(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 NPRR857:]

(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) <= 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) <= 200 MW and Resources have responded to any earlier deployments; or

(c) When PRC <= 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) <= 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) <= 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 >= 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
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Addendum 4: Recovery from Loss of Power to Key Facilities
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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

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.

- 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

- 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

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

- 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

- 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.

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

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.

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

- 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.

- 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 were 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

- 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

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.

- 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

- 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

- 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

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

g. Should secondary numbers for certain organizations be prepared in the ERP? **Action item – each person responsible to update phone numbers in the ERP update should evaluate the need for secondary contact numbers on their list.**
h. Need to continue to follow established processes and guidelines
i. Need to ensure at minimum from foreman – a daily overview of progress with ERP coordinator and communications group

4. Initiating the disaster restoration plan
    a. Discuss the initiation of the disaster restoration plan
    b. Co-ops being utilized for restoration – a good move – try to do this in future events if possible, use contractors that we already have on-board where they are most useful
    c. Depending on inventory needs – maybe cooperatives could bring some material with them? Minor materials vs. CPR's This will be dealt with on a scenario basis
    d. Expect a scenario where some cooperatives are not available – need to be prepared to request out-of-state cooperative support – **Action Item – Kevin to ensure the statewide cooperative numbers are in ERP.**
    e. FEMA/mutual aid – in the future – we need to try to document requests for mutual aid to other cooperatives – develop a form letter? **Action Item – Quentin/Cameron to develop form letter for assistance request to other cooperatives.**
    f. Food/preparation needs to continue to be discussed throughout the event – action item – how do we handle feeding large groups of folks across our territory – **Action Item - Landy/Marty to work on an idea of local representation on this item – maybe office managers**
    g. Delivering food also allowed us to know where all the crews were and their status
    h. Having the local foreman in charge is the way to go – communications, engineering, crews, dispatch, local emergency services. **Action item – the foremen should come up with a list of things to consider from initiation of the plan locally to operations and then clean up.**
    i. Data access to the network is an issue – **Brad – Action Item - need to consider this IT – review MiFi and other options including use of tethering on iPhone.**
    j. As the disaster becomes larger – UCS employees shift towards disaster management – **Action Item - David/Mark/Foremen/Kirk need to discuss shifting from construction to project/disaster management**
    k. Discussion of an RV or construction trailer setup – **Action Item – Kevin - need to address this in the plan – identify locations of rentals across territory.**
    l. Need to continue to recognize terrain – dozer work was greatly helpful in restoration
    m. Press conference to be considered and worked through communications on the ERP response

5. Operation of the disaster restoration plan
    a. Discuss the operation of the of the disaster restoration plan

b. Again, the foreman at the local point was imperative – larger events spanning across the territory require a point person for the foremen
c. Need to ensure that we have some tie to EMT/etc. in preparation for safety issues/accidents – Safety department needs to be prepared to be involved in preparedness for accidents
d. Operations folks – time was tracked well, work orders good, but we need to figure out how to better track operations vehicle/equipment use
e. Non-operations/salaried folks – time was not tracked well, this needs to be figured out for FEMA reimbursement purposes
f. Action item – Quentin to review time sheets and process of tracking time and equipment use –for all personnel working on restoration
g. Action Item - Billing – Lisa/LaFonda/Robert/Cory to document process that was followed – work out this process to where it could/can work system wide with different types of issues with members
h. Need to understand that liability can be a concern – especially in this case, all comments/information from a liability standpoint to flow through safety/HR.
i. Command center can be utilized to assist – especially as the system becomes fully deployed this year
j. Action Item - Roger – work with foremen to come up with a written plan on how to take care of an incident such as this at a local level – setup, daily crew work, safety, etc.

6. Completion of the plan
    a. Discuss the wrap-up of the disaster restoration plan
    b. Clean up – need to consider clean up as a part of the restoration plan, need to work with crews to return retired/damaged equipment as much as possible – ensure the construction sites are clear/clean after the fact – try not to allow a clean up to delay restoration – focus on central clean up piles
    c. As long as we follow our processes, we should be good.
7. After review of the event, was the ERP an effective document in aiding to success/preparation for the event?
    a. Overall, the plan helped UCS be prepared for the event and successfully navigate through the issues of dealing with an event.
8. We need to update the current plan with any recommendations and updates
    a. Kevin Keesee will be coordinating the update of the plan for 2012 preparedness
    b. Review with Board of Directors will occur January 30, 2012. We should attempt to get as much accomplished on the update as close to January 30 as possible. **Action Item – Kevin will get with each employee to update the plan. Try to get updates to Kevin in a reasonable amount of time after the request**

Background

It is October and cold fronts are starting to move through the area. The area weather services issue severe weather warnings as they see the potential for severe thunderstorms and tornados across the North Texas area. As the front moves through United's service territory, it appears to be pretty much a rain event until the front crosses central Johnson County. A very severe storm builds and spawns an F5 tornado that centers on the EDO office heading east. The office is severely damaged, and it is determined that the dispatch room is not fit for continuing use and the backup dispatch room must be used in Cleburne. Along with other damage, the tower at EDO is on the ground and materials/trash from the office is spread for miles around. Further, while localized, there is severe damage to United's distribution system from the EDO office to the eastern edge of United's territory.

Pre and Post Storm Actions

Upon learning that a severe thunderstorm is heading into United's eastern territory, the Dispatcher monitors the weather situation and advises on-call Operations Foremen. At approximately 6:15 pm the thunderstorm develops into an F5 tornado headed directly for United's Eastern District Office. Once the storm has passed, dispatch immediately makes contact with Cameron Smallwood, Emergency Response Coordinator, via the designated dispatch cell phone, and relays the incident. The EDO is severely damaged leaving dispatch inoperable, as well as putting the communications tower on the ground.

Cameron Smallwood quickly informs all staff and supervisors of the situation. System Operator Jerry Scott immediately notifies all dispatch personnel of the situation, and begins the process of relocating to the backup control center in Cleburne. Critical loads are notified and a news announcement is developed by Communication representatives and delivered to the media as well as posted on United's Website and Facebook page. This announcement informs the membership and community of possible widespread interruptions, safety hazards concerning electrical service and conveys emergency contact numbers.

Cameron calls a mandatory emergency meeting at the Cleburne Cooperative headquarters for all necessary supervisors and staff, 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:

- Emergency Coordinator - Cameron Smallwood
- Secondary Emergency Coordinator - Quentin Howard
- Operations Manager - Ed Nunez
- Engineering Services Manager - Cory Menzel
- System Operators -Jerry Scott
- Engineering (Area) Representatives - Jason Dillard and Denny Adams
- Billing Representative - Lisa Bench
- Finance and Accounting Representatives – Russell Young and Paula Cupps
- IT Department (Eric Cagle, Brad Mead and Alen Rogic) and MIS (Robert Bernhoft)
- Member Service Group - Landy Bennett and Office Managers
- Construction Contractor Group - Mark Buckner

- Line Foreman- Tim Timmons, Travis Ashworth, Gary Sims, Ted Gebhardt, Roger Wolfe, Jerry Scott, and other Journeyman linemen as needed.
- Communications Representatives - Marty Haught and Mauri Montgomery
- Key Accounts Representatives – Jeff Pannell and Seth Rosser
- Human Resources - Patty Holleman, Debra Ciccarelli, and Kevin Keesee

The following issues were raised from this emergency and had to be tested. The results are as follows:

- **Does United have proper guidelines and procedures in preparation for the situation?**

  From a procedural standpoint, United has guidelines in place for responding to disaster situations. Several deficiencies were discovered as a result of this disaster and will be addressed in this document. Key points of this scenario include:
  - To date, Safety Personnel has verbally communicated the evacuation and take cover plan to all employees of the Eastern District Office. A written document, including evacuation route diagrams, is in the process of being finalized. The evacuation route diagrams will be placed in key locations throughout the building.
  - Securing the property is part of the short-term recovery effort as described in the Purchasing and Materials Management section (Tab 00 of the Main ERP Document). Items to cover include perimeter fencing, material and equipment security, and building safety.
  - With the communications tower on the ground, United has lost functionality from its SCADA system, AMR, radio, Brazos direct line, and the DA system. United would work with Brazos to re-route communications to the Cleburne tower as quickly as possible following procedures located in (Tab 4 of the ERP Document). In the meantime, manual processes would be implemented. For example, meter readings could be downloaded from substations, and hot line tags could be controlled from the substation or the downline devices.

- **Does United have proper guidelines and procedures for successfully shifting dispatch to the backup dispatch center and operating at that location without undue issues or delays?**

  - A crucial benefit of the renovation to the Eastern District Office was the creation of a functional backup control center. In this scenario, dispatch cannot function out of the EDO and will need to be relocated back to Cleburne. All hardware and software are in place, and key personnel are aware of the course of action to facilitate this transition. However, the process and procedures have not been fully documented to date. There is an existing departmental objective to document the successful and timely transition of the dispatch control system back to Cleburne. This objective is expected to be completed in 2013. The finalized document will be located in the Outage Management Guidelines located in (Tab 4 of the ERP Document).

- **Does United have proper guidelines and procedures for successfully shifting EDO employees to other offices?**
  - Yes, the Quick Reference Guide for Employees (Tab 12 of the ERP Document) provides instructions for Burleson employees to report to the Cleburne office. United Staff will make decisions for both short and long-term office solutions.

- **Does United have proper guidelines and procedures to successfully perform the damage assessment function?**
  - Yes, these guidelines do exist and are located in (Tab 00 of the ERP Document) and guidelines for FEMA documentation are located in (Tab 11 of the ERP Document).

- **Is United prepared to implement an electronic damage assessment function utilizing the Partner damage assessment tool? If not, what will it take to be prepared to use this tool going forward and when can this be implemented?**
  - United has the software purchased and configured to implement the Partner electronic damage assessment function. Personnel training needs to be conducted to familiarize necessary employees with the benefits of this valuable tool. Test scenarios will be a part of the training to ensure personnel, hardware, and connectivity are working properly. After completion of training in 2013, United will be prepared to implement the damage assessment function.

- **What, if anything, should be done to secure the EDO facility after the incident? What should United do with the trash/debris spread for miles around from the office? Should security of documents, data, etc. be of concern?**
  - Until the perimeter fence can be rebuilt (assuming it has been destroyed), United should enlist the services of local law enforcement or a 24 hour security company to protect United's assets on the property. This is prescribed in (Tab 00 of the ERP Document) in the Office/Office Equipment/Inventory section. Staff will make a decision regarding what to do with all undamaged equipment left at the EDO. Safety personnel, along with emergency crews from outside entities, should determine whether or not any existing portion of the building is safe to enter. This assessment will decide if any functionality is left at the site, and/or if all employees must report to Cleburne until further notice.
  - United should focus its efforts and resources on power restoration for the membership rather than cleanup of debris and trash. Systems are in place to identify missing assets, which will be useful for the insurance adjuster in determining losses. The need for reconciling inventory is addressed in the Accounting Issues section of (Tab 00 of the ERP Document).
  - To assess inventory losses, United has the ability to use the iXp as well as Special Equipment reports to identify missing assets. This will be important for insurance purposes. While United has an initiative to digitize all information, there still exists the threat that working files, which may contain sensitive member information, will remain vulnerable. Sensitive employee documents are located in file cabinets in the second floor storage closet. These cabinets carry a security rating that provides adequate confidence in their ability to secure employee information in most scenarios. The severity of this storm has compromised United's ability to safeguard all confidential member and employee information. Therefore, sensitive documents

are no longer secure and contained within the building. Communications personnel will draft and mail a letter to report the damage and the risk of compromised personal information to the membership. United views this as an internal member issue, therefore local and regional media will not be notified of the lost member data in an attempt to minimize the risk of fraudulent activity.

- **What updates are needed to be made to the Emergency Operations Plan as a result of this test?**
  - Create a Server Room Contingency Plan in case of a total loss, even though not mentioned in this scenario
  - Include documentation assigning personnel to secure emergency fencing companies in Tab 15 "Other References" in the ERP
  - Finalize emergency evacuation and take cover plans for all offices, including the posting of maps for each office
  - Create a “boiler plate” document to address potential breach of both member and employee privacy concerns in the event that storm damage has exposed sensitive member and employee information
  - Continue United’s initiative to go paperless with member information and research available options for the efficient digital storage of sensitive HR documents
  - Make annual update to the ERP document to ensure accurate data
  - Currently the damage assessment process is located in two parts of the ERP – Tab 00 and Tab 11
    - Consolidate this information into a single process to be located in one part of the ERP

Emergency Levels and Outage Levels

It is determined by using United's Outage Level Guidelines chart, located in (Tab 4 of the ERP) that the storm has left United with a level 4 outage.

Duties for All Groups

According to Outage Level Guidelines in Tab 4 of the ERP manual, Cameron Smallwood, as 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:

Emergency Response Coordinator – Cameron Smallwood

- Declare Level Four (4) emergency and conduct supervisory team meeting using Business Continuity (Tab 1 of ERP) as an 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, 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
- Communicate with PUC and ERCOT using web update process
- Communicate with FEMA as necessary
- Verify with Operations and Safety departments that safe work hour guidelines are being followed

Operations Group – Ed Nunez

- Utilize qualified personnel to perform a "Fast Survey" of damages per ERP.

  Tab 00 - Main ERP Document, Section - Engineering and Operations # 7

  - 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 Cleburne Back-up dispatch wall map to identify outages and/or work orders and to prioritize outages.
  - Evaluate need of additional repair/restoration crews.
  - Update Emergency Coordinator on extent of storm damage.
- Organize construction effort with available construction personnel, contract coordinator 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
- Reinforce following safe work practices.

Technical Services/ Planning - Jared Wennermark

- Contact environmental spill contractor to prepare for cleanup of large oil spills
- Consider impact and resolution of extended AMR outage due to re-feeds
- Have Technical Services employees prepared for loss of special equipment
- Have Planning employees prepared for assisting with studies for engineering, operations, and dispatch

Engineering (Area) Representatives - Jason Dillard & Denny Adams

- Dispatch/Operations contacts Engineering Supervisor (east and west) and makes them aware of the immediate emergency and need for assistance
- Reps are contacted by Supervisor and dispatched to begin 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 - Marty Haught and Mauri Montgomery

- 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 and social media 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 – Jeff Pannell and Seth Rosser

- Update critical/key members with progress of restoration as soon as possible
- Recommend priority restoration of critical/key accounts as appropriate
- When possible, assist any other department as needed.

Human Resources – Patty Holleman, Debra Ciccarelli, and Kevin Keesee

- Update insurance agent/carrier concerning disaster and maintain updates with agent.
- Work with operations and Safety departments to ensure safe work hours are maintained
- Ensure adequate work force is available to handle all necessary tasks throughout the emergency, including using outside sources if necessary
- Ensure employee message/communication lines are updated and working
- Coordinate with community groups such as Red Cross and United Way should United need these services
- Assist with 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 Partner Damage Assessment module for preparing damage assessments as necessary.
- Create necessary reports for use by other departments.
- Ensure employees with vehicles are available to assist as needed

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, Alen Rogic, and Robert Bernhoft

- Use PC-based Emergency Outage Program (can be used in the field if necessary) that contains current member information if necessary
- 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
- Contact any vendors necessary to ensure proper operations

Fleet Management – Trent Halford & 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 – Russell Young and Paula Cupps

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

- Place supply chain on stand-by and post tentative orders. Supply chain includes TEC, Irby, KBS, Thomasson, Techline, 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.
- Evaluate damage sustained to the warehouse and relocate personnel and supplies as necessary

Member Service Group -Landy Bennett

- Since the outages may last several days, MSRs will have to work on a schedule to allow them to work 24/7 on a rotation that will allow them rest periods as necessary.
- 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 Milsoft OMS. MSRs will focus on unresolved calls as the office managers assign them.
- Dispatch and Member Services 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 contracted personnel.
    - Portable restroom and shower facilities.
    - Portable heating or cooling for the tents.
    - Sleeping cots and bags.
    - Generators to operate electrical needs of the housing areas.

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

Background

It is early afternoon in late August and ERCOT has issued an Energy Emergency Alert (EEA) Level 2, with forecasts of EEA 3 conditions for later in the day due to extreme heat. The Executive Staff is having a meeting at the Eastern District Office (EDO), while the Supervisor Task Force is having a meeting in the Cleburne office. At approximately 2pm in the afternoon, a heavily armed group of domestic terrorists (members of the Earth Liberation Front – ELF) storms the EDO, inflicting heavy casualties among the employees and Executive Staff and taking over the dispatch area. It becomes apparent that the intentions are to inflict terror, gain control of United's distribution facilities and communication networks, and to gain access to the Cooperative's Financial and CIS systems.

Actions Immediately Following the Attack

Safety personnel will work with local law enforcement to secure the EDO and evacuate all employees.

The ability of United to respond to the attack depends on the level of damage and the goals of the terrorist group. The assumption is that they disabled the network between the other offices but left the internet up and running in order to share the information they have stolen with others in their terrorist group. Given this scenario, the IS&T department will quickly log in via VPN and begin shutting down the systems so that no further damage can be done.

The Operations Representative immediately notifies all dispatch personnel of the situation, and begins the process of relocating to the backup control center in Cleburne. In the event that ERCOT declares the statewide grid has reached EEA Level 3, The System Operator will work with Brazos and United's District Foremen to facilitate the required load shed. Engineering Services will contact Brazos to begin re-routing SCADA control to the backup control center in Cleburne. Key Accounts personnel will notify Critical loads/Key Accounts and a news announcement will be developed by the Communications Representative stating that the EDO is closed and to expect interruptions to electrical service as well as United's payment systems. This announcement will be posted on United's Website and Facebook page.

The Emergency Coordinator (Quentin Howard) and the Secondary Coordinator (Jared Wennermark) are among the casualties to the Executive Staff, so the acting Emergency Coordinator is Ed Nunez with Robert Bernhoft serving as the acting Secondary Emergency Coordinator. The acting Emergency Coordinator will call a mandatory emergency meeting at the Cleburne Cooperative headquarters for the Task Force and all necessary 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 are clarified:

- Acting Emergency Coordinator – Ed Nunez
- Acting Secondary Emergency Coordinator – Robert Bernhoft
- IS&T Department Representative – Robert Bernhoft
- Engineering/Tech Services Representative – Cory Menzel
- Operations Representative – Jerry Scott
- Safety Department Representative – David Stone
- Finance and Accounting Representative – Russell Young
- Communications Representative – Jeff Pannell

- Key Accounts Representative – Seth Rosser
- Member Services and Billing Representative – Lisa Bench
- Facilities and Warehouse Representative – Robert Sherman
- Field Engineering Representative – Jason Dillard
- Construction Contractor Representative – Mark Buckner
- Human Resources Representatives – Patty Holleman, Kevin Keesee

The following issues were raised from this emergency and had to be tested. The results are as follows:

- **Does United have proper guidelines and procedures in place for the terrorist action itself (initial response, casualties, leadership transition, etc.)?**

  From a procedural standpoint, United has guidelines in place for responding to emergency/disaster situations. Several deficiencies were discovered as a result of this emergency and will be addressed in this document. Key points of this scenario include:
  - Securing the property is part of the short-term recovery effort as described in the Purchasing and Materials Management section (Tab 00 of the Main ERP Document) and should be implemented after the property has been turned back over to United from law enforcement. Items to cover include perimeter fencing, material and equipment security, and building safety.
  - With the communications being taken over by ELF, United has lost functionality from its SCADA system, AMR, radio, Brazos direct line, and the DA system. United would work with Brazos to re-route communications to the Cleburne tower as quickly as possible following procedures located in Tab 4 of the ERP Document. In the meantime, manual processes would be implemented. For example, meter readings could be downloaded from substations, and hot line tags could be controlled from the substation or the downline devices.
  - Emergency shutdown procedures for Daffron and other systems will need to be developed and placed in Tab 5 of the ERP Document.
  - The Safety Department will need to develop a Safety Guideline for hostile intruder events and place it in Tab 12 of the ERP Document.
  - Accounting will need to develop a document for freezing all cooperative bank accounts and place this document in Tab 1 of the ERP Document.
  - In addition to following the ERP, Policy # 4120 (Privacy and Confidentiality of Member Personal Information) will need to be followed.

- **Does United have proper guidelines and procedures for successfully shifting dispatch to the backup dispatch center and operating at that location without undue issues or delays?**
    - A crucial benefit of the renovation to the Eastern District Office was the creation of a functional backup control center. In this scenario, dispatch cannot function out of the EDO and will need to be relocated back to Cleburne. All hardware and software are in place, and key personnel are aware of the course of action to facilitate this transition. The process and procedures have been documented and the finalized document will be placed in the Outage Management Guidelines located in Tab 4 of the ERP Document.
    - Engineering Services will need to develop, with Brazos, a document describing the process to disable the communications at the EDO while transferring those capabilities to Cleburne. This document will be placed in Tab 4 of the ERP Document.

- **Does United have proper guidelines and procedures for addressing the breach of security involved with unauthorized access to the communications and CIS systems?**
    - The Security Committee has developed the UCS Security Guidelines document, which is updated annually and addresses differing levels of security breaches, including a terrorist attack. This document will need to be placed in Tab 5 of the ERP Document. The IS&T department will develop additional guidelines for securing computer and communications systems.

- **What, if anything, should be done to secure the EDO facility after the incident?**
    - Once law enforcement allows United to re-occupy the facility, the guidelines located in Tab 00 of the ERP Document should be followed.

- **Should security of documents, data, etc. be of concern?**
    - Yes, IS&T and Engineering Services, along with outside vendors and law enforcement, will need to determine the level of security breach and what data/documents were accessed by ELF. Based on these findings, United will refer to the UCS Security Guidelines document and policies for the proper response. United will need to document damages to assets for the sake of insurance claims.
    - While United has an initiative to digitize all information, there still exists the threat that working files, which may contain sensitive member information, will remain vulnerable. Policy # 4120 will be followed regarding the compromise of confidential member information. Sensitive employee documents are located in file cabinets in the second floor storage closet. If the ELF attack has compromised employee confidential information, Communications personnel will notify employees of the risk of compromised personal information.

- **What updates are needed to be made to the Emergency Response Plan as a result of this test?**
  - IS&T will develop emergency shutdown procedures for Daffron and other systems.
  - The Safety Department will need to develop a Safety Guideline for hostile intruder events and provide necessary employee training.
  - Accounting will need to develop a document for freezing all cooperative bank accounts.
  - The process and procedures to shift dispatch from the EDO to Cleburne have been documented and the finalized document needs to be placed in the Outage Management Guidelines located in Tab 4 of the ERP Document.
  - Engineering Services will need to develop, with Brazos, a document describing the process to disable the communications at the EDO while transferring those capabilities to Cleburne.
  - Develop the Emergency Manual System Operation Plan (EMSOP) to identify key areas in the distribution system to position personnel for the manual override of SCADA equipment.
  - The UCS Security Guidelines document will need to be placed in Tab 5 of the ERP Document.
  - Make annual update to the ERP document to ensure accurate data

Duties for All Groups

To best respond to the terrorist attack, communication between all departments will be imperative and all employees should assist with any duties needed for the safe resolution of the scenario. The following employees assume their assigned responsibilities and duties as determined by the UCS Emergency Response Plan:

Emergency Response Coordinator – Ed Nunez

- 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 report to future CEO, CFO and Staff
- Stay in regular contact with Communications Group for updates (to and from)
- Stay in contact with local Law Enforcement and Emergency Management offices as necessary
- Communicate with PUC and ERCOT using web update process, if necessary
- Assess the need to obtain security personnel at each of the remaining offices

IS&T Representative – Robert Bernhoft

- All available IS&T staff will VPN into the EDO and do the following:
- Initiate the LOCKDOWN Procedure on the Power720 that locks out all users from the system and initiates a system shutdown
- Contact the local phone company to initiate emergency routing of the Burleson # to one of the other offices (Cleburne)
- Contact BlackBox to establish the ACD group on the secondary phone server
- Disable all key fobs of employees in the Burleson Office and Executive staff
- Disable Active Directory Profiles of all users in the EDO and Executive staff
- Change Administrator password on BURSVR
- Initiate Remote PC Shutdown utilizing the utility on the BURSVR to all PCs in the EDO
- Manually shutdown servers
- Reconfigure front-end mail server to push all emails to SVLMAIL (for those that were on the mail server in the EDO)
- Follow IS&T Disaster Recovery procedures in Tab 05 of the ERP Document to restore damaged/inaccessible systems

Engineering/Technical Services Representative – Cory Menzel

- Ensure all aspects of the backup Control Center are functioning properly (OMS, IVR, SCADA)
- Consider impact and resolution of extended AMR outage due to terrorist attack
- Have Technical Services employees prepared for loss of special equipment
- Have Planning employees prepared for assisting with studies for engineering, operations, and dispatch
- Notify vendors of current status of emergency
- Create necessary reports for use by other departments

Operations Representative – Jerry Scott

- Tab 00 - Main ERP Document, Section - Engineering and Operations # 7
    - Deploy personnel into standby mode to key areas of the distribution system in accordance with the Emergency Manual System Operation Plan
    - Update Emergency Coordinator on EMSOP progress

Safety Department Representative – David Stone

- Work with law enforcement to coordinate the safety of employees and the facility
- Back-feed safety in the execution of EMSOP must be considered and communicated
- Preparation of crews for dealing with a terrorist attack – should be discussed as part of formal training
- Must maintain the safety culture with internal and external workers

Finance and Accounting Representative – Russell Young

- Implement the process of freezing all cooperative bank accounts
- Work with the Communications Representative to notify employees of the risk that their personal information (bank accounts, SSN, etc) has been compromised

Communications Representative – Jeff Pannell

- Communicate with media, city and county officials and keep them up-to-date
- Communicate with members in areas with specific needs
- Communicate safety to the public during the event (office closure, etc.)
- Utilize website and social media to keep public up-to-date
- Remind employees of guidelines for dealing with media and membership
- Update acting Emergency Response Coordinator with key information

Key Accounts – Seth Rosser

- Update critical/key members on the terrorist attack and the potential for disruption of service
- Once United has regained control of the distribution system, make follow-up phone calls

Member Services and Billing Representative – Lisa Bench

- Reinforce to all MSRs that they are not to provide any details of the terrorist attack and should route all inquiries from the media to the Communications Representative
- Prepare the MSRs to expect a heavy call volume due to the inability to transfer calls to other offices, especially to the EDO
- 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 of the delay

Facilities/Warehouse Representative – Robert Sherman

- Secure and prepare the facility to be re-occupied after law enforcement clears United to return to work at the site
- Redirect material/equipment orders to be delivered to Cleburne instead of the EDO
- Facilitate the relocation of warehouse from the EDO to Cleburne until a decision is made about the future use of the EDO

Field Engineering Representative - Jason Dillard

- The Field Engineering Representative directs his employees to provide any assistance as needed

Construction Contractor Representative – Mark Buckner

- Communicate the situation with contractors and secure commitments for crews to be available as needed

Human Resources – Patty Holleman and Kevin Keesee

- Work in a concerted effort with local law enforcement to help identify and provide emergency contact information for deceased and injured employees
- Update insurance agent and carriers concerning the terrorist attack. Provide assistance as requested to insurance carriers in order to begin processing of potential General Liability and Workers' Compensation claims
- Ensure employee message/communication lines are updated and working
- Coordinate with community groups such as Red Cross and United Way should United employees and/or their families need these services
- Assist with arrangements for counseling services for employees and/or their families
- Implement an employee restoration process in order to fill positions that have been left vacant following the attack
- Notify NRECA of events and complete deceased employee processes
- Assist employees, families and beneficiaries to ensure a successful navigation through NRECA benefits (medical, dental, life insurance, LTD, retirement and 401(k)) and workers compensation issues

Background

A major ice storm effects the southern half of United Cooperative's Service territory during mid-December. Complicating the situation is the fact that several employees are away on vacation, and a few additional employees are unable to work as a result of case of influenza that has spread through the Cooperative's service territory. The area effected by the ice storm is generally located south of Highway 67, and the storm has effected other neighboring Cooperative's as far south as Georgetown. Approximately one inch of ice has accumulated on the distribution lines, and many of the roadways are heavily coated with ice as well.

Operations has a fleet of four wheel drive vehicles and tire chains for most bucket trucks and digger trucks. These trucks have proven useful in maneuvering ice bound roads and some off road trails. United also maintains a list of emergency wrecker and dozer services that can be used in the event that our vehicles get stuck or need assistance in maneuvering through hazardous terrain.

United utilizes lap top computers for line personnel and many office personnel. Employees are encouraged to take home their company laptops in preparation for major weather events. Using a VPN, these laptops can be utilized to conduct and coordinate cooperative business from home if necessary. Laptops allow some of United's office employees to provide support from home in cases of severe weather and/or influenza outbreak.

Issues to be Tested:

1) Does United have proper guidelines and procedures in place to handle the situation described? From a procedural standpoint, United has guidelines in place for responding to emergency/disaster situations. Key points of this scenario include:

   a. Widespread outages south of US Hwy 67
   b. Limited assistance from neighboring cooperatives to the South
   c. Limited mobility
   d. Employee absenteeism

2) Does the Cooperatives Emergency Response Plan address the listed situation in terms of:
   a. Preliminary/advanced identification of imminent weather events
      i. Tab 4- Guidelines for UCS Outage Management United has equipped the dispatch center with monitors and the capability to view weather radar from internet site or weather broadcast from television via CATV. However, there is not a written guideline as to when monitoring radar is to begin, but is a normal, undocumented, practice. Generally, due to the frequency of thunderstorms and the procedure for enabling and disabling Alt Trip settings in our down line electronic reclosers, radars are monitored continually once local media has announced in forecast. A radar is required to be displayed and monitored at all times in dispatch. An additional item will be added to Dispatch checklist to ensure that a radar is displayed at all times.

b. Damage assessment
    i. Tab 11- FEMA provides the damage assessment guidelines along with copies of damage assessment logs for documentation purposes with oversight being assigned to Field Engineering Manager.
    ii. Tab 4- Outage Management Guidelines provides direction as when to switch from repair to damage assessment mode.

c. Acquisition and distribution of materials
    i. Tab 6- Warehouse Purchasing Recovery lays out the guidelines and plan to maintain the ability to receive and distribute materials and equipment for system restoration. Due to consistency in operational procedures of warehousing and purchasing throughout the system, districts affected by such an event should be able to relocate and/or function within a timely manner.

d. Oversight, tracking, and coordination of contractors, and mutual aid assistance
    i. The following Tabs provide documentation for oversight, tracking and coordination of contractors and mutual aid assistance.
        1. Tab 00- Main ERP
        2. Tab 10- Emergency Key Contact info
        3. Tab 7- Emergency RUS Contract
        4. Tab 15- Other References

e. Logistics such as housing, feeding, and equipping mutual aid personnel
    i. The following Tabs provide documentation for oversight of logistics such as housing, feeding, and equipping mutual aid personnel
        1. Tab 00- Main ERP
        2. Tab 10- Emergency key contact info
        3. Tab 15- Other References

f. Coordination, tracking, and documentation of work
    i. United does have the capability to coordinate, track and document work through the current work order process and the Partner Damage Assessment tool.

3) Since the situation described has the potential of qualifying as a FEMA event, are United's processes and procedures appropriately designed to ensure that proper FEMA documentation and reporting will be maintained?
    a. The following Tabs provide documentation for proper FEMA reporting. Since disasters are not declared to be a FEMA event until after the fact, United follows FEMA reporting requirements throughout all disaster events.
        1. Tab 00- Main ERP
        2. Tab 11- FEMA

4) Does United have the proper guidelines and procedures in place to handle an influenza pandemic relative to its effect on employees and member contact?
    - Tab 1 – Business Continuity covers office employees and the need to keep three offices open (Burleson, Cleburne, and Stephenville) in the event of a catastrophe.
    - Tab 12 Disaster Planning Quick Reference covers personal preparation to limit the spread of germs.

5) What updates are needed to be made to the Emergency Response Plan as a result of this test?
    a. NIMS training has been obtained and will be documented in the ERP
    b. Will update immanent weather watch procedures and add to Dispatch checklist
    c. Will add specific language to address pandemic outbreak in the Business Continuity document as well as the Employee Disaster Quick Reference Guide

Date/Time/Location

The preparedness review and test was held at the Cleburne office, on September 30, 2015 beginning at 10:00am.

Invited/Notified

The Emergency Response Plan preparedness test information was filed with the Public Utility Commission. In addition, Mr. Rafael Reyes, the Texas District Coordinator for District 4A of Texas Department of Emergency Management was notified and invited to attend the test.

Attendees

Quentin Howard, Jared Wennermark, Robert Sherman, Jason Dillard, Cory Menzel, Mark Buckner, Jerry Scott, and David Stone.

Background

A major line of super-cell thunderstorms travels across United's entire service territory causing approximately 9,000 outages system wide. Two areas are hit by major tornadoes during the storms. The first tornado effects an area along Hwy 174 between Joshua and Burleson, while the second tornado destroys several poles along Hwy 281 between Stephenville and Morgan Mill and damages Brazos' Wright substation transformer. Preliminary estimates suggest that over 70 three phase poles have been destroyed, along with approximately 2.5 miles of large conductor (#4/0 ACSR and #477 ACSR) throughout the system.

Invited/Notified

The Emergency Response Plan preparedness test information was filed with the Public Utility Commission. In addition, Mr. Rafael Reyes, the Texas District Coordinator for District 4A of Texas Department of Emergency Management was notified and invited to attend the test.

Issues to be Tested:

1) Does United have proper guidelines and procedures in place to handle the situation described? Key points of this scenario include:

a. Key Points
   i. Two major areas affected – North of Stephenville and North Cleburne.
   ii. Over 70 three phase poles were destroyed.
   iii. Tornadoes have a distinctive, destructive quality which renders transformers and materials unavailable for reuse. In addition, tornadoes typically require major clean-up activities prior to re-building infrastructure.
   iv. There is a high probability that environmental clean-up and reporting will be required.
   v. Communications with Brazos will need to be immediate so that they can begin mobilizing their work at Wright.
   vi. Mobility and access will most likely be very limited due to debris.

vii. Coordination with Emergency Management teams and other first responders will be critical.

viii. While the disaster may not be a FEMA event, it will need to be handled as a FEMA event until additional information is available.

ix. Damage assessment and restoration efforts will need to be coordinated.

b. Does United have proper guidelines and procedures in place to handle the situation described?

i. *Two major areas affected* – Yes, United has historically handled multiple damage areas at the same time. Dispatch can be divided as needed, and materials and personnel can be mobilized as required.

ii. *Over 70 three phase poles were destroyed* – Yes, United has historically handled similar damage at PK Lake during the August 2011 fires.

iii. *Tornadoes have a distinctive, destructive quality* – Yes, materials and personnel are available to change out the poles and transformers as required.

iv. *Environmental clean-up and reporting* – Yes, processes are in place to address the reporting and clean-up procedures, as well as the insurance reporting requirements that may be needed. Relationships have been established with environmental contractors with an immediate response availability.

v. *Communications with Brazos* – Yes, regular communications with Brazos occur regularly and their SCADA system will provide them with immediate notification. Protocols are in place to facilitate mobile substation utilization.

vi. *Limited mobility and access* – Yes, the Emergency Response Plan addresses the use of bulldozers and other clearing equipment to assist with access, as well as contact lists for additional contractors to assist as needed. Communications with local and State authorities will also be key to facilitate access to the highways (Highway 281 and Highway 174).

vii. *Coordination with Emergency Management* teams – The Emergency Response Plan details coordination procedures with the emergency management personnel. In addition, the National Incident Management System (NIMS) is specifically designed to facilitate coordination with emergency management and United's Emergency Response Coordinator has participated in NIMS training.

viii. *FEMA Protocols* – Yes, The Emergency Response Plan details FEMA protocols which will be utilized at the beginning of a major disaster. In addition, NIMS training addresses FEMA protocols as well.

ix. *Damage assessment and restoration effort* coordination – Yes, damage assessment and restoration efforts are well established in Tab 11 of the Emergency Response Plan.

2) Does the Cooperative's Emergency Response Plan address the listed situation in terms of:
    a. Preliminary/advanced identification of imminent weather events
    Yes – the process for imminent weather identification is listed in Tab 4 of the Emergency Response Plan.

    b. Damage assessment
    Yes – damage assessment is covered under Tab 11 of the ERP.

    c. Acquisition and distribution of materials
    Yes – material acquisition and distribution is covered under Tab 6 of the ERP.

    d. Oversight, tracking, and coordination of contractors, and mutual aid assistance
    Yes – these items are covered under Tab 7 and Tab 11 of the ERP.

    e. Logistics such as housing, feeding, and equipping mutual aid personnel
    Yes – these items are covered under Tab 15 of the ERP.

    f. Coordination, tracking, and documentation of work
    Yes – the FEMA documentation is covered under Tab 11 of the ERP.

3) Since the situation described has the potential of qualifying as a FEMA event, are United's processes and procedures appropriately designed to ensure that proper FEMA documentation and reporting will be maintained?

    Yes – The FEMA documentation and tracking procedures are covered under Tab 11 of United's Emergency Response Plan, and these procedures are implemented in coordination with United's work order procedures when a major disaster occurs.

4) What updates are needed to be made to the Emergency Response Plan as a result of this test?

    a. Annual updates will be required for each of the affected Tabs of the Emergency Response Plan.

    b. A copy of the Oil Spill Prevention and Clean Up process shall be included on Tab 15 to replace the procedure from previous Emergency Response Plans.

Date/Time/Location

The preparedness review and test was held at the Cleburne office, on October 6, 2016 beginning at 10:00am.

Invited/Notified

The Emergency Response Plan preparedness test information was filed with the Public Utility Commission. In addition, Mr. Rafael Reyes, the Texas District Coordinator for District 4A of Texas Department of Emergency Management was notified and invited to attend the test.

Attendees

Quentin Howard, Jared Wennermark, Ed Nunez, Jerry Scott, Cory Menzel, Robert Bernhoft, Jeff Pannell and Landy Bennett.

Background

On a clear, hot day in June United's G&T experiences an equipment failure in a substation that triggers the de-energizing of a large section of transmission line, affecting seven substations serving United and resulting in over 16,000 meters being without power. Due to sectionalizing constraints and the high level of load because of the high temperature, it takes Brazos approximately 20 minutes to restore the first substation and an additional 10 minutes each to pick up the subsequent substations.

As a result of the initial outage, one of United's automated switching schemes operates incorrectly, leaving breakers open on both feeds into a major commercial district. Exacerbating the problem further, the failure is not recognized or reported for approximately two hours after power is restored to the transmission line and substations.

Throughout the three hour event, the maximum capacity of United's phone system, IVR system, web page, and outage viewer is exceeded from the increased traffic. A relatively smaller number of texts and emails are also received from members pertaining to the situation.

Issues to be Tested:

1) Does United have proper resources, guidelines and procedures in place to handle the situation described?
   a. Key points of this scenario include:
      i. Communications avenues were stretched beyond capacity causing a decrease in performance.
         1. Phone Systems (Incoming Phone Lines, Interactive Voice Response)
         2. Internet and Website (traffic overload)
         3. Interoffice Communications (Phone Switches reached capacity, and communications between offices overloaded)

      ii. SCADA does not recognize transmission outages properly (feeder outages versus substation outages).

      iii. Brazos breaker configuration left a high quantity of meters exposed to one transmission outage.

iv. Internal human resource challenges
    1. Dispatch
    2. Member Service Representatives
    3. Key Accounts
    4. Operations
    5. Technical Services
    6. Engineering Services

v. Procedure to confirm breaker status after the restoration of the transmission outage was critical.

vi. "Cold load pick-up" was a concern.

vii. Reliability on and unfamiliarity with Brazos staffing and procedures for a large transmission outage.

viii. Post outage communications with the Membership issues?

ix. Limited information and capabilities related to the unknown in regard to a transmission outage.
    1. Length of the outages?
    2. Relying on Brazos for restoration.

x. Communications between Brazos and United

b. Does United have proper guidelines and procedures in place to handle the situation described?
    i. Communications avenues were stretched beyond capacity causing a decrease in performance.
        1. Phone Systems (Incoming Phone Lines, Interactive Voice Response)
            a. 138 phone lines and 48 ports on the IVR exist currently. While it is impossible to ever have enough resources to handle an outage this large, there is a concern that United did not have sufficient resources to handle the outage described.
        2. Internet and Website (traffic overload)
            a. Internet traffic was extremely heavy which effected the website, outage viewer and email traffic. There is a concern that United did not have the resource to handle an outage of this size.
        3. Interoffice Communications (Phone Switches reached capacity, and communications between offices overloaded)
            a. Telephone traffic between offices was extremely heavy which effected the website, outage viewer and email traffic. There is a concern that United did not have the resource to handle an outage of this size.

    ii. SCADA does not recognize transmission outages properly (feeder outages versus substation outages).
        1. A solution needs to be developed to address the SCADA recognition of a transmission outage.

iii. Brazos breaker configuration left a high quantity of meters exposed to one transmission outage.
    1. United's procedures are up to date in regard to transmission outages and the ERP; however, a clearer understanding of Brazos' system and standards is needed going forward.

iv. Internal human resource challenges
    1. Dispatch
        a. Yes, United's resources and staffing procedures are adequate for this event.
    2. Member Service Representatives
        a. Yes, United's resources and staffing procedures are adequate for this event.
    3. Key Accounts
        a. Yes, United's resources and staffing procedures are adequate for this event.
    4. Operations
        a. Yes, United's resources and staffing procedures are adequate for this event.
    5. Technical Services
        a. Yes, United's resources and staffing procedures are adequate for this event.
    6. Engineering Services
        a. Yes, United's resources and staffing procedures are adequate for this event.

v. Procedure to confirm breaker status after the restoration of the transmission outage was critical.
    1. Yes, United's procedures are adequate for this event.

vi. "Cold load pick-up" was a concern.
    1. Yes, "Cold load pick-up" is addressed by United's Planning Staff and Brazos.

vii. Reliability on and unfamiliarity with Brazos staffing and procedures for a large transmission outage.
    1. While there is a desire for a better understanding of Brazos staffing and procedures for this type of event, United's ERP is up to date in regard to a large transmission outage.

viii. Post outage communications with the Membership issues?
    1. Yes, United's procedures are in place to handle post outage communications.

ix. Limited information and capabilities related to the unknown in regard to a transmission outage.
    1. Length of the outages?
        a. While there is a desire for a better understanding of Brazos staffing and procedures for this type of event, United's ERP is up to date in regard to a large transmission outage.
    2. Relying on Brazos for restoration.
        a. While there is a desire for a better understanding of Brazos staffing and procedures for this type of event, United's ERP is up to date in regard to a large transmission outage.

x. Communications between Brazos and United
    1. Yes, communications procedures are in place and up to date.

2) Does the Cooperatives Emergency Response Plan address the listed situation?
    i. Communications avenues were stretched beyond capacity causing a decrease in performance.
        1. Phone Systems (Incoming Phone Lines, Interactive Voice Response)
        2. Internet and Website (traffic overload)
        3. Interoffice Communications (Phone Switches reached capacity, and communications between offices overloaded)
            a. Yes – Tab 5 of the ERP covers communications for this situation.

    ii. SCADA does not recognize transmission outages properly (feeder outages versus substation outages).
        1. Yes – Tab 4 of the ERP covers SCADA operations.

    iii. Brazos breaker configuration left a high quantity of meters exposed to one transmission outage.
        1. This item does not apply to United's ERP, but is addressed by Brazos and United's Planning personnel.

    iv. Internal human resource challenges
        1. Dispatch
        2. Member Service Representatives
        3. Key Accounts
        4. Operations
        5. Technical Services
        6. Engineering Services
            a. Yes – Tab 2 of the ERP covers key personnel and staffing.

    v. Procedure to confirm breaker status after the restoration of the transmission outage was critical.
        1. Yes – Tab 4 of the ERP covers outage restoration procedures.

    vi. "Cold load pick-up" was a concern.
        1. This item does not apply to United's ERP, but is addressed by Brazos and United's Planning personnel.

vii. Reliability on and unfamiliarity with Brazos staffing and procedures for a large transmission outage.
    1. This item does not apply to United's ERP, but is addressed by Brazos and United's Planning personnel.

viii. Post outage communications with the Membership issues?
    1. Yes – Tab 4 and Tab 12 covers post outage communications.

ix. Limited information and capabilities related to the unknown in regard to a transmission outage.
    1. Length of the outages?
    2. Relying on Brazos for restoration.
        a. This item does not apply to United's ERP, but is addressed by Brazos and United's Planning personnel.

x. Communications between Brazos and United
    1. Yes – Tab 4 covers Brazos and United communications during an outage event.

3) What updates are needed to be made to the Emergency Response Plan as a result of this test?
   a. Update the SCADA procedures in Tab 4 to reflect item 2-ii above.
   b. Update Tab 5 to address current communications procedures and hardware configurations.
   c. Update Tab 2 to reflect current personnel.
   d. Tab 9 needs to be updated to reflect current employee contact information.
   e. Tab 10 needs to be updated to reflect the current emergency key contact information
   f. Tab 12 needs to be updated to reflect the changes to the ERP.
   g. Remove camera inventory and update Tab 15 due to the implementation of phones with cameras throughout the Cooperative, and changes related to disaster planning for employees (annual update).
   h. Update Tab 11 to reflect use of phones with cameras during the damage assessment process.

4) What updates/modifications to United's resources, processes and procedures are needed as a result of this test?
   a. Implement SCADA recognition of transmission outages referenced in item 2ii above.
   b. Form a committee to review and address communications limitations.
   c. Address additional training on breaker status recognition.

Date/Time/Location

The preparedness review and test was held at the Cleburne office of United Cooperative Services in the Board Room, on October 3, 2017 beginning at 10:00am.

Invited/Notified

The Emergency Response Plan preparedness test information was filed with the Public Utility Commission. In addition, Mr. Brian Brumfield, the Texas District Coordinator for District 4A of Texas Department of Emergency Management was notified and invited to attend the test.

Attendees

Quentin Howard, Ed Nunez, Marty Haught, Robert Bernhoft, Mauri Montgomery, Kevin Keesee, Kade Kincannon, Landy Bennett, and Gynger Gossett.

Background

West Nile Virus outbreak effects 20% of United's employees (either by being sick personally or by having dependents that are infected) in early August as a result of heavy rains in July which caused an extreme spike in the mosquito population in North Texas. Since the outbreak occurs during the summer, the absence of the employees as a result of the West Nile Virus is exacerbated by employees being on scheduled vacations; resulting in major employee shortages in all Departments throughout the Cooperative. Additionally, the outbreak occurs during an unusually hot period across the entire State that ultimately results in multiple ERCOT EEA Level 3 events that occur while the employee group is depleted.

Key Issues:

- West Nile effecting all departments – severe shortage of employees
- Rotating outages resulting in open doors/windows to escape the heat, allowing infected mosquitos greater access to individuals resulting in additional infections
- EEA Level 3 events
- August is the beginning of the budget and evaluation cycle

Issues to be Tested:

1) Does United have proper resources, guidelines and procedures in place to handle the situation described?
    a. Key points of this scenario include:
        i. Vendors/Suppliers potentially effected by West Nile also which could effected United.
            1. Yes – we have relationships with multiple suppliers and are not limited by being a sole source Cooperative.
        ii. Critical and key accounts affected by West Nile and potential loss of Key Accounts Reps.
            1. Yes – we have personnel in other Departments that can fill in as needed to address the effect on Key Accounts.
        iii. Extra sensitive to medical critical accounts during rolling outages.
            1. Yes – these accounts are designated within the iXP System, and these are reviewed semi-annually.
        iv. Extra sensitive to key accounts during rolling outages.
            1. Yes – these accounts are designated within the iXP System, and these are reviewed on an ongoing basis.

v. Extra sensitive to safety/critical infrastructure accounts during rolling outages.
    1. Yes – these accounts are designated within the iXP System, and these are reviewed annually.
vi. Increased contacts related to EEA Level 3 events.
    1. Yes – the systems have been upgraded and the new looped connection is in place. In addition, there is a potential for utilization of CRC to help address this issue – Add language/plan to Tab 1 - Landy.
vii. Handling an EEA Level 3 with potential loss of key personnel that are responsible for planning and implementing rotating outages.
    1. Yes – There are back up personnel in place, and the rotating outage list is regularly updated as part of the Operations and Planning Standards.
viii. Human Resources and potential effects on benefits and budget timing.
    1. Yes – Human Resources will notify NRECA and maintain current status of benefits until the emergency is over.
    2. Yes – The budget process can be delayed and expedited once the emergency is over. Add language/plan to Tab 1 – Kevin K.
ix. Preparedness for the medical effects of West Nile on employees.
    1. Yes – The appropriate resources would be referenced (i.e. CDC, Red Cross, TeleDoc, etc.)
    2. Appropriate recommended steps would be initiated at the Cooperative to limit effects of the virus (dispersing hand sanitizer, use of gloves, masks, etc.)
x. Communications with Membership and Public regarding EEA Level 3 events.
    1. Yes – notices to the news media, on social media, website, radio, etc.
xi. Communications with Membership and Public regarding effects of West Nile on United and the Public.
    1. Yes – notices to the news media, on social media, website, radio, etc.
xii. Effect on PrePower Accounts.
    1. Yes – PrePower auto disconnects will be suspended for the duration of the EEA event.
xiii. Rotating outages potential effects in regard to “cold load” pick up.
    1. Yes – United’s personnel are trained to handle “cold load” pick up situations.
    2. Communications will also be implemented to communicate to the Membership on appropriate procedures to take during an EEA event.
xiv. Potential software and phone system issues.
    1. Yes – upgrades have been completed over the past few years for the phone system and network communications to address this issue.

2) Does the Cooperative’s Emergency Response Plan address the listed situation?
i. Vendors/Suppliers potentially effected by West Nile also which could effected United.
    1. Yes – This is covered under Tab 6 of the Emergency Response Plan.
ii. Critical and key accounts affected by West Nile and potential loss of Key Accounts Reps.
    1. No – A plan to address this should be added to Tab 1.
iii. Extra sensitive to medical critical accounts during rolling outages.
    1. Yes – This is covered under Tab 10 of the Emergency Response Plan.
iv. Extra sensitive to key accounts during rolling outages.
    1. Yes – This is covered under Tab 10 of the Emergency Response Plan.
v. Extra sensitive to safety/critical infrastructure accounts during rolling outages.
    1. Yes – This is covered under Tab 10 of the Emergency Response Plan.

vi. Increased contacts related to EEA Level 3 events.
    1. Yes – This is covered under Tab 5 of the Emergency Response Plan.
vii. Handling an EEA Level 3 with potential loss of key personnel that are responsible for planning and implementing rotating outages.
    1. ??? – Add a section to Tab 13 that covers United's Processes for EEA events?
viii. Human Resources and potential effects on benefits and budget timing.
    1. No – will add language/plan to Tab 1
ix. Preparedness for the medical effects of West Nile on employees.
    1. Yes – This is covered under Tab 12 of the Emergency Response Plan.
x. Communications with Membership and Public regarding EEA Level 3 events.
    1. ??? – Add a section to Tab 13 that covers United's Processes for EEA events?
xi. Communications with Membership and Public regarding effects of West Nile on United and the Public.
    1. ??? – Add a section to Tab 13 that covers United's Processes for EEA events?
xii. Effect on PrePower Accounts.
    1. ??? – Add a section to Tab 13 that covers United's Processes for EEA events?
xiii. Rotating outages potential effects in regard to "cold load" pick up.
    1. ??? – Add a section to Tab 13 that covers United's Processes for EEA events?
xiv. Potential software and phone system issues.
    1. Yes – This is covered under Tab 5 of the Emergency Response Plan.

3) What updates are needed to be made to the Emergency Response Plan as a result of this test?
    a. Update Tab 1 to include:
        1. The potential for utilization of CRC - Landy.
        2. Language/plan for handling potential effects on benefits and budget timing Kevin K.
    b. Update Tab 13 – Add a section that covers United's Processes for EEA events (operations, communications, etc.)
4) What updates/modifications to United's resources, processes and procedures are needed as a result of this test?
    a. Work from home process needs to be developed – Robert Bernhoft
    b. Research utilization of CRC or similar vendors as a resource for call center solutions - Landy.
5) Is this situation addressed in the VRA?
    a. Yes – Pandemics and ERCOT EEA Events are identified in the VRA
6) What updates/modification should be made to United's VRA as a result of this test?
    a. The VRA is up-to-date since it was updated in June 2017. The VRA shall be incorporated into the ERP and reviewed/updated annually as a part of the annual ERP table top exercise.

Other Suggested Changes/Modifications Needed for the 2017 ERP Update:

- Update the Mutual Aid Request Form Letter in the ERP – Tab 0 and Tab 15
- Add Caterer from Valley Mills to list – Tab 10 (from Solar Ground Breaking)
- Emergency Fuel Plan – Agreements/Retainers – Tab 15
- Add the VRA to the ERP and review/update annually – Tab 15
- Review and update the list of those responsible for updating the various Addendum items within the Emergency Response Plan

- Research methods to automate the update to various lists within the Emergency Response plan on a regular basis (monthly) and implement these updates where they are viable. In addition, research ways to store these lists electronically in a manner that they can still be accessed if United's computer systems are compromised.

2018 Emergency Response Plan Exercise

3/9/2018

Date/Time/Location

The preparedness review and test was held at the Stephenville office of United Cooperative Services in the Board Room, on March 9, 2018 beginning at 10:00am.

Invited/Notified

N/A

Attendees

Cameron Smallwood, Marty Haught, Quentin Howard, Ed Nunez, Jerry Scott, Robert Bernhoft, Landy Bennett, Cory Menzel, Blake Beavers, Robert Sherman, Russell Young, Jared Wennermark, Mauri Montgomery, Mark Buckner, and Jason Dillard.

Background

United Cooperative Services experience an ice storm that began on February 21, 2018 with restoration completed on February 26, 2018. The ice storm effected over 9,000 of United's meters at its peak with the majority of the effected meters being located in the northern and western portions of Erath County. This exercise was a review of the ice storm and a discussion on how to improve preparations for similar events in the future.

Key Issues:

- The storm had multiple waves that appeared to be under control within the first 12 hours, but then worsened on day two.
- Damage assessments were not implemented due to the characteristics of the storm.
- Access to the damage was hampered due to weather conditions.
- Fallen trees created access issues.
- Copper and outdated conductors created additional challenges.
- Call volume overwhelmed the ability to get an accurate accounting of the outage extent.
- Logistics (lodging, meals, etc.) and orientation of outside crews was not as stream-lined as it could have been.
- The storm characteristics made determining estimated restoration times difficult/impossible to predict, and errant external communications also occurred as a result.

Issues to be Tested:

1) Does United have proper resources, guidelines and procedures in place to handle the situation described?
    a. Key points of this scenario include:
        i. The storm had multiple waves that appeared to be under control within the first 12 hours, but then worsened on day two.
        ii. Damage assessments were not implemented due to the characteristics of the storm.
        iii. Access to the damage was hampered due to weather conditions.
        iv. Fallen trees created access issues.
        v. Copper and outdated conductors created additional challenges.
        vi. Call volume was large enough and long enough so as to hinder the system's ability to get an accurate accounting of the outage.