in documentation and training necessary to comply with a myriad of new North American Electric Reliability Corporation (NERC) measures.

Technical Services increased by eight (8) employees as a result of MEC and MVEC joining STEC and NERC measures. Five (5) of those added are based at the Pearsall Office and one (1) relay technician and two (2) computer/IT technician positions were added at the Sam Rayburn Headquarters Complex. These were positions needed to fulfill responsibilities of new NERC measures and to help maintain STEC's growing plant. The thirteen (13) employees based at the Donna Office perform Technical Services communications and substation duties.

Transmission and Substation employees increased by ten (10), all of which are based at the Pearsall Office. The increases are a line crew, a right-of-way crew, and an Office & Warehouse Coordinator. These employees are necessary to maintain and operate western assets.

When MVEC and MEC joined STEC, some employees transferred to work directly for STEC to ensure equal services for all Members. For MEC, the transfers were limited to those that worked at the Pearsall Power Plant. The employees that transferred from MVEC included substation and communications technicians and their supervisor.

Q. HOW MANY EMPLOYEES DOES STEC HAVE WHOSE DUTIES ARE NOT TRANSMISSION RELATED?

A. STEC has sixty-nine (69) full-time employees that have no transmission related responsibilities. The Generation Department, Wholesale

Marketing/QSE Department, the Competitive Retailer services personnel, and two (2) distribution engineers do not typically charge any of their time to transmission related accounts or work orders. Only during unusual circumstances such as major storm restoration efforts would any of these employees perform any transmission related work and that would only be by temporary assignment.

Q. DOES STEC UTILIZE OUTSIDE CONTRACTORS FOR TRANSMISSION PROJECTS? IF SO, WHY? WHAT TYPE OF WORK DO THEY PERFORM?

A. Yes. STEC commonly engages contractors to do a variety of work on both transmission and distribution projects. Required schedules for transmission line and substation projects rarely allow the time for in-house personnel to sequentially complete all work. Most of the time STEC has several projects underway but periodically there are times when the work load is very light. Rather than hire, invest in training and risk laying off employees during a workload lull, STEC hires qualified contractors for construction and professional services. When the work load is light, STEC may perform projects with in-house personnel. STEC also contracts support when a function requires rare equipment or special training. For example, STEC does not own an airplane or a helicopter and does not keep licensed pilots and qualified aircraft mechanics on staff for aerial patrol of transmission lines. It is considerably less costly to contract the aircraft for short occasions as necessary.

Outside contractors and consultants perform the following types of work:

- Environmental assessments and routing studies
- Facility construction
- Right-of-way and property clearing and maintenance
- Wood pole groundline inspection and treatment
- Engineering and design
- Surveying
- Property title research
- Land value appraisals
- Right-of-way acquisition
- Patrol aircraft
- Aerial line maintenance
- Aerial photography, photogrammetry or other mapping techniques
- Transformer oil analyses
- Building design
- NERC measure related training
- Environmental health and safety training
- Accounting audits
- Internet, phone, and other communications services
- Waste disposal, handling and hauling
- Wage and salary studies
- Power requirement studies
- Legal representation

VI.

TRANSMISSION OPERATIONS AND MAINTENANCE

Q. PLEASE DESCRIBE THE COMPONENTS OF STEC'S TRANSMISSION O&M EXPENSE FOR 2012?

A. STEC's O&M expense for transmission services for the test year is $14,138,429 as Schedule D-1 indicates. The amount includes costs assigned to FERC 560 through 567: Transmission Operations, FERC 568 through 573: Transmission Maintenance, and a functionalized portion of the Administrative and General (A&G) expenses in FERC 920 through 932 shown by Schedule D-2.

Schedule D-1 also lists the major components of STEC's O&M cost by FERC account number. Costs include those associated to STEC's 24/7 system operations center including related communications and SCADA programming support, right-of-way and overhead line operations and maintenance efforts, vegetation management, station facility maintenance and operations, and supervision of these efforts.

Q. WHAT WERE STEC'S TRANSMISSION O&M EXPENSES FOR 2012 AND THE FOUR PREVIOUS YEARS EXCLUDING A&G?

A. Table 3 shows the costs incurred for operations and for maintenance for the years 2008 through 2012.

Table 3

	2008	2009	2010	2011	2012
Operations	$3,513,395	$3,933,846	$4,693,823	$5,047,792	$5,654,480
Maintenance	$4,138,579	$4,937,565	$5,824,044	$6,328,492	$5,914,964
Total	$7,651,974	$8,871,411	$10,517,867	$11,376,284	$11,569,444

Q. PLEASE EXPLAIN THE INCREASES IN ANNUAL TRANSMISSION O&M COSTS.

A. The increases in transmission O&M are due to the substantial increase in transmission line and substation assets and associated responsibilities related to the MEC and MVEC asset transfers. STEC has, since those asset transfers, constructed the Pearsall and Donna offices for personnel that are involved in transmission and substation duties. The Pearsall office serves as a base for line crew, right-of-way crew, and technical services personnel, all partially involved in transmission related O&M. Filling the Pearsall Office positions began in January 2010. The Donna office was completed in 2011 and the employees based there primarily maintain substations and communications equipment.

Q. TO WHAT EXTENT DID STEC UTILIZE CONTRACTORS IN DIRECT PERFORMANCE OF TRANSMISSION O&M WORK IN 2012?

A. In transmission O&M accounts, contractors supporting transmission O&M in 2012 with equipment and labor were paid $628,205. Major contracted work included transmission line and station energized washing, emergency restoration of failed transmission line and station equipment, repair of SCADA and communications equipment, transmission equipment painting,

right-of-way and transmission station grounds maintenance, and job function training and continuing education presentations.

Q. PLEASE BRIEFLY EXPLAIN STEC'S VEGETATION MANAGEMENT PROGRAM.

A. STEC's vegetation management plan includes methods and cycles for efforts necessary to keep rights-of-way clear enough to allow ingress and egress to transmission line facilities and to maintain clearances between trees and conductors. It includes the minimum vegetation approach distances and the distances targeted in trimming operations. The plan is attached as Exhibit CJA-5.

Q. ARE OUTSIDE CONTRACTORS USED IN VEGETATION MANAGEMENT AND, IF SO, TO WHAT EXTENT?

STEC does utilize contract help in its vegetation management efforts. Contractors that are licensed and experienced in herbicide application are frequently engaged in right-of-way spraying. Airplanes and helicopters are regularly hired by the hour for right-of-way patrol and line inspection. The bulk of STEC's vegetation management work, though, tree trimming, right-of-way mowing, spot spraying, and ground based patrol is performed by in-house personnel. STEC compensated contractors performing vegetation management related duties in its system a total of $146,193 in 2012.

Q. PLEASE DISCUSS THE RIGHT-OF-WAY MAINTENANCE CYCLES OF THE PLAN.

A. STEC's goal is to mow or shred twenty percent (20%) of its rights-of-way annually or, in other words, transmission rights-of-way are mowed every five years. Over time this cycle has proven adequate in providing satisfactory ease of access to STEC's transmission lines in emergency situations and has effectively denied vegetation encroachment upon conductors. The program lists minimum tree trimming distances for one-year and three-year return cycles for each transmission line voltage level and calls for annual patrol of all rights-of-way.

Q. WHAT WERE THE EXPENSES OF STEC'S VEGETATION MANAGEMENT IN THE TEST YEAR AND THE FOUR PREVIOUS YEARS?

A. Table 4 below includes the annual costs of vegetation management.

Table 4

Vegetation Management Costs				
2008	2009	2010	2011	2012
$505,055	$510,279	$574,079	$860,330	$807,229

Q. PLEASE DISCUSS THE INCREASES IN ANNUAL VEGETATION MANAGEMENT COSTS.

A. The increases are due to phasing in STEC employee positions and assuming the right-of-way maintenance responsibilities for the transmission lines previously owned by MEC and MVEC. The process of filling the Pearsall office based positions began in January 2010. Unfortunately, STEC experienced employee turnover in the Pearsall based and Sam Rayburn based right-of-way mowing and tree trimming crews that has had an effect on vegetation maintenance costs into 2012. The asset transfers

and establishment of the equipment and manpower to take care of the transferred facilities caused STEC's vegetation management costs to significantly increase in 2011.

Q. PLEASE DESCRIBE STEC'S TRANSMISSION LINE INSPECTION PRACTICES AND CYCLES.

A. STEC performs annual patrols of all transmission lines. These annual patrols are typically a combination of ground based and aerial to inspect vegetation and transmission line equipment. Other practices and cycles STEC strives for are:

- Ground Line Inspection and Treatment - 10 years

  A 10 year cycle for a comprehensive ground line internal and external wood pole inspection has proven adequate in STEC's areas. Up to two feet of soil around the poles is excavated, the wood is subject to a variety of integrity tests, and fungicide is applied if it is needed. All the poles inspected are wrapped to protect the ground line and extend the life of the pole.

- Ground-Based Patrol - 2 years

  Part of the annual line patrols is by personnel from the ground. STEC's goal is that, if considered separately from aerial patrol, that all transmission lines would be inspected from the ground every two years. The ground-based patrol performs a brief ground line integrity check and a visual inspection of each

structure and its hardware, assesses the surrounding vegetation encroachment, and looks for damaged conductors.

- Climbing Inspection - 10 years

  STEC's line crews target a 10-year cycle of climbing inspection. This function is particularly time consuming for wood pole lines where the job includes checking the integrity of the pole above and below ground level, repairing ground wires, tightening bolts and down guys, repairing woodpecker holes, replacing woodpecker and other bird deterrents, and closely inspecting crossarms, insulators, and conductors. Condemned equipment and poles are scheduled for replacement as soon as is practicable or, if warranted, immediately repaired.

Q. ARE STEC'S O&M EXPENSES REASONABLE?

A. Yes, they are. STEC's O&M expense during the test year is 5.4% of its net transmission plant. The majority of STEC's lines are of wood pole and wood crossarm construction and about 1,200 miles were installed more than 50 years ago. Considering the type, amount and age of its assets, STEC's O&M expenses are reasonable.

VII.

TARIFF

Q. IS STEC PROPOSING CHANGES TO ITS TARIFF?

A. Yes, the proposed tariff, including the WTS and DWS schedules, is attached as Exhibit CJA-6.

Q. WHAT ARE THE COMPONENTS OF STEC'S TARIFF?

A. STEC's proposed tariff has three (3) sections:

Section I. Preliminary Statement

Section II. Rates and Charges

Section III. Rules and Regulations

Q. PLEASE EXPLAIN WHY SECTION I NEEDS TO BE REPLACED.

A. Replacement is required because changes have affected most of the section. The joining of MEC and MVEC as STEC Members affected the Member information, list of Texas Counties, list of STEC offices, and description of the STEC system.

Q. WHAT RATE SCHEDULES ARE INCLUDED IN SECTION II OF STEC'S TARIFF?

A. STEC's tariff includes only two rate schedules, the Wholesale Transmission Service (WTS) rate and the Distribution Level Wholesale Transmission Service (DWS) rate. The WTS applies to all transmission ratepayers and the DWS applies to transmission service customers that are served through STEC facilities that are rated less than 60 kV.

Q. PLEASE DISCUSS THE WTS RATE PROPOSED IN SECTION II.

A. The changes to the WTS schedule include text changes and the increase proposed for STEC's Annual and Monthly access fees. STEC's proposed access fee is $0.722285 per month per kW, an increase of $0.1543 per month per kW. The proposed access fee is shown on Schedule A. A version of the WTS with change indicators is included in Exhibit CJA- 6.

Q. PLEASE DISCUSS THE DWS RATE IN SECTION II.

A. The DWS rate applies to services connected to the ERCOT transmission system through STEC's facilities that are rated less than 60 kV. These are STEC's distribution facilities and are step-down transformers, breakers, reclosers, switches, buswork, controls and other associated equipment located in the STEC substations. STEC does not own any overhead distribution lines that serve wholesale or retail customers.

Each month wholesale service customers pay the DWS rate times the greatest fifteen minute interval peak demand kW measured in the previous 12 months at each delivery point. The DWS is a non-coincident peak (NCP) demand rate.

Q. PLEASE EXPLAIN THE RATE EQUATION IN THE DWS.

A. The DWS rate equation is on Sheet 11. It will be calculated by STEC each year using historical loads and distribution costs. The total distribution rate base on the books will be multiplied by the latest rate of return approved for STEC by the PUC in a TCOS-RFP. This amount plus the annual distribution

expense, less interest expense, will be divided by the average NCP KW-month billing units of the last three years. This is the DWS rate.

The DWS with change indicators is included in Exhibit CJA-6.

Q. WHAT IS THE RESULTING DWS RATE?

A. The DWS rate, using end-of-2012 data as provided by the Schedules of this TCOS-RFP, is $1.26429 per KW per month at each metered delivery point.

Q. PLEASE EXPLAIN WHY SECTION III SHOULD BE REPLACED.

A. The Rules and Regulations part of Section III includes definitions and discussions of several aspects of STEC's service as well as a Service Extension Policy. It has been several years since these were updated and changes are necessary due to the following influences:

- PUC Substantive Rule changes
- ERCOT protocols and guides changes
- ERCOT market changes
- STEC's Member additions
- STEC's rate changes

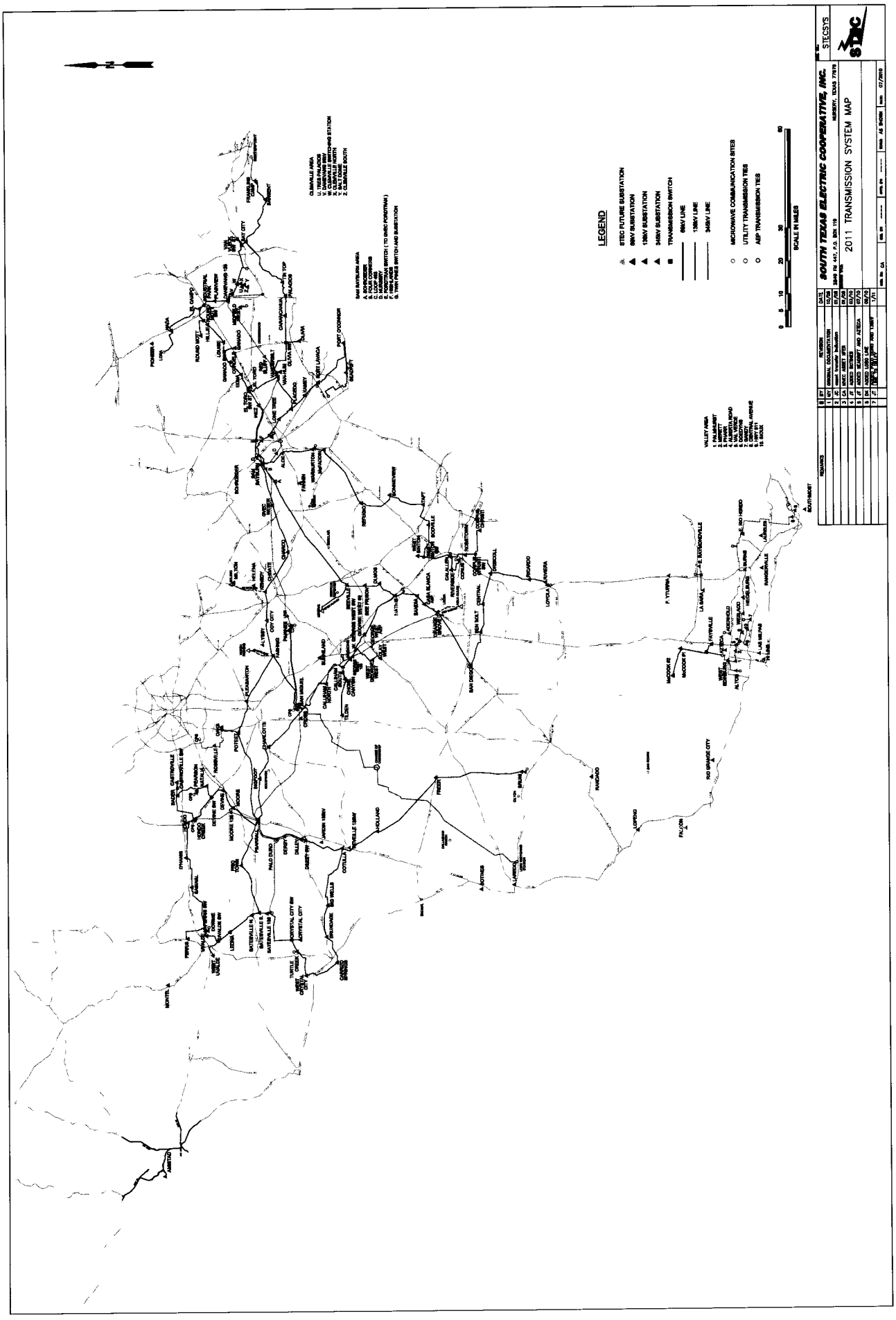
The change indicators applied according to PUC Subst. R. 25.241 would be continuous through Section III so STEC proposes full replacement.

Q. DOES STEC'S BOARD OF DIRECTORS SUPPORT THE PROPOSED TARIFF?

A. Yes. STEC's Board of Directors approved the proposed tariff.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.


LEGEND
STEC FUTURE SUBSTATION
69kV SUBSTATION
138kV SUBSTATION
345kV SUBSTATION
TRANSMISSION SWITCH
69kV LINE
138kV LINE
345kV LINE
MICROWAVE COMMUNICATION SITES
UTILITY TRANSMISSION TIES
AEP TRANSMISSION TIES
SCALE IN MILES
SOUTH TEXAS ELECTRIC COOPERATIVE, INC.
2011 TRANSMISSION SYSTEM MAP
STECSYS

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
5/2010	Hondo Creek 138-remove auto	8072214			(153,975.57)						
5/2010	Hondo Creek 138-install Auto	7072215			1,254,058.66						
5/2010	Pearsall Power Plant expansion	5105055									
5/2010	Lift 69kV for move	7097221									
5/2010	Generation Interconnect Study	7097327									
6/2010	Industrial Park-Remove Regulators	8064061								(41,966.85)	
6/2010	Industrial Park-Install Regulators	7064062								27,381.26	
6/2010	Sam Rayburn-Tower Inspection & Paint	7072227									13,299.22
6/2010	Mobile Sub-Build New Cables	7102016									
6/2010	Danevang 138-Clemville Sw remove Radio	8072153			(12,000.00)						
6/2010	Danevang 138-Clemville Sw install Radio	7072154			36,138.64						
6/2010	Robstown-Remove Existing RTU	8066140									
6/2010	Robstown-Install RTU	7066141								9,522.78	
6/2010	Sam Rayburn-El Toro remove radio	8056102									(26,500.00)
6/2010	Sam Rayburn-El Toro radio	7056103									28,639.20
6/2010	El Campo-Remove Radio	8086106								(3,500.00)	
6/2010	El Campo-Install Radio	7086107								6,191.72	
6/2010	Lenz-Remove Radio to Fashing	8072175									(3,500.00)
6/2010	Lenz-Install Radio to Fashing	7072176									7,651.31
6/2010	Calallen-Remove Radio to Robstown	8076155								(10,413.67)	
6/2010	Calallen-Install radio to Robstown Sub	7076156								30,798.95	
6/2010	El Toro Sw-Remove Radios	8082125			(3,500.00)						
6/2010	El Toro Switch-Install Radios	7082126			10,027.97						
6/2010	San Diego-Remove 3A Control	8042060									
7/2010	Berclair-install Ethernet	7072286									19,063.52
7/2010	Danevang 138-remove radio	8052051			(22,600.19)						
7/2010	Danevang 138-install radio	7052052			28,757.13						
7/2010	San Diego-Install U/F Control	7042061									
7/2010	Loyola-Remove radios	8036106			(43,365.90)						
7/2010	Leona-Remove radios	8036108									
7/2010	Alice Repeater-Remove radios	8036110									(6,140.46)
7/2010	Alice Repeater-install radio	7036111									1,182.13
7/2010	Calallen-Remove radio	8046142								(1,156.88)	
8/2010	Driscoll-Install 3 Regulators	7064025								20,856.02	
9/2010	Carancahua-Correct Inventory	8094045								(9,709.67)	
9/2010	Inez-Install Recloser	7094110								24,649.95	
9/2010	Beeville MW-Remove Radio	8072135								(63,982.40)	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
9/2010	Riviera-Remove 2 F3A	8064042								(11,115.16)	
9/2010	Beeville-remove recloser	8094305								(14,666.30)	
9/2010	Choke Canyon-Remove recloser	8054071									(1,100.00)
9/2010	Choke Canyon-install reg controls	7054072								6,063.84	
9/2010	Refugio-Remove Regulator Controls	8054073								(1,100.00)	
9/2010	Refugio- install reg controls	7054074								8,598.72	
9/2010	Louise-Remove Regulator	8054186								(3,782.68)	
9/2010	Louise-Install 150 AMP Regulator	7054187								4,028.98	
9/2010	San Diego-Remove Reclosers	8084017								(36,956.22)	
9/2010	Danevang 138-Upgrade RTU	7052117			77,275.22						
9/2010	Riverside-Remove Regulators	8104075								(28,068.00)	
10/2010	Burns Substation-install xfmr no. 2	7074349								1,432,922.06	
10/2010	Burns Substation-install xfmr no. 2	7072348								273,575.58	
10/2010	Weslaco-install 15MVA xfmr	7064145								1,356,961.84	
10/2010	Falcon Power Plant-138kV line protection	7072010			240,305.87						
10/2010	Taft-Remove Radio	8076191								(13,890.58)	
10/2010	Taft-install radio	7076192								7,672.16	
10/2010	Pearsall Power Plant expansion	5075035									
11/2010	Vanderbilt 138-install RTU	7104055			9,342.40						
11/2010	20mva mobile-Install Metering & Jacks	7084184								30,835.12	
11/2010	Four Corners-install radio	7076142									14,328.87
11/2010	Fashing-Install Radio Upgrade	7076174								8,132.23	
11/2010	Schroeder - install Recloser Switches	7104026								11,884.41	
11/2010	Highlands - install radio	7076202								7,783.57	
11/2010	Beeville-install comm. to reclosers	7094362								2,483.94	
11/2010	Riviera-Upgrade RTU	7059135								5,435.10	
11/2010	Schroeder-install comm. to reclosers	7096041								1,748.62	
11/2010	Kenedy-install comm. to reclosers	7096042								2,471.56	
12/2010	Azteca-Construct 138/12.47kV sub	7071023								714,471.85	
12/2010	Azteca-Construct 138/12.47kV sub	7072022								520,186.71	
12/2010	Azteca-Construct Substation	7074021								1,823,717.99	
12/2010	Azteca-Construct Scada & Comm.	7076019								20,478.96	
12/2010	Four Corners-Transformer Laydown Yard	7081025								78,271.29	
12/2010	Merett-Install 15MVA xfmr	7084230								1,056,280.52	
12/2010	Merett- install 15MVA xfmr xmsn	7082229								109,634.03	
12/2010	Sam Rayburn 69kV Yard-Snake Prot.	7072336			2,924.07						
12/2010	Seadrift-Construct station common	7051069								615,388.31	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
12/2010	Seadrift-construction station dist	7054070								383,544.98	
12/2010	Seadrift-construction station xmsn	7052068								274,211.36	
12/2010	Seadrift-Install SCADA & Comm	7096049								161,275.48	
12/2010	Southmost-install Scada & Comm.	7076026								118,780.49	
12/2010	Weslaco-Install 15MVA xfmr xmsn	7062144								191,754.18	
1/2011	Highlands-Install New Rtu	7066133								9,794.02	
1/2011	Southmost-Construct Common Equipment	7071027						125,098.88		424,506.19	
1/2011	Mec Devine-Install Fence Grounding	7071396								14,718.83	
1/2011	Mec Big Foot-Install Fence Grounding	7071397								7,150.12	
1/2011	Mec Big Wells-Install Fence Grounding	7071398								24,446.29	
1/2011	Mec Frio Town-Install Fence Grounding	7071399								10,403.74	
1/2011	Southmost-Construct New Substation	7072024								1,590,443.72	
1/2011	Clemville Sw-Upgrade Rtu	7072307									15,089.80
1/2011	Vanderbilt 138-Upgrade Rtu	7072309			51,051.34						
1/2011	Southmost-Construct sub dist	7074025								1,696,558.70	
1/2011	Four Corners-Upgrade Rtu	7081200								15,090.75	
1/2011	Warburton-Install Radio Upgrade	7082122			6,331.52						
1/2011	Mathis-Install Radio Upgrade	7086083								7,411.80	
1/2011	Plainview-Install Radio Upgrade	7086087								8,289.49	
1/2011	Nada-Install Radio Upgrade	7086089								17,918.98	
1/2011	Olmos-Install Radio Upgrade	7086091								8,386.69	
1/2011	S Clemville-Install Radio Upgrade	7086093								8,451.76	
1/2011	N Clemville-Install Radio Upgrade	7086095								8,283.07	
1/2011	S Calliham-Install Radio Upgrade	7086101								8,170.49	
1/2011	Mcfaddin-Install Radio	7086124								8,043.93	
1/2011	Inez-Install Radio Upgrade	7086128								7,973.35	
1/2011	Van Vleck-Install Radio	7086130								8,531.51	
1/2011	Burns-Correcting Transformer	7114015								73,813.97	
1/2011	Highlands-Remove Old Rtu	8066132								(8,913.52)	
1/2011	Clemville Sw-Remove Existing Rtu	8072306									(8,382.16)
1/2011	Vanderbilt 138-Remove Existing Rtu	8072308			(8,000.00)						
1/2011	Four Corners-Remove Rtu	8081199								(8,977.48)	
1/2011	Warburton-Remove Existing Radio	8082121			(10,336.82)						
1/2011	Mathis-Remove Existing Radio	8086082								(5,841.05)	
1/2011	Plainview-Remove Existing Radio	8086086								(8,550.68)	
1/2011	Nada-Remove Existing Radio	8086088								(7,794.27)	
1/2011	Olmos-Remove Radio Upgrade	8086090								(10,390.00)	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
1/2011	S Clemville-Remove Radio	8086092								(5,447.00)	
1/2011	N Clemville-Remove Radio	8086094								(5,447.00)	
1/2011	S Calliham-Remove Existing Radio	8086100								(5,484.48)	
1/2011	Mcfaddin-Remove Existing Radio	8086123								(10,374.48)	
1/2011	Inez-Remove Existing Radio	8086127								(4,477.29)	
1/2011	Van Vleck-Remove Existing Radio	8086129								(4,371.64)	
2/2011	Pharr Sub-Remove 10Mva Transformer	8074342								(65,000.00)	
2/2011	Pharr Sub-Install 25Mva Transformer	7074343								1,100,284.89	
2/2011	Poteet-Install Digital Microwave	7076150								14,989.86	
2/2011	Poteet-Remove Radio	8076149								(9,465.75)	
2/2011	Pleasanton-Remove Radio To Poteet	8076147								(15,305.40)	
2/2011	Pleasanton-install radio	7076148								8,959.49	
2/2011	Robstown-Install radio	7076158								28,487.30	
2/2011	Robstown-Remove Radio	8076157								(13,281.98)	
2/2011	Four Corners-Remove Radio	8076141								(18,311.65)	
2/2011	Sam Rayburn- Upgrade Scada Server	7086207									
2/2011	Burns-Remove Transformer	8104199								(742,066.00)	
2/2011	Install SCADA to MVEC	7096016									41,555.31
2/2011	Saltdome-Construct Sub xmsn	7072376								520,955.38	
2/2011	Saltdome-Construct Substation dist	7074377								1,253,857.21	
2/2011	Saltdome-Construct Sub scada	7076375								63,276.31	
2/2011	Saltdome-Construct Sub common	7071378								904,258.96	
3/2011	Sam Rayburn-Remove Scada Server	8086206									
3/2011	Alton-Remove Transformer	8114066								(65,000.00)	
3/2011	Port Lavaca-remove recloser	8104169								(17,663.63)	
3/2011	Robstown-Retire Bypass Switches	8104035								(1,524.75)	
3/2011	Robstown-Install Bypass Switches	7104036								5,454.69	
3/2011	Charlotte-Retire Switches	8104181								(1,153.62)	
3/2011	Charlotte-Install Switches	7104182								11,575.63	
4/2011	Bonnieview-remove radio	8076195								(9,906.60)	
4/2011	Bonnieview-Radio Upgrade	7076196								12,483.00	
4/2011	Refugio-remove radio	8076193								(7,187.31)	
4/2011	Refugio-Radio Upgrade	7076194								6,683.29	
4/2011	Sodville-remove radio	8076189								(6,445.08)	
4/2011	Sodville-Radio Upgrade	7076190								7,457.70	
4/2011	West Sinton-remove radio	8076185								(5,000.00)	
4/2011	West Sinton-Radio Upgrade	7076186								6,554.37	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
4/2011	Central To Driscoll-remove radio	8076183								(8,579.42)	
4/2011	Central To Driscoll-Radio Upgrade	7076184								6,395.60	
4/2011	Driscoll-remove radio	8076181								(6,611.86)	
4/2011	Driscoll-Radio Upgrade	7076182								6,977.80	
4/2011	Corpus Christi-remove radio	8076199								(10,703.91)	
4/2011	Corpus Christi-Radio Upgrade	7076200								6,687.57	
4/2011	Highlands-remove radio	8076201								(14,022.23)	
4/2011	West Sinton Sw-remove radio	8072187									(6,304.62)
4/2011	West Sinton Sw-Radio Upgrade To Sodville	7072188									11,975.93
4/2011	W George West-remove radio	8076177								(7,691.47)	
4/2011	W George West-Radio Upgrade	7076178								6,829.31	
4/2011	George West 138-remove radio	8072179			(5,000.00)						
4/2011	George West 138-Radio Upgrade	7072180			7,038.55						
4/2011	Corpus Christi Sw-Remove Radio	8072197									(5,794.47)
4/2011	Schroeder-remove radio	8076203								(5,000.00)	
4/2011	Schroeder-Radio Upgrade	7076204								6,369.88	
4/2011	Sam Rayburn remove radio	8076205		(8,380.40)							(5,316.20)
4/2011	Sam Rayburn-Radio Upgrade	7076206									12,024.25
4/2011	Mec Batesville-PM Ocbs	7072207									
4/2011	Vandervilt 138-Tower Inspections	7072228									
4/2011	Danevang 138-Tower Inspections	7072229									
4/2011	Beeville Mw-Tower Inspections	7072230									
4/2011	Goliad Mw-Tower Inspections	7072339									
4/2011	Nursery-Remove Reclosers	8074244								(17,427.30)	
4/2011	Nursery-F6 Recloser	7074245								77,844.64	
4/2011	Beeville-Install 4 Reclosers	7074247								77,515.01	
4/2011	Beeville-Remove Reclosers	8074246								(4,400.00)	
4/2011	North Calliham-remove Recloser	8074263									
4/2011	North Calliham-Install Recloser	7074264									
4/2011	Corpus Christi Sw-Install Radio	7072198									12,352.32
4/2011	Burns - install xfmr dist	7074349								1,601.20	
4/2011	Danevang 69-Remove Radios	8086137								(11,136.86)	
4/2011	Danevang 69-Install Radios	7086138								8,021.57	
4/2011	San Miguel Mw-remove radio	8082139								(8,768.73)	
4/2011	San Miguel Mw-Radio Upgrade	7082140								5,593.31	
4/2011	San Miguel-Remove Radio	7082142								7,251.29	
4/2011	San Miguel-Radio Upgrade	8082141								(8,768.73)	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
4/2011	Stec-Remove 138Kv Poles	8092001				(69,870.43)					
4/2011	Stec-Install Poles 138Kv	7092002				28,648.80					
4/2011	North Calliham-Install Recloser	7092005									
4/2011	construct Palmhurst To Merett line	7092015	6,804.16			917,846.26	858,235.08				
5/2011	Verdi -Construct Substation	7041058						13,756.00			
5/2011	Tin Top-Install Reclosers	7084045								93,192.53	
5/2011	Plainview-Install Bypass Switches	7084198								16,305.01	
5/2011	Stec-install wood poles	7092004				826,863.11	85,685.61				
5/2011	Clemville North-Install Recloser Control	7094051								1,012.23	
5/2011	Placedo - Install RXE	7104079								28,810.98	
5/2011	Poteet - Install Recloser Switches	7104102								26,334.16	
5/2011	Port Lavaca -Install Ethernet	7104139								2,569.47	
5/2011	Olmos - Install Ethernet	7104153								1,184.34	
5/2011	Olmos-Remove Reclosers	8084044								(68,765.58)	
5/2011	Plainview -Retire EG-1 Switches	8084197								(2,395.53)	
5/2011	Stec-Pole Replacement	8092003				(529,324.39)	(62,462.10)				
5/2011	Poteet-Retire EG-1 Switches	8104101								(3,165.29)	
5/2011	Stec-Bcc Software Configuration	5085040									11,758.95
6/2011	Beeville-Install MJ-XL Controls	7054065								10,458.74	
6/2011	Coy City-Install MJ-XL Controls	7054075								6,057.36	
6/2011	Mathis-Install Mj-Xl Controls	7054078								15,911.10	
6/2011	West Sinton Sw-Sodville, Static Wire	7062087					79,651.35				
6/2011	Franklin'S Camp-Install F6 Controls	7064037								21,942.03	
6/2011	Highlands West-Install reg Controls	7064049								7,172.57	
6/2011	Riviera-Install Regulator Controls	7064053								5,100.00	
6/2011	Agua Dulce-Replace Regulators	7064082								10,304.50	
6/2011	Dilley 69-Install Fence	7071211								17,964.87	
6/2011	Goldfinch-Install Radio Upgrade	7072160									123,651.06
6/2011	San Miguel-Install Radio To Goldfinch	7072162									48,278.68
6/2011	Pearsall-Radio Upgrade To Goldfinch	7072164									55,570.72
6/2011	Greta-Install Metering Equipment	7072259								8,825.09	
6/2011	El Toro Sw-Upgrade Antenna Tower	7072332									71,051.49
6/2011	Hondo-Install Capacitors	7072335								3,011.79	
6/2011	Riverside-Upgrade Transmission	7072362								50,305.32	
6/2011	Ricardo-Metering Pt-Ct	7072369								51,680.87	
6/2011	Downie-Install Capacitor Bank	7072379			43,568.00						
6/2011	Rossville-Install Load Profile Cards	7074248								3,549.56	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
6/2011	D'Hanis-Install U/V Relaying	7074310								15,413.81	
6/2011	Sabinal-Install U/V Relaying	7074311								14,629.41	
6/2011	Crystal City-Install U/V Relaying	7074312								1,888.79	
6/2011	Pearsall-Install U/V Relaying	7074313								548.58	
6/2011	Derby-Install U/V Relaying	7074314								503.80	
6/2011	Frio-Install U/V Relaying	7074315								1,036.39	
6/2011	Castroville-Capacitor Bank relay	7074316								21,278.53	
6/2011	Dilley-Install U/V Relaying	7074326								2,031.98	
6/2011	Natalia-Install U/V Relaying	7074327								13,904.19	
6/2011	Moore-Install U/V Relaying	7074328								13,425.66	
6/2011	Devine-Install U/V Relaying	7074329								9,850.65	
6/2011	Randado-Install U/V Relaying	7074330								2,630.46	
6/2011	Big Foot-Install U/V Relaying	7074331								43,443.78	
6/2011	West Sinton-Replace Regulators	7074341								5,700.64	
6/2011	Bader-Install 3 Cts	7074360								4,039.28	
6/2011	Castroville-Install Transformer	7074371								848,189.93	
6/2011	Oaks 69-Install Transformer	7074373								847,695.94	
6/2011	Bee Prison-Install Regulator	7074401								11,137.19	
6/2011	Oaks 138-Install Grounding	7082120			3,977.42						
6/2011	Palacios-Install Bypass Switches	7084016								5,900.66	
6/2011	Coy City-Install Recloser	7084033								21,066.15	
6/2011	Louise-Install Recloser Control F6	7084040								636.83	
6/2011	Ferris-Install Recloser Controls	7084053								17,992.15	
6/2011	Uvalde-Recloser Controls	7084055								17,537.65	
6/2011	Leona-Install Recloser Controls	7084057								12,134.02	
6/2011	N Batesville-Install Recloser Controls	7084059								23,461.84	
6/2011	Cotulla-Install Recloser Controls	7084061								18,420.41	
6/2011	Freer-Install Recloser Controls	7084063								12,434.73	
6/2011	Laredo-Install Recloser Controls	7084065								8,217.09	
6/2011	Bruni-Install Recloser Controls	7084067								9,558.18	
6/2011	Lopeno-Install Recloser Controls	7084069								11,609.01	
6/2011	Rio Grande City-Install Recl Controls	7084071								9,813.42	
6/2011	Holland-Install Recloser Controls	7084078								13,551.20	
6/2011	Mineral-Replace Regulators	7084081								9,127.03	
6/2011	S Batesville-Install Recloser Controls	7084114								18,097.27	
6/2011	Round Mott-Install Regulators	7084147								15,878.74	
6/2011	Poteet-Replace Recloser	7084190								60,482.94	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
6/2011	Highlands-Install Regulators	7084212								140,576.90	
6/2011	George West 69-Install Radio	7086097								12,750.83	
6/2011	Stec- install 138Kv Poles	7102002				8,907.03	2,358.57				
6/2011	Stec- install 69Kv Poles	7102004				340,300.74	70,588.92				
6/2011	Crossroads-Remove radio	8052106								(108,536.69)	
6/2011	Beeville-Remove Regulator Controls	8054064								(1,100.00)	
6/2011	Coy City-Remove Regualtor Controls	8054074								(1,100.00)	
6/2011	Mathis-Remove Regulator Controls	8054077								(1,100.00)	
6/2011	Louise-Remove Analog Equipment	8056049								(25,402.55)	
6/2011	Riviera-Remove Rtu	8059134								(17,570.00)	
6/2011	West Sinton Sw To Sodville-Static Wire	8062090					(57,008.40)				
6/2011	Highlands-Remove Regulator Controls	8064048								(3,000.00)	
6/2011	Riviera-Remove Regulator Controls	8064052								(3,000.00)	
6/2011	Agua Dulce-Regulators	8064081								(8,297.03)	
6/2011	Goldfinch-Remove Radio	8072159									(4,863.55)
6/2011	San Miguel-Remove Radio	8072161									(496.22)
6/2011	Pearsall-Remove Existing Radio	8072163								(1,131.00)	
6/2011	West Sinton-Replace Regulators	8074340								(7,380.44)	
6/2011	Bader-Remove 3 Cts	8074359								(3,100.23)	
6/2011	Castroville-Rem Old Transformer	8074370								(268,649.18)	
6/2011	Oaks 69-Remove Transformer	8074372								(83,727.13)	
6/2011	Bee Prison-Remove Regulator	8074400								(11,992.44)	
6/2011	Palacios-Retire Bypass Switches	8084015								(527.50)	
6/2011	Coy City-Remove WVWE Recloser	8084048								(21,066.15)	
6/2011	Ferris-Remove Recloser Controls	8084052								(1,100.00)	
6/2011	Uvalde-Change Recloser Controls	8084054								(1,100.00)	
6/2011	Leona-Remove Recloser Controls	8084056								(733.00)	
6/2011	N Batesville-Remove Recloser Controls	8084058								(1,100.00)	
6/2011	Cotulla-Remove Recloser Controls	8084060								(1,100.00)	
6/2011	Freer-Remove Recloser Controls	8084062								(1,100.00)	
6/2011	Laredo-Remove Recloser Controls	8084064								(733.00)	
6/2011	Bruni-Rem Recloser Controls	8084066								(733.00)	
6/2011	Lopeno-Remove Recloser Controls	8084068								(733.00)	
6/2011	Rio Grande City-Remove Recl.Controls	8084070								(733.00)	
6/2011	Uvalde-Remove Recloser Controls	8084077								(733.33)	
6/2011	Mineral-Replace Regulators	8084080								(6,939.83)	
6/2011	S Batesville-Remove Recloser Controls	8084113								(1,100.00)	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
6/2011	Round Mott-Remove Regulators	8084146								(14,060.58)	
6/2011	Highlands-Remove Regulators	8084211								(32,348.03)	
6/2011	Aloe-Remove Bypass Switches	8084231								(576.04)	
6/2011	George West 69-Remove Radio	8086096								(8,806.43)	
6/2011	Stec-138Kv Poles	8102001				(1,317.70)	(1,969.09)				
6/2011	Stec-69Kv Poles	8102003				(71,797.81)	(6,373.52)				
7/2011	Botines-Construct Sub Common	7061069								576,825.26	
7/2011	Botines-Construct Sub Transmission	7062068			20,408.14	281,118.63	38,794.93			560,774.09	
7/2011	Botines-Construct Sub Distribution	7064067					6,222.12			1,003,532.06	
7/2011	Botines-Construct Sub Communications	7066066								71,768.89	
7/2011	Sodville To Taft-Install Static	7072172					27,905.22				
7/2011	Sodville To Taft-Install Insulators	7072225					33,692.48				
7/2011	Taft To Bonnieview-Install Insulators	7072258					43,882.35				
7/2011	Taft To Bonnieview-Static Wire	7072272					61,101.82				
7/2011	Install xmsn line xarm & hardware	7072303				192,167.15	26,553.28				
7/2011	Bonnieview To Refugio - Install Static	7072319					67,732.75				
7/2011	Beeville-Install 69Kv Capacitor Bank	7072380								159,280.46	
7/2011	Freer-Install Tdsp Meter	7077267								7,605.60	
7/2011	Leona-Install Tdsp Meter	7077269								6,992.85	
7/2011	Devine-install ground relay	7079262								2,397.63	
7/2011	Bonnieview-Install Motor Operators	7082072								21,017.38	
7/2011	Charco-Install Motor Operators	7082073								20,806.52	
7/2011	George West-Install Motor Operators	7082074								27,352.36	
7/2011	Central-Install Motor Operators	7082075								35,846.86	
7/2011	Hondo Creek-Install comm.	7082165			24,216.12						
7/2011	Moore-Install comm.	7082166			23,195.65						
7/2011	Vanderbilt 138-Install comm.	7082169			28,276.94						
7/2011	San Miguel-Install comm.	7082171			17,693.99						
7/2011	Refugio To McFaddin-Static Wire	7082186					125,363.84				
7/2011	Ricardo-Install Recloser	7084018								24,233.66	
7/2011	Danevang-Add Transformer	7084194								78,806.36	
7/2011	Bay City-Install Regulators	7084214								71,735.45	
7/2011	Charlotte-Install Regulators	7084216								74,571.40	
7/2011	Aloe-Install Controls	7084221								46,889.44	
7/2011	Twin Pines-Install Regulator	7084234								9,836.19	
7/2011	Four Corners-Install Reclosure	7084238									
7/2011	Red Bluff-Install comm.	7086175								27,378.47	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
7/2011	Four Corners-Install comm.	7086177								24,866.60	
7/2011	Lopeno Repeater-Install radios	7086217									21,040.09
7/2011	Crossroads-Install Scada to JEC	7087196									21,990.29
7/2011	Central-Install Regulator	7094071								5,582.74	
7/2011	Beeville-Install Regulators	7094076								46,503.96	
7/2011	Beeville-Install 3 New Pts	7094078								21,695.96	
7/2011	N Calliham-Install Regulator	7094103								3,499.98	
7/2011	Bonnieview-Upgrade Regulator Controls	7094239								5,041.16	
7/2011	Corpus Christi-Install Regulator	7094343								14,079.02	
7/2011	Driscoll-Install Regulator	7094353								14,335.80	
7/2011	Fannin-Install Regulator	7104138								13,071.98	
7/2011	Placedo-Install Recloser	7114078								7,922.02	
7/2011	El Campo-Install Pts	7114137								20,074.74	
7/2011	Charlotte-Install Recloser	7114146								9,697.88	
7/2011	Bonnieview-Install Regulator	7114163								4,009.54	
7/2011	Sodville To Taft-Remove Static	8072171					(81,051.52)				
7/2011	Taft To Bonnieview-Remove Static	8072271					(106,239.36)				
7/2011	remove 69kV xarm & hardware	8072302				(155,865.86)	(114.01)				
7/2011	Bonnieview To Refugio-Remove Static	8072318					(49,365.92)				
7/2011	Freer-Remove Existing Meter	8077266								(5,850.00)	
7/2011	Leona-Remove Existing Meter	8077268								(4,936.60)	
7/2011	Refugio To McFaddin-Remove Static	8082185					(30,929.40)				
7/2011	Danevang-Remove Fuses	8084193								(2,097.82)	
7/2011	Bay City-Remove Regulator	8084213								(17,656.53)	
7/2011	Charlotte-Remove Regulator	8084215								(11,454.19)	
7/2011	Twin Pines-Remove Regulator	8084233								(3,290.29)	
7/2011	Corpus Christi-Remove Regulator	8084342								(6,330.91)	
7/2011	Central-Remove Regulator	8094070								(8,103.01)	
7/2011	Beeville-Remove Regulators	8094075								(35,828.74)	
7/2011	Beeville-Remove Rusted Pt	8094077								(14,526.19)	
7/2011	N Calliham-Remove Regulator	8094102								(2,157.35)	
7/2011	Driscoll-Remove Regulator	8094352								(19,740.46)	
7/2011	Fannin-Remove Regulator	8104137								(10,511.55)	
7/2011	Beeville-Remove Recloser	8104191								(41,979.85)	
7/2011	Danevang-Remove Regulator	8114077								(7,518.90)	
7/2011	Fashing-Remove Regulators	8114100								(23,285.16)	
7/2011	Kenedy-Remove Regulators	8114102								(16,125.16)	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
7/2011	El Campo-Remove Pts	8114136								(10,849.39)	
7/2011	Bonnieview-Remove Regulator	8114162								(7,205.29)	
8/2011	Freer-Install Transformer	7074213			1,375.95					8,822.71	
8/2011	Nada-Install Reclosers	7074254								37,733.83	
8/2011	Highlands-Install Reclosers	7074256								38,357.85	
8/2011	Mathis To Orange Grove-Install Insulators	7082255				8,598.48	48,724.69				
8/2011	Fannin-Install Recloser	7084039								25,579.77	
8/2011	Riverside-Install Recloser, Controls	7084041								76,246.24	
8/2011	Loyola-Install Reclosers	7084145								77,995.83	
8/2011	Placedo-Install Controls	7084219								15,869.19	
8/2011	Twin Pines -Install Poles	7087236									
8/2011	Nursery-Install Recloser	7094048								16,128.82	
8/2011	Ganado-Install Regulator	7094087								12,499.23	
8/2011	Tilden -Install Regulator	7094089								12,119.88	
8/2011	Beeville-Install Recloser	7094095								13,870.61	
8/2011	West Sinton-Install Regulator	7094101								3,892.46	
8/2011	Four Corners-install Recloser Controls	7094108								84,869.93	
8/2011	Tilden-Install Regulator	7094307								15,199.80	
8/2011	Ricardo-Install Regulator	7094333								16,833.93	
8/2011	Port Lavaca-Isntall Regulator	7104040								10,269.10	
8/2011	Poc-Install Regulators	7104050								31,589.11	
8/2011	Kenedy-Install Recloser	7104066								21,704.09	
8/2011	Olmos-Install Regulators	7104113								29,674.81	
8/2011	Twin Pines-Install Regulators	7104164								20,729.74	
8/2011	Beeville-Installr Reclosers	7104192								85,003.52	
8/2011	Pleasanton-Install Regulator	7104194								12,028.50	
8/2011	Simmons-Install Regulators	7114048								20,255.66	
8/2011	POC To Dow-69kV line	7992087	475,361.79			5,190,329.09	2,255,199.26				
8/2011	PO'C-install xmsn station	7992089								427,075.37	
8/2011	Freer-Remove Transformer	8074212								43.40	
8/2011	Nada-Remove Recloser Controls	8074253								(2,200.00)	
8/2011	Highlands-Remove Recloser	8074255								(2,200.00)	
8/2011	Mathis To Orange Grove	8082254				(1,182.83)	(15,954.84)				
8/2011	Fannin-Remove Controls	8084038								(2,200.00)	
8/2011	Loyola-Remove Reclosers	8084144								(871.62)	
8/2011	Placedo-Remove Controls	8084218								(1,100.00)	
8/2011	Twin Pines-Remove 2 Poles	8087235				(2,657.70)					

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
8/2011	Nursery-Remove Recloser	8094047								(18,409.58)	
8/2011	Riverside-Remove Recloser	8094085								(44,712.53)	
8/2011	Ganado-Remove Regulators	8094086								(13,406.27)	
8/2011	Beeville-Remove Reclsoer	8094094								(13,870.61)	
8/2011	West Sinton-Remove Regulator	8094100								(7,781.43)	
8/2011	Ganado-Remove Regulators	8094301								(4,477.56)	
8/2011	Tilden-Remove Regulator	8094306								(45,146.38)	
8/2011	Ricardo-Remove Regulator	8094332								(27,972.62)	
8/2011	Port Lavaca-Remove Regulator	8104039								(9,428.13)	
8/2011	Poc-Remove Regulators	8104049								(99,731.40)	
8/2011	Kenedy-Remove Recloser	8104065								(29,204.78)	
8/2011	Twin Pines-Remove Reclosers	8104108								(27,699.86)	
8/2011	Kenedy-Remove Recloser	8104110								(19,366.66)	
8/2011	Olmos-Remove Regulators	8104112								(32,530.41)	
8/2011	Four Corners-Remove Reclosers	8104130								(60,123.79)	
8/2011	Twin Pines-Remove Regulator	8104163								(16,416.76)	
8/2011	Pleasanton-Remove Regulator	8104193								(22,830.07)	
8/2011	Simmons-Remove Regulator	8114047								(7,418.05)	
8/2011	Poc-Remove 69Kv Structure	8992088								(59,234.01)	
9/2011	San Miguel To Pawnee 138Kv Line	7032132	54,993.28			2,065,691.93	797,599.28				
9/2011	Clemville Switch-Install Arrestors	7072282			7,034.09						
9/2011	Batesville-install 7.5 xfmr	7074261								234,551.92	
9/2011	Vanderbilt 138-Install cameras	7082026			14,191.64						
9/2011	Warburton-Install cameras	7082028			13,723.09						
9/2011	George West 138- Install cameras	7082030			11,768.57						
9/2011	Pawnee-Install cameras	7082031			7,319.96						
9/2011	Pearsall 138-Install comm.	7082167			8,634.89						
9/2011	Warburton -Install cameras	7082168			42,433.43						
9/2011	San Migu 345-Install comm	7082170			49,178.44						
9/2011	Pawnee-Install cameras	7082173			38,213.56						
9/2011	Danevang 138-cameras	7082174			31,141.45						
9/2011	Mathis To Georgewest-69kV Insulators	7082202				16,292.71	25,691.23				
9/2011	Mcfaddin To Aloe-Install static	7082226					53,540.86				
9/2011	Loop 463-Install cameras	7086176								52,936.11	
9/2011	Sam Rayburn-Network Security	7086178									562,826.12
9/2011	Pearsall Pp-Network Security	7086179									39,382.18
9/2011	Bay City-Install Arrestors	7092052								6,894.95	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
9/2011	El Campo-Install Arrestors	7092056								7,205.78	
9/2011	Highlands-Install Arrestors	7092057								4,495.60	
9/2011	Louise-Install Arrestors	7092059								3,952.10	
9/2011	Pleasanton-Install Arrestors	7092061								7,794.88	
9/2011	Robstown-Install Arrestors	7092063								2,991.91	
9/2011	Sargent-Install Arrestors	7092065								5,917.05	
9/2011	Sodville-Install Arresors	7092067								5,148.02	
9/2011	Kenedy-Install Arrestors	7092069								4,529.44	
9/2011	Refugio-Install Transformers	7092320								35,305.35	
9/2011	Beeville-Install Arrestors	7092354								11,186.47	
9/2011	Port Lavaca-Install Arrestors	7092355								8,613.88	
9/2011	Placedo-Install Arrestors	7092356								3,892.58	
9/2011	Olmos-Install Arrestors	7092357								4,928.37	
9/2011	Refugio-Install Arrestors	7092358								2,617.17	
9/2011	Orange Grove-Install feeder	7094068								64,884.74	
9/2011	Franklin'S Camp-repair auto	7102131			246,189.93						
9/2011	Kenedy-Install Bypass Switches	7104018								16,391.91	
9/2011	Ferris-Install 10Mva Transformer	7104198								307,299.41	
9/2011	Fashing-Install Regulators	7114101								60,126.16	
9/2011	Kenedy-Install 2:1 auto	7114103								86,606.07	
9/2011	Simmons-Install Transformer	7114046								65,992.82	
9/2011	San Miguel To Pawnee remove 138kV line	8032131				(214,118.87)	(748,816.04)				
9/2011	N Batesville-Remove Transformer	8074260								(132,906.75)	
9/2011	Mathis To Georgewest-Remove Insulators	8082201				(5,375.62)	(21,444.42)				
9/2011	Mcfaddin To Aloe-remove Static	8082225					(2,245.10)				
9/2011	Palmhurst-Remove Conductor	8092014				(154,680.00)	(92,600.00)				
9/2011	Refugio-Replace Transformers	8092319								(30,569.26)	
9/2011	Tilden - Remove Regulator	8094088								(7,820.00)	
9/2011	Kenedy-Retire Bypass Switches	8104017								(928.65)	
9/2011	Driscoll-Remove Recloser	8104057								(10,689.24)	
9/2011	Ferris-Remove Transformer	8104197								(56,059.46)	
9/2011	Central Underbuild-Remove 2 Poles	8107008				(1,231.06)					
9/2011	Simmons-remove xfmr	8114045								(17,652.68)	
10/2011	14MVA mobile	7074233								1,354,580.05	
10/2011	Loyola-Install cameras	7081029								17,946.05	
10/2011	George West 138-Install Radio	7082111			11,912.67						28,120.12
10/2011	Batesville 138-Uhf Install	7082241			20,709.07						28,248.81

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
10/2011	Dilley Mw-Install Uhf	7082243									24,797.34
10/2011	Callaghan Ranch-Uhf Install	7082244									30,242.28
10/2011	Holland-Uhf Install	7082248									26,950.18
10/2011	Oilton -Uhf Install	7082250									30,793.07
10/2011	San Ramon-Uhf Install	7082253									27,215.48
10/2011	Uvalde Mw-Uhf Install	7086240									
10/2011	Hondo Office-Uhf Install	7086242									28,432.99
10/2011	Crystal City-Uhf Install	7086245			20,429.10						28,674.67
10/2011	D'Hanis-Uhf Install	7086246									27,245.10
10/2011	Randado-Uhf Install	7086251									
10/2011	Rgc-Uhf Install	7086252									26,609.96
10/2011	San Miguel Mine-Install xmsn line gates	7087163									31,954.90
10/2011	Dilley Mw-install radio	7092311									25,287.26
10/2011	Holland Mw-install radio	7092312									
10/2011	Callaghan Ranch install radio	7092313									
10/2011	Four Corners-Install Radio	7096020								34,718.74	
10/2011	Clemville-Install Scada	7096040								16,344.06	
10/2011	Poc-Scada & Communications	7096050								48,027.02	
10/2011	El Toro-Install Radio Upgrade	7096252								7,871.98	
10/2011	El Toro Switch-Install Existing Radio	7096254			5,322.70						
10/2011	Placedo-Install Radio Upgrade	7096256								9,032.12	
10/2011	Lone Tree-Install Radio	7096258								5,400.76	
10/2011	Olivia-Isntall Radio Upgrade	7096260								8,784.08	8,588.56
10/2011	Carancahua-Install Radio	7096262	-	-	-					5,637.67	
10/2011	Twin Pines Sw-Install Radio	7096264									
10/2011	Twin Pines-Install Radio	7096266								5,763.18	
10/2011	Calallen-Install Radio	7096268								6,117.32	
10/2011	Riverside-Install Radio Upgrade	7096270								7,994.02	
10/2011	Nada-Install Radio	7096272								5,657.42	5,569.72
10/2011	Round Mott-Install Radio	7096274								8,961.95	
10/2011	Godlfinch-Install Radio	7096276									15,213.35
10/2011	Charlotte-Install Radio	7096278								8,055.28	
10/2011	Alice Repeater-Install Radio	7096280									10,485.30
10/2011	San Diego-Install Radio	7096282								21,288.12	
10/2011	Leona-Isntall Radio	7096284									6,999.91
10/2011	Orange Grove-Install Radio	7096286								8,365.76	14,696.17
10/2011	Sam Rayburn-Install Radio	7096288									

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
10/2011	Vec-Install Radio	7096290									
10/2011	Industrail Park-Install Radio	7096292								8,633.76	
10/2011	El Campo-Install Radio	7096294								6,747.83	8,227.43
10/2011	Bay City0Install Radio	7096298								6,006.20	
10/2011	Jec-Install Radio	7096300									
10/2011	Pleasnton Install Security Equipment	7102021								7,667.48	
10/2011	Pearsall-Install Comm & Scada	7102052								23,689.84	5,290.32
10/2011	Palo Duro-Install Communications	7102053			230,004.33						
10/2011	Oilton Mw-Install Communications	7106151									
10/2011	Pearsall-Install Ethernet Card	7114076								2,190.00	
10/2011	Central To Driscoll-Remove Static	8062091					(5,612.75)				
10/2011	Driscoll To Central-Remove insulators	8062108					(44,254.74)				
10/2011	Fashing-Remove Radio To Lenz	8076173								(12,822.74)	
10/2011	Driscoll-Remove Relay Switch	8082012								(2,050.00)	(7,968.61)
10/2011	George West 138-Remove Radios	8082110			(10,000.00)						
10/2011	Sam Rayburn-remove Radio	8092039									(1,955.67)
10/2011	Inez-Remove bypass switches	8094109								(3,282.85)	
10/2011	Four Corners-Remove Radio	8096019									
10/2011	El Toro- Remove Existing Radio	8096251								(6,755.53)	
10/2011	El Toro Switch-Remove Radio	8096253			(5,000.00)						
10/2011	Placedo-Remove Radio	8096255								(11,952.20)	
10/2011	Lone Tree -Remove Radio	8096257								(9,806.36)	
10/2011	Olivia-Remove Radio	8096259								(7135.42)	(7,445.04)
10/2011	Carancahua-Remove Radio	8096261								(6,497.27)	
10/2011	Twin Pines-Remove Radio	8096263									
10/2011	Twin Pines-Remove Radio	8096265								(7,226.49)	
10/2011	Calallen-Remove Radio	8096267								(7,052.38)	
10/2011	Riverside-Remove Radio	8096269								(5,573.47)	
10/2011	Nada-Remove Radio	8096271								(5,951.96)	(5,000.00)
10/2011	Round Mott-Remove Radio	8096273								(8,144.34)	
10/2011	Goldfinch-Remove Radio	8096275									(5,201.97)
10/2011	Charlotte-Remove Radio	8096277								(7,537.31)	
10/2011	Alice Repeater-Remove Radio	8096279									(14,730.44)
10/2011	San Diego-Remove Radio	8096281								(10,487.78)	(9,828.84)
10/2011	Leona-Remove Radio	8096283									
10/2011	Vec-Remove Radio	8096289									
10/2011	El Campo-Remove Radio	8096293								(17,717.17)	(8,170.26)

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
10/2011	Bay City-Remove Radio	8096297								(6,385.65)	
10/2011	Jec-Remove Radio	8096299									
10/2011	Four Corners-Correct Inventory	8104170								(20,948.65)	
11/2011	San Miguel To Fashing-install line	7072403				1,683,311.40	418,840.47				
11/2011	San Miguel To Fashing-Remove line	8072402				(84,113.63)	(17,214.79)				20,698.67
11/2011	Poc-Install security	7081205								1,836.13	
11/2011	Encinal-Install Uhf	7082247									
11/2011	Laredo-Install Uhf	7086249								20,474.79	
11/2011	Salt Dome-Install line	7072374				16,210.86	29,091.69				
12/2011	Amistad-security	5085038			10,137.09						
12/2011	West Sinton To Calallen-Static	7062165					51,258.57				
12/2011	West Sinton To Calallen-Install Insulators	7062176					25,983.90				14,266.18
12/2011	West Sinton-Install Reg Controls	7064051								5,127.68	27,350.60
12/2011	Goliad-Ethernet	7072285									19,888.50
12/2011	Beeville-Ethernet	7072287									13,697.00
12/2011	Lenz-Ethernet	7072288									10,894.75
12/2011	San Miguel-Ethernet	7072289									19,468.48
12/2011	Pearsall-Ethernet	7072291									14,294.08
12/2011	Leona-Ethernet	7072293									9,930.29
12/2011	Crossroads-Ethernet	7072297									
12/2011	Danevang-Ethernet	7072298									8,802.29
12/2011	West Sinton-Install Bypass Switches	7074321								11,026.02	19,714.10
12/2011	Sam Rayburn - Ethernet Underbuild	7076284									
12/2011	Mathis-Ethernet	7076292									
12/2011	Franklin'S Camp-Upgrade Rtu	7079305			2,714.34						
12/2011	San Miguel-Install Battery Bank	7082014			29,045.23						
12/2011	Carancahua-Install Arrestors	7092053								3,182.48	
12/2011	Driscoll-Install Arrestors	7092054								9,996.72	
12/2011	Edna-Install Arrestors	7092055								6,558.58	
12/2011	Lone Tree-Install Arrestors	7092058								8,762.18	
12/2011	Poteet-Install Arrestors	7092062								6,489.13	
12/2011	San Diego-Install Arrestors	7092064								3,835.53	
12/2011	Schroeder-Install Arrestors	7092066								5,088.77	
12/2011	Port Lavaca-Carrier Upgrade	7092090								19,573.54	
12/2011	Install 69kV conductor	7092243					126,117.93				
12/2011	Bay View-Install comm.	7092361								15,284.60	
12/2011	Ben Bolt-Install radio	7102007								19,141.84	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
12/2011	Lobo-Communications	7106048								9,654.94	
12/2011	West Sinton To Calallen-Remove Insulators	8062175					(12,836.88)				
12/2011	West Sinton-Remove Reg Controls	8064050								(3,000.00)	
12/2011	West Sinton-Remove Bypass Switches	8074320								(515.55)	
12/2011	Franklin's Camp-Upgrade Rtu	8079304			(17,620.69)						
12/2011	San Miguel-Remove Battery Bank	8082013			(14,967.44)						(1,300.00)
12/2011	Stec-Remove Conductor	8092242					(3,064.46)				
12/2011	Sam Rayburn-Remove Existing Radio	8096287									
12/2011	Pleasanton-Remove Regulators	8101115								(12,979.00)	
12/2011	Palacios To Tin Top-remove Insulators	8092072					(55,629.53)				
12/2011	Palacios To Tin Top-Replace Insulators	7092073					36,211.29				
12/2011	Olivia To Vanderbilt-Remove Insulators	8092082				(5,929.76)	(137,409.70)				
12/2011	Olivia To Vanderbilt-Replace Insulators	7092083				24,058.02	84,525.33				
12/2011	Bonnieview To Refugio-Remove Insulators	8092113					(18,186.58)				
12/2011	Bonnieview To Refugio-Replace Insulators	7092114					55,992.56				
12/2011	CC To Robstown-Rep Insulators	8092340					(85,583.89)				
12/2011	CC To Robstown-Rep Insulators	7092341					49,011.57				
1/2012	Palo Duro-Construct Sw Station	7072220			1,882,760.20						
1/2012	Vanderbilt-Ethernet Underbuild	7072296			16,823.77						
1/2012	Calallen-Ethernet Underbuild	7076294								14,507.79	
1/2012	N Edinburg To W Edinburg- install 138kV	7092027				426,332.86					
1/2012	Palacios To Carancahua-Install Insulators	7092044					23,231.95				
1/2012	Pleasanton-replace grounding	7101015								12,179.61	
1/2012	Pleasanton-Ground Wire Repair	7101107								22,830.07	
1/2012	San Miguel To Lobo - Line Clean Up	7102037	-	247,454.16							
1/2012	San Diego-Install Breaker	7102144								216,150.01	
1/2012	Van Vleck-Install Battery Bank	7104032								13,532.51	
1/2012	Rio Grande-Install Regulator	7104064								18,342.80	
1/2012	N Batesville-install xfmr	7104068								10,000.00	
1/2012	Ben Bolt-Install Oil Containment	7104069								22,827.51	
1/2012	Van Vleck install recl. Bypass	7104098								8,896.94	
1/2012	Kenedy-Install Recloser	7104111								24,497.93	
1/2012	Stec-Install 138kV poles	7112002				139,605.31	37,447.49				
1/2012	Stec-Install 69kV poles	7112004				367,665.99	54,778.55				
1/2012	Stec-69Kv Rehab	7112005				1,633.23					
1/2012	Tres Palacios-Build Tline	7112097								73,905.72	
1/2012	Tres Palacios-Build Substation	7112098								343,363.58	

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			350	352	353	355	356	360	361	362	397
1/2012	Tres Palacios-Build Substation	7111096								(453,307.09)	
1/2012	Tres Palacios-Build Substation	7114157								24.05	
1/2012	Tres Palacios-Build Substation	7116117								36,013.74	
1/2012	Warburton-Remove Blown CT	8082224			(9,805.02)						
1/2012	Van Vleck-Remove Battery Bank	8104031								(18,799.03)	
1/2012	Stec-Pole Changeout 138Kv	8112001				(28,965.15)	(193,419.54)				
1/2012	Stec-Pole Changeout 69Kv	8112003				(99,642.27)	(55,406.23)				
1/2012	D'Hanis-underbuild xmsn	8117166				(2,021.50)	(2,080.08)				
2/2012	Palo Duro To Dilley-Construct 138kv Line	7072219	325,621.00			3,209,161.25	2,527,234.00				
2/2012	Cotulla-Install 69Kv Breakers	7082154								305,160.59	
2/2012	Freer-Install (2) 69Kv Breakers	7082160								203,229.14	
2/2012	Pearsall To Moore Rebuild	7092248	117,142.00			131,805.43	1,953,866.36				
2/2012	Charco-Upgrade Regulator Controls	7094225								6,283.88	
2/2012	Agua Dulce-Upgrade Regulator Controls	7094227								5,041.16	
2/2012	Louise-Upgrade Regulator Controls	7094229								6,297.94	
2/2012	Sodville-Upgrade Regulator Controls	7094231								14,873.54	
2/2012	Ecleto-Upgrade Regulator Contolrs	7094233								5,386.84	
2/2012	Ganado-Upgrade Regulator Controls	7094235								5,041.16	
2/2012	Taft-Upgrade Regulator Controls	7094237								6,297.95	
2/2012	Mineral-Upgrade Regulator Controls	7094241								6,297.94	
2/2012	Ganado-Install Regulator	7094302								9,513.31	
2/2012	Twin Pines-Install Privacy Fencing	7101117								144,308.54	
2/2012	Montell-construct sub common	7101123								287,031.82	
2/2012	Montell-construct sub xmsn	7102121						54,016.50		12,889.04	
2/2012	Port Lavaca To Port O'Connor 795 wire	7102209				6,364.56	1,048,650.35				
2/2012	Montell-construct sub dist	7104122								1,099,902.41	
2/2012	Stec-Storm Restoration	7112010				91,164.34	38,541.54			32,530.24	
2/2012	Bruni-Install Transformer	7112037								385,273.92	
2/2012	Oaks-Repair Copper Theft	7112099								17,897.07	
2/2012	Industrial Park-Repair Breaker	7112110								8,077.05	
2/2012	Orange Grove-Install Ccvt	7112206			16,301.91						
2/2012	West Sinton-Install Regulators	7114105								34,782.68	
2/2012	Schroeder-Regulator Replacement	7114170								5,072.84	
2/2012	Kenedy-Replace Regulators	7114174								46,847.69	
2/2012	West Sinton-Replace Regulators	7114196								46,531.74	
2/2012	Robstown-Regulator Repairs	7114198								43,657.27	
2/2012	Ferris-Transformer Upgrade	7114221								207,671.74	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
2/2012	Franklin'S Camp-install xfmr	7114237								214,184.67	
2/2012	San Deigo-Recloser Upgrade	7114251								16,375.55	
2/2012	Montell-construct sub comm. SCADA	7116082								70,022.50	
2/2012	Helena-Construct sub xmsn	7117011								127,454.30	
2/2012	Helena-Construct Sub dist	7117012									
2/2012	Helena-Construct Sub, comm. SCADA	7117013								13,040.99	
2/2012	Helena-Construct Sub common	7117014								211,163.98	
2/2012	Van Vleck-Regulator Repair	7124012								7,441.60	
2/2012	West Sinton To Calallen-remove static	8062177					(9,721.28)				
2/2012	Pearsall To Moore remove wire	8092247				(24,126.96)	(41,327.49)				
2/2012	Charco-remove controls	8094224								(3,000.00)	
2/2012	Agua Dulce-remove controls	8094226								(3,000.00)	
2/2012	Louise-remove controls	8094228								(3,000.00)	
2/2012	Sodville-remove controls	8094230								(17,693.40)	
2/2012	Ecleto-remove controls	8094232								(3,000.00)	
2/2012	Ganado-remove controls	8094234								(3,000.00)	
2/2012	Taft-remove controls	8094236								(3,000.00)	
2/2012	Mineral-remove controls	8094240								(3,000.00)	
2/2012	Port Lavaca To Poc-remove wire	8102208				(151.92)	(30,712.34)				
2/2012	Van Vleck-Remove Fuses	8104097								(202.47)	
2/2012	Bruni-Remove Transformer	8112036								(17,522.77)	
2/2012	Nada To El Campo remove pole	8112188				(682.93)	(1,445.58)				
2/2012	Orange Grove-Install Ccvt	8112205			(11,148.30)						
2/2012	West Sinton -Remove Regulators	8114104								(15,075.38)	
2/2012	Schroeder-remove regulator	8114169								(4,781.25)	
2/2012	Kenedy-Remove Regulators	8114173								(72,645.99)	
2/2012	West Sinton-Remove Regulators	8114195								(23,202.84)	
2/2012	Robstown-Remove Regulators	8114197								(78,219.82)	
2/2012	Ferris-remove xfmr	8114220								(307,299.41)	
2/2012	Franklin's Camp-remove xfmr	8114236								(63,543.75)	
2/2012	San Deigo-remove recloser	8114250								(22,376.07)	
2/2012	Palo Duro To Dilley-remove line	8122049				(464,077.56)	(344,266.45)				
2/2012	Van Vleck-remove regulater	8124011								(9,917.71)	
2/2012	Vanderbilt-Remove Recloser	8124020								(2,349.29)	
3/2012	Weslaco-Cip Network Security	7096337								5,753.21	
3/2012	Aderhold-Cip Network Security	7096336								4,690.21	
3/2012	Heidelberg-Cip Network Security	7096338								8,988.99	

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Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
3/2012	Burns-Cip Network Security	7096339								7,662.06	
3/2012	Uvalde-Install Fuses	7104036								836.88	
4/2012	Rgc-install radio	7092317									20,121.64
4/2012	San Ramon-install radio	7092316									23,763.33
4/2012	Oilton-Mw/Ds3 Upgrade	7092314									25,319.35
4/2012	Uvalde-Mw/Ds3 Upgrade	7092308									26,939.09
4/2012	D'Hanis-Mw/Ds3 Upgrade	7092309									32,330.90
4/2012	Pearsall-Mw/Ds3 Upgrade	7096310								33,028.43	
4/2012	Randado-Mw/Ds3 Upgrade	7092315									26,364.20
4/2012	Bruni-Ds3 Upgrade	7102082									27,067.03
5/2012	Cotulla-Install Control House	7081151								48,512.22	
5/2012	Sioux construct sub common	7081158								1,132,714.54	
5/2012	Freer - Control House	7081162								244,637.02	
5/2012	Sioux construct sub xmsn	7082157								1,774,023.51	
5/2012	Calallen-Install New Feeder	7084116								4,400.00	
5/2012	Poc-Install New Feeder	7084117								4,135.00	
5/2012	Sioux construct sub dist	7084156								1,814,371.51	
5/2012	Freer-install radios	7086149								35,031.49	
5/2012	Cotulla-Install Comm Equipment	7086153								20,386.26	
5/2012	Sioux construct sub SCADA comm.	7086155								16,285.60	
5/2012	Donna Office complex	7091008						748,307.47			26,950.94
5/2012	Van Vleck-Rework Bus	7091084									
5/2012	Olivia to Carancahua-Install Insulators	7092034					60,184.01				
5/2012	Aloe To Mcfaddin-Install Insulators	7092037					39,699.41				
5/2012	Loyola-Install 69Kv Arrestors	7092060								1,780.60	
5/2012	Calliham South-install 5 MVA xfmr	7092099								53,868.03	
5/2012	Orange Grove-install tone equipment	7092116			12,530.51						
5/2012	George West 138-install tone equipment	7092118			12,530.51						
5/2012	San Mig 138-install relaying	7092220			13,217.38						
5/2012	El Campo-Install Bypass Switch	7094223								41,576.54	
5/2012	Bader-Install F6 Controls	7094324								80,148.85	
5/2012	Wcec-Radio Upgrade	7096296								12,906.70	
5/2012	Franklins Camp-remove residence	7102010				21,421.46	5,821.51				
5/2012	Rangerville-Install switch Interrupter	7102030								20,412.42	
5/2012	Derby-Install Line Switches	7102085								737.30	
5/2012	Dilley 69-Switches	7102087								32,288.45	
5/2012	Dilley 69-Install 69Kv Switches	7102104								34,387.67	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
5/2012	Derby-Install 69Kv Switches	7102106								23,352.66	
5/2012	E Rio Hondo-Replace Poles	7102190				86,622.94					
5/2012	Pleasanton-Install Recloser Switches	7104020								8,648.51	
5/2012	Fashing-Install Recloser Bypass	7104024								31,813.11	
5/2012	Carancahua-InstallRecloser Switches	7104028								7,871.03	
5/2012	Midfield West-Install 3 Cutouts	7104056								4,433.88	
5/2012	Bader-Install Battery And Charger	7104119								2,311.84	
5/2012	Bader-Install Acs Server	7104174								21,396.23	
5/2012	Bader-Esv Recloser	7104187								7,356.15	
5/2012	Placedo-Install Fuses	7104205								917.38	
5/2012	Sunniland-New Substation	7111120						88,794.51		532,881.88	
5/2012	Ferris -Transmission Line Reroute	7112017				29,944.21	31,166.37				
5/2012	Orange Grove 138-Install A Frame	7112084			24,124.99						
5/2012	Sunniland-construct sub xmsn	7112122								95,371.02	
5/2012	Sunniland-construct sub dist	7114121								430,757.61	
5/2012	Sunniland-construct sub common	7116160								98,705.91	
5/2012	West Uvalde-Modify Tline	7117186				27,468.44	4,267.32				
5/2012	Lone Tree-Remove Recloser Controls	8074273								(4,400.00)	
5/2012	Freer-Remove Common Equip	8081161								(12,709.60)	
5/2012	Olivia To Carancahua-Remove Insulators	8092033					(125,552.32)				
5/2012	Aloe To Mcfaddin-Remove Insulators	8092036					(78,134.42)				
5/2012	Calliham South-remove xfmr	8092098								(18,630.64)	
5/2012	Orange Grove-Remove Tone Equipment	8092115			(2,400.00)						
5/2012	George West-Remove Tone Equipment	8092117			(2,400.00)						
5/2012	San Mig-Remove Tone Equipment	8092119			(2,400.00)						
5/2012	El Campo-Remove Bypass Switches	8094222								(1,824.51)	
5/2012	Bader-Remove Controls, Reclosers	8094323								(72,257.19)	
5/2012	El Campo- Retire Radio	8096295								(10,812.80)	
5/2012	Derby-Remove 69Kv Switches	8102105								(5,504.25)	
5/2012	E Rio Hondo-Remove Structures	8102189				(130,118.25)					
5/2012	Pleasanton-Retire Switches	8104019								(1,850.92)	
5/2012	Fashing-Retire Ge Switches	8104023								(1,399.90)	
5/2012	Bader-Retire Battery Charger	8104118								(2,988.56)	
5/2012	Mockingbird Overpass-New Pole	8107076				(1,313.74)					
5/2012	Ferris-Remove Trans Line	8112016				(686.19)	(1,247.36)				
5/2012	Orange Grove 138- Remove A Frame	8112083			(4,992.88)						
5/2012	Orange Grove-Remove Switches	8112085								(3,417.23)	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
5/2012	Cc Sw To Cc69-Remove Structures	8112216				(1,372.38)					
5/2012	Bruni-Mw/Ds3 Upgrade	7102082								27,067.03	(27,067.03)
6/2012	Castroville-Upgrade Transformer	7072365								96,494.13	
6/2012	Tin Top-Upgrade Rtu	7076382								24,758.53	
6/2012	Fannin-Install Rtu	7086020								12,001.95	
6/2012	Poteet-Instal Rtu	7086022								10,092.24	
6/2012	Hondo Creek-Install Scada	7092018									24,267.40
6/2012	West Edinburg To Palmhurst	7092030				928,956.79	674,260.16				
6/2012	Rangerville-Install Transformer	7094024								66,384.59	
6/2012	Falcon Pp-Install Scada	7096249			35,809.49						
6/2012	Pearsall-Install Wavetrap	7102012			21,288.35						
6/2012	Derby-Install Regulator	7104090								8,414.05	
6/2012	Castrolville-Install Control Building	7109038								231,646.34	
6/2012	Batesville 138-Install bank and charger	7112093			20,560.02						
6/2012	Hondo Creek-Install bank and charger	7112095			19,323.34						
6/2012	Tin Top-Remove Rtu	8076381								(14,007.20)	
6/2012	Fannin-Remove Rtu	8086019								(3,854.31)	
6/2012	Poteet-Remove Rtu	8086021								(17,659.92)	
6/2012	West Edinburg To Palmhurst	8092029				(73,580.13)					
6/2012	Pearsalll-Remove Wavetrap	8102011								(30,000.00)	
6/2012	Schroeder-Retire Ge Switches	8104025								(941.54)	
6/2012	Orange Grove-Remove Conductor	8112087				(27,193.91)	(14,254.50)				
6/2012	Batesville 138-Remove battery	8112092			(15,000.00)						
6/2012	Hondo Creek-Remove battery	8112094			(15,000.00)						
6/2012	West Uvalde-remove pole	8117185				(1,754.07)					
7/2012	Moore-Install SCADA comm.	7092017			23,997.04						
7/2012	San Ramon - install SCADA comm.	7092246									10,936.23
7/2012	Placedo To Vanderbilt-install insulators	7092329					27,712.84				
7/2012	Moore Sw-install terminal equipment	7102014			74,596.26						
7/2012	Calallen To Corpus Christi-install 4/0	7102034					356,814.89				
7/2012	Hondo-Mw/Ds3 Upgrade	7102083									9,699.24
7/2012	Dilley-Install Pts	7102134								25,252.05	
7/2012	Devine-Install Recloser Controls	7104081								76,026.88	
7/2012	Castroville-Install Current Fuses	7104091								12,695.27	
7/2012	D'Hanis-Install Acs Scada	7104176								23,271.83	
7/2012	Hondo-Install Switches	7104178								7,860.56	
7/2012	D'Hanis-Isntall Battery Bank	7104186								15,427.36	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
7/2012	Robstown Office-Upgrade Radio	7107094									25,279.00
7/2012	Calallen -Upgrade Radio To Nec	7107096								14,377.72	
7/2012	Kenedy-install base material	7111067								87,921.37	
7/2012	Simmons-install base material	7111068								2,010.15	
7/2012	Orange Grove-Install Switches	7112086								61,792.11	
7/2012	Dasmap Software Upgrade	7112127									32,305.85
7/2012	Cc Sw To Cc-Install Structure	7112217				17,420.96	10,278.85				
7/2012	Industrial Park-Install F6 Controls	7114019								16,558.34	
7/2012	San Diego-Install Ethernet For F6	7114020								11,252.72	
7/2012	Robstown -Isntall Ethernet For F6	7114021								3,081.04	
7/2012	Charlotte-Install Ethernet For F6	7114022								3,963.01	
7/2012	George West-Install Ethernet For F6	7114023								4,903.51	
7/2012	West Sinton-Install Ethernet For F6	7114024								5,502.09	
7/2012	Round Motti-Install Etherent For F6	7114025								4,651.27	
7/2012	Danevang-Install Ethernet For F6	7114026								4,341.67	
7/2012	El Campo-Install Equipment For F6	7114028								7,757.10	
7/2012	Tilden-Install xfmr & regulators	7114070								408,683.80	
7/2012	Mobile Goliath-Repairs	7114114								968,246.96	
7/2012	Cotulla-Install xfrm & regulators	7114204								293,339.07	
7/2012	Dilley-Install Transformer	7114225								75,117.92	
7/2012	Heidelberg-Install Transformer	7114232								425,684.22	
7/2012	Cotulla-Install Feeder Bay	7114235								110,154.96	
7/2012	Fashing-Add Feeder Bay	7114254								93,296.09	
7/2012	VEC-Install Meter	7114260								7,383.71	
7/2012	N Clemville-Install Net/Security	7116029								3,596.11	
7/2012	Nadai-Install Network/Security	7116031								3,772.88	
7/2012	Plainview-Isntall Network Equipment	7116035								3,062.97	
7/2012	Bcc-Install Scada Server	7116073									21,399.59
7/2012	Stec-Isntall Scada Server	7116075									46,606.00
7/2012	Kenedy-Install Comm. to Helena	7116123								19,774.02	
7/2012	Fashing-Install Comm. to Lyssy	7116125								25,074.65	
7/2012	George West-Comm. to Sunniland	7116161			11,173.03						
7/2012	Pearsall Power Plant-UHF System	7116168									10,355.97
7/2012	Warburton-Repair Auto Transformer	7122047			29,389.83						
7/2012	Kenedy-Install Cap Bank	7122141								7,452.10	
7/2012	Beeville-Install Regulator	7124051								24,375.73	
7/2012	S Batesville-Replace Regulator	7124061								19,342.89	

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
7/2012	Hondo-Replace Regulator	7124063								10,918.70	
7/2012	Bay City-Install Recloser	7124080								21,602.94	
7/2012	Laureles-Copper Theft Repair	7124090								9,341.77	
7/2012	Laureles-Copper Theft Repair	7122091								6,214.36	
7/2012	Sandia-Install Reclosure	7124136								10,463.82	
7/2012	Placedo To Vanderbilt-Remove static	8092328					(28,090.16)				
7/2012	Callallen To Cc Sw -Conductor	8102033					(28,983.59)				
7/2012	Dilley-Remove Pts	8102133								(4,020.00)	
7/2012	Devine-Remove Recloser Controls	8104080								(10,000.00)	
7/2012	D'Hanis-Retire Ilex Scada	8104175								(10,962.26)	
7/2012	Hondo-Retire Smd Switches	8104177								(2,444.05)	
7/2012	Dhanis - Retire Batteries	8104185								(2,988.56)	
7/2012	Robstown - Remove Radio	8107093								(22,216.78)	
7/2012	Calallen Remove Radio	8107095								(13,190.71)	
7/2012	Insustrial Park-Retire Controls	8114018								(2,000.00)	
7/2012	Tilden-Remove xfmr	8114069								(167,395.91)	
7/2012	W Edinburg-Remove xfmr	8114116								(958,473.00)	
7/2012	Cotulla-Remove xfmr	8114203								(36,991.85)	
7/2012	Dilley-Remove Transformer	8114224								(147,326.00)	
7/2012	San Miguel To Pawnee-Remove Static	8112228					(634.90)				
7/2012	Bcc-Remove Existing Server	8116072									(30,000.00)
7/2012	Beeville-Remo Regulators	8124050								(31,002.64)	
7/2012	S Batesville-Replace Regulator	8124060								(10,920.00)	
7/2012	Hondo-Replace Regulator	8124062								(13,960.93)	
7/2012	Driscoll-Remove Faulted Transformer	8124133								(23,670.92)	
7/2012	Sandia-Rem Reclosure	8124135								(13,218.00)	
8/2012	Dilley-Install Communications	7106166								3,557.14	
8/2012	Derby -Install Communications	7106168								3,212.95	
8/2012	Orange Grove-Install Conductor	7112088				31,757.25	46,541.33				
8/2012	Pearsall-San Mig Pp2 Circuit Swp	7112107				177,544.52	130,985.05				
8/2012	Moore-Install Ocr	7114239								6,028.04	
8/2012	Bonniewview-Install Cap Bank	7122030			(43,568.00)					271,245.78	
8/2012	San Mig To Fashing-Reinsulate	7122035				11,802.89	128,478.98				
8/2012	Downie-Install Relay Communications	7122118			84,358.10						
8/2012	El Campo-Install Gas Breaker	7122143								85,743.17	
8/2012	Driscoll-Install Transformer	7124134								56,837.50	
8/2012	Moore Sw-Pearsall line terminal	8102013			(50,000.00)						

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
8/2012	Pearsall-Remove San Mig Circuit	8112106				(10,599.09)	(11,718.72)				
8/2012	Remove Transformer, Regulators	8114190								(35,913.15)	
8/2012	Moore-Rem Damaged Ocr	8114238								(17,012.40)	
8/2012	El Campo-Rem Vac Switch Control	8122142								(15,000.00)	
9/2012	Bonnieview-Install xfmr & regulators	7114191								145,457.30	
10/2012	Spec-Snake Fence	7092346								24,741.82	
10/2012	Bruni-Install Cap Bank	7082210								60,177.90	
10/2012	Pearsall-Install Auto Transformer	7122026								1,715,701.87	
10/2012	Pearsall-Remove Auto Transformer	8122025								(150,000.00)	
10/2012	Jec-Snake Fence	7092351								33,204.53	
10/2012	Kec-Snake Fence	7092350			1,883.27					24,482.45	
10/2012	Nec-Snake Fence	7092349								23,716.48	
10/2012	Vec-Snake Fence	7092345			1,976.37					49,338.15	
10/2012	Wec-Snake Fence	7092344			2,741.01					20,511.41	
10/2012	Mec-Snake Fence	7092347			2,051.14					12,273.49	
11/2012	Georgewest-Install xfmr common	7121029								39,079.00	
11/2012	Georgewest-Install xfmr xmsn	7122027								156,087.88	
11/2012	Georgewest-Install xfmr dist	7124028								17,964.00	
12/2012	Las Miplas-Install xfmr xmsn	7092021								207,680.63	
12/2012	Alberta Switch-construct station	7092318	251,575.24		2,565,045.09						
12/2012	Las Milpas-Install xfmr dist	7094022								1,126,522.74	
12/2012	Lyssy-construct station common	7101126						48,640.00		199,283.07	
12/2012	Milton-construct station common	7101129						46,558.93		197,178.89	
12/2012	Alberta To Val Verde upgrade line	7102042				1,604,092.10	788,356.93				
12/2012	Lyssy-construction station xmsn	7102124								137,933.32	
12/2012	Milton-construct station xmsn	7102127								78,124.15	
12/2012	Heidelberg-Install Insulators	7112061					260,596.62				
12/2012	Tilden-Install Cap Bank	7112182								309,534.79	
12/2012	Alton-Add 2 Feeder Bays	7114058								1,133,439.97	
12/2012	Milton-construction station common	7116079								5,581.92	
12/2012	Lyssy-Install Station	7116080								7,293.16	
12/2012	Sargent-Install Truss	7124106								117,051.54	
12/2012	Bay City-Install Low Bay Truss	7124108								112,973.08	
12/2012	Big Foot-Install Transformer	7124155								217,473.76	
12/2012	Big Foot-Install Regulators & xfmr	7124172								113,971.22	
12/2012	Alberta To Val Verde	8102041				(85,672.98)	(64,349.36)				
12/2012	Heidelberg-Rem Insulators	8112060					(228,432.72)				

Closed Work Orders and Adjustments for April 2010 - December 2012

Close Date	Description	Work Order No.	Account Number								
			350	352	353	355	356	360	361	362	397
12/2012	Salt Dome - Remove Bay	8114057								(17,658.42)	
12/2012	Las Milpas-Remove Transformer	8114144								(196,608.57)	
12/2012	Sargent-Remove Truss	8124105								(4,824.51)	
12/2012	Bay City-Rem Low Bay Truss	8124107								(8,218.91)	
12/2012	Big Foot-Remove Transformer	8124154								(82,853.91)	
12/2012	Big Foot-remove xfmr	8124171								(42,267.68)	
	Closed Work Order Totals		1,231,497	239,074	7,095,468	16,661,684	10,918,327	1,125,172	-	41,565,982	1,954,000
Journal Entries and Non-Work Order Transactions											
	138KV Transformer,Temporary for Amistad Facilities				500,000.00						
	Journal Entry Adjustments		(13,441)	(482,847)	(16,405,284)	(495,379)	100,398	87,406	(3,595,533)	20,680,307	(45,049)
	Journal Entry Totals		(13,441)	(482,847)	(15,905,284)	(495,379)	100,398	87,406	(3,595,533)	20,680,307	(45,049)
	Total Closed Work Orders		1,218,056	(243,773)	(8,809,816)	16,166,305	11,018,725	1,212,578	(3,595,533)	62,246,289	1,908,951

TRANSMISSION PLANNING CRITERIA

South Texas Electric Cooperative, Inc.

I. INTRODUCTION

The transmission system should be designed to withstand certain specific contingencies. The criteria described within this document indicate the desired performance level of the planned transmission system in response to simulated tests. They are not intended as rules limiting engineering judgment and experience in system design and planning.

II. SCOPE

The criteria will be applied in planning studies to identify problem areas, plan new facilities, and recommend system improvements. The following portions of the system are covered by these criteria:

A. Transmission lines 69kV and above.

B. Interconnections with other utility systems.

C. Transmission substations including substations at generating plants.

D. The transmission voltage portion of all member substation locations including co-generation and other merchant plants.

III. DEFINITIONS

A. Transmission Voltage - A nominal phase to phase voltage of 69kV or greater.

B. Transmission Facility - A transmission line or autotransformer connected at a transmission voltage.

C. Substation Component - (operated at 69kV or above)

1. Any section of bus between automatic switching devices.
2. Any switching device.
3. Any metering or protective device.

D. Normal Operating Condition - The steady-state condition of the system for any given hour with all facilities operational and with reasonable generation schedules in effect.

E. Single Contingency Condition - The steady-state condition of the system upon outage of any single facility or generating unit preceded by a normal operating condition.

F. Double Contingency Condition - The steady-state condition of the system upon outage of any two facilities, in any combination, preceded by a normal operating condition.

G. Normal Rating - The maximum normal current loading as determined by the following:

1. Transformer - nameplate rating with available cooling.
2. Transmission Line - determined by the "Normal Ampere Rating" (1) - which is listed in section VIII.
3. Substation Component - nameplate rating or design rating.

H. Emergency Rating - The maximum emergency current rating as determined by the following:

1. Transmission Line - determined by the "Emergency Ampere Rating" (1) - which is given in Exhibit B1.

2. Transmission Transformers –

a. 2 Hour Rating - maximum load that the transformer can serve for a continuous 2 hour period without loss of transformer life.

b. 5 Day Rating - maximum load that the transformer can serve for a continuous 5 day period without loss of transformer life.

I. Loading - The amount of current flowing through a transmission facility or substation component.

J. Cogeneration Capacity - The maximum net generation capacity available to the transmission system from a qualified cogeneration facility.

K. Bulk Transmission – The transmission system which encompasses the electrical generation resources, transmission lines, interconnections with neighboring systems and associated equipment that is operated at voltages of 100kV or higher.

L. Steady State - The period of time occurring before a disturbance on the system or after oscillations caused by a disturbance has faded.

IV. TRANSMISSION CAPABILITY DESIGN REQUIREMENTS

A. STEADY STATE CONDITIONS

1. NORMAL CONDITIONS

Normal conditions are defined as the set of conditions which the transmission network could be expected to experience as a normal course of events. These conditions include, but are not limited to; alternate generation schedules, various load levels, facilities out for maintenance, any firm or economic power transfers, or any combination of the above.

Under normal conditions the transmission system should be designed such that no transmission line, autotransformer or substation equipment is loaded above its normal rating and all substation bus and equipment voltages are within normal limits. Ratings and limits are listed in section VIII.

2. PROBABLE DISTURBANCES

Probable disturbances are defined as those events which are likely to occur, such as listed below. These events should be considered in combination with any of the previously described normal conditions.

a. Loss of any single or double circuit transmission line.

b. Loss of any generating unit.

c. Loss of any autotransformer.

d. Loss of any bus.

e. Loss of any capacitor or reactor bank.

For any probable disturbance the transmission system should be designed such that no transmission element, (bus, conductor, autotransformer, breaker or CT) is loaded above its emergency rating (VII.A - VII.D), transmission bus voltages with loads are within 90 - 105% of nominal and no load is lost other than when the outaged element is the only source of supply.

No substation component will be subjected to a maximum three phase or single phase to ground fault duty above 100% of its rated short-term fault current at rated voltage.

3. EXTREME DISTURBANCES

Extreme disturbances are defined as those events which historically have occurred, but are less probable than those listed under IV.A.2. Examples of this disturbance type are included in the list below.

a. Loss of all generating capacity at any generating station with a common source of fuel.

b. Loss of any two generating units.

c. Loss of all circuits on a common right-of-way.

d. Loss of any two autotransformers.

e. Loss of two adjacent bus sections in any station.

f. Loss of any single or double circuit with any generating unit out of service.

g. Loss of any single or double circuit with any autotransformer out of service.

h. Loss of a large load or a major load center.

These events should be considered in combination with any of the previously described normal conditions.

For any extreme disturbance the transmission system should be capable of withstanding the following design limits until corrective action can be taken by the system operators:

1. No Transmission conductor is loaded above 100% of its emergency rating (VII.A).
2. No autotransformer, CT or breaker is loaded above 110% of its emergency rating (VII.B - VII.D).
3. Transmission bus voltages at no-load busses are within 85% - 105% of nominal.

B. TRANSIENT CONDITIONS

Transient Conditions occur during the time between initiation of a system disturbance to the time when all oscillations have faded and the system returns to steady state conditions.

The transmission system should not experience loss of synchronism or undamped oscillations after the occurrence of the contingencies listed below assuming that the disturbance is initiated while the system is experiencing normal steady state conditions as described previously. Each of the first three disturbances listed below should include the effects of reclosing where applicable.

1. A permanent three phase fault on any generator, transmission circuit, transformer, breaker or bus section, cleared by normal relay operation.
2. A permanent phase to ground fault on any generator, transmission circuit, transformer, breaker or bus section with delayed clearing. This delayed clearing could be due to circuit breaker, relay system or communications system malfunction.
3. A permanent phase to ground fault on both circuits of two adjacent transmission circuits on a multiple circuit tower cleared by normal relay operation.
4. Any of the disturbances listed in IV.A.2 or IV.A.3.

Transient stability studies should be performed to estimate the critical clearing time for three phase faults cleared by breaker failure relays at important multi-terminal stations when new modifications, as determined using engineering judgment, create a substation impact to performance of the system. When technically feasible and economically reasonable, as determined using engineering judgment, these stations will be protected such that faults should be cleared within the time determined from the studies.

C. BULK TRANSMISSION INTERCONNECTION CRITERIA

1. The planned design of the bulk transmission system, including interconnections to other utilities, shall conform to National Electric Reliability Council standards and guides and ERCOT Planning Criteria as well as these STEC Transmission Planning Criteria. The following are conditions that violate the ERCOT Planning Criteria:
   a. The loading of a transmission facility beyond its emergency rating.
   b. A voltage profile in which more than 5% of the busses in an ERCOT control area deviate more than ±5% of nominal
   c. A steady state angle shift of greater than 40 degrees between buses, which could inhibit automatic reclosing following a fault.
2. Adequate transfer capability between STEC and ERCOT shall be maintained while meeting the ERCOT Planning Criteria. STEC's import capability shall be at least equal to its net planned import plus the capacity of its largest generating plant less its planned internal on-line reserve. STEC's export capability shall be at least equal to its net planned export plus its planned internal on-line reserve.

D. DISTRIBUTION SUBSTATION TRANSMISSION CONNECTION CRITERIA

The transmission connection shall be designed such that, under single contingency conditions, service will be restored to the low side of the distribution substation after normal automatic operation of protective equipment or, alternately, that the capability exists to restore distribution by manual switching.

E. OTHER TRANSMISSION SUBSTATION CONNECTION CRITERIA

1. The design of a transmission substation will be such that substation components will not be a limiting factor in the reliability of the line(s) to which it is connected.
2. The transmission supply to a substation will be designed so that single contingency outages of STEC transmission facilities will not result in long term outages to the substation.

3. A 69kV radial line should be considered for looping if the combined substation load on the radial line is greater than 15 MW or any one of the metered substation loads is greater than 10 MW.
4. A 138kV radial line should be considered for looping if the combined substation load served is greater than 25 MW or any one of the station loads is greater than 20 MW.
5. Generation Interconnections
    a. Generation Capacity 100 MW or greater: The transmission interconnection shall be designed in accordance with all parts of these criteria.
    b. Generation Capacity 10 MW to 100 MW: The transmission interconnection shall be designed to accept full generation capacity to the transmission system under a single contingency condition with no transmission facility or substation component loaded greater than 100% of normal rating.

V. EXCEPTIONS

The System Design Criteria is not intended to be absolute and inviolate. Exceptions to the criteria may be considered in the event of the following:

A. Engineering Judgment with Management Approval

1. Minor violations - Cases where violation of the criteria is minor and reward for investment is limited.
2. Budgetary Constraints - Cases of project delay due to inadequate budget. Judgment must be exercised to prioritize projects and minimize risk to the system.
3. Temporary conditions - Cases where a problem will only exist for a short period of time (1 or 2 years) and will not pose undue risk to the system.

B. Unavoidable Delays – Cases where projects are delayed due to weather or right-of-way acquisition difficulties.

C. Operational Conditions - Cases where operation outside the criteria is necessary due to long term forced outages of equipment, common-mode failures, and unforeseen load changes.

VI. GENERAL HIGH VOLTAGE CIRCUIT BREAKER GUIDELINES

A. New Stations - Circuit breakers will be installed with adequate ratings to meet continuous current and interrupting duty requirements for a minimum of 20 years.

B. Existing Stations - Circuit breakers are replaced when available fault current exceeds 95% of the nameplate interrupting rating and when load current reaches 95% of the continuous current rating. If major work is planned at a station and it is anticipated a breaker's duty will exceed 90% of its rating within five years, then the breaker will be replaced ahead of time during the construction.

VII. GENERAL LOAD EXPOSURE

A. Transmission line exposure of loads shall be limited to 400 MVA-Miles or less between circuit breakers.

B. System improvements will be considered at loads that have experienced more than two (2) transmission outage hours per year for two (2) consecutive years. Outage time due to hurricanes or tropical storms will not apply to the two (2) hours per year total.

VIII. LINE AND EQUIPMENT RATINGS

Available transfer capacity of a facility shall be limited to that calculated using the capacity of the most limiting series element in the installation.

A. TRANSMISSION LINE CONDUCTOR RATINGS

1. Capacity ratings for the varying types of construction employed at STEC are included in a spreadsheet, ATC Calculation.xls, located in the "Engineering/Calculations/ATC" folder.
2. The two-hour emergency ratings are based on applicable ambient temperature, 100°C conductor temperature, 2 feet/second wind speed, full sun, and applicable Latitude.
3. Normal ratings are 90 percent of the emergency rating.
4. 15 minute emergency ratings of conductors are calculated assuming preloading at normal rating.
5. Calculations are made with software based on IEEE 738.

   Note: There are some lines that are operationally limited to 75°C conductor temperature.

B. AUTOTRANSFORMER MVA RATINGS

1. Normal Rating: Manufacturers FOA rating at 65 °C rise.
2. Emergency Rating: Manufacturers FOA rating at 65 °C rise.

C. OIL AND GAS CIRCUIT BREAKER CONTINUOUS CURRENT RATINGS

1. Normal Rating: 90% of Manufacturers specified rating.
2. Emergency Rating: 100% of Manufacturers specified rating.

D. CURRENT TRANSFORMER AMPERE RATINGS

1. Normal Rating: 100% of Manufacturers specified rating.
2. Emergency Rating: 110% of Manufacturers specified rating.

E. AIR DISCONNECT SWITCH CURRENT RATING

Rate A is 100% of equipment nominal current rating. Rates B and C are calculated as per ANSI C37.37 assuming maximum equipment temperature of 80°C, applicable ambient temperature, and switch rated °C rise (normally 35°C).

F. SUBSTATION BUS AND EQUIPMENT NORMAL VOLTAGE RATINGS

Nominal	Range (±5%)
12.47kV	11.9kV to 13.1kV
24.94kV	23.7kV to 26.2kV
69kV	65.5kV to 72.5kV
138kV	131kV to 145kV
345kV	328kV to 362kV

G. SHUNT REACTOR RATINGS

1. Normal Rating	100% of Manufacturers specified rating
2. Emergency Rating	110% of Manufacturers specified rating

H. BUS CONDUCTORS AND FITTINGS

1. Normal Rating	Manufacturers specified or 100 degrees C rating
2. Emergency Rating	Manufacturers specified or 110% of Normal

Note: STEC does not own or operate electrical energy storage devices as defined in NERC Planning Standard II.C.

Document Revision Log

Date	Rev. No.	Rev. By	Revision Summary
5/31/2007	1		
10/07/10	2	Cory Allen	added "69kV" and reworded IV.E.3; replaced IV.E.4; replaced "cogeneration" with "generation" IV.E.6; deleted VII.B; modified VIII.A; modified VIII.A. and VIII.D; deleted "approved..." on first page; added Document Revision Log

End Transmission Planning Criteria

THIS PAGE IS OVERSIZED

AND CAN BE VIEWED IN

CENTRAL RECORDS

Transmission Line Right-of-way Vegetation Management Program

South Texas Electric Cooperative, Inc.

Updated: January 2013

I. Objective

This program is for use by right-of-way personnel as a guideline for maintenance of all South Texas Electric Cooperative, Inc. (STEC) transmission line easements in order to improve the reliability of the electric transmission system by preventing outages caused by vegetation.

II. Practices

A. Schedule

The Line Superintendent shall define a schedule for right-of-way patrol. This schedule shall be reviewed and updated by the Line Superintendent from time to time as conditions change.

B. Right-of-way Maintenance Intervals

1. **Patrol:** All STEC rights-of-way shall be patrolled annually to assess vegetation encroachment. Patrol shall include a system wide aerial observation and partial system ground inspections. Problem areas found during patrol inspection shall be visited by the appropriate right-of-way maintenance personnel to assess each situation in order to choose and prioritize procedures. Clearances between vegetation and conductor shall be measured during rights-of-way inspections.
2. **Mowing:** Rights-of-way shall be mowed every five (5) years on average. Areas in which aggressive re-growth over the five (5) year period to the extent easement access is restricted shall either have a shorter return interval for mowing or, if allowed, have herbicide applied.
3. **Tree Trimming:** The encroachment limits as listed on drawing TMR-14 are based on a three (3) year return cycle. If restrictions to vegetation removal exist, the drawing also lists the minimum trimming clearances for a one (1) year return cycle. Each of these locations shall be annually inspected and trimmed as necessary.
4. **Herbicide Application:** Herbicide shall be applied along the rights-of-way as is necessary from time to time to facilitate mowing and trimming.

C. Minimum Clearances

Minimum distances between vegetation and transmission line conductor that right-of-way maintenance personnel shall endeavor to provide are indicated on the attached drawing TMR-14, Exhibit A. Clearances for 69kV, 138kV, and 345kV transmission line conductors are shown on the drawing.

1. "MAID plus MAD" distance, as referred to on TMR-14, is calculated from Table 5 and Table 17 of IEEE Standard 516-2003 for the appropriate voltages.
   a. IEEE Std 516-2003 Table 5 lists calculated MAID assuming the highest transient overvoltage factor (T), elevation of less than 3,000 feet above sea level, and standard atmospheric conditions for each applicable line voltage rating.

b. IEEE Std 516-2003 Table 17 lists distances that must be added to compensate for inadvertent human movements.

2. "Max Sag Change" distance is the most change in conductor sag expected for transmission line conductors due to temperature variance. The construction with the most sag change for each voltage rating is listed so that clearances are conservatively large.

3. "Annual Estimated Growth" distance is the amount local vegetation is expected to grow per year. This distance is based upon the fastest five (5) year average tree growth in the transmission system.

4. "Vertical Distance A"

   a. "Minimum Tree Approach" distance is the sum of the MAID plus MAD and Max Sag Change.

   b. "1 Year Trim To Distance" is the minimum vertical tree approach plus clearance necessary for a one year trimming interval. The maximum amount trees freshly trimmed are expected to grow is 3.5'.

   c. "3 Year Trim To Distance" is the minimum vertical tree approach plus clearance necessary for a three year trimming interval to accommodate the annual estimated growth.

5. "Horizontal Distance B"

   a. "Minimum Tree Approach" distance is MAID plus MAD added to conductor blow out. Conductor blow out includes the length of insulator and amount of sag at 60°F with 100 MPH wind.

   b. "1 Year Trim To Distance" is the minimum horizontal tree approach, conductor blow out, and the one year tree growth.

   c. "3 Year Trim To Distance" is the minimum horizontal tree approach, conductor blow out, and three year tree growth.

6. Clearance 1 and Clearance 2 as defined in NERC FAC-003-1 R1.2 are indicated on drawing TMR-14.

7. Clearance calculations assume that no tool or personnel are positioned at any point during vegetation management procedures within applicable minimum approach distance as defined by the National Electric Safety Code. All tree trimming procedures shall be conducted such that movement of vegetation or personnel will not violate applicable minimum personnel approach distances.

D. Responsible Personnel

1. Design of this program was performed by in-house personnel licensed to practice as Professional Engineers in the state of Texas. ANSI Standard A300 and IEEE Standard 516-2003 were the primary references in the development of the plan.

2. Implementation of the plan is the responsibility of the Line Superintendent and predominantly performed by in-house right-of-way maintenance personnel. The lead personnel over field crews responsible for right-of-way maintenance, including any contract services acquired from time to time, shall have at least four (4) years of experience in applicable fields.

3. STEC System Operators are responsible for implementing remedial plans as necessary when informed of vegetation encroachment that threatens public safety or safe operation of a transmission line and violates the minimum clearances. STEC System Operators are NERC Certified and are fully qualified and authorized to initiate proper corrective actions.

E. Clearance Violations

1. Certain situations may occur such that timely vegetation maintenance is not possible at a location such that safe operation of a transmission line is threatened. Mitigation plans shall be made through a concerted effort by the Line Superintendent and the Chief System Operator. Consideration of the following shall be made.
   a. Estimated amount of time when the location of vegetation encroachment is expected to be accessible to maintenance personnel.
   b. Applicability of reducing line loading through transmission switching to increase or maintain present clearance to vegetation.
   c. Isolation of the transmission line section until such time proper vegetation clearances can be obtained.
   d. Helicopter access to location of clearance violation for personnel transport.
2. If vegetation clearances cannot be maintained as a result of landowner or other entity intervention, the Line Superintendent shall inform the General Manager. Management will consider methods of mitigation such as adding structures for additional ground clearance, compensatory offers to the landowner, or legal action.

III. Imminent Threat Process

Discovery of a condition likely to result in imminent vegetation contact shall immediately be relayed to the System Operator.

A. The System Operator shall gather the following information from the threat observer.
   1. Nature of the threat; tree, vine, etc.
   2. Location and line section
   3. Distance from the conductor
   4. Any other information requested by the System Operator

B. The System Operator shall log the information.

C. The System Operator shall contact the Line Superintendent with the information who will dispatch proper personnel to mitigate the potential problem.

D. If a reported clearance issue presents a clear danger to personnel or the public or if it represents imminent damage to equipment, the System Operator shall instigate remedial action that will minimize impact of the potential vegetation contact to the transmission system. Such remedial actions may include:
   1. Isolation of the line section
   2. Load reduction of the line section

E. The System Operator shall inform ERCOT Operations of the nature and location of the threat and again when the threat is mitigated.