and the requirements to receive assistance. The purpose of this Fact Sheet is to provide Public Assistance applicants with key information they need to consider when using contracted resources. Failure to follow federal contracting requirements when procuring and selecting contractors puts applicants at risk of not receiving full reimbursement for eligible disaster costs.

Understanding Which Federal Contracting Requirements Apply to Public Assistance Applicants

The federal procurement requirements are found at 2 C.F.R. §§ 200.317-200.326. In order for a Public Assistance applicant to determine which contracting rules apply, the applicant must first determine if it is a state or non-state entity. States must follow procurement requirements found at 2 C.F.R. § 200.317 and non-states must follow procurement requirements found at 2 C.F.R. §§ 200.318 through 200.326.

A “**STATE**” means any state or territory of the United States, and any agency or instrumentality of that state or territory.

A “**NON-STATE**” entity is any eligible Public Assistance applicant that does not meet the “state” definition. Non-state applicants include local governments, Indian tribal governments, institutions of higher education, hospitals, and other eligible private non-profit organizations.

State entity applicants should refer to “**Checklist A: State Entities**” on page 2 for additional information. Non-state entity applicants should refer to “**Checklist B: Non-State Entities**” on page 2 for additional information.

DISCLAIMER: This Fact Sheet is intended to provide general information on procurement compliance and is not inclusive of every rule that an applicant may need to comply with. Additional information regarding the federal procurement standards can be found at the following webpage: www.fema.gov/procurement-disaster-assistance-team.

ATTENTION: Potential Compliance Issues

State Entities:

- ☐ Not following their own procurement policies and procedures.
- ☐ Not including required contract provisions.

Non-state entities:

- ☐ Using Time & Materials (T&M) contracts without a ceiling price.
- ☐ Awarding sole-source contracts without ensuring the noncompetitive proposals method is appropriately followed.
- ☐ Using pre-awarded/pre-disaster contracts for supplies or services that are out of the contract scope.
- ☐ Awarding to contractors that drafted solicitation documents.
- ☐ Using geographic preferences in the evaluation of bids and proposals.
- ☐ Entering into Cost-Plus-Percentage of Cost (CPPC) contract types. These contract types are prohibited.
- ☐ Improper “piggybacking” of other entities’ contracts.
- ☐ Awarding to suspended or debarred contractors.

FEDERAL PROCUREMENT REQUIREMENTS CHECKLISTS

Checklist A: State Entities

- ☐ Follow **the same policies and procedures** used when contracting with non-Federal funds (2 C.F.R. § 200.317);
- ☐ Comply with the **procurement of recovered materials** guidelines (2 C.F.R. § 200.322);
- ☐ Must include **required contract provisions** in all purchase orders/contracts awarded (2 C.F.R. § 200.326); and
- ☐ **Reasonable cost** considerations:
 - ☐ While **T&M contracts** without a ceiling price and **CPPC contracts** may be allowable under state standards, the use of these contracting vehicles carry a higher risk of noncompliance with the requirement that costs be reasonable (2 C.F.R. § 200.404) and as such may be subject to a higher level of scrutiny.

Checklist B: Non-State Entities

- ☐ Maintain written standards of conduct covering **conflicts of interest** and governing the performance of employees who engage in the selection, award, and administration of contracts (2 C.F.R. § 200.318(c));
- ☐ Conduct procurements in a manner providing for **full and open competition** (2 C.F.R. § 200.319);
- ☐ Take six necessary steps to assure that **small and minority businesses, women's business enterprises, and labor surplus area firms** are used when possible (2 C.F.R. § 200.321):
 - ☐ Place such organizations that are qualified on solicitation lists;
 - ☐ Ensure such organizations are solicited whenever they are potential sources;
 - ☐ Divide total requirements, when economically feasible, into smaller tasks or quantities;
 - ☐ Establish delivery schedules, where the requirement permits, which encourage their participation;
 - ☐ Use the services and assistance, as appropriate, of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
 - ☐ Require prime contractor to take the above affirmative steps if subcontracting.
- ☐ Perform a **cost or price analysis** in connection with every procurement action in excess of the Simplified Acquisition Threshold, including contract modifications (2 C.F.R. § 200.323);
- ☐ Use allowable **procurement methods**, including procurement by micro-purchases, small purchases, sealed bidding, competitive proposals, and non-competitive proposals and ensure corresponding standards are met (2 C.F.R. § 200.320);
- ☐ If using a **T&M contract**, ensure that no other contract type is suitable and the contract includes a ceiling price that the contractor exceeds at their own risk (2 C.F.R. § 200.318(j));
- ☐ Follow the **bonding requirements** for all facility and improvement projects (2 C.F.R. § 200.325);
- ☐ Must include **applicable contract provisions** in all contracts awarded (2 C.F.R. § 200.326);
- ☐ Comply with the **procurement of recovered materials** guidelines (2 C.F.R. § 200.322);
- ☐ Maintain **oversight** to ensure contractors perform according to the terms, conditions, and specifications of their contracts or purchase orders (2 C.F.R. § 200.318(b)); and
- ☐ Maintain **records** sufficient to detail the history of the procurement. These records will include, but are not limited to the rationale for the method of procurement, selection of contract type; contractor selection or rejection; and basis for the contract price (2 C.F.R. § 200.318(i)).

DAILY TIME SHEET FOR FEMA REIMBURSABLE CATEGORIES

Date: _____

Employee Number: _____

Vehicle Unit Number: _____

Employee Name (print):

Supervisor Name (print): _____

Employee Signature: _____

Supervisor Signature: _____

[illegible]

Totals _____

Note: It may be necessary for this timesheet to be turned into your employer in addition to United's Damage As

LOG SHEET FOR FEMA REIMBURSABLE CATEGORIES

Date: _____	Work Order #/Reference #: _____
Line Crew: _____	Supervisor Name (print): _____
_____	Supervisor Signature: _____
_____	Vehicle Unit Number: _____
Substation and Circuit _____	Grid Location _____

<input type="checkbox"/>	Category A: Emergency Work - e.g. debris removal
<input type="checkbox"/>	Category B: Emergency Protective Measures
<input type="checkbox"/>	Category F: Permanent Work on Distribution Lines

Log Sheet #

NOTES:

DRAWING:

Staking Pages Attached: _____

FEMA DISASTER ASSISTANCE FACT SHEET – DAP 9580.6

Overview

The purpose of this fact sheet is to establish criteria to determine eligibility for repair or replacement of disaster-damaged electric distribution and transmission systems under the authority of rural electric cooperatives (RECs), municipal electric utilities, public power districts, and other public entities following a major disaster or emergency declaration by the President. This fact sheet addresses appropriate contracting procedures, categories of work (that is, Category B or F), criteria for replacing conductors, hazard mitigation, Rural Utility Service (RUS) Bulletins, and collateral damage. The Federal Emergency Management Agency (FEMA) must inspect and validate all projects for which the owners are requesting replacement of conductors. The utility owners are responsible for the safety and reliability of their distribution and transmission systems.

Contracting

To be eligible for Federal funding, applicants must comply with federal procurement standards as outlined in the Title 44 Code of Federal Regulations (CFR), Part 13.36, Procurement. Essential elements of the procurement process include: competition; a clear and definitive scope of work, if possible; qualified bidders (documented by licenses, financial records, proof of insurance, and bonding, as applicable); a price analysis to demonstrate price reasonableness; compliance with all relevant local, State, and Federal requirements, laws and policies; and, clear documentation of the process/rationale followed in making procurement decisions. There is no requirement to negotiate profit separately when applicants follow competitive procurement procedures. Profit is considered to be a component of the unit price.

Unacceptable Contracts: Cost Plus Percentage of Cost

Acceptable Contracts:

1. Lump Sum
2. Unit Price
3. Cost Plus Fixed Fee
4. Sole Source for Materials – in limited situations. RECs, municipal utilities, and public power districts may use noncompetitive procurements to procure materials, provided they meet the requirements of 44 CFR §13.36(d)(4), Methods of procurement to be followed, Procurement by noncompetitive proposals.
5. Time and Material (T&M) - applicants may use T&M contracts only when it has been determined that no other contract is suitable and the contract includes a ceiling price that the contractor exceeds

at its own risk (44 CFR §13.36(b)(10), Procurement standards). Since RECs, municipal utilities, and public power districts generally provide the materials used in repairing their systems, these contracts are referred to as “time and equipment” (T&E) contracts. Due to the critical nature of restoring power to the electrical grid following a disaster and because exigent circumstances do not permit delays related to fully assessing the damages before repair work begins, RECs, municipal utilities, and public power districts commonly use T&E contracts for making disaster-related repairs.

The use of T&E contracts to repair disaster-related damages to electrical transmission and distribution systems may be eligible for Public Assistance (PA) funding provided the utility owner:

- (a) Documents the exigent circumstances that exist and explains why other types of contracts were not suitable;
- (b) Documents why a detailed scope of work could not be developed for the repairs;
- (c) Ensures that all T&E contracts contain a “ceiling price” that the contractor exceeds at its own risk, a “not to exceed” clause, or are otherwise limited by an applicant- issued task order;
- (d) Performs and documents a price analysis to demonstrate that the hourly rates are reasonable and justifiable under the disaster conditions;
- (e) Documents the terms of the contract (including mutual aid contracts); and
- (f) Monitors contractors and keeps good records of work performed.

Category of Work

FEMA characterizes work authorized under sections 403, Essential Assistance, and 407, Debris Removal, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) as emergency work (Categories B and A, respectively) and under section 406, Repair, Restoration, and Replacement of Damaged Facilities, as permanent work (Categories C-G). Category F refers to the permanent repair of utility systems. RECs, municipal utilities, and public power districts work to restore power to customers as soon as possible following disasters. Most repairs are permanent in nature. FEMA categorizes electric utility restoration work as follows:

1. FEMA will characterize all temporary work that RECs, municipal utilities, and public power districts perform to restore power to all facilities capable of receiving it, as Category B, emergency work. In these situations, the RECs, municipal utilities, and public power districts make permanent repairs later to bring the damaged components into compliance with appropriate codes and standards.
2. FEMA will characterize work that RECs, municipal utilities, and public power districts perform to restore the damaged facilities to pre-disaster condition in accordance with applicable codes and

standards as Category F, permanent work. RECs, municipal utilities, and public power districts can complete permanent repairs immediately after the disaster occurs or after temporary repairs are completed (see item 1 above).

Replacing Conductors

44 CFR §206.226, Restoration of damaged facilities, authorizes reimbursement for "... work to restore eligible facilities on the basis of the design of such facilities as they existed immediately prior to the disaster ..." in accordance with adopted codes and standards. FEMA recognizes local, state, and national codes (for example, the National Electrical Safety Code and RUS standards and specifications for materials, equipment, and construction, which are applicable regardless of funding source) as appropriate when determining eligible cost to repair or replace damaged electrical facilities.

Establishing Pre-Disaster Condition

Applicants should provide the following information to establish pre-disaster condition of their facilities:

1. Certification of the pre-disaster condition and capacity of the conductor from a licensed professional engineer who has direct experience with the damaged electrical transmission or distribution system. Records providing satisfactory evidence of the condition and capacity of the conductor as it existed prior to the disaster. The certification may be supplemented by a professional engineering evaluation.
2. If available, copies of construction work plans demonstrating the utility's past practices and current/future projects.
3. If required by RUS, a copy of any corrective action plans submitted to RUS in compliance with 7 CFR §1730.25, Corrective action (RUS borrowers only).

Criteria for Conductor Replacement

Determining the disaster-related damages to some components (for example, poles, guys, and cross-arms) of an electrical transmission or distribution system can usually be accomplished by visual inspection. However, determining the full extent of disaster-related damages to conductors, and the appropriate method to repair the damages, is more challenging, particularly with older systems. FEMA considers a conductor eligible for replacement when it is stretched beyond the point where it can be effectively repaired and re-sagged through predictable modeling to meet appropriate clearances, sag and tension, and to meet pre-disaster reliability. A conductor is beyond the point where it can be effectively repaired when one or more of the following criteria exist within a line section:

1. 25% or more of the conductor spans are damaged. Damage is defined as broken conductors, broken strands, the existence of new (disaster-related) splices, and/or if the conductor is severely pitted, burned, kinked, or damaged in other ways.
2. 30% or more of the line spans are visibly out of sag or do not meet clearances (for example, the conductor does not meet clearance requirements for conductor-to-conductor or conductor-to-ground).
3. 40% or more of the poles were replaced or need to be replaced or plumbed (straightened) due to the disaster.
4. 40% or more of the supporting structures have a disaster-related damaged component (for example, x-arms, braces, pin, ties, insulators, guys/anchors, or poles).
5. The sum of the percentages of the above criteria is 65% or more.
6. Other additional compelling information provided by a licensed professional engineer.

Replacement Conductor

FEMA will fund eligible work in accordance with 44 CFR §206.226, Restoration of damaged facilities. The use of #2 Aluminum Conductor Steel Reinforced (ACSR), however, is considered the lower cost equivalent to replace conductor with equal or lesser amperage capacity, such as copper weld conductor (CWC), hard and soft drawn copper wire, smaller ACSR, and Amerdutor. When such conductor is replaced with #2 ACSR, FEMA will fund adjustments of span lengths and pole heights to meet appropriate design requirements.

If FEMA determines that the conductor is eligible for replacement, FEMA will fund the use of #2 ACSR as the lower cost equivalent replacement of conductor with equal or lesser amp capacity (for example, copper weld conductor (CWC), hard and soft drawn copper wire, and smaller ACSR, and Amerdutor). If the existing spacing of poles exceeds the spacing required for the new conductor, FEMA will fund the installation of additional poles and components as required to meet appropriate design requirements.

If disaster damaged conductor does not qualify for replacement, the damaged line section is eligible for repair only.

Hazard Mitigation

FEMA provides hazard mitigation funding under Section 404, Hazard Mitigation, and Section 406, Repair, Restoration, and Replacement of Damaged Facilities, of the Stafford Act. The State manages the Section 404 Hazard Mitigation Grant Program and establishes the funding priorities for the program. FEMA will evaluate and fund Section 406 hazard mitigation projects to protect disaster-damaged components of facilities. FEMA supports funding cost-effective hazard mitigation measures for electrical transmission and distribution facilities. In order to be eligible, hazard mitigation measures under Section 406 of the Stafford Act:

1. Must be appropriate to the disaster damage and must prevent future damage similar to that caused by the declared event.
2. Must be applied only to the damaged element(s) of a facility. This criterion is particularly important when conducting repairs to a portion of a system.
3. Cannot increase risks or cause adverse effects to the facility or to other property.
4. Must consist of work that is above and beyond the eligible work required to return the damaged facility to its pre-disaster design. Upgrades required to meet current codes and standards, however, are not considered hazard mitigation measures for purposes of the PA Program and have different eligibility criteria.

FEMA staff must review and approve hazard mitigation measures prior to implementation to ensure eligibility, technical feasibility, environmental and historic preservation compliance, and cost effectiveness. FEMA may fund the use of "wind-motion resistant conductor" as effective hazard mitigation, when conductor segments qualify for replacement.

Code or standard upgrades that FEMA determines do not meet the five criteria listed in 44 CFR §206.226(d), Restoration of damaged facilities, Standards, but which will enhance a facility's ability to resist similar damage in a future disaster, may be eligible for funding under Section 406 hazard mitigation (see FEMA Disaster Assistance Policy DAP9526.1, Hazard Mitigation Funding under Section 406 of the Stafford Act). For example, increasing the size or changing the type of conductor for hazard mitigation purposes may be eligible for FEMA reimbursement provided it is both viable and cost-effective.

Cost effectiveness is defined as:

1. Up to 15% of the total eligible cost of eligible repairs; or

2. Up to 100% of eligible repair costs for measures listed in Appendix A of DAP9526.1; or
3. A benefit-cost ratio of 1 or greater.

A non-exhaustive list of typical hazard mitigation measures for electrical systems includes the following:

Sample Mitigation Measure

Justification

Installing additional poles to support transformers

100%, listed in Appendix A of DAP9526.1

Installing guy-wires

100%, listed in Appendix A of DAP9526.1

Providing looped distribution service or other redundancies to critical facilities

100%, listed in Appendix A of DAP9526.1

Elevating pad-mounted transformers above BFE (or ABFE where applicable)

100%, listed in Appendix A of DAP9526.1

Replacing damaged poles with higher-rated poles of the same or different material

100%, listed in Appendix A of DAP9526.1

Cross bracing on H Frame Poles

100%, listed in Appendix A of DAP9526.1

Removing large diameter communication lines

100%, listed in Appendix A of DAP9526.1

Upgrade conductor to Wind-Motion Resistant Conductor (e.g., T2 ACSR)

15% of the total eligible cost of eligible repairs

Mid span poles (not specified by code)

15% of the total eligible cost of eligible repairs

Rural Utility Service (RUS) Bulletins

In order for the costs of Federal, State, and local repair or replacement standards which change the pre-disaster construction of a facility to be eligible, 44 CFR §206.226(d), Restoration of damaged facilities, Standards, requires that the standards must:

1. Apply to the type of repair or restoration required;
2. Be appropriate to the pre-disaster use of the facility;
3. Be found reasonable, in writing, and formally adopted and implemented by the State or local government on or before the disaster declaration date, or be a legal Federal requirement applicable to the type of restoration;

4. Apply uniformly to all similar types of facilities within the jurisdiction of the owner of the facility; and
5. For any standard in effect at the time of a disaster, it must have been enforced during the time it was in effect.

Under the authority of the Rural Electrification Act of 1936, the United States Department of Agriculture RUS, Electric Programs Division, makes direct loans and guarantees loans to electric utilities to serve customers in rural areas. Rural electric cooperatives use the loans and loan guarantees to finance construction of electric distribution, transmission, and generation facilities. Through these loans, the Federal government is the majority note-holder for approximately 700 electric systems in 46 states. In accordance with 7 CFR 1724.1(b), Electrical Engineering, Architectural Services and Design Policies and Procedures, all borrowers, regardless of funding sources, are required to comply with RUS requirements for new construction design standards, and the use of RUS accepted material on electric systems.

On July 1, 2005, RUS published Bulletin 1742D-106, Considerations for Replacing Storm-Damaged Conductors, The bulletin provides guidelines to assist rural electric cooperatives in making expedient decisions on whether to repair or replace damaged conductors after disasters. FEMA has reviewed this bulletin and determined that it does not meet the definition of a code or standard as described in 44 CFR §206.226(d). Therefore, FEMA will not accept RUS Bulletin 1742D-106 as a basis for replacing damaged conductors.

To date, rural electric cooperatives have not cited other RUS Bulletins to support their requests for the replacement of conductors. FEMA will evaluate other RUS Bulletins on a case-by-case basis.

Repair of Collateral Damage

The repair of damage to eligible facilities caused during the performance of eligible work is reimbursable under the Public Assistance Program. If rural electric cooperatives, municipal utilities, or public power districts damage their own or other public property while performing emergency repairs to their facilities, the cost to repair the damage may be eligible (see DAP9525.8, Damage to Applicant-Owned Equipment). Rural electric cooperatives often obtain easements from private landowners to access and maintain their transmission and distribution facilities. If private property easements are damaged while making repairs to the disaster-damaged facilities (for example, ruts on the property), the repair of the damage to the private property is eligible for FEMA Public Assistance reimbursement. Applicants shall demonstrate legal responsibility for the repair in the form of a written or statutory easement with an express legal responsibility to repair the damage.

Elizabeth A. Zimmerman

Date

Assistant Administrator

Disaster Assistance Directorate

Conductor Replacement Criteria

Frequently Asked Questions

1. What is a span?

A span is the distance between two poles.

2. What is a line section?

A line section is a group of contiguous spans selected for evaluation. The applicant has flexibility in defining a line section. A line section could be a single span, all the spans between two deadend structures, all the spans on a feeder, all the spans on a tap or any other group of contiguous spans that are evaluated together.

3. What is Criterion 1 and how is it applied?

This criterion relates to visible damage to the conductor in a line section. A conductor span with damage such as broken strands, splices or sleeves (installed as a result of the disaster), birdcaging, severe pitting, burns, kinks or other visible conductor damage is counted in this criterion. The number of conductor spans is calculated by multiplying the number of conductors per span by the number of spans. For example a three phase line section with three spans has 12 conductor spans (4 conductors x 3 spans = 12). If a single conductor span has damage in more than one location it still only counts as one damaged conductor span. If 25% or more of the of the total conductor spans in a line section have visible damage as a direct result of the disaster, then the conductors of that line section are considered eligible for replacement.

4. What is Criterion 2 and how is it applied?

This criterion relates to conductor elongation or stretch in a line section. Any conductors in a span that are out of sag or do not meet clearance requirements as a direct result of the disaster are counted in this criterion. If more than one conductor in a span is out of sag or does not meet clearance requirements it still counts as just one span. This evaluation does not require precise measurement of the conductor temperature or actual sag or clearances. This determination is

to be made using the good judgment of a qualified electrical inspector. If 30% or more of the total spans in a line section are visibly out of sag or do not meet clearance requirements as a direct result of the disaster, then the conductors of that line section are considered eligible for replacement.

5. What is Criterion 3 and how is it applied?

This criterion is related to damage to the poles supporting the conductor in a line section. If a pole was replaced, is in need of replacement or is in need of plumbing (straightening) as a direct result of the disaster, then it counts in this criterion. A pole is considered to be in need of straightening if it is leaning such that it is unsafe to climb. If 40% or more of the total poles in a line section meet this criterion then the conductors in that line section are considered eligible for replacement.

6. What is Criterion 4 and how is it applied?

This criterion relates to damage to the supporting structure other than the poles. If the supporting structure has damage such as a broken crossarm, broken support brace, bent pin, broken tie, broken insulator, broken guy or pulled anchor as a direct result of the disaster then that support structure is counted in this criterion. If more than one element of the support structure is damaged it still only counts as one damaged support structure. If a pole is counted under criterion 3 then the supporting structure should not be counted under criterion 4. If 40% or more of the total number of support structures in a line section are damaged as a direct result of the storm then the conductors of that line section are considered eligible for replacement.

7. What is Criterion 5 and how is it applied?

This criterion relates to the total damage to a line section. If the sum of the percentages calculated for criteria 1 through 4 is 65% or more then the conductors of that line section are considered eligible for replacement. It is possible that the sum of the percentages for criteria 1 through 4 could be more than 100%.

8. What is Criterion 6 and how is it applied?

This criterion is included to account for other methods of demonstrating that the conductor in a line section is damaged beyond repair. If this criterion is applied then supporting evidence must be documented to clearly describe the basis for the conclusion that the conductor in this line section was damaged as a direct result of the disaster and is not suitable for continued service. FEMA will make the final determination on a case-by-case basis.

DISASTER ASSISTANCE
FACT SHEET
DAP9580.6

ELECTRIC UTILITY REPAIR

(PUBLIC AND PRIVATE NONPROFIT)



PUBLIC ASSISTANCE: CONTRACTING REQUIREMENTS CHECKLIST

FEMA's Public Assistance (PA) program provides supplemental assistance to states, tribes, and local governmental entities, as well as certain private non-profit organizations (hereinafter referred to as applicants) to assist them with recovering from emergencies and major disasters. FEMA's *Public Assistance Program and Policy Guide* (<http://www.fema.gov/public-assistance-policy-and-guidance>) provides comprehensive information regarding the types of assistance FEMA can provide and the requirements to receive assistance. The purpose of this Fact Sheet is to provide Public Assistance applicants with key information they need to consider when using contracted resources. Failure to follow federal contracting requirements when procuring and selecting contractors puts applicants at risk of not receiving full reimbursement for eligible disaster costs.

Understanding Which Federal Contracting Requirements Apply to Public Assistance Applicants

The federal procurement requirements are found at 2 C.F.R. §§ 200.317-200.326. In order for a Public Assistance applicant to determine which contracting rules apply, the applicant must first determine if it is a state or non-state entity. States must follow procurement requirements found at 2 C.F.R. § 200.317 and non-states must follow procurement requirements found at 2 C.F.R. §§ 200.318 through 200.326.

A “**STATE**” means any state or territory of the United States, and any agency or instrumentality of that state or territory.

A “**NON-STATE**” entity is any eligible Public Assistance applicant that does not meet the “state” definition. Non-state applicants include local governments, Indian tribal governments, institutions of higher education, hospitals, and other eligible private non-profit organizations.

State entity applicants should refer to “**Checklist A: State Entities**” on page 2 for additional information. Non-state entity applicants should refer to “**Checklist B: Non-State Entities**” on page 2 for additional information.

DISCLAIMER: This Fact Sheet is intended to provide general information on procurement compliance and is not inclusive of every rule that an applicant may need to comply with. Additional information regarding the federal procurement standards can be found at the following webpage: www.fema.gov/procurement-disaster-assistance-team.

ATTENTION: Potential Compliance Issues

State Entities:

- ☐ Not following their own procurement policies and procedures.
- ☐ Not including required contract provisions.

Non-state entities:

- ☐ Using Time & Materials (T&M) contracts without a ceiling price.
- ☐ Awarding sole-source contracts without ensuring the noncompetitive proposals method is appropriately followed.
- ☐ Using pre-awarded/pre-disaster contracts for supplies or services that are out of the contract scope.
- ☐ Awarding to contractors that drafted solicitation documents.
- ☐ Using geographic preferences in the evaluation of bids and proposals.
- ☐ Entering into Cost-Plus-Percentage of Cost (CPPC) contract types. These contract types are prohibited.
- ☐ Improper “piggybacking” of other entities’ contracts.
- ☐ Awarding to suspended or debarred contractors.

FEDERAL PROCUREMENT REQUIREMENTS CHECKLISTS

Checklist A: State Entities

- ☐ Follow **the same policies and procedures** used when contracting with non-Federal funds (2 C.F.R. § 200.317);
- ☐ Comply with the **procurement of recovered materials** guidelines (2 C.F.R. § 200.322);
- ☐ Must include **required contract provisions** in all purchase orders/contracts awarded (2 C.F.R. § 200.326); and
- ☐ **Reasonable cost** considerations:
 - ☐ While **T&M contracts** without a ceiling price and **CPPC contracts** may be allowable under state standards, the use of these contracting vehicles carry a higher risk of noncompliance with the requirement that costs be reasonable (2 C.F.R. § 200.404) and as such may be subject to a higher level of scrutiny.

Checklist B: Non-State Entities

- ☐ Maintain written standards of conduct covering **conflicts of interest** and governing the performance of employees who engage in the selection, award, and administration of contracts (2 C.F.R. § 200.318(c));
- ☐ Conduct procurements in a manner providing for **full and open competition** (2 C.F.R. § 200.319);
- ☐ Take six necessary steps to assure that **small and minority businesses, women's business enterprises, and labor surplus area firms** are used when possible (2 C.F.R. § 200.321):
 - ☐ Place such organizations that are qualified on solicitation lists;
 - ☐ Ensure such organizations are solicited whenever they are potential sources;
 - ☐ Divide total requirements, when economically feasible, into smaller tasks or quantities;
 - ☐ Establish delivery schedules, where the requirement permits, which encourage their participation;
 - ☐ Use the services and assistance, as appropriate, of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
 - ☐ Require prime contractor to take the above affirmative steps if subcontracting.
- ☐ Perform a **cost or price analysis** in connection with every procurement action in excess of the Simplified Acquisition Threshold, including contract modifications (2 C.F.R. § 200.323);
- ☐ Use allowable **procurement methods**, including procurement by micro-purchases, small purchases, sealed bidding, competitive proposals, and non-competitive proposals and ensure corresponding standards are met (2 C.F.R. § 200.320);
- ☐ If using a **T&M contract**, ensure that no other contract type is suitable and the contract includes a ceiling price that the contractor exceeds at their own risk (2 C.F.R. § 200.318(j));
- ☐ Follow the **bonding requirements** for all facility and improvement projects (2 C.F.R. § 200.325);
- ☐ Must include **applicable contract provisions** in all contracts awarded (2 C.F.R. § 200.326);
- ☐ Comply with the **procurement of recovered materials** guidelines (2 C.F.R. § 200.322);
- ☐ Maintain **oversight** to ensure contractors perform according to the terms, conditions, and specifications of their contracts or purchase orders (2 C.F.R. § 200.318(b)); and
- ☐ Maintain **records** sufficient to detail the history of the procurement. These records will include, but are not limited to the rationale for the method of procurement, selection of contract type; contractor selection or rejection; and basis for the contract price (2 C.F.R. § 200.318(i)).

<p align="center">Emergency Response Plan Force Account Equipment Summary</p>
--

Work Order # or Map Location

Unit Number	Description	Operator's Name	Dates and Hours Worked Each Week							
			Date							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							
			Hours							

Instruction Sheet for Force Account Equipment Summary

Who should use this form: Anyone utilizing a Cooperative vehicle that is not already accounted for on a Direct Labor Record Summary (generally, all Operations employees utilizing Cooperative vehicles should use this form.)

How to use this form:

Work Order # or Map Location Enter the work order number (if available) or map location of the project

Unit Number Enter the Cooperative Unit Number for the vehicle utilized

Description Enter the description of the vehicle, including the size and type of vehicle (for example - 1/2 ton pickup; or 3.5 ton bucket truck)

Operator's Name Enter the name of the primary operator of the vehicle

Date Enter the dates the vehicle (s) were used

Hours Enter the hours that the vehicle (s) were used on each date
UPDATEED 11/19/2015

**Emergency Response Plan
Direct Labor Record**

Employee Name (s):

Vehicle Used (Unit Number and Description)

Example - Unit #125 - 1/2 ton pickup:

Work Order or Map # of Project	Dates and Hours Worked Each Week							
	Date							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							
	Reg.							
	O.T.							
	Veh. Used							

Instruction Sheet for Direct Labor Record

Who should use this form: Anyone who does not already fill out timesheets that account for his or her time by work order (generally speaking - non-operations employees should use this form). Salaried employees should fill out this form when working directly on a work order/project.

When to use the form: To record time directly associated with the design, construction, or retirement of a project.

This form DOES NOT: Take the place of a regular timesheet. Employees who generally fill out a timesheet, will continue to fill out his or her regular timesheet in addition to this form.

How to use this form:

Employee Name (s):	Enter the name or names of the employees whose time is represented
Vehicle Used:	Include the unit number and general description of the vehicle that was used by the employees
Work Order or Map # of the Project	Enter the work order number (if known) or a map number of the location of the project.
Reg. (Regular Time)	Number of hours of regular time worked by the employee or employees on the noted work order each day.
O.T. (Overtime)	Number of hours of overtime worked by the employee or employees on the noted work order each day.
Veh. Used	Total number of hours the vehicle described at the top of the form was utilized each day on the noted work order.

UPDATED 11/19/2015

ERCOT Nodal Operating Guides

Section 4: Emergency Operation

December 17, 2021

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4 EMERGENCY OPERATIONS

4.1 Introduction

- (1) Emergency operation is intended to address operating conditions under which the reliability of the ERCOT System is inadequate and there is no solution readily apparent. During a declared system emergency, ERCOT can instruct Transmission Operators (TOs) and Qualified Scheduling Entities (QSEs) to take specific operating actions that would otherwise be discretionary. Upon receiving a Verbal Dispatch Instruction (VDI) from ERCOT, and in compliance with these Operating Guides, the QSEs shall direct relevant Resources or groups of Resources to respond to the instruction. ERCOT shall coordinate with QSEs and TOs to assure that necessary actions are taken to maintain reliability.
- (2) It is essential that good, timely, and accurate communication routinely occur between ERCOT, TOs, and QSEs. QSE and TO personnel shall report unplanned equipment status changes as outlined in this Section. ERCOT System Operators may ask for status updates as required in order to gather information to make decisions on system conditions to determine what type of emergency communication may be appropriate.
- (3) ERCOT may issue communications in the form of Operating Condition Notices (OCNs), Advisories, Watches and Emergency Notices. These communications may relate to but are not limited to, weather, transmission, computer failure, or generation information. ERCOT shall specify the severity of the situation, the area affected, the areas potentially affected, and the anticipated duration of the Emergency Condition. These communications will be issued by ERCOT to inform all TOs and QSEs of the current operating situation. TOs will notify their represented Transmission Service Providers (TSPs) and Load Serving Entities (LSEs). QSEs will in turn notify the appropriate Resources, Retail Electric Providers (REPs) and LSEs. QSEs and TOs shall establish and maintain internal procedures for contingency preparedness or to expedite the resolution of the conditions communicated by ERCOT that threaten system reliability.
- (4) Before deciding which communication to issue, ERCOT must consider the possible severity of the operating situation before an Emergency Condition occurs. If practicable, the market shall be allowed to attempt to mitigate or eliminate any possible Emergency Condition. ERCOT has the responsibility to issue the appropriate communications to facilitate a solution by Market Participants.

4.2 Communication Prior to and During Emergency Conditions

4.2.1 *Operating Condition Notice*

- (1) An Operating Condition Notice (OCN) shall be issued by ERCOT in accordance with Protocol Section 6.5.9.3.1, Operating Condition Notice. OCNs are for communication purposes only.

- (2) ERCOT may require information from Qualified Scheduling Entities (QSEs) and Transmission Operators (TOs). Typical information requested may include, but is not limited to:
 - (a) Resource fuel capabilities;
 - (b) Resource condition details; and
 - (c) Actual weather conditions.
- (3) ERCOT will provide verbal notice of an OCN to all TOs and QSEs representing Resources and post the message electronically to the ERCOT website. When an OCN is issued, it does not place ERCOT in an Emergency Condition. QSEs should notify appropriate Resources, Retail Electric Providers (REPs) and Load Serving Entities (LSEs). TOs should notify their represented Transmission Service Providers (TSPs) as appropriate.

[NOGRR177: Replace paragraph (3) above with the following upon system implementation of NPRR857:]

- (3) ERCOT will provide verbal notice of an OCN to all TOs and QSEs representing Resources and post the message electronically to the ERCOT website. When an OCN is issued, it does not place ERCOT in an Emergency Condition. QSEs should notify appropriate Resources, Retail Electric Providers (REPs) and Load Serving Entities (LSEs). TOs should notify their represented Transmission Service Providers (TSPs) and Direct Current Tie Operators (DCTOs) as appropriate.

4.2.2 Advisory

- (1) An Advisory will be issued by ERCOT in accordance with Protocol Section 6.5.9.3.2, Advisory, when it recognizes that conditions are developing or have changed such that QSE and/or TO actions may be prudent in anticipation of possible Emergency Conditions.
- (2) ERCOT may require information from QSEs and TOs. Typical information requested may include, but is not limited to:
 - (a) Resource fuel capabilities;
 - (b) Resource condition details; and
 - (c) Actual weather conditions.
- (3) When an Advisory is issued for Physical Responsive Capability (PRC) below 3,000 MW and ERCOT expects system conditions to deteriorate to the extent that an Energy Emergency Alert (EEA) Level 2 or 3 may be experienced, ERCOT shall evaluate

constraints active in Security-Constrained Economic Dispatch (SCED) and determine which constraints have the potential to limit generation output.

- (a) Upon identification of such constraints, ERCOT shall coordinate with the TSPs that own or operate the overloaded Transmission Facilities associated with those constraints, as well as the Resource Entities whose generation output may be limited, to determine whether:

[NOGRR177: Replace paragraph (a) above with the following upon system implementation of NPRR857:]

- (a) Upon identification of such constraints, ERCOT shall coordinate with the TSPs and DCTOs that own or operate the overloaded Transmission Facilities associated with those constraints, as well as the Resource Entities whose generation output may be limited, to determine whether:

- (i) A 15-Minute Rating is available that allows for additional transmission capacity for use in congestion management, if an EEA Level 2 or 3 is declared, and post-contingency actions can be taken within 15 minutes to return the flow to within the Emergency Rating. Such actions may include, but are not limited to, reducing the generation that increased output as a result of enforcing the 15-Minute Rating rather than the Emergency Rating;
- (ii) Post-contingency loading of the Transmission Facilities is expected to be at or below Normal Rating within two hours; or
- (iii) Additional transmission capacity could allow for additional output from a limited Generation Resource by taking one of the following actions:
 - (A) Restoring Transmission Elements that are out of service;
 - (B) Reconfiguring the transmission system; or
 - (C) Making adjustments to phase angle regulator tap positions.

If ERCOT determines that one of the above-mentioned actions allows for additional output from a limited Generation Resource, ERCOT may instruct the TSPs to take the action(s) during the Advisory to allow for additional output from the limited Generation Resource.

- (b) ERCOT shall also coordinate with TSPs who own and operate the Transmission Facilities associated with the double-circuit contingencies for the constraints identified above to determine whether the double-circuit failures are at a high risk of occurring due to system conditions, which may include: severe weather conditions forecasted by ERCOT in the vicinity of the double-circuit, weather

conditions that indicate a high risk of insulator flashover on the double-circuit, repeated Forced Outages of the individual circuits that are part of the double-circuit in the preceding 48 hours, or fire in progress in the right of way of the double-circuit.

[NOGRR177: Replace paragraph (b) above with the following upon system implementation of NPRR857:]

- (b) ERCOT shall also coordinate with TSPs and DCTOs who own and operate the Transmission Facilities associated with the double-circuit contingencies for the constraints identified above to determine whether the double-circuit failures are at a high risk of occurring due to system conditions, which may include: severe weather conditions forecasted by ERCOT in the vicinity of the double-circuit, weather conditions that indicate a high risk of insulator flashover on the double-circuit, repeated Forced Outages of the individual circuits that are part of the double-circuit in the preceding 48 hours, or fire in progress in the right of way of the double-circuit.

- (c) The actions detailed in this Section shall be supplemental to the development and maintenance of Constraint Management Plans (CMPs) as otherwise directed by the Protocols or Operating Guides.

- (4) ERCOT shall provide verbal notice of an Advisory to all TOs and QSEs representing Resources and shall post the message electronically to the ERCOT website. When an Advisory is issued, it does not place ERCOT in an Emergency Condition. QSEs shall notify appropriate Resources, REPs and LSEs of Advisories. TOs should notify their represented TSPs as appropriate of Advisories.

[NOGRR177: Replace paragraph (4) above with the following upon system implementation of NPRR857:]

- (4) ERCOT shall provide verbal notice of an Advisory to all TOs and QSEs representing Resources and shall post the message electronically to the ERCOT website. When an Advisory is issued, it does not place ERCOT in an Emergency Condition. QSEs shall notify appropriate Resources, REPs, and LSEs of Advisories. TOs should notify their represented TSPs or DCTOs as appropriate of Advisories.

4.2.3 Watch

- (1) A Watch may be issued by ERCOT in accordance with Protocol Section 6.5.9.3.3, Watch, when it recognizes that conditions have developed such that an Emergency Condition may be imminent.

- (2) ERCOT may require information from QSEs and TOs. Typical information requested may include, but is not limited to:
 - (a) Resource fuel capabilities;
 - (b) Resource condition details; and
 - (c) Actual weather conditions.
- (3) When a post-contingency overload of an element cannot be rectified, including through the use of CMPs, ERCOT shall issue a Watch.
- (4) ERCOT shall provide verbal notice of the Watch to all TOs and QSEs representing Resources and shall post the message electronically to the ERCOT website. QSEs shall notify appropriate Resources, REPs and LSEs. TOs shall notify their represented TSPs.

[NOGRR177: Replace paragraph (4) above with the following upon system implementation of NPRR857:]

- (4) ERCOT shall provide verbal notice of the Watch to all TOs and QSEs representing Resources and shall post the message electronically to the ERCOT website. QSEs shall notify appropriate Resources, REPs, and LSEs. TOs shall notify their represented TSPs or DCTOs.

4.2.4 Emergency Notice

- (1) An Emergency Notice will be issued by ERCOT in accordance with Protocol Section 6.5.9.3.4, Emergency Notice, when ERCOT is operating in an Emergency Condition. This includes when ERCOT is considered to be in an insecure state when ERCOT Transmission Grid status is such that a Credible Single Contingency event presents the threat of uncontrolled separation of cascading Outages and/or large-scale service disruption to Load (other than Load being served from a single-feed transmission service) and/or overload of a Transmission Facility, and no timely solution is obtainable from the market.
- (2) ERCOT shall provide verbal notice of an Emergency Notice to all TOs and QSEs representing Resources and shall post the message electronically to the ERCOT website.
- (3) When an Emergency Notice is issued, ERCOT is operating in an Emergency Condition. QSEs shall notify appropriate Resources, REPs and LSEs. TOs shall notify their represented TSPs and LSEs.

[NOGRR177: Replace paragraph (3) above with the following upon system implementation of NPRR857:]

- (3) When an Emergency Notice is issued, ERCOT is operating in an Emergency Condition. QSEs shall notify appropriate Resources, REPs and LSEs. TOs shall notify their represented TSPs, DCTOs, and LSEs.

4.3 Operation to Maintain Transmission System Security

- (1) ERCOT shall continue to operate according to Security Criteria outlined in Section 2.2.2, Security Criteria, unless an Emergency Condition has been declared by ERCOT.
- (2) Transmission Overload – ERCOT can:
 - (a) Order adjustment to unit generation schedules, switching of Transmission Elements or Load interruption to relieve the overloaded Transmission Element;
 - (b) Order a Transmission Element whose loss would not have a significant impact on the reliability of transmission system switched out to increase interconnected system transfers.
- (3) Violation of security criteria – ERCOT can order changes to unit dispatch or commitment to eliminate or avoid a security criteria violation. Normally these changes should be performed through market control mechanisms including Security-Constrained Economic Dispatch (SCED) or Reliability Unit Commitment (RUC) as described in the Protocols, but if an ERCOT Operator finds these mechanisms insufficient to resolve the violation, the ERCOT Operator may require any other action necessary to address the violation.
- (4) Partial Blackout or Blackout – ERCOT shall implement Black Start procedures.

4.3.1 Real-Time and Short Term Planning

- (1) ERCOT will conduct Real-Time and short term planning based on the security criteria established in these Operating Guides. Operations during Forced and Planned Outages will also follow these criteria. Line Ratings are provided to ERCOT in accordance with Protocols and these Operating Guides. ERCOT will employ Constraint Management Plans (CMPs) and use of Remedial Action Schemes (RASs) to facilitate the use of the ERCOT Transmission Grid while maintaining system security and reliability in accordance with the Protocols, these Operating Guides, and applicable North American Electric Reliability Corporation (NERC) Reliability Standards. ERCOT will address operating conditions under which the reliability of the ERCOT System is inadequate and no solution is readily apparent in accordance with the Protocols and these Operating Guides.

4.4 Block Load Transfers between ERCOT and Non-ERCOT System

- (1) Under Watch, Energy Emergency Alert (EEA) conditions, or for local transmission constraints, it may become necessary to implement Block Load Transfer (BLT) schemes

which will transfer Loads normally located in ERCOT to a non-ERCOT System. Similarly, when a non-ERCOT System experiences certain transmission contingency or short supply conditions, ERCOT may be requested to transfer Loads normally located in the non-ERCOT System to ERCOT. All BLTs must comply with Protocol Section 6.5.9.5, Block Load Transfers between ERCOT and Non-ERCOT Control Areas.

4.5 Energy Emergency Alert (EEA)

4.5.1 General

- (1) At times it may be necessary to reduce ERCOT System demand because of a temporary decrease in available electricity supply. The reduction in supply could be caused by emergency Outages of generators, transmission equipment, or other critical facilities; by short-term unavailability of fuel or generation; or by requirements or orders of government agencies. To provide an orderly, predetermined procedures for curtailing Demand during such emergencies, ERCOT shall initiate and coordinate the implementation of the Energy Emergency Alert (EEA) in accordance with Protocol Section 6.5.9.4, Energy Emergency Alert.
- (2) The goal of the EEA is to provide for maximum possible continuity of service while maintaining the integrity of the ERCOT System to reduce the chance of cascading outages.

4.5.2 Operating Procedures

- (1) The ERCOT System Operators have the authority to make and carry through decisions that are required to operate the ERCOT System during emergency or adverse conditions. ERCOT will have sufficiently detailed operating procedures for emergency or short supply situations and for restoration of service in the event of a Partial Blackout or Blackout. These procedures will be distributed to the personnel responsible for performing specified tasks to handle emergencies, remedy short supply situations, or restore service. Transmission Service Providers (TSPs) will develop procedures to be filed with ERCOT describing implementation of ERCOT requests in emergency and short supply situations, including interrupting Load, notifying others and restoration of service.

[NOGRR177: Replace paragraph (1) above with the following upon system implementation of NPRR857:]

- (1) The ERCOT System Operators have the authority to make and carry through decisions that are required to operate the ERCOT System during emergency or adverse conditions. ERCOT will have sufficiently detailed operating procedures for emergency or short supply situations and for restoration of service in the event of a Partial Blackout or Blackout. These procedures will be distributed to the personnel responsible for

performing specified tasks to handle emergencies, remedy short supply situations, or restore service. Transmission Service Providers (TSPs) and Direct Current Tie Operators (DCTOs) will develop procedures to be filed with ERCOT describing implementation of ERCOT requests in emergency and short supply situations, including interrupting Load, notifying others and restoration of service.

- (2) ERCOT and each TSP will endeavor to maintain transmission ties intact if at all possible. This will:
 - (a) Permit rendering the maximum assistance to an area experiencing a deficiency in generation;
 - (b) Minimize the possibility of cascading loss to other parts of the system; and
 - (c) Assist in restoring operation to normal.

[NOGRR177: Replace paragraph (2) above with the following upon system implementation of NPRR857:]

- (2) ERCOT and Transmission Operators (TOs) will endeavor to maintain transmission ties intact if at all possible. This will:
 - (a) Permit rendering the maximum assistance to an area experiencing a deficiency in generation;
 - (b) Minimize the possibility of cascading loss to other parts of the system; and
 - (c) Assist in restoring operation to normal.

- (3) ERCOT's operating procedures will meet the following goals while continuing to respect the confidentiality of market sensitive data. If all goals cannot be respected simultaneously then the priority order listed below shall be respected:
 - (a) Maintain station service for nuclear generating facilities;
 - (b) Securing startup power for power generating plants;
 - (c) Operating generating plants isolated from ERCOT without communication;
 - (d) Restoration of service to critical Loads such as:
 - (i) Military facilities;
 - (ii) Facilities necessary to restore the electric utility system;
 - (iii) Law enforcement organizations and facilities affecting public health; and

- (iv) Communication facilities.
- (e) Maximum utilization of ERCOT System capability;
- (f) Utilization of Ancillary Services to the extent permitted by ERCOT System conditions;
- (g) Utilization of the market to the fullest extent practicable without jeopardizing the reliability of the ERCOT System;
- (h) Restoration of service to all Customers following major system disturbances, giving priority to the larger group of Customers; and
- (i) Management of Interconnection Reliability Operating Limits (IROLs) shall not change.

4.5.3 Implementation

- (1) ERCOT shall be responsible for monitoring system conditions, initiating the EEA levels below, notifying all Qualified Scheduling Entities (QSEs) and Transmission Operators (TOs), and coordinating the implementation of the EEA conditions while maintaining transmission security limits. QSEs and TOs will notify all the Market Participants they represent of each declared EEA level.
- (2) During the EEA, ERCOT has the authority to obtain energy from non-ERCOT Control Areas using Direct Current Tie(s) (DC Tie(s)) or by using Block Load Transfers (BLTs) to move load to non-ERCOT Control Areas. ERCOT maintains the authority to curtail energy schedules flowing into or out of the ERCOT System across the DC Ties in accordance with North American Electric Reliability Corporation (NERC) scheduling guidelines.
- (3) ERCOT, at management's discretion, may at any time issue an ERCOT-wide appeal through the public news media for voluntary energy conservation.
- (4) There may be insufficient time to implement all levels in sequence. ERCOT may immediately implement Level 3 of the EEA any time the clock-minute average system frequency falls below 59.91 Hz for 20 consecutive minutes and shall immediately implement Level 3 any time the steady-state frequency is below 59.5 Hz for any duration.
- (5) Percentages for Level 3 Load shedding will be based on the previous year's TSP peak Loads, as reported to ERCOT, and will be reviewed by ERCOT and modified annually.
- (6) The ERCOT System Operator shall declare the EEA levels to be taken by QSEs and TSPs. QSEs and TSPs shall implement actions under that level (and all above if not previously accomplished) and if ordered by the ERCOT shift supervisor or his designate, shall report back to the ERCOT System Operator when the requested level has been completed.

[NOGRR177: Replace paragraph (6) above with the following upon system implementation of NPPR857:]

- (6) The ERCOT System Operator shall declare the EEA levels to be taken by QSEs, TSPs, and DCTOs. QSEs, TSPs, and DCTOs shall implement actions under that level (and all above if not previously accomplished) and if ordered by the ERCOT shift supervisor or his designate, shall report back to the ERCOT System Operator when the requested level has been completed.
- (7) During EEA Level 3, ERCOT must be capable of shedding sufficient firm Load to arrest frequency decay and to prevent generator tripping. The amount of firm Load to be shed may vary depending on ERCOT Transmission Grid conditions during the event. Each TSP will be capable of shedding its allocation of firm Load, without delay. The maximum time for the TSP to interrupt firm Load will depend on how much Load is to be shed and whether the Load is to be interrupted by Supervisory Control and Data Acquisition (SCADA) or by the dispatch of personnel to substations. Since the need for firm Load shed is immediate, interruption by SCADA is preferred. The following requirements apply for an ERCOT instruction to shed firm Load:
 - (a) Load interrupted by SCADA will be shed without delay and in a time period not to exceed 30 minutes;
 - (b) Load interrupted by dispatch of personnel to substations to manually shed Load will be implemented within a time period not to exceed one hour;
 - (c) The initial clock on the firm Load shed shall apply only to Load shed amounts up to 1000 MW total. Load shed amount requests exceeding 1000 MW on the initial clock may take longer to implement; and
 - (d) If, after the first Load shed instruction, ERCOT determines that an additional amount of firm Load should be shed, another clock will begin anew. The time frames mentioned above will apply.
- (8) Each TSP, or its designated agent, will provide ERCOT a status report of Load shed progress within 30 minutes of the time of ERCOT's instruction or upon ERCOT's request.
- (9) During EEA Level 2 or 3, for those constraints that meet the criteria identified in paragraph (3)(a) of Section 4.2.2, Advisory, ERCOT may control the post-contingency flow to within the 15-Minute Rating in SCED. After Physical Responsive Capability (PRC) is restored to at least 3,000 MW or the Emergency Condition has ended, whichever is later, and ERCOT has determined that system conditions have improved such that the chance of re-entering into an EEA Level 2 or 3 is low, ERCOT shall restore control to the post-contingency flow to within the Emergency Rating for these constraints that utilized the 15-Minute Rating in Security Constrained Economic Dispatch (SCED).
- (10) During EEA Level 2 or 3, for those constraints that meet the criteria identified in paragraph (3)(b) of Section 4.2.2, ERCOT shall continue to enforce constraints

associated with double-circuit contingencies throughout an EEA if the double-circuit failures are determined to be at high risk of occurring, due to system conditions. For all other double-circuit contingencies identified in paragraph (3)(b) of Section 4.2.2, ERCOT will enforce only the associated single-circuit contingencies during EEA Level 2 or 3. ERCOT shall resume enforcing such constraints as a double-circuit contingency after PRC is restored to at least 3,000 MW or the Emergency Condition has ended, whichever is later, and ERCOT has determined that system conditions have improved such that the chance of re-entering into an EEA Level 2 or 3 is low. For constraints related to stability limits that are not IROLs, ERCOT may elect not to enforce double-circuit contingencies during EEA Level 3 only.

4.5.3.1 General Procedures Prior to EEA Operations

- (1) Prior to declaring EEA Level 1 detailed in Section 4.5.3.3, EEA Levels, ERCOT may perform the following operations consistent with Good Utility Practice:
 - (a) Provide Dispatch Instructions to QSEs for specific Resources to operate at an Emergency Base Point to maximize Resource deployment so as to increase Responsive Reserve (RRS) levels on other Resources;
 - (b) Commit specific available Resources as necessary that can respond in the timeframe of the emergency. Such commitments will be settled using the Hourly Reliability Unit Commitment (HRUC) process;
 - (c) Start Reliability Must-Run (RMR) Units available in the time frame of the emergency. RMR Units should be loaded to full capability;
 - (d) Utilize available Resources providing Non-Spinning Reserve (Non-Spin) services as required;

[NOGRR187: Replace item (d) above with the following upon system implementation of NPRR863:]

- (d) Utilize available Resources providing RRS, ERCOT Contingency Reserve Service (ECRS), and Non-Spin services as required;
- (e) Instruct TSPs and Distribution Service Providers (DSPs) or their agents to reduce Customer Load by using existing, in-service distribution voltage reduction measures if ERCOT determines that the implementation of these measures could help avoid entering into EEA and ERCOT does not expect to need to use these measures to reduce the amount of Load shedding that may be needed in EEA Level 3. A TSP, DSP, or their agent shall implement these instructions if distribution voltage reduction measures are available and already installed. If the TSP, DSP, or their agent determines in their sole discretion that the distribution voltage reduction would adversely affect reliability, the voltage reduction

measure may be reduced, modified, or otherwise changed from maximum performance to a level of exercise that has no negative impact to reliability; and

- (f) ERCOT shall use the PRC and system frequency to determine the appropriate Emergency Notice and EEA levels.
- (2) When PRC falls below 3,000 MW and is not projected to be recovered above 3,000 MW within 30 minutes following the deployment of Non-Spin, ERCOT may deploy available contracted Emergency Response Service (ERS)-10 and ERS-30 via an Extensible Markup Language (XML) message followed by a Verbal Dispatch Instruction (VDI) to the QSE Hotline. The ERS-10 and ERS-30 ramp periods shall begin at the completion of the VDI.
- (a) ERS-10 and ERS-30 may be deployed at any time in a Settlement Interval. ERS-10 and ERS-30 may be deployed either simultaneously or separately, and in any order, at the discretion of ERCOT operators.
 - (b) Upon deployment, QSEs shall instruct their ERS Resources in ERS-10 and ERS-30 to perform at contracted levels consistent with the criteria described in Section 8.1.3.1.4, Event Performance Criteria for Emergency Response Service Resources, until either ERCOT releases the ERS-10 and ERS-30 deployment or the ERS-10 and ERS-30 Resources have reached their maximum deployment time.
 - (c) ERCOT shall notify QSEs of the release of ERS-10 and ERS-30 via an XML message followed by VDI to the QSE Hotline. The VDI shall represent the official notice of ERS-10 and ERS-30 release.
 - (d) Upon release, an ERS Resource shall return to a condition such that it is capable of meeting its ERS performance requirements as soon as practical, but no later than ten hours following the release.

4.5.3.2 General Procedures During EEA Operations

- (1) ERCOT Control Area authority will re-emphasize the following operational practices during EEA operations to minimize non-performance issues that may result from the pressures of the emergency situation.
 - (a) ERCOT shall suspend Ancillary Service obligations that it deems to be contrary to reliability needs;
 - (b) ERCOT shall notify each QSE and TO via Hotline of declared EEA level;
 - (c) QSEs and TOs shall notify each represented Market Participant of declared EEA level;

- (d) ERCOT, QSEs and TSPs shall continue to respect confidential market sensitive data;

[NOGRR177: Replace paragraph (d) above with the following upon system implementation of NPRR857:]

- (d) ERCOT, QSEs, TSPs, and DCTOs shall continue to respect confidential market sensitive data;

- (e) QSEs shall update Current Operating Plans (COPs) to limit or remove capacity when unexpected start-up delays occur or when ramp limitations are encountered;
- (f) QSEs shall report when On-Line or available capacity is at risk due to adverse circumstances;
- (g) QSEs, TSPs, and all other Entities must not suspend efforts toward expeditious compliance with the applicable EEA level declared by ERCOT nor initiate any reversals of required actions without ERCOT authorization;

[NOGRR177: Replace paragraph (g) above with the following upon system implementation of NPRR857:]

- (g) QSEs, TSPs, DCTOs, and all other Entities must not suspend efforts toward expeditious compliance with the applicable EEA level declared by ERCOT nor initiate any reversals of required actions without ERCOT authorization;

- (h) ERCOT shall define procedures for determining the proper redistribution of reserves during EEA operations; and
- (i) QSEs shall not remove an On-Line Generation Resource without prior ERCOT authorization unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, QSEs shall immediately inform ERCOT of the need and reason for removing the On-Line Generation Resource from service.

4.5.3.3 EEA Levels

- (1) ERCOT will declare an EEA Level 1 when PRC falls below 2,300 MW and is not projected to be recovered above 2,300 MW within 30 minutes without the use of the following actions that are prescribed for EEA Level 1:
 - (a) ERCOT shall take the following steps to maintain steady state system frequency near 60 Hz and maintain PRC above 1,750 MW:

- (i) Request available Generation Resources, that can perform within the expected timeframe of the emergency, to come On-Line by initiating manual HRUC or through Dispatch Instructions;
- (ii) Use available DC Tie import capacity that is not already being used;
- (iii) Issue a Dispatch Instruction for Resources to remain On-Line which, before start of emergency, were scheduled to come Off-Line; and
- (iv) Instruct QSEs to deploy undeployed ERS-10 and ERS-30.

[NOGRR221: Insert item (v) below upon system implementation of NPRR1010:]

- (v) At ERCOT's discretion, manually deploy, through Inter-Control Center Communications Protocol (ICCP), available RRS and ERCOT Contingency Reserve Service (ECRS) capacity from Generation Resources having a Resource Status of ONSC and awarded RRS or ECRS.

(b) QSEs shall:

- (i) Ensure COPs and telemetered High Sustained Limits (HSLs) are updated and reflect all Resource delays and limitations; and

[NOGRR221: Replace paragraph (i) above with the following upon system implementation of NPRR1010:]

- (i) Ensure COPs and telemetered HSLs, Normal Ramp Rates, Emergency Ramp Rates, and Ancillary Service capabilities are updated and reflect all Resource delays and limitations; and

- (ii) Suspend any ongoing ERCOT-required Resource performance testing.

[NOGRR216 and NOGRR229: Insert applicable portions of paragraph (iii) below upon system implementation of NPRR1002 for NOGRR216; or upon system implementation of NPRR995 for NOGRR229:]

- (iii) Ensure that each of its Energy Storage Resources (ESRs) and Settlement Only Energy Storage Systems (SOESSs) suspends charging until the EEA is recalled, except under the following circumstances:
 - (A) The ESR has a current SCED Base Point Instruction, Load Frequency Control Dispatch Instruction, or manual Dispatch Instruction to charge the ESR;

- (B) The ESR or SOESS is actively providing Primary Frequency Response; or
- (C) The ESR or SOESS is co-located behind a Point of Interconnection (POI) with onsite generation that is incapable of exporting additional power to the ERCOT System, in which case the ESR may continue to charge as long as maximum output to the ERCOT System is maintained.

- (2) ERCOT may declare an EEA Level 2 when the clock-minute average system frequency falls below 59.91 Hz for 15 consecutive minutes. ERCOT will declare an EEA Level 2 when PRC falls below 1,750 MW and is not projected to be recovered above 1,750 MW within 30 minutes without the use of the following actions that are prescribed for EEA Level 2:
- (a) In addition to the measures associated with EEA Level 1, ERCOT shall take the following steps to maintain steady state system frequency at a minimum of 59.91 Hz and maintain PRC above 1,430 MW:
 - (i) Instruct TSPs and Distribution Service Providers (DSPs) or their agents to reduce Customer Load by using existing, in-service distribution voltage reduction measures that have not already been implemented. A TSP, DSP or their agent shall implement these instructions if distribution voltage reduction measures are available and already installed. If the TSP, DSP, or their agent determines in their sole discretion that the distribution voltage reduction would adversely affect reliability, the voltage reduction measure may be reduced, modified, or otherwise changed from maximum performance to a level of exercise that has no negative impact to reliability.
 - (ii) Instruct TSPs and DSPs to implement any available Load management plans to reduce Customer Load;
 - (iii) Instruct QSEs to deploy RRS supplied from Load Resources (controlled by high-set under-frequency relays). ERCOT shall issue such Dispatch Instructions in accordance with the deployment methodologies described in paragraph (iv) below.

[NOGRR186: Replace paragraph (iii) above with the following upon system implementation of NPRR863:]

- (iii) Instruct QSEs to deploy ECRS or RRS (controlled by high-set under-frequency relays) supplied from Load Resources. ERCOT may deploy ECRS or RRS simultaneously or separately, and in any order. ERCOT shall issue such Dispatch Instructions in accordance with the deployment

methodologies described in paragraph (iv) below.

- (iv) ERCOT shall deploy RRS capacity supplied by Load Resources (controlled by high-set under-frequency relays) in accordance with the following:

[NOGRR186: Replace paragraph (iv) above with the following upon system implementation of NPRR863:]

- (iv) Load Resources providing ECRS that are not controlled by high set under-frequency relays shall be deployed prior to Group 1 deployment. ERCOT shall deploy ECRS and RRS capacity supplied by Load Resources (controlled by high-set under-frequency relays) in accordance with the following:

- (A) Instruct QSEs to deploy half of the RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt Group 1 Load Resources providing RRS. QSEs shall deploy Load Resources according to the group designation and will be given some discretion to deploy additional Load Resources from Group 2 if Load Resource operational considerations require such. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

[NOGRR186 and NOGRR198: Replace applicable portions of paragraph (A) above with the following upon system implementation of NPRR863 or NPRR939, respectively:]

- (A) Instruct QSEs to deploy RRS with a Group 1 designation and all of the ECRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resources to interrupt Group 1 Load Resources providing ECRS and RRS. QSEs shall deploy Load Resources according to the group designation and will be given some discretion to deploy additional Load Resources from any of the groups not designated for deployment if Load Resource operational considerations require such. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

- (B) At the discretion of the ERCOT Operator, instruct QSEs to deploy the remaining RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt Group 2 Load Resources providing RRS. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

[NOGRR198: Replace paragraph (B) above with the following upon system implementation of NPRR939:]

- (B) At the discretion of the ERCOT Operator, instruct QSEs to deploy RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt additional Load Resources providing RRS based on their group designation. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

- (C) The ERCOT Operator may deploy both of the groups of Load Resources providing RRS at the same time. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period; and

[NOGRR186 and NOGRR198: Replace applicable portions of paragraph (C) above with the following upon system implementation of NPRR863 or NPRR939, respectively:]

- (C) The ERCOT Operator may deploy Load Resources providing only ECRS (not controlled by high-set under-frequency relays) and all groups of Load Resources providing RRS and ECRS at the same time. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period; and

- (D) ERCOT shall post a list of Load Resources on the MIS Certified Area immediately following the Day-Ahead Reliability Unit Commitment (DRUC) for each QSE with a Load Resource obligation which may be deployed to interrupt under paragraph (A), Group 1 and paragraph (B), Group 2. ERCOT shall develop a

process for determining which individual Load Resource to place in Group 1 and which to place in Group 2. ERCOT procedures shall select Group 1 and Group 2 based on a random sampling of individual Load Resources. At ERCOT's discretion, ERCOT may deploy all Load Resources at any given time during EEA Level 2.

[NOGRR198 and NOGRR221: Replace applicable portions of paragraph (D) above with the following upon system implementation of NPRR939 or NPRR1010, respectively:]

- (D) ERCOT shall post a list of Load Resources on the MIS Certified Area immediately following the DRUC for each QSE with a Load Resource RRS or ECRS award, which may be deployed to interrupt under paragraph (A) and paragraph (B). ERCOT shall develop a process for determining which individual Load Resource to place in each group based on a random sampling of individual Load Resources. At ERCOT's discretion, ERCOT may deploy all Load Resources at any given time during EEA Level 2.

- (vi) Unless a media appeal is already in effect, ERCOT shall issue an appeal through the public news media for voluntary energy conservation; and
 - (vii) With the approval of the affected non-ERCOT Control Area, TSPs, DSPs, or their agents may implement transmission voltage level BLTs, which transfer Load from the ERCOT Control Area to non-ERCOT Control Areas in accordance with BLTs as defined in the Operating Guides.
- (b) Confidentiality requirements regarding transmission operations and system capacity information will be lifted, as needed to restore reliability.
- (3) ERCOT may declare an EEA Level 3 when the clock-minute average system frequency falls below 59.91 Hz for 20 consecutive minutes. ERCOT will declare an EEA Level 3 when PRC cannot be maintained above 1,430 MW or when the clock-minute average system frequency falls below 59.91 Hz for 25 consecutive minutes. Upon declaration of an EEA Level 3, ERCOT will implement any measures associated with EEA Levels 1 and 2 that have not already been implemented.

[NOGRR216 and NOGRR229: Insert applicable portions of paragraph (a) below upon system implementation of NPRR1002 and renumber accordingly for NOGRR216; or upon system implementation of NPRR995 for NOGRR229:]

- (a) ERCOT shall instruct ESRs and SOESSs to suspend charging. For ESRs, ERCOT shall issue the instruction via a SCED Base Point, or, if otherwise necessary, via a manual Dispatch instruction. An ESR or SOESS shall suspend charging unless providing Primary Frequency Response or LFC issues a charging instruction to an ESR that is carrying Regulation Down Service (Reg-

Down). However, an ESR or SOESS co-located behind a POI with onsite generation that is incapable of exporting additional power to the ERCOT System may continue to charge as long as maximum output to the ERCOT System is maintained.

- (a) When PRC falls below 1,000 MW and is not projected to be recovered above 1,000 MW within 30 minutes, or when the clock-minute average frequency falls below 59.91 Hz for 25 consecutive minutes, ERCOT shall direct all TOs to shed firm Load, in 100 MW blocks, distributed as documented in these Operating Guides in order to maintain a steady state system frequency at a minimum of 59.91 Hz and to recover 1,000 MW of PRC within 30 minutes.
- (b) TOs and TDSPs may shed Load connected to under-frequency relays pursuant to an ERCOT Load shed directive issued during EEA Level 3 so long as each affected TO continues to comply with its Under-Frequency Load Shed (UFLS) obligation as described in Section 2.6.1, Automatic Firm Load Shedding, and its Load shed obligation as described in Section 4.5.3.4, Load Shed Obligation.

4.5.3.4 Load Shed Obligation

- (1) Obligation for Load shed is by DSP. Load shedding obligations need to be represented by an Entity with 24x7 operations and Hotline communications with ERCOT and control over breakers. Percentages for Level 3 Load shedding will be based on the previous year's TSP peak Loads, as reported to ERCOT, and will be reviewed by ERCOT and modified annually. (Use TOs as list of Entities)

ERCOT Load Shed Table

Transmission Operator	2020 Total Transmission Operator Load (%MW)
AEP Texas Central Company	8.23
Brazos Electric Power Cooperative Inc.	5.11
Brownsville Public Utilities Board	0.36
Bryan Texas Utilities	0.51
CenterPoint Energy Houston Electric LLC	24.78
City of Austin DBA Austin Energy	3.55
City of College Station	0.28
City of Garland	0.76
City of Lubbock	0.62
CPS Energy (San Antonio)	6.47
Denton Municipal Electric	0.48
GEUS (Greenville)	0.15

Golden Spread Electric Cooperative Inc.	0.38
Lamar County Electric Cooperative Inc.*	0.07
LCRA Transmission Services Corporation	6.05
Oncor Electric Delivery Company LLC	36.16
Rayburn Country Electric Cooperative Inc. DBA Rayburn Electric	1.38
South Texas Electric Cooperative Inc.	2.00
Texas-New Mexico Power Company	2.66
ERCOT Total	100.00

[NOGRR219: Replace Section 4.5.3.4 above with the following upon system implementation:]

4.5.3.4 Load Shed Obligation

- (1) Each TO shall take and direct actions to ensure that ERCOT Load shed instructions are effectuated. Each DSP shall comply with any reasonable instruction given by its TO to effectuate Load shed obligations.
- (2) Percentages for Level 3 Load shedding will be based on the previous year's TSP peak Loads, as reported to ERCOT, and will be reviewed by ERCOT and revised annually or as otherwise appropriate to reflect any new or changed TO designation. ERCOT shall maintain a Load Shed Table posted on the ERCOT website that reflects each TO's total Load shed obligation.
- (3) Following ERCOT's annual peak Load review or ERCOT's receipt of any new or changed TO designation, ERCOT shall post any anticipated revisions to the Load Shed Table on the ERCOT website. ERCOT shall issue a Market Notice announcing the posting of the revisions at least ten days prior to the effective date of the revisions or as soon as practicable if ERCOT determines there is a need to correct the Market Notice less than ten days before the effective date.

4.5.3.5 EEA Termination

- (1) ERCOT shall:
 - (a) Continue EEA until sufficient Resources are available to ERCOT to eliminate the shortfall and restore adequate reserves;

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

- (b) Restore full reserve requirements (normally 2300 MW);
 - (c) Terminate the levels in reverse order, where practical;
 - (d) Notify each QSE and TO of EEA level termination; and
 - (e) Maintain a stable ERCOT System frequency when restoring Load.
- (2) QSEs and TOs shall:
- (a) Implement actions to terminate previous actions as EEA levels are released in accordance with these Operating Guides;
 - (b) Notify represented Market Participants of EEA levels changes;
 - (c) Report back to the ERCOT System Operator when each level is accomplished; and
 - (d) Loads will be restored when specifically authorized by the ERCOT.

4.6 Black Start Service

- (1) This section provides general guidelines to be followed in the event of a Partial Blackout or Blackout of the ERCOT System. Timely implementation of a Black Start plan compiled in accordance with Section 8, Attachment E, Black Start Plan Template, should facilitate coordination between ERCOT, Qualified Scheduling Entities (QSEs) who represent Black Start Resources, Black Start Resources, and Transmission Operators (TOs) and ensure restoration of service to the ERCOT System at the earliest possible time. The Authorized Representative for Resource Entities that own contracted Black Start Resources will provide their QSE and ERCOT with a copy of the individual plant start-up procedures for coordination of their activities with those of the appropriate TO.
- (2) Pre-established plans and procedures cannot foresee all the possible combinations of system problems that may occur after a major failure. It is the responsibility of ERCOT to restore the system to normal, applying the principles, strategies, and priorities outlined in the ERCOT Black Start Plan.

4.6.1 Principles

- (1) In order to minimize the time required, ERCOT will develop the Black Start Plan to utilize the principles, strategies, and priorities outlined in this Guide. The ERCOT Black Start Plan shall be coordinated with local TO Black Start plans to provide a coordinated Black Start reference.
- (2) Each contracted Black Start Resource and each QSE with contracted Black Start Resource(s) will have readily accessible and sufficiently detailed current operating procedures to assist in an orderly recovery.

- (3) Mutual assistance and cooperation will be essential during the restoration. Deliberate, careful action by each QSE, TO, and Resource Entity is necessary to minimize the length of time required for restoration and to avoid the reoccurrence of a Partial Blackout or Blackout of the ERCOT System.
- (4) Throughout the restoration, recovery will depend on ERCOT receiving an accurate assessment of system conditions and status from each QSE, TO, and Resource Entity throughout the restoration. Adequate and reliable communications must be available within the ERCOT System. During Black Start recovery, communication restrictions may enable the sharing of market sensitive information that pertains to the restoration of the ERCOT System. This includes but is not limited to availability status and recovery activities.

4.6.2 Strategies

- (1) In the event of a Partial Blackout or Blackout of the ERCOT System, immediate steps must be taken to return the interconnected network to normal as quickly as possible. For detailed Black Start information, refer to Section 8, Attachment A, Detailed Black Start Information.
 - (a) Each TO shall immediately initiate its portion of the ERCOT Black Start Plan and attempt to establish contact with ERCOT. If communications with ERCOT are unavailable the TO shall immediately establish communications with its interconnected Black Start Resource(s) and the Black Start Resource's QSE.
 - (b) Each QSE representing Black Start Resources shall initiate communications with its Black Start Resources and immediately notify ERCOT and the appropriate TO of their condition and status.
 - (c) Available Black Start Resources shall immediately start their isolation and startup procedures and attempt to establish communications with the local TO.
 - (d) As generating and transmission capabilities become available, systematic restoration of ERCOT Load with respect to priorities shall begin in accordance with the local TO Black Start plans, taking care to balance Load and generating capability while maintaining an acceptable frequency.
 - (e) Appropriate voltage levels and reactive control must be maintained during the restoration. Consideration should be given to connecting Islands at locations having communications, frequency control, voltage control, synchronization facilities, and adequate transmission capacity. ERCOT will coordinate the return to full Automatic Generation Control (AGC) in the interconnection.

4.6.3 Priorities

- (1) Priorities for an ERCOT System Black Start recovery are listed below:

- (a) Secure and/or stabilize generating units where necessary.
- (b) Prepare Cranking Paths and Synchronization Corridors as necessary to support restoration.
- (c) Assess ERCOT System condition, and available communication facilities.
- (d) Restore and maintain communication facilities to the extent possible.
- (e) Bring units with contracted Black Start capability On-Line.
- (f) Provide service to critical facilities:
 - (i) Provide station service for nuclear generating facilities;
 - (ii) Provide critical power to as many Generation Resources as possible to prevent equipment damage;
 - (iii) Secure or provide startup power for Generation Resources that do not have Black Start capability; and
 - (iv) Supply station service to critical substations where necessary.
- (g) Connect Islands at designated synchronization points taking care to avoid recurrence of a Partial Blackout or Blackout of the ERCOT System.
- (h) Restore service to critical Loads such as:
 - (i) Military facilities;
 - (ii) Facilities necessary to restore the electric utility system, including fuel sources;
 - (iii) Law enforcement organizations and facilities affecting public health; and
 - (iv) Public communication facilities.
- (i) Restore service to the remaining Customers. Attention should be given to restoring feeders with under-frequency relay protection.

4.6.4 Responsibilities

- (1) ERCOT's responsibilities are as follows:
 - (a) Shall maintain a Black Start plan in accordance with North American Electric Reliability Corporation (NERC) Reliability Standards and no more than 30 days after revising the Black Start plan, shall notify the TOs of the revised Black Start

plan and post the plan with an effective date on the Market Information System (MIS) Certified Area for TOs;

- (b) Shall, no more than 30 days after receiving a TO's new or revised Black Start plan, notify the TO of ERCOT's approval or disapproval of the TO's new or revised Black Start plan and post the approved TO's new or revised Black Start plan with an effective date on the MIS Certified Area to specified Market Participants requested by the TO;
- (c) Coordinate and approve Planned Outage schedules for contracted Black Start Resources;
- (d) Train TOs, QSEs, and Resource Entities that represent Black Start Resources in the restoration of the ERCOT System. This training will cover the theory of restoration and the processes that will need to be implemented during a Partial Blackout or Blackout;

[NOGRR194: Replace paragraph (d) above with the following upon system implementation of NPRR857:]

- (d) Train TOs, QSEs, Direct Current Tie Operators (DCTOs), and Resource Entities that represent Black Start Resources in the restoration of the ERCOT System. This training will cover the theory of restoration and the processes that will need to be implemented during a Partial Blackout or Blackout;
- (e) Will review the plans and procedures for consistency and conformance with these Operating Guides and ensure that they are updated at least annually;
- (f) ERCOT shall report to the Reliability and Operations Subcommittee (ROS) by April 1 of each year a plan for review and any testing activities of Black Start Resources;
- (g) Shall verify that the number, size, and location of Black Start Resources are sufficient to meet the ERCOT Black Start Plan; and
- (h) In the event of a Partial Blackout or Blackout of the ERCOT System, ERCOT shall:
 - (i) Maintain continuous surveillance of the status of the ERCOT System;
 - (ii) Act as a central information collection and dissemination point for the ERCOT Region;
 - (iii) Coordinate reconnection of transmission;
 - (iv) Direct assistance for QSEs who represent Black Start Resources, TOs, Resource Entities, and Market Participants;

- (v) Direct the distribution of reserves; and
- (vi) Coordinate the return of the ERCOT System to AGC.

(2) TOs' responsibilities are as follows:

- (a) Shall review and submit their Black Start plans to ERCOT via secured webmail or encrypted data transfer:
 - (i) Annually by November 1 of each year, for the upcoming calendar year. Plans submitted before November 1 will be deemed to have been received on November 1 for ERCOT to initiate the approval process described in paragraph (1)(b) above; and
 - (ii) When the Black Start plan for the current year has changed.

The TO may request that ERCOT post the TO's new or revised Black Start plan on the MIS Certified Area for specified Market Participants. The TO will have the responsibility to notify specified Market Participants that the new or revised Black Start plan has been posted on the MIS Certified Area; and

- (b) In event of a Partial Blackout or Blackout of the ERCOT System:
 - (i) Shall communicate with local Black Start Resources and the Black Start Resource's QSE;
 - (ii) Coordinate switching to next start Resources and local Load;
 - (iii) Shall implement its local Black Start plan;
 - (iv) Shall follow the direction of ERCOT on behalf of represented Transmission Service Providers (TSPs) and Distribution Service Providers (DSPs);

[NOGRR177: Replace paragraph (iv) above with the following upon system implementation of NPRR857:]

- (iv) Shall follow the direction of ERCOT on behalf of represented Transmission Service Providers (TSPs), DCTOs, and Distribution Service Providers (DSPs);

- (v) Shall act as the regional ERCOT representative in coordinating interconnection of Resources; and
- (vi) Shall follow the direction of ERCOT for reconnection of Islands.

(3) QSEs' representing Black Start Resources responsibilities are as follows:

- (a) Verify that associated QSE personnel are proficient in implementation and use of the appropriate procedures for use in the event of a Partial Blackout or Blackout; and
 - (b) In the event of a Partial Blackout or Blackout of the ERCOT System, QSEs representing Black Start Resources shall:
 - (i) Take immediate steps to initiate and maintain communications with its Black Start Resources;
 - (ii) Supply ERCOT and/or the local TO with information on the status of generation, fuel, transmission, and communication facilities;
 - (iii) Follow the direction of the local TO or ERCOT in regards to output of its Generation Resources; and
 - (iv) Provide available assistance as directed by ERCOT or the local TO.
- (4) Black Start Resources' responsibilities are as follows:
- (a) Verify that associated Resource personnel are proficient in the implementation and use of appropriate individual plant start-up procedures for use in the event of a Partial Blackout or Blackout; and
 - (b) In the event of a Partial Blackout or Blackout of the ERCOT System, Black Start Resources shall:
 - (i) Isolate the Black Start Resource from the ERCOT Transmission Grid;
 - (ii) Establish communications with the local TO who is the primary contact for the Black Start Resource;
 - (iii) Supply the local TO and QSE with information on the status of generation, fuel, transmission isolation, and communication facilities;
 - (iv) Follow the appropriate plant start-up procedures and request synchronization and auxiliary Load pickup from the TO; and
 - (v) Follow the direction of the local TO or ERCOT until such time as normal system operations resume. The Black Start Resource should follow the direction of the QSE instructed by the TO or ERCOT when necessary.
- (5) Generation Resources that are not Black Start Resources have the following responsibilities in the event of a Partial Blackout or Blackout of the ERCOT System:
- (a) Take immediate steps to initiate and maintain communications with its QSE; and

- (b) Follow the direction of the local TO or ERCOT until such time as normal system operations resume. The Generation Resource should follow the direction of the QSE as instructed by the TO or ERCOT when necessary.
- (6) Section 8, Attachment A, Detailed Black Start Information, and Section 8, Attachment E, Black Start Plan Template, provide a detailed and specific Black Start information guide. Interested parties should use this information for technical reference material, Black Start testing, development of Black Start plans, and training of personnel.

4.6.5 *Black Start Emergency Back Up Communication Facilities Criteria*

- (1) All back-up communications systems shall meet the following minimum requirements:
 - (a) Be operational for 72 hours immediately following the start of a Blackout without external power from the ERCOT System;
 - (b) Provide direct voice communications between Black Start Resource and TO, TO and other appropriate TOs, and TO and ERCOT; and
 - (c) Maintain written procedures that address operator training and the testing of the communication system;
- (2) TOs shall have a satellite phone that meets the minimum back up communication requirements as a back-up communication system and that is compatible with ERCOT's satellite phone.

4.7 Geomagnetic Disturbance Operating Plan

4.7.1 *Monitoring and Dissemination of Space Weather Information*

- (1) ERCOT shall maintain procedures to receive Geomagnetic Disturbance (GMD) alerts and warnings issued by the National Oceanic and Atmospheric Administration (NOAA).
- (2) ERCOT shall implement and maintain procedures to provide GMD alerts and warnings to Transmission Operators (TOs).
- (3) Other forecasted and current space weather information is publicly available directly through the NOAA website.

4.7.2 *Development and Submission of TO GMD Operating Procedures or Processes*

- (1) Each TO that operates transmission equipment that includes a power transformer with a high side wye-grounded winding with terminal voltage greater than 200 kV shall develop a GMD operating procedure or process to mitigate the effects of GMD events on the reliable operation of its system.

- (2) Each TO GMD operating procedure or process shall be provided to ERCOT as soon as practicable but no later than November 25, 2014. Updates to the plan shall be provided to ERCOT by March 15 of each subsequent year.
- (3) Each TO GMD operating procedure or process shall include:
 - (a) A procedure to receive GMD alerts and warnings from ERCOT;
 - (b) A description of operational actions the TO intends to take to mitigate the effects of a GMD event. This description shall include:
 - (i) The triggering event for each action;
 - (ii) A detailed explanation of each operational action;
 - (iii) A list of Entities with which the TO must coordinate, if any, including any actions requested of other Entities in the ERCOT Region in order to implement the TO's GMD operating procedure or process; and
 - (iv) The conditions under which each action would be terminated.
 - (c) A procedure for reporting to ERCOT any unusual operational information that could be the result of GMD, such as high reactive loading, MVAr or voltage swings, high geomagnetically induced current on monitored transformers or equipment malfunctions.

4.7.3 *ERCOT's GMD Operating Plan and ERCOT Review of TO GMD Operating Procedures or Processes*

- (1) ERCOT shall develop a GMD operating plan and post it on the Market Information System (MIS) Certified Area for TOs.
- (2) The ERCOT GMD operating plan shall coordinate the TO GMD operating procedures or processes. This coordination is intended to ensure the TO GMD operating procedures or processes are not in conflict with one another and is not intended to be a review of the technical aspects of the TO GMD operating procedures or processes.
- (3) In preparing the ERCOT GMD operating plan, ERCOT shall identify and notify the relevant TOs of any conflicts between the different TO GMD operating procedures or processes and any unacceptable actions requested of ERCOT in the TO operating procedures or processes.
 - (a) ERCOT and the TOs shall coordinate development of any required modifications to the TO GMD operating procedures or processes necessary to resolve these conflicts or unacceptable actions.

- (b) A TO shall make the resulting modifications to its GMD operating procedures or processes.
- (4) The ERCOT GMD operating plan shall include:
 - (a) A description of activities designed to mitigate the effects of GMD events on the reliable operation of the interconnected transmission system; and
 - (b) Any operating actions required of ERCOT by the TO GMD operating procedures or processes and approved by ERCOT for inclusion in the ERCOT GMD operating plan.

4.8 Responsive Reserve Service During Scarcity Conditions

- (1) This Section details how Responsive Reserve (RRS) service may be manually deployed, also referred to as release of High Ancillary Service Limit (HASL), during scarcity conditions, pursuant to Protocol Section 6.5.7.6.2.2, Deployment of Responsive Reserve (RRS). The existing measure of scarcity is Physical Responsive Capability (PRC) and spinning reserves. If PRC and spinning reserves drop below 3,000 MW, this process may be used. Scarcity conditions may occur during the Peak Load Season when ERCOT System Load is above 60,000 MW. For all other months, they could occur when ERCOT System Load is above 50,000 MW.

[NOGRR187: Replace paragraph (1) above with the following upon system implementation of NPRR863:]

- (1) This Section details how Responsive Reserve (RRS) service may be manually deployed, also referred to as release of High Ancillary Service Limit (HASL), during scarcity conditions, pursuant to Protocol Section 6.5.7.6.2.2, Deployment of Responsive Reserve (RRS). The existing measure of scarcity is Physical Responsive Capability (PRC). If PRC drops below 3,000 MW, and all available ERCOT Contingency Reserve Service (ECRS) (dispatchable by Security-Constrained Economic Dispatch (SCED)) and Non-Spinning Reserve (Non-Spin) Service has been deployed, this process may be used. Scarcity conditions may occur during the Peak Load Season when ERCOT System Load is above 60,000 MW. For all other months, they could occur when ERCOT System Load is above 50,000 MW.

4.8.1 Responsive Reserve Service Manual Deployment

- (1) RRS for capacity may be manually deployed (HASL released) when the system approaches scarcity conditions so that the capacity reserved behind HASL will be released to Security-Constrained Economic Dispatch (SCED). The capacity may be released under any of the following conditions:

- (a) When HASL – (Gen + 5 minute load ramp) \leq 200 MW, deploy a portion of the available RRS capacity from Generation Resources and Controllable Load Resources after all the available Non-Spinning Reserve (Non-Spin) service has been deployed;
- (b) Additional RRS capacity from Generation Resources and Controllable Load Resources may be deployed, as available, when HASL – (Gen + 5 minute load ramp) \leq 200 MW and Resources have responded to any earlier deployments; or
- (c) When PRC \leq 2,000 MW, release all remaining RRS capacity from Generation Resources and Controllable Load Resources after all the available Non-Spin has been deployed.

[NOGRR187 and NOGRR191: Replace applicable portions paragraph (1) above with the following upon system implementation of NPRR863 or NPRR939, respectively:]

- (1) RRS for capacity may be manually deployed (HASL released) when the system approaches scarcity conditions so that the capacity reserved behind HASL will be released to SCED.
 - (a) When HASL – (Gen + 5 minute load ramp) \leq 200 MW, ERCOT may deploy a portion of the available RRS capacity from Generation Resources and Controllable Load Resources in after all the available ECRS (dispatchable by SCED) and Non-Spinning Reserve (Non-Spin) service has been deployed and Resources have responded to any earlier deployments.
 - (b) When HSL – (Gen + 5 minute load ramp) \leq 500 MW, ERCOT may deploy Load Resources controlled by high-set under-frequency relays providing RRS.

4.8.2 Responsive Reserve Service Manual Recall

- (1) The manual deployment of RRS for capacity from Generation Resources and Controllable Load Resources may be recalled when HASL – (Gen + 5 minute load ramp) $>$ 1,600 MW and/or PRC \geq 3,300 MW.
- (2) The operator will consider system conditions and Ancillary Services in releasing or recalling RRS. System frequency, load ramp, and factors such as Regulation Up Service (Reg-Up) versus Regulation Down Service (Reg-Down) deployment status will be considered.

Emergency Response Plan – Other

Description	Obtained From
Table Top Drills	Live Data Pull – Quentin Howard
NIMS Documentation	Live Data Pull – Quentin Howard

Emergency Response Plan
Table Top Drill (TTD)

United Electric Cooperative Services, Inc.

November 8, 2006
Stephenville Board Room

In attendance of TTD:

Emergency Coordinator: Cameron Smallwood

Executive Staff: Lynn Godfrey, Quentin Howard, Landy Bennett

Supervisors: Murray McCollum, Robert Sherman, Patty Holleman, Paula Cupps, Robert Bernhoft, Brad Mead, Mauri Montgomery, John Segovia, Tim Lewellen, Warren Stanley, Eunice Wohlferd

Purpose of TTD:

Per RUS requirements, United must annually perform a TTD with a specific situation using the Emergency Response Plan (ERP). The goal is to test the Emergency Response Plan and report after the fact as to the effectiveness of the plan. Any areas of the ERP that need to be improved should be accomplished within an acceptable timeframe.

Situation:

Severe Ice Storm in Johnson and Hood County

Key Facts of Emergency:

- 75% of UCS customers in Johnson and Hood County are out of power, the remainder of the system has spotted outages
- Most circuits that represent outages have major facilities damage
- Power to UCS Cleburne and Acton offices is affected by damaged circuits
- Communications tower at Cleburne has failed due to ice loading (thankfully didn't fall on the building)
- SBC circuits into the Cleburne office are dead due to TXU having no power at Cleburne C/O
- Approximately one-third of the employees of the Cleburne and Acton offices cannot report due to road conditions/lack of transportation
- It is payday at UCS

Discussion of Layout of the ERP:

Page 2: Main Plan from TEC TOC

Page 6: Addendum Listing: see below

The addendums to this document give more specific information as to how this plan should operate with specifics to UCS. The addendums follow in the below numbered tab format:

Addendum 1: UCS Key Personnel and Organizational Chart

Addendum 2: UCS Employee Contact Information

Addendum 3: Key Emergency Contact Phone Numbers

Addendum 4: Recovery from Loss of Power to Key Facilities

Addendum 5: Business Continuity

Addendum 6: Outage Management Guidelines

Addendum 7: IT Disaster Recovery

Addendum 8: Warehouse/Purchasing Disaster Recovery

What are the Responsibilities of Each Department/Sub-Department?

Some results/key points of the TTD discussion:

- Emergency Coordinator: Responsible for Operation of the Plan/Reporting Status to CEO/COO/CFO/Communications:
 - Need to stay in constant contact with TEC
 - Need to stay in constant contact with FEMA
 - Need to stay in constant contact with Law Enforcement/Emergency Management of Johnson and Hood Counties
 - Need to address and manage daily meetings/with necessary employees
- Marketing/Key Accounts:
 - Should consider communication to critical/key customers by listings
 - Should keep them updated with progress of restoration as possible
 - Should you prioritize restoration; be prepared to address priorities
- Communications:
 - Need to be prepared to communicate with media/law enforcement/city and county officials and keep them up-to-date
 - Need to be prepared to communicate with members in local areas
 - Need to communicate safety to public during the event – wires down, etc.

- Need to be prepared to utilize web site to keep public up-to-date
- Need to remind employees of guidelines in dealing with media, membership
- Customer Service:
 - Need to prepare for customers coming to site due to unresolved outages – potential upset customers
 - Consider potential of not enough personnel for customer service
 - We must notify community/membership of what we are doing
 - Transportation of people to offices will need to be considered
 - IT must provide enough equipment by relocating assets if necessary
 - We should utilize the IVR as much as possible when call volume exceeds our ability to answer and give answers
 - Consider training of employees for new duties if assigned
 - Customer service may be relied upon for too many duties, must be careful of this
- Operations:
 - Must have availability of fuel for Cleburne and other locations as necessary
 - May need to make agreements with UCS-served gas stations to get them power and buy all fuel – may need to get generation to them
 - Use of procurement cards could be an issue – cash issues
 - Meals, water for crews must be provided
 - Should contact Brazos to see how they might be utilized in this type of an emergency.
 - Need to keep safety culture as key objective with all crews, internal and external
 - Crews will be with each group of external workers, therefore no radio issues seen
 - Will limit the use of UCS line crew for construction during an event
 - Policy on rest, how long, how much should crews work – staff will take up this issue
 - HR will be contact for employees and family members needing assistance
 - Communications with the crews will be done through UCS assigned personnel
 - Locates for construction – notification, laws – potential safety impact needs to be reviewed and expectations trained to visiting crews
 - Need to be prepare to address tree trimming issues – contract coordination, access to locations for construction
 - Must tracking initial outages without full communications
 - Need to be prepared to do the damage assessment with operations
 - Need to be prepared for mud – bulldozer, plywood, etc.
 - Need to ensure laundry of visiting crews in handled

- System Engineering:
 - Should also use area reps/staking personnel for damage assessment
 - Should be prepared for area reps/staking personnel involvement in creation of staking information
 - Be prepared for involving contract line design services
 - Other duties put aside in non-affected areas – like billing related tasks
- Contract Services:
 - Enlist help if needed in coordination of all crews and services
 - Will need to consider with operations what number of crews (maximum) is actually manageable and limit incoming/assisting crews to that number
 - Designate who completion items (projects) are communicated to and when
 - Need to quickly issue construction bids for FEMA reasons
 - Need to accurately keep track of the billing/etc. from crews for accurate accounting in work orders for FEMA reimbursement
- Mechanics:
 - Be prepared to acquire materials to fix vehicles
 - Need to assist in fixing other companies vehicles, keep track of this as well
 - Must consider locations we can outsource such repairs
- Planning Services:
 - Need to be prepared to quickly review requests for re-construction based on policy, construction work plan, and long range plan requirements
 - Must be involved in those decisions in emergency operations center
- Engineering Services:
 - Use of OMS by guidelines
 - Concentrate on getting all technologies operational and stable with necessary assistance from Brazos and IT
 - Need to be prepared to use the Porche/Call Center - Emergency to improve communications response if our systems are down
 - Training of current technology to do damage assessment and track progress
 - Evaluate using OMS be used to update internet with information
- Technical Services:
 - Be prepared to handle spill issues – containment and disposal, potential PCB
 - Figure on some line equipment programming, installation, operation issues
 - Understand potential AMR issues related to backfeeds, etc.
 - Figure on possible use of AMR for outage restoration
- Safety:
 - Backfeed safety must be considered and communicated

- Generator safety (member-owned) must be considered and communicated
 - Public safety with downed lines must be emphasized via communications efforts
 - Preparation of crews for dealing with disaster – should be discussed prior to work
 - Access – dealing with law enforcement, stay in contact
 - Must maintain the safety culture with internal and external workers
 - Ensure that a UCS employee is available for energizing lines – safety is a priority over time to restore
 - Security for materials and visiting people/equipment must be addressed
 - Security for employees/members at office locations must be addressed
- Human Resources:
 - Work with VPs to ensure personnel availability at locations
 - Be prepared to offer employee assistance if/when/how needed
 - Communication with employees at home may be necessary
 - Cell phone communications will be helpful
 - High level of anxiety/stress with employees must be considered – rest policy
 - Ensure enough workforce to handle all necessary tasks
 - Accommodations for outside work force must be considered
 - Coordination with community groups such as Red Cross may be necessary
 - Insurance carrier should be kept up-to-date with progress, etc.
- IT and MIS:
 - Restore Communications however necessary
 - Restore Power for IT devices if lost
 - Emergency Outage Program has some information – should be used without AS400 if necessary
 - Can revert to paper outage process as detailed in OMS guidelines if necessary
 - Need to coordinate with Brazos, DFW Communications, and communications companies
 - Need to consider potential overload of communications systems
 - Potential network accessibility issues may become something to consider
- Finance and Accounting:
 - Proper methods for FEMA funding assistance are very important to follow by all employees
 - Need to be more familiar with FEMA requirements
 - May consider paper checks and more frequent paper checks (weekly), or cash payments if necessary to employees
 - Revenue, metering issues – need to be prepared without incoming revenue – cash resources
 - May wish to intentionally delay billing functions for use of area reps in other areas

- Purchasing:
 - Must know what materials to get to which areas
 - May have issues getting material into the Cleburne yard, need to be ready for other warehouse locations
 - Need to define the pickup yard be for material for all crews reporting
 - Availability of materials, how can we ensure material is available with vendors
 - Need results from initial damage assessment for material orders
 - May need to involve neighboring co-ops for materials
 - Methods of tracking may be cumbersome (incoming and outgoing) – be prepared with ideas
 - Possibility of needed labor for warehouse may become reality
 - List of materials to purchase should be reviewed and acted upon if advance notice of potential emergency

- Facilities:
 - Must meet essentials for employees/visitors (water, heat, food, bathrooms, etc.)
 - May need to schedule generation for the Cleburne office if no permanent installation occurs
 - May have a need for membership access locations – to customer service, coordinate with customer service
 - Location/development of ‘tent city’ for workers

- COO/CFO:
 - Continual needs assessment from personnel not directly involved will be an important part of the response, internal and external (all areas)

- CEO/Executive Assistant:
 - CEO is primary media spokesperson, CEO can appoint delegates as necessary
 - CEO to handle communication, update of board members as necessary
 - CEO/board president to decide if special meetings for updates are necessary – such as weekly board meetings

What changes need to be implemented to the United ERP as a result of the TTD?

Below is a point by point table of updates/changes that need to be made with the person responsible for the change/update. All changes/updates need to be returned to the Emergency Coordinator by December 31, 2006. After all changes/updates are made, a revised plan will be given to necessary employees.

Item Needing Changed/Updated	Assigned To
Need to ensure that we know who to contact at FEMA Completed and inserted into Contacts section	Cameron
Update critical care and key account listing Completed and inserted into Contacts section	Landy
Implement breakup of critical care codes Completed, reflected in critical care listing	Landy/Robert B
Create baseline internet page for emergency information Baseline page completed, will need to be updated if needs to be used for specific emergency	Robert B
Update media list Completed and inserted into Contacts section	Mauri
Create baseline outage internet page linked to website Determined this would provide data to limited folks, also cost prohibitive in relation to usefulness – MSSQL Site Licensing required	Tim
Research Fuel issues, determine if further action is necessary Research completed, contact information gathered and inserted into Contacts section	Robert S
Talk with/arrange with TEC plan if tent needed, determine potential locations Research completed, contact information gathered and inserted into Contacts section	Cameron
Discuss potential policy regarding working hours/rebuild/pay to employees Necessary policy updates are being implemented	Staff
Review locate parameters within an emergency situation Research completed, Warren to inform line foreman and crews as to requirements in an emergency situation	Warren
Damage Assessment data—collection/use/closeout Tim/Murray have come up with a simple way to track via the OMS	Tim/Murray
Create emergency construction contract ready to bid Contract created and stored electronically and with Quentin in paper form in case of need	Quentin
Update construction contractor list Completed and inserted into Contacts section	Quentin
Create emergency ROW contract ready to bid Contract created and stored electronically and with Quentin in paper form in case of need	Murray/Quentin
Update ROW contractor list Completed and inserted into Contacts section	Murray/Quentin
Develop daily crew log sheet for crew foreman Base log sheet created and inserted into Miscellaneous section	Murray/Lynn
Contact current construction contractors for emergency pricing Current contractor on notice for this, Documentation with Quentin	Quentin

Create timesheet for FEMA purposes Complete an inserted into Miscellaneous section	Paula/Lynn
Review FEMA standard spreadsheets, develop guidelines for use by employees where necessary Complete an inserted into Miscellaneous section	Paula/Lynn
Review FEMA portion of ERP, develop quick reference guide Complete an inserted into Miscellaneous section	Paula/Lynn
Locate and document potential outsource mechanics, towing	Ken/Bob/Murray
Guidelines for porche remote answering service Cost prohibitive to utilize Porche as a backup answering service, may be used on an as needed basis with extra setup time on the front end if all UCS systems are not able to handle issues, not seen as a major issue due to the wide coverage of existing offices of UCS	Tim/Brad
Locate and document potential security services Research completed, contact information gathered and inserted into Contacts section	Warren
Locate and document community assistance organizations Research completed, contact information gathered and inserted into Contacts section	Landy
Locate and document area hotel, community housing locations Research completed, contact information gathered and inserted into Contacts section	Patty
Update vendor listing for materials management emergency ops Update completed and inserted in Materials section	Robert S
Update ERP books and distribute when all complete Completed and distributed	Cameron/Glenda Karen
Cleburne Generator	Cameron/Lynn
Create listing of UCS owned cameras/video, consider purchase Research completed, information gathered and inserted into Miscellaneous section	Mauri
Develop procedures for off location warehouse Completed and inserted in Materials section	Robert S
Develop card system for access Format completed and available if needed	Mauri
Locate and document fleet/equipment lease options Research completed, contact information gathered and inserted into Contacts section	Robert S/Murray
Update all other contacts not assigned Completed and inserted into Contacts section	Cameron/others
Contact Brazos and discuss their availability in this type of incident Realized Brazos is not prepared for communications failures, have written Brazos requesting them to plan for communications failures	Cameron
Locate and document line design contractors Completed and inserted into Contacts section	Quentin

Emergency Response Plan
Table Top Drill (TTD)

United Electric Cooperative Services, Inc.

December 13, 2007
Cleburne Civic Center

In attendance of TTD:

Emergency Coordinator: Cameron Smallwood

Executive Staff: Marty Haught, Quentin Howard, Landy Bennett

Supervisors: Patty Holleman

Others: Community leaders that would normally be involved in County-wide disaster exercises such as law enforcement, health officials, commissioners, ISD personnel and Johnson County Emergency Management personnel.

Purpose of TTD:

Per RDUP requirements, United must annually perform a TTD with a specific situation using the Emergency Response Plan (ERP). The goal is to test the Emergency Response Plan and report after the fact as to the effectiveness of the plan. Any areas of the ERP that need to be improved should be accomplished within an acceptable timeframe.

Situation:

Flu Pandemic

Key Facts of Emergency:

- It is January 2008.
- The first local case of Avian Flu was identified in Dallas on December 30th.
- Within 4 days, 3 cases and outbreaks within Fort Worth hospitals are identified.
- The WHO (World Health Organization) has issued a Pandemic Phase 6, which means that there is sustained human-to-human transmission in numerous counties. WHO is also reporting that about 10% of known cases have been hospitalized, and 20% of cases have ended in death.
- There is still no vaccine available.
- The federal government has distributed supplies of anti-viral medications from the Strategic National Stockpile. The State of Texas has received an allotment, and Johnson County has received its portion.
- It is widely known that this anti-viral medication supply from the SNS is very limited, and not available to all who are infected.
- Local stock of over-the-counter flu medication supplies are dwindling, causing issues at local physician's offices, clinics, and retail pharmacies.

- Several local individuals are potentially exposed and exposed others in the community.
- A mild ice storm occurs within the timeframe that communications needs to occur to the community concerning potential flu outbreak.

Discussion of Layout of the ERP:

Page 2: Main Plan from TEC TOC

Page 6: Addendum Listing: see below

The addendums to this document give more specific information as to how this plan should operate with specifics to UCS. The addendums follow in the below numbered tab format:

- Addendum 1: UCS Key Personnel and Organizational Chart
- Addendum 2: UCS Employee Contact Information
- Addendum 3: Key Emergency Contact Phone Numbers
- Addendum 4: Recovery from Loss of Power to Key Facilities
- Addendum 5: Business Continuity
- Addendum 6: Outage Management Guidelines
- Addendum 7: IT Disaster Recovery
- Addendum 8: Warehouse/Purchasing Disaster Recovery
- Addendum 9: Miscellaneous Items
- Addendum 10: UCS Operational and Planning Standards

What are the Responsibilities of Each Department/Sub-Department?

Some results/key points of the TTD discussion:

- Emergency Coordinator: Responsible for Operation of the Plan/Reporting Status to CEO/COO/CFO/Communications:
 - Need to stay in constant contact with TEC
 - Need to stay in constant contact with FEMA
 - Need to stay in constant contact with Law Enforcement/Emergency Management of Johnson County
 - Need to stay in contact with PUC/ERCOT – follow web update process
 - Need to address and manage daily meetings/with necessary employees
 - Need to address chain of command in case Emergency Coordinator is sick or even those below – backup EC is named – VP System Engineering
- Marketing/Key Accounts:
 - Should consider communication to critical/key customers by listings
 - Should keep them updated with progress of restoration as possible

- Should you prioritize restoration; be prepared to address priorities
- Review possibility of closing local offices, staff up in customer service with other employees as necessary
- Communications:
 - Need to be prepared to communicate with media/law enforcement/city and county officials and keep them up-to-date
 - Need to be prepared to communicate with members in local areas
 - Need to communicate safety to public during the event – wires down, etc.
 - Need to be prepared to utilize web site to keep public up-to-date
 - Need to remind employees of guidelines in dealing with media, membership
 - Communicate Human Resources decisions on employees reporting to work sick
 - Review possibility of closing local offices, staff up in customer service with other employees as necessary; need to communicate this in all ways possible
 - Need to minimize personal communications within the office as much as possible in case of disease issues
- Customer Service:
 - Need to prepare for customers coming to site due to unresolved outages – potential upset customers, customers coming to site to talk with employees but offices being closed
 - Consider potential of not enough personnel for customer service due to sickness or inability of agents not being able to come to work
 - We must notify community/membership of what we are doing – work with communications
 - Transportation of people to offices will need to be considered
 - IT must provide enough equipment by relocating assets if necessary – due to pandemic, remote office considerations should be taken if possible
 - We should utilize the IVR as much as possible when call volume exceeds our ability to answer and give answers
 - Consider training of employees for new duties if assigned
 - Customer service may be relied upon for too many duties, must be careful of this
- Operations:
 - Must have availability of fuel for Cleburne and other locations as necessary
 - May need to make agreements with UCS-served gas stations to get them power and buy all fuel – may need to get generation to them
 - Use of procurement cards could be an issue – cash issues
 - Meals, water for crews must be provided
 - Need to keep safety culture as key objective with all crews, internal and external

- Crews will be with each group of external workers, therefore no radio issues seen
- Will limit the use of UCS line crew for construction during an event
- HR will be contact for employees and family members needing assistance
- Communications with the crews will be done through UCS assigned personnel
- Locates for construction – notification, laws – potential safety impact needs to be reviewed and expectations trained to visiting crews
- Need to be prepare to address tree trimming issues – contract coordination, access to locations for construction
- Need to be prepared to bring in outside crews, need to concentrate on containment due to pandemic impacts
- Need to be prepared to do the damage assessment with operations
- Need to be prepared for mud – bulldozer, plywood, etc.
- Need to ensure laundry of visiting crews in handled – if it gets to that point
- Need to consider keeping employees well as much as possible, isolation from general public
- System Engineering:
 - Should also use area reps/staking personnel for damage assessment
 - Should be prepared for area reps/staking personnel involvement in creation of staking information
 - Be prepared for involving contract line design services
 - Other duties put aside in non-affected areas – like billing related tasks
 - Prepared for assisting customer service if necessary
- Contract Services:
 - Enlist help if needed in coordination of all crews and services
 - Will need to consider with operations what number of crews (maximum) is actually manageable and limit incoming/assisting crews to that number
 - Designate who completion items (projects) are communicated to and when
 - Need to quickly issue construction bids for FEMA reasons
 - Need to accurately keep track of the billing/etc. from crews for accurate accounting in work orders for FEMA reimbursement
- Mechanics:
 - Be prepared to acquire materials to fix vehicles
 - Need to assist in fixing other companies vehicles, keep track of this as well
 - Must consider locations we can outsource such repairs
- Planning Services:
 - Need to be prepared to quickly review requests for re-construction based on policy, construction work plan, and long range plan requirements
 - Must be involved in those decisions in emergency operations center

- Engineering Services:
 - Use of OMS by guidelines
 - Be prepared to utilize OMS for damage assessment
- Technical Services:
 - Be prepared to handle spill issues – containment and disposal, potential PCB
 - Figure on some line equipment programming, installation, operation issues
 - Understand potential AMR issues related to backfeeds, etc.
 - Figure on possible use of AMR for outage restoration
- Safety:
 - Backfeed safety must be considered and communicated
 - Generator safety (member-owned) must be considered and communicated
 - Public safety with downed lines must be emphasized via communications efforts
 - Preparation of crews for dealing with disaster – should be discussed prior to work
 - Access – dealing with law enforcement, stay in contact
 - Must maintain the safety culture with internal and external workers
 - Ensure that a UCS employee is available for energizing lines – safety is a priority over time to restore
 - Security for materials and visiting people/equipment must be addressed – may wish to limit any outside contact
 - Security for employees/members at office locations must be addressed
- Human Resources:
 - Work with VPs to ensure personnel availability at locations
 - Be prepared to offer employee assistance if/when/how needed
 - Communication with employees at home may be necessary
 - Cell phone communications may be helpful
 - High level of anxiety/stress with employees must be considered – rest policy
 - Ensure enough workforce to handle all necessary tasks
 - Accommodations for outside work force must be considered
 - Coordination with community groups such as Red Cross may be necessary
 - Insurance carrier should be kept up-to-date with progress, etc.
- IT and MIS:
 - Restore Communications however necessary if lost
 - Restore Power for IT devices if lost
 - Emergency Outage Program has some information – should be used without AS400 if necessary
 - Can revert to paper outage process as detailed in OMS guidelines if necessary

- Need to consider potential overload of communications systems
- Potential network accessibility issues may become something to consider – may wish to be prepared to allow employees to remotely work, what issues might be present?
- Be prepared to utilize satellite phones as necessary
- Finance and Accounting:
 - Proper methods for FEMA funding assistance are very important to follow by all employees
 - Need to be more familiar with FEMA requirements
 - May consider paper checks and more frequent paper checks (weekly), or cash payments if necessary to employees
 - Revenue, metering issues – need to be prepared without incoming revenue – cash resources
 - May wish to intentionally delay billing functions for use of area reps in other areas
- Purchasing:
 - Must know what materials to get to which areas
 - May have issues getting material into the Cleburne yard, need to be ready for other warehouse locations
 - Need to define the pickup yard be for material for all crews reporting
 - Availability of materials, how can we ensure material is available with vendors
 - Need results from initial damage assessment for material orders
 - May need to involve neighboring co-ops for materials
 - Methods of tracking may be cumbersome (incoming and outgoing) – be prepared with ideas
 - Possibility of needed labor for warehouse may become reality
 - List of materials to purchase should be reviewed and acted upon if advance notice of potential emergency
- Facilities:
 - Must meet essentials for employees/visitors (water, heat, food, bathrooms, etc.)
 - May need to schedule generation for the Cleburne office if no permanent installation occurs
 - May have a need for membership access locations – to customer service, coordinate with customer service
 - Location/development of ‘tent city’ for workers if needed for isolation
 - Worry about lockdown and security if needed – will need to close offices and work with communications to post signs as necessary
- COO/CFO:
 - Continual needs assessment from personnel not directly involved will be an important part of the response, internal and external (all areas)

- CEO/Executive Assistant:
 - CEO is primary media spokesperson, CEO can appoint delegates as necessary
 - CEO to handle communication, update of board members as necessary
 - CEO/board president to decide if special meetings for updates are necessary – such as weekly board meetings

What changes need to be implemented to the United ERP as a result of the TTD?

Below is a point by point table of updates/changes that need to be made with the person responsible for the change/update. All changes/updates need to be returned to the Emergency Coordinator by **January 14, 2008**. After all changes/updates are made, a revised plan will be given to necessary employees.

Item Needing Changed/Updated	Assigned To
Update critical care and key account listing	Landy/Cameron/Robert
Update media lists	Mauri/Marty
Update IT Section of ERP, add item – remote connection to office with PC's/VOIP telephony	IT
Update contractor listings	Quentin
Update listing of mechanics, towing services	Murray/Mechanics
Update list of potential security services	Warren
Update list of community assistance organizations	Landy
Update list of area hotel, community housing locations	Patty
Update vendor listing for materials management emergency ops	Kirk
Complete Cleburne Generator Guidelines	Murray/Jared/Warren
Update listing of UCS owned cameras/video, consider purchase	Mauri/Marty
Update fleet/equipment lease options	Murray
Update all other contacts not assigned	Cameron/others
Contact Brazos, get latest emergency contact listing	Cameron
Update ERP books and distribute when all complete	Cameron/Tricia
Update Employee Training Manual – Include Personal Preparation Items, Perform Associated Training	Cameron
Update United Board on ERP Activities – January Board Meeting	Cameron

Emergency Response Plan
Table Top Drill (TTD)

Review of Emergency Action in Response to April 2008 Severe Weather Damage

United Electric Cooperative Services, Inc.

Friday, November 21, 2008
Cleburne Board Room and Stephenville Board Room

In attendance of TTD/Review:

Emergency Coordinator: Cameron Smallwood

Backup Emergency Coordinator: Quentin Howard

Executive Staff (other than coordinators): Murray McCollum, Landy Bennett, Marty Haught, Barry McWilliams

Supervisors: Jared Wennermark, Jerry Scott, Eunice Wohlferd, Kirk Cross, Mauri Montgomery, Jason Goosen, Sarah Ralph, Robert Bernhoft, Eric Cagle, John Segovia, Paula Cupps, Jason Dillard, Mark Dixon, Denny Adams

Purpose of TTD/Review:

Per RDUP requirements, United must annually perform a TTD with a specific situation using the Emergency Response Plan (ERP). The goal is to test the Emergency Response Plan and report after the fact as to the effectiveness of the plan. Any areas of the ERP that need to be improved should be accomplished within an acceptable timeframe. It has been decided that the two storms in April of 2008, which include April 10th and April 23rd provided many learning experiences in implementation of the ERP.

Situation:

Severe Storm and Damage on April 10th and April 23rd

Key Facts of Emergency:

- It is spring in North Texas
- Weather threats are common this time of year, weather forecasters state rain and thunderstorms are possible
- April 10th storm strikes in early morning (just after midnight) and brings multiple tornados across northern Johnson County, one of the most populated areas in United's service territory which provides several challenges
 1. Several major oil spills including a three-phase regulator rack and a three-phase transformer bank pole
 2. Overhead line is down across several major roads including FM 731 and IH-35W
 3. Approximately 11 circuits are locked out at the substation level

4. Many line and individual outages have trees on the line
 5. Approximately 10% of the membership is out of power
 6. Contractors were utilized for several jobs for restoration of power
- April 23rd storm strikes across the United service territory in the early evening and brings multiple tornados and stiff straight-line winds wreaking havoc across Stephenville and Granbury with spotted outages system-wide which provided several challenges
 1. The majority of outage locations had sustained line damage included downed conductors
 2. Approximately 12 circuits are locked out at the substation level
 3. Trees again are a major issue in this storm like the last
 4. Compounding the problem was that United was not fully recuperated from the prior storm from several perspectives including outstanding service orders, materials, and labor
 5. Approximately 15% of United's members were without power
 6. Operational crews shifted across operational districts to assist where needed

Discussion of Layout of the ERP:

Page 2: Main Plan from TEC TOC

Page 6: Addendum Listing: see below

The addendums to this document give more specific information as to how this plan should operate with specifics to UCS. The addendums follow in the below numbered tab format:

- Addendum 1: UCS Key Personnel and Organizational Chart
- Addendum 2: UCS Employee Contact Information
- Addendum 3: Key Emergency Contact Phone Numbers
- Addendum 4: Recovery from Loss of Power to Key Facilities
- Addendum 5: Business Continuity
- Addendum 6: Outage Management Guidelines
- Addendum 7: IT Disaster Recovery
- Addendum 8: Warehouse/Purchasing Disaster Recovery
- Addendum 9: Miscellaneous Items
- Addendum 10: UCS Operational and Planning Standards

What are the Responsibilities of Each Department/Sub-Department?

Some results/key points of the TTD discussion:

- Emergency Coordinator: Responsible for Operation of the Plan/Reporting Status to CEO/COO/CFO/Communications:
 - Need to stay in constant contact with outside agencies as needed
 - Need to stay in contact with PUC/ERCOT – follow web update process in coordination with communications area
 - Backup Coordinator needs to be prepared, continue to be in communications loop
 - Ensure in working with safety and operations in ensuring work safety in hours
- Marketing/Key Accounts:
 - Should consider communication to critical/key customers by listings
 - Should keep them updated with progress of restoration as possible
 - Work with operations to prioritize restoration as necessary
- Communications:
 - Need to be prepared to proactively communicate with media/law enforcement/city and county officials and keep them up-to-date
 - Need to be prepared to communicate with members in local areas
 - Need to communicate safety to public during the event – wires down, etc.
 - Need to be prepared to utilize web site to keep public up-to-date
 - Need to remind employees of guidelines in dealing with media, membership
 - Assist in update of ERCOT-PUC outage data
- Customer Service:
 - Need to prepare for customers coming to site due to unresolved outages – potential upset customers, customers coming to site to talk with employees but offices being closed
 - We must notify community/membership of what we are doing – work with communications
 - We should utilize the IVR as much as possible when call volume exceeds our ability to answer and give answers
- Operations:
 - Operations was prepared to find other sources of fuel, but was not needed
 - May need to make agreements with UCS-served gas stations to get them power and buy all fuel – may need to get generation to them
 - Meals, water for crews must be provided – restaurants, etc. open in these events
 - Need to keep safety culture as key objective with all crews, internal and external
 - Communications with the crews will be done through UCS assigned personnel

- Locates for construction – notification, laws – all worked out as expected and locates were done as expected
- Coop addressed tree trimming issues – contract coordination, access to locations for construction – contractors were available and used, worked well
- Need to be prepared to do the damage assessment with operations – system engineering employees – did work with FEMA process, still needs some work
- System Engineering:
 - Should also use area reps/staking personnel for damage assessment
 - Assist in move folks around area where they were not in their areas
 - Should be prepared for area reps/staking personnel involvement in creation of staking information
 - Other duties put aside in non-affected areas – like billing related tasks
- Contract Services:
 - Enlist help if needed in coordination of all crews and services
 - Will need to consider with operations what number of crews (maximum) is actually manageable and limit incoming/assisting crews to that number
 - Designate who completion items (projects) are communicated to and when
 - Need to quickly issue construction bids for FEMA reasons
 - Need to accurately keep track of the billing/etc. from crews for accurate accounting in work orders for FEMA reimbursement
- Mechanics:
 - Be prepared to acquire materials to fix vehicles
 - Need to assist in fixing other companies vehicles, keep track of this as well
 - Must consider locations we can outsource such repairs
- Planning Services:
 - Need to be prepared to quickly review requests for re-construction based on policy, construction work plan, and long range plan requirements and capacity/voltage limits
 - Must be involved in those decisions in emergency operations center
- Engineering Services:
 - Use of OMS by guidelines
 - Be prepared to utilize OMS for damage assessment
 - Create outage summary pages
- Technical Services:
 - Be prepared to handle spill issues – containment and disposal, potential PCB
 - Figure on some line equipment programming, installation, operation issues

- Understand potential AMR issues related to backfeeds, etc.
- Figure on possible use of AMR for outage restoration
- Prepare to work with purchasing on approval of alternate materials
- Safety:
 - Backfeed safety must be considered and communicated
 - Generator safety (member-owned) must be considered and communicated
 - Public safety with downed lines must be emphasized via communications efforts
 - Access – dealing with law enforcement, stay in contact
 - Must maintain the safety culture with internal and external workers
 - Ensure that a UCS employee is available for energizing lines – safety is a priority over time to restore
- Human Resources:
 - High level of anxiety/stress with employees must be considered – rest policy
 - Ensure enough workforce to handle all necessary tasks
 - Insurance carrier should be kept up-to-date with progress, etc.
- IT and MIS:
 - Restore Communications however necessary if lost
 - Restore Power for IT devices if lost
 - Emergency Outage Program has some information – should be used without AS400 if necessary
 - Can revert to paper outage process as detailed in OMS guidelines if necessary
 - Need to consider potential overload of communications systems
 - Be prepared to utilize satellite phones as necessary
- Finance and Accounting:
 - Proper methods for FEMA funding assistance are very important to follow by all employees
 - Need to be more familiar with FEMA requirements
- Purchasing:
 - Must know what materials to get to which areas
 - Need to define the pickup yard be for material for all crews reporting
 - Availability of materials, how can we ensure material is available with vendors
 - Need results from initial damage assessment for material orders
 - May need to involve neighboring co-ops for materials
 - Possibility of needed labor for warehouse may become reality
 - List of materials to purchase should be reviewed and acted upon if advance notice of potential emergency

- Facilities:
 - Be prepared for generator use if needed to keep office going
- COO/CFO:
 - Continual needs assessment from personnel not directly involved will be an important part of the response, internal and external (all areas)
- CEO/Executive Assistant:
 - CEO is primary media spokesperson, VP Communications work with CEO for proper messages to media
 - CEO to handle communication, update of board members as necessary
 - CEO/board president to decide if special meetings for updates are necessary – such as weekly board meetings

Lessons Learned:

ERCOT/PUC reporting – need to be better prepared for reporting information to state in future emergency outage situations

The FEMA-type forms created have seemed to work well to keep track of units replaced and location of outage repair

When possible, United will attempt upon outage/damage, to place back in actual service without having to come back and rework

Reminder that generator could be used in situation with larger customers, gas stations, etc. – gas industry could also aid in generator availability

Consider correspondence to certain members concerning storm preparedness – potentially create generator rental, purchase locations

Review on-hold messaging to ensure member hears what we want them to hear

Review updating picture taking process, for mass pictures tied to outages – maybe small digital video/audio device

We created an outage summary intranet page as a result of need for communications/emergency management from these storms

Still need to work with TEC on getting designated containers for large spills; maintain containment devices and PIG materials, ensure significant spills have pictures; review possibility of obtaining a heavier duty pump for clean up purposes

What changes need to be implemented to the United ERP as a result of the TTD?

Below is a point by point table of updates/changes that need to be made with the person responsible for the change/update. All changes/updates need to be returned to the Emergency Coordinator by **December 19, 2008**. After all changes/updates are made, a revised plan will be given to necessary employees.

Item Needing Changed/Updated	Assigned To
Update critical care and key account listing	Landy/Cameron/Robert
Update media lists	Mauri/Marty
Update IT Section of ERP	IT
Update contractor listings	Quentin
Update listing of mechanics, towing services	Murray/Mechanics
Update list of potential security services	David
Update list of community assistance organizations	Landy
Update list of area hotel, community housing locations	Patty
Update vendor listing for materials management emergency ops	Kirk
Review Cleburne Generator Guidelines	Jared/Jerry
Update listing of UCS owned cameras/video	Mauri/Marty
Update fleet/equipment lease options	Murray
Update all other contacts not assigned	Cameron/others
Contact Brazos, get latest emergency contact listing	Cameron
Update Employee Training Manual—Include Personal Preparation Items, Perform Associated Training	Cameron, Quentin
Update United Board on ERP Activities—January Board Meeting	Cameron
Update ERP books and distribute when all complete, John to PDF	Cameron/Tricia

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

12/18/09

Background

In March 2010, all Senior Staff and the Board of Directors have traveled to an important meeting in Oklahoma for five days, including the Emergency Response Coordinator, Cameron Smallwood, and the Secondary Emergency Response Coordinator, Quentin Howard. Additionally, the Communications Manager, Mauri Montgomery, is unavailable. While there, an unexpected major snow storm blocks all communication between the Senior Staff and United and its employees. Later that day the same storm hits United's service territory. Fortunately, communications throughout United's system are intact.

Pre-Storm Watch

Upon learning that a severe snowstorm is headed United's way, Dispatchers monitor the weather situation and advise on-call Operations Foremen. Foremen, Line Crews, and Dispatch evaluate the precautionary situation, and based on incoming reports from the North it soon becomes apparent that large-scale outages are inevitable across United's territory. In the absence of Senior Staff, Jared Wennermark is notified of the possible large-scale emergency and steps into the role of Acting Emergency Response Coordinator and initiates the Emergency Response Plan (ERP). Jerry Scott assumes the role of Acting Operations Superintendent.

Dispatch requests that phone operators prepare to answer incoming calls that will rapidly increase as the storm approaches. Jerry ensures that all available operations personnel are preparing to be called in to work. Critical loads are put on-notice and a news announcement is developed by Communications representatives and sent to the media warning membership and the public of possible widespread interruptions in electrical service, and conveys emergency contact numbers.

Jared calls a mandatory emergency meeting at Cooperative headquarters for all supervisors, utilizing phone conferencing and Web-ex to reach the other offices. After reviewing the ERP document in the meeting, the following assignments and responsibilities were clarified:

- Acting Emergency Response Coordinator – Jared Wennermark
- Acting Operations Superintendent - Jerry Scott
- Engineering Services Group - Cory Menzel
- Acting System Operators -Tim Timmons/David Applegate.
- Engineering (Area) Representatives - Jason Dillard/Denny Adams
- Billing Representative - Lisa Bench
- Finance and Accounting Representative – Paula Cupps
- IT Department (Eric Cagle, Brad Mead and John Segovia) and MIS (Robert Bernhoft)
- Member Service Group - Eunice Wohlferd/Office Managers.
- Construction Group - Mark Buckner
- Line Superintendents- Tim Timmons, David Applegate, Gary Sims, Ted Gebhardt, Roger Wolfe, other Journeyman linemen as needed.

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

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- Communications Representatives - Patty Holleman, Ed Nunez, Kevin Keesee.
- Key Accounts Representatives – Ed Nunez, Kevin Keesee
- Facilitators - All Supervisors

Emergency Levels and Outage Levels

For the purpose of tracking the progress of the storm, the supervisory team determined to follow the Outage Level Guidelines that are normally used by operations and dispatch, but would need to cross-reference those levels with the Emergency Levels described in the ERP when necessary.

According to the Outage Level Guidelines, Outage Level 1 and Level 2 storms do not normally require additional help outside of operations personnel. As the storm rolls in, it rapidly progresses to Outage Level 4, which necessitates the declaration of an Emergency Level 3 as described in the ERP.

At the heart of the severe storm, it is determined that approximately 25% of United's members are without power across the cooperative's territory and estimate 300-400 poles are down. Internal communications remain working, but due to the volume of calls coming into the co-op, the ability to answer them adequately is compromised.

Duties for All Groups

According to Outage Level Guidelines in Tab 5 of the ERP manual, Jared Wennermark, as Acting Emergency Response Coordinator, is responsible for overall coordination of the emergency response, and reports operational status to outside agencies and to the Communications Group for dissemination to the public.

The following employees assume their assigned responsibilities and duties as determined by the UCS Emergency Response Plan throughout the duration of the storm and its aftermath:

Acting Emergency Response Coordinator – Jared Wennermark

- Declare Level Three (3) emergency and conduct supervisory team meeting using Business Continuity (Tab 5 of ERP) as outline of priorities during the emergency. Have responsible parties consult other tabs for specific duties and procedures.
- Review responsibilities of each department and ensure appropriate procedures and documentation are started. Follow up on these duties in subsequent daily meetings with supervisory team.
- Assist supervisory team with interpreting policy and procedural requirements of the ERP as questions arise
- Document execution of plan for future report to CEO/COO/CFO and Staff
- Stay in regular contact with Communications Group for updates (to and from)
- Ensure TEC is contacted by appropriate personnel to prepare for and request additional material and contract labor needs
- Stay in contact with local Law Enforcement and Emergency Management offices as necessary

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

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- Communicate with PUC/ERCOT using web update process
- Communicate with FEMA as necessary
- Verify with Operations and Safety departments that safe work hour guidelines are being followed
- Contact environmental spill contractor to prepare for cleanup of large oil spills
- Consider impact and resolution of extended AMR outage due to re-feeds
- Consider appointing "shadow" Coordinator that can step in if necessary
- Have Technical Services employees prepared for loss of special equipment
- Have Planning employees prepared for assisting with studies for engineering, operations, and dispatch

Operations Group – Jerry Scott

- Utilize qualified personnel to perform a "Fast Survey" of damages per ERP.
 - Survey personnel will submit damage reports with location and material needed to restore power
 - Inventory of needed material will be reported to purchasing as soon as possible
 - Indicate damaged areas on wall map in dispatch to identify outages and/or work orders and to prioritize outages.
 - Evaluate need of additional repair/restoration crews.
 - Update Acting Emergency Coordinator on extent of storm damage.
- Organize construction effort with available construction personnel and contractors.
 - Assign work areas and the hours work is to be performed.
 - Train in completion of FEMA documents, i.e. pictures before and after repairs etc...
 - Train and/or provide RDUP specs for construction.
 - Reinforce following safe work practices.
 - Repair efforts will begin with larger volume of members and priority accounts as recommended per ERP.
- Make arrangements for excavating equipment for ROW clearing.

Construction Group – Mark Buckner

- Issue construction bids in a timely manner for FEMA compliance
- Oversee & inspect the reconstruction effort as necessary

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

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Engineering (Area) Representatives

- Once the storm reaches Level III all Area Representatives will be in place to begin assisting with outage calls or surveying line and turning in appropriated material lists needed to restore power.
- Each Representative will have disposable cameras (or phone cameras) and laptops to assist with the documentation of facility damages.
- Photos will be kept with associated work orders
- Convey work orders to the appropriate Operations personnel to maintain the integrity of the work order system
- Report system damage assessment to Emergency Coordinator, Communications, and other groups as necessary

Communications - Patty Holleman, Ed Nunez, Kevin Keesee

- Communicate with media/ law enforcement/ city and county officials and keep them up-to-date.
- Communicate with members in areas with specific needs.
- Communicate safety to public during the event (wires down, etc.)
- Utilize website to keep public up-to-date
- Remind employees of guidelines for dealing with media and membership
- Update ERP coordinator with key information
- Assist in update of ERCOT-PUC outage data
- Document damage with photos/video for use in FEMA reporting and communications

Key Accounts – Ed Nunez, Kevin Keesee

- Update critical/key customers with progress of restoration as soon as possible
- Recommend priority restoration of critical/key accounts as appropriate

Human Resources – Patty Holleman, Debra Ciccarelli

- Work with operations and Safety departments to ensure safe work hours are maintained
- Ensure enough work force is available to handle all necessary tasks throughout the emergency, including using outside sources if necessary
- Update insurance carrier with progress of disaster, etc.
- Ensure employee message lines are updated and working
- Coordinate with community groups such as Red Cross may be necessary

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

12/18/09

- Make arrangements for employees that have been displaced from their homes

Engineering Services – Cory Menzel

- Ensure all aspects of OMS are functioning properly (DiSPatch, IVR, SCADA).
- Notify vendors of current status of emergency.
- Utilize OMS for preparing damage assessments if necessary.
- Create necessary reports for use by other departments.

Billing Representative – Lisa Bench

- Accounts that have readings will be billed, accounts without readings will be held until readings are available (UCS goal is to bill all meters as close to a 30 day billing period as possible)
- If a large number of meters are not billed, the members will be notified via the media of the delay
- Remain in constant communications with other departments and be ready to assist if necessary

IT and MIS – Eric Cagle, Brad Mead, John Segovia, Robert Bernhoft

- Use PC-based Emergency Outage Program (can be used in the field if necessary) that contains current member information
- Revert to paper outage process as detailed in OMS guidelines if necessary
- Monitor communications, network, and computer systems for proper operation, failure, or potential overload
- Utilize satellite phones as necessary

Fleet Management – Jim McKenzie, Sam Heathington

- Manage fuel availability
- Maintain repair facility-arrange for outside repairs if needed due to power loss
- Arrange for overflow parking due to additional vehicles if needed
- Make arrangements with suppliers for tire repair
- Contact towing company to assure availability

Finance and Accounting – Paula Cupps

- Review and be familiar with FEMA requirements
- Remind all employees of proper methods for FEMA funding assistance

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

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- Remind employees that before and after pictures need to be taken with detailed description of location
- Ensure FEMA forms (Internal Created Spreadsheets) are updated and distributed to personnel

Purchasing and Materials Management – Kirk Cross

- Place supply chain on stand-by and post tentative orders. Supply chain includes TEC, Irby, KBS, Thomasson, Techline, Roy O'Martin, and Hughes.
- If needed, complete the "Requesting Assistance from TEC" Form as noted in our ERP and fax TEC a copy as directed by Acting Emergency Response Coordinator.
- Instruct Storekeepers to immediately begin issuing and tracking material in accordance with the guidelines delineated in the ERP and our 'FEMA Storm Damage Charges' instructions. Minor material would also be tracked to specific jobs.

Member Service Group

- Since this has occurred during the day when employees are at work, all CSRs will be required to remain at their offices to take the outage calls.
- Since the outages may last several days, CSRs will have to work on a schedule to allow them a rest period
- Member services will work with dispatchers returning phone calls to members to see if power has been restored
- If the phone calls become too heavy, they may have to be routed through the Porsche IVR system. CSRs will take care of unresolved calls as the office managers and customer service manager assign them.
- Dispatch and Customer Service will coordinate handling the phone calls.

Facilities – Mike Huston

- Ensure offices are supplied with janitorial products and paper goods.
- Make arrangements with restaurants for meal preparations.
- Make arrangements for lodging of crews. If necessary, provide:
 - Tents to house up to 100 contracted personnel each at Cleburne and Stephenville.
 - Portable restroom and shower facilities.
 - Portable heating for the tents.
 - Sleeping cots and bags.
 - Generators for both locations to operate electrical needs of the housing areas.

2009 Emergency Response Plan Exercise

Supervisors' Group Assignment

12/18/09

Safety Department – Mark Dixon, David Stone

- Back-feed safety must be considered and communicated
- Generator safety (member-owned) must be considered and communicated
- Public safety with downed lines must be emphasized via communications efforts
- Preparation of crews for dealing with disaster- should be discussed prior to work
- Access-dealing with law enforcement, stay in contact
- Must maintain the safety culture with internal and external workers
- Ensure that a UCS employee is available for energizing lines-safety is a priority over time to restore
- Security for materials and visiting people/ equipment must be addressed
- Security for employees/members at office locations must be addressed

Suggested Modifications for Emergency Response Recovery Plan:

1. Update the current ERP manual with appropriate employee contact information.
2. Develop a *Quick Reference Guide for Key Personnel* to reduce time necessary in searching in current ER/RP manual to react quickly by key personnel and move to action quickly/accurately under emergency situations.
3. Make sure employees use *Quick Accounting Reference Guide for FEMA Reimbursable Disaster*.
4. Resolve discrepancy between the description of "Emergency Levels" in the main body of the ER/RP and "Outage Levels" listed in the Addendum (see Outage Level Guidelines on page 18-19 of Tab 6). Specifically, Emergency Levels indicate a scale of 1-3, while Outage Levels use 1-4.
5. Under the Communications & Key Accounts-Action Plan, insert verbiage:
 - a. Boiler plate press release created
 - b. Provide access to website editing to all of Communications department
 - c. Document damage with photos/video for use in FEMA reporting and communications
6. Revise the current ERP manual to "clean-up"/remove unnecessary blank pages, etc. End result is an increase in efficiency in use of the manual under time-sensitive situations.
7. Insert in greater detail language regarding UCS Total Safety Culture, including Cardinal Rules.
8. Create ERP section on the Intranet and on a server in Cleburne

2010 Emergency Response Plan Exercise

Supervisors' Group Assignment

12/15/10

Background

In December 2010, Emergency Response Coordinator Cameron Smallwood, Secondary Emergency Response Coordinator Quentin Howard, and the remainder of the cooperative's executive staff have traveled to an Energy Efficiency Summit meeting in Chicago. While there, a major snow storm strands the United executive team. Two days later, the same weather system that has been affecting the upper Midwest makes its way down to North Texas and devastates the cooperative's distribution system. Nearly four inches of ice load, coupled with 40-mph winds cut a 30-mile wide swath through the co-op's system, leaving 30,000 meters without power. The one silver lining is that the co-op's land line and wireless communications systems have remained undamaged. In the executive staff's absence, Jared Wennermark and Mauri Montgomery have been designated EPR coordinators.

Pre-Storm Watch

Even though the cooperative had begun making preliminary emergency plans prior to the winter storm's arrival, early forecasts had predicted the storm would not exceed Level 1 intensity. Co-op dispatchers had continually monitored the storm's movement for the past 48-hours and had kept all on-call Operations Linemen and their Foremen on alert. However, the storm's dynamics quickly changed from intermittent light snow to a freezing rain mix between 11 p.m. and 1 a.m. the next day. Beginning at 1:30 a.m., the cooperative's SCADA and OMS systems began indicating widespread outages on the northern fringes of the co-op's service territory. By 3 a.m., dispatch reported that outages were occurring along a line extending through the Burleson, Cleburne, Granbury and Stephenville areas. Operations crews were also reporting severe line loss in areas still accessible by common routes, due to early highway department road closures. In the absence of Senior Staff, Technical Services/Planning Manager Jared Wennermark and Director of Media and Community Relations Mauri Montgomery are notified that a large-scale, Level 3 storm emergency is eminent. As a result, Wennermark and Montgomery step into roles as Acting Co-Emergency Response Coordinators and initiate the cooperative's Emergency Response Plan (ERP). Cleburne Operations Foreman Jerry Scott assumes the role of Acting Operations Superintendent.

With the Level 3 storm assessment, Dispatch requests all member service representatives to report, or request travel assistance to their assigned offices to help receive any incoming calls. The Operations Superintendent requests all available operations personnel to report to their respective offices. Critical commercial loads and critical care member accounts are put on-notice, where possible. An initial outage and electrical safety alert is posted on the United website, and press releases are e-mailed to regional media outlets warning the United membership and the general public of severe, widespread interruptions in electrical service. The press release also include emergency contact numbers for the cooperative's seven area offices and mentions that outage and restoration updates will be made available on the cooperative's website and other social media on a continuing basis.

A mandatory emergency meeting is held at Cooperative headquarters in Cleburne for all supervisors, utilizing phone conferencing (where available) and Web-ex to reach key employees in other areas. ERP document guidelines, department responsibilities and individual assignments are reviewed in those early emergency deliberations.

Emergency Levels and Outage Levels

The supervisory team is advised that according to Outage Level Guidelines normally used by operations and dispatch, the storm has escalated into an Outage Level 4 which necessitates the declaration of an Emergency Level 3 as described in the ERP.

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At the height of the storm, it is estimated that approximately 40% of United's meters are without power across the cooperative's service territory. SCADA confirms 75 circuits are out. In addition, Brazos Electric Cooperative has reported transmission line loss, though the extent has not been officially verified. Internal communications remain viable at all seven of the cooperative's area offices, but low call volume indicates the probability that many of the co-op's members have lost land line phone service. This is confirmed by comparing calls received by OMS with outage numbers in the AMR system. Most of the incoming calls are coming through wireless phones.

Duties for All Groups

According to Outage Level Guidelines in Tab 5 of the ERP manual, Wennermark and Montgomery, as Acting Emergency Response Coordinators, are responsible for overall coordination of the emergency response and for collating and reporting operational status to outside agencies and media outlets.

The following employees assume their assigned responsibilities and duties as determined by the UCS Emergency Response Plan throughout the duration of the storm and its aftermath:

Acting Emergency Response Coordinators – Jared Wennermark, Mauri Montgomery

- Declare Level Three (3) emergency and conduct supervisory team meeting using Business Continuity (Tab 5 of ERP) as outline of priorities during the emergency. Have responsible parties consult other tabs for specific duties and procedures
- Review responsibilities of each department and ensure appropriate procedures and documentation are started. Follow up on these duties in subsequent daily meetings with supervisory team.
- Assist supervisory team with interpreting policy and procedural requirements of the ERP as they may pertain to the potential for federal disaster declaration (i.e., FEMA documentation)
- Document execution of plan for future report to CEO/COO/CFO and Executive Staff
- Maintain frequent internal and external communications, utilizing every feasible medium
- Ensure TEC is contacted by appropriate personnel to prepare for and request additional material and contract labor needs
- Stay in contact with local Law Enforcement and Emergency Management offices as necessary and provide such agencies with system restoration progress and logistics
- Communicate outage information to PUC using web update process, ERP Tab 9
- Communicate early damage assessments with local and state governments as necessary and coordinate all restoration work and the assimilation of supporting restoration documentation as if storm damage will become part of a federal disaster area declaration.
- Verify with Operations, Safety, and HR departments that safe work hour guidelines are being followed
- Contact environmental spill contractor to prepare for cleanup of large oil spills

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Supervisors' Group Assignment

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- Consider impact and resolution of extended AMR outage due to re-feeds. Use Partner meter reading capability if necessary
- Consider appointing "shadow" Operations Superintendent that can step in if necessary
- Have Technical Services employees prepared for loss of special equipment (reclosers, regulators, capacitors, etc.)
- Have Planning Engineers prepared for assisting with studies for engineering, operations, and dispatch

Operations Group – Jerry Scott

- Confirm available personnel as referenced under ERP Tab 1 and 2
 - (6) Foreman to coordinate branch offices
 - (9) Journeyman Lineman
 - (14) Lineman and First Class Lineman
 - (3) Equipment Operators
 - (14) Groundmen and Apprentice Linemen, Level I thru III
- Utilize qualified personnel to assist with Preliminary Damage Assessment (PDA or "Fast Survey") per ERP Tab 9
 - Survey personnel will fill out and submit damage reports using form on p. 87
 - Inventory of needed material will be reported to purchasing as soon as possible
 - Indicate damaged areas on wall map in dispatch to identify outages and/or work orders and to prioritize outages
 - Evaluate need for additional repair/restoration crews
 - Update Acting Emergency Coordinator(s) on extent of storm damage
- Organize construction effort with available construction personnel and contractors as described in ERP Tab 9 and 10.
 - The Operation department would use Journeyman and First Class linemen to assist outside crews (3 to 4 crews each). With 15 employees in this Class, United would be able to manage as many as **60** outside crews. Lineman, Apprentices and Groundmen would work on critical accounts or elsewhere as needed, for an additional **22** crews.
 - Assign work areas and the hours work is to be performed
 - Ensure proper completion of FEMA documents, i.e. pictures before and after repairs etc.

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Supervisors' Group Assignment

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- Provide RDUP specs and training for construction where necessary
- Reinforce following safe work practices
- Repair efforts will begin with larger volume of members and priority accounts as recommended by ERP guidelines
- Make arrangements for ROW clearing assistance as listed in the ERP Tab 3.
- Update Emergency Response Coordinator(s) at least twice daily on restoration efforts

Construction Group – Mark Buckner/Larry Rainwater

- Make contact with Contractors from the Bid list referenced in ERP Tab 3. Maximum number of crews co-op can manage is **60** based on available operations personnel.
- Confirm contract forms are properly executed as found in ERP Tab 9
- Oversee & inspect the reconstruction effort as necessary
- Issue construction bids in a timely manner for FEMA compliance and make considerations for any construction upgrades (mitigation) approved with FEMA involvement
- Issue bids for site and debris cleanup as well as determine sites where cleanup efforts can be reclaimed and/or recycled per FEMA guidelines

Engineering (Area) Field Representatives (Jason Dillard/Denny Adams)

- Make immediate and credible assessment of storm damage within 2-4 hours if possible. Follow FEMA guidelines for Preliminary Damage Assessment (PDA) referenced in the Public Assistance Policy Digest (FEMA 321/2008 pg 98), and using form on ERP Tab 9 p. 87
- Call in Area Representatives from PK and Meridian for additional help
- Determine if additional personnel are needed to perform PDA
 - Engineering Service personnel
 - Entry level Operations personnel
- Assign Representative to survey each feeder outage reflected in OMS
- Ensure each Representative has a laptop and camera (digital, disposable film, or phone) to assist documentation of plant damage
- Report PDA findings to Emergency Coordinator(s)
 - Photos will be kept with associated work orders
 - FEMA documents (with assessor initials) to accompany each set of photos
- Initiate staking/construction process

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- Be prepared to engage contract staking services and determine which entity is most feasible logistically
- Convey work orders and documentation to the appropriate Operations personnel to maintain the integrity of the work order system
- After initial damage assessment is complete, direct System Engineering and other assigned personnel to assist in moving Operations around unfamiliar territories
- Prioritize regular duties in unaffected areas, such as billing and related tasks. Prepare for assisting customer service if necessary

Communications – Mauri Montgomery, Patty Holleman, Ed Nunez, Kevin Keesee

- Provide complete, timely and proactive communications as restoration data becomes available—ERP Tab 9
- Utilize emergency contacts list and communicate with broadcast/print media/ law enforcement/ city and county officials and keep contacts apprised of system restoration and current status —ERP Tab 3
- Act as primary contact between federal and state agencies under direction of Emergency Coordinator(s)
- Keep cooperative directors, members and general public informed about system restoration process and progress through regular and timely updates
- Cultivate, print, and disseminate emergency outage collateral, i.e. contractor credentials and emergency announcements for posting at area cross roads and major thoroughfares
- Develop and distribute public safety announcements throughout the event (wires down, etc.)
- Utilize website and all available social media to keep public up-to-date
- Remind employees of communications protocol and guidelines set for dialogue with media and membership
- Update supervisors and department heads on internal and external restoration assessments
- Assist in damage documentation with photos/video for use in FEMA reporting and communications

Key Accounts – Ed Nunez, Kevin Keesee

- Update critical/key customers with progress of restoration as soon as possible—ERP Tab 9
- Recommend priority restoration of critical/key accounts as appropriate—ERP Tab 9
- Aid in relay of damage assessment and restoration updates to commercial/industrial sites
- Assist with delivery of meals to crews if necessary

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Human Resources – Patty Holleman, Debra Ciccarelli

- Work with Finance and Accounting personnel in providing timely information to ERP Coordinators such as labor/direct costs (actual wages, salaries and overtime compensation per FLSA) of employees who are working the storm throughout power restoration. Information will continue to be supplied to establish basic criteria for permanent work, to receive FEMA funds to restore any UCS facility to its pre-disaster design, to perform same function as pre-disaster situation and fully operate at the capacity prior to the disaster. (Ref: FEMA PAPD, pg. 95, "Permanent Work")

Assist the ERP Coordinators in documentation of the **pre-disaster** facility, dimensions and description of the damage so a proper Scope of Work can be developed and Case Management File for recovery data collection. Supply insurance requirements, general property and flood insurance information to ERP for Case Management File, indicating costs in policy limits along with a cost estimate for the repair of disaster-related damage. Work with Finance and Accounting departments to supply depreciation (eligible costs and final loss valuations by insurers).

- Supply information to ERP Coordinators about the organization, including physical location, points of contact, information regarding private nonprofit status for development of a Request for Public Assistance (RPA) and work directly with a RPA Crew Leader throughout the project. ERP Coordinators will use information to establish a Project as part of United's declared disaster (Damage Description and Scope of Work).
- Supply information to ERP Coordinators who will complete specific forms for assistance (Ref: FEMA PAPD, pg. 146, "Topic References", specifically, *Request for Public Assistance form*). Also, be prepared to attend Applicants' Briefing with ERP Coordinators and supply files, provide copies and documentation that identify damage, collect cost data and develop cost estimates. (Ref: FEMA PAPD, pg. 4).
- Prepare to hold shelter workshops for designated employees working the storms to ensure adequate rest and meals are available (Ref: FEMA PAPD, pg. 41, Eligible Applicants). Facilities owned by United are considered a "shelter workshop" a special critical service for employees who work the storm or victims of the storm (Ref: FEMA PAPD, pg 110 Private Nonprofit Facility).

Engineering Services – Cory Menzel

- Ensure all aspects of OMS are functioning properly (DiSPatch, IVR, SCADA)
- Notify vendors of current emergency status
- Utilize OMS for preparing damage assessments if necessary
- Create necessary reports for use by other departments
- Ensure that Engineering Services employees with company vehicles are being utilized in field operations, i.e. damage assessment/restoration as needed.

Billing Representative – Lisa Bench

- Accounts that have readings will be billed. Accounts without readings will be held and processed no more than four days before an estimated reading is used to maintain benchmark standards (Ref: ERP Tab 5, Business Continuity), which prohibit exceeding a 35-day billing cycle.

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- If storm crisis prevents billing distribution for a significant number of meters, United members will be notified via the media of the delay and billing will resume as soon as possible—whether estimated usage or current readings are used.
- Remain in constant communications with other departments and be ready to assist if necessary

IT and MIS – Eric Cagle, Brad Mead, John Segovia, Robert Bernhoft

- If connection to AS400 is lost, use PC-based Emergency Outage Program that contains current member information (use icon on desktop on dispatch PC's and field laptops)
- Revert to paper outage process as detailed in OMS guidelines if necessary, ERP Tab 6 p.77
- Monitor communications, network, and computer systems for proper operation, failure, or potential overload
- Utilize satellite phones as necessary, ERP Tab 3 p. 57

Fleet Management – Trent Halford, Sam Heathington

- Manage fuel availability, ERP Tab 3 p. 62
- Maintain repair facility-arrange for outside repairs if needed due to power loss
- Arrange for overflow parking due to additional vehicles if needed
- Make arrangements with suppliers for tire repair
- Contact towing company to assure availability

Finance and Accounting – Paula Cupps

- Review and be familiar with FEMA record-keeping requirements (FEMA Applicant Handbook, Appendix D). This can be found under the accounting forms on the forms page on the intranet.
- Act as consultant to all employees for processes needed to receive FEMA funding assistance. Fill out as much of the required documentation as possible in advance.
- Make sure that employees take before and after pictures along with detailed descriptions of each location where repairs are made.
- Make sure employees retain receipts of purchases for FEMA reimbursement.
- Ensure FEMA forms are updated and distributed to personnel. All FEMA accounting forms are listed under the accounting forms on the forms page on the Intranet.

Purchasing and Materials Management – Kirk Cross

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- Submit orders and secure receipt of materials needed to begin repair and replacement of damaged plant. Ensure standby of vendor supply chain and secure tentative commitment to guarantee any additional material orders. Supply chain includes TEC, Irby, KBS, Thomasson, Techline, Roy O'Martin, and Hughes.
- Following initial assessment of infrastructure loss, complete Requesting Assistance from TEC form and fax to TEC as directed by Acting Emergency Response Coordinator(s).
- Storekeepers instructed to immediately begin issuing and tracking material in accordance with the guidelines in the ERP and our FEMA Storm Damage Charges instructions. Minor material will also be tracked to specific jobs.

Member Service Group

- Revert to Office Hours Mode (Ref: ERP tab 6 pg 21)
- Member Service Manager will be notified by dispatch and will contact the office managers in Burleson, Cleburne, and Stephenville offices
- Each Office Manager will contact one MSR in her group to come to their designated office
- Once MSR personnel arrive, MSR Manager will coordinate with Dispatch to be able to assign each Office Manager a section of the unresolved calls from the Porche IVR (Ref: ERP tab 6 pg 7 Member Level Applications)
- Call resolution is handled as referenced in current ERP
- Since the outages may be extended, MSR's will have to work on a rotation schedule to allow rest periods.
- While it is the full intention of UCS to have human interaction with its members, there may be instances in the daytime when the member service group cannot keep up with the incoming calls. (Ref: ERP Tab 6 pg 20 Daytime Disaster/Major Outages)
- Member services will work with dispatchers in returning phone calls to members to update and inform members of restoration efforts and direct them to United website for updated information
- Member Services will continue to answer member calls and verify the restoration of power while meeting cooperative goals (Ref: ERP tab 6 pg 4 Purpose of Outage Management)

Facilities – Mike Huston

- Make contact with emergency vendor suppliers—ERP Tab 3
- Ensure offices are supplied with janitorial products and paper goods
- Make arrangements with restaurants for meal preparations

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Supervisors' Group Assignment

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- Make arrangements for lodging of crews. If necessary, provide:
 - Tents to house all contracted personnel at Cleburne and Stephenville
 - Portable restroom and shower facilities
 - Portable heating for the tents
 - Sleeping cots and bags
 - Electrical generators for both locations

Safety Department – Mark Dixon, David Stone

- Be prepared to procure additional safety management personnel
- Maintain safety supervision of all crews and Immediately begin on-site evaluation of safety practices
- Back-feed and generator safety (member-owned) will be communicated and managed
- Public safety due to downed lines must be emphasized via communications efforts
- Tailgate safety briefings with all crews will be conducted
- Ensure contact to area law enforcement is maintained
- Ensure that a UCS employee is available for energizing lines and for oversight of general safety when power is being restored throughout the restoration process
- Security for materials and visiting people/equipment will be arranged and managed
- Security for employees/members at office locations will be arranged and managed

Suggested Modifications for Emergency Response Recovery Plan:

1. Update the current ERP manual where appropriate
2. Add contact list for large oil spill contractors
3. With Prepay and other systems now relying on AMI, a section should be included detailing procedures for dealing with AMI system contingencies
4. Develop a *Quick Reference Guide for Key Personnel* to reduce time necessary in searching in current ERP manual
5. Create more tabs to make quick reference easier (specifically the Miscellaneous Tab). Contract forms, FEMA documents, and ERCOT material should be in their own tabs.
6. Modify or remove DOE report to indicate that Brazos handles this report for United

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7. In the future, we can take advantage of Partner's damage assessment module to replace paper documentation methods in the current ERP
8. AMR outage information should be used to supplement call data in the future and be part of OMS processes

2011 Emergency Response Plan Review Meeting

December 20, 2011

1. Discussion of Event that required enactment of ERP – Easter fires of 2011 at PK
 - a. Fires started on the April 15th in high winds and dry conditions, April 19th conditions worsened and there was an understanding that things were not getting better – preparing to enact ERP.
2. Pre-rollout response
 - a. Discuss initial meeting – had a meeting on April 21 with all needed supervisors and folks necessary to implement the ERP – Meeting agenda/notes attached for reference
 - b. Operations performed a safety review prior to damage assessment – to allow safe review by assessors and first responders – this needs to be done in each situation
 - c. Discussion of using our first meeting review as a guideline to future first meeting agendas
 - d. A question as to who should have been at the initial meeting – we need to ensure the communications to the appropriate folks as a disaster occurs
 - e. Preparation for getting in and out of disaster areas – there were some issues concerning access – but need to continually evaluate safety aspects of access
 - f. Jurisdictional issues during the disaster – need to ensure to discuss this in the initial meeting – be prepared to deal with confusion with first responders
 - g. It was discussed that if we have an pre-meeting, it should be assumed that we will be in a FEMA event
 - h. Supplier issues with one of our main suppliers at the time, so we selected one that had the most of the materials needed – Techline was prepared – therefore United was prepared – Having the UCS warehouse folks up there was also key
3. Initial response/damage assessment
 - a. Discussed initial response/damage assessment
 - b. Purpose of damage assessment – communications and visibility by public, media and membership, first responders, emergency management personnel, resources (labor and materials)
 - c. Not having the GPS/GIS information on the front end was problematic, but we were able to get it done – before and after work required – quickly discussed that the full system inventory will be complete at the end of this year which will solve this problem
 - d. **Action item – Foremen , Eng Services, Jason/Denny to review how to implement a system wide damage assessment – need to discuss picture issue as well**
 - e. Value of social media/web sites
 - f. Going through the exercise ensures preparedness for who to contact – even if they are not explicitly on the lists in the ERP