



# **Compliance Audit Report Public Version**

**Cottonwood Energy, LP (Cottonwood)  
(NCR01210)  
October 30, 2007**

**Confidential Information (including  
Privileged and Critical Energy Infrastructure  
Information) – Has Been Removed**

**November 13, 2007**

---

## TABLE OF CONTENTS

Executive Summary .....	3
Audit Process .....	4
<i>Objectives</i> .....	4
<i>Scope</i> .....	4
<i>Methodology</i> .....	4
<i>Company Profile</i> .....	5
<i>Audit Specifics</i> .....	5
Audit Results .....	5
<i>Findings</i> .....	7
<i>Conclusions</i> .....	10
Summary of Cottonwood Energy, Ip Response to the Audit Findings .....	11
Appendix 1 — Applicable Reliability Standards.....	12

## EXECUTIVE SUMMARY

This final compliance audit report is the public version. Confidential information (including privileged and critical energy infrastructure information) has been redacted from this report. The full final compliance audit report was submitted to the audited entity and NERC.

Cottonwood Energy, LP (Cottonwood) was audited on October 30, 2007 for compliance with the requirements contained in the NERC Reliability Standards that are currently enforceable and apply to Cottonwood's operation. This audit focused on documents and other evidence provided to SERC by the staff of Cottonwood, and did not include any evidence obtained through system observation or inspection. The findings of the audit are based on the state of compliance and current mitigation activity at the time of the audit, and do not reflect past compliance activities or activities that will be completed in the future.

The audit was conducted by asking Cottonwood staff to show valid evidence of meeting each and every individual requirement and sub-requirement contained in the eight standards that had been previously identified by SERC to Cottonwood as subject to this audit. Cottonwood staff responded by providing evidence in the form of reports, procedures, studies, and other documents. Cottonwood staff would then cite specific portions of the evidence that demonstrated compliance. This evidence and the citations were documented and evaluated by the audit team for the level of compliance and agreement with the requirement. If all of the requirements and sub-requirements of an audited standard were met, then Cottonwood was judged to be compliant. Likewise, if any of the requirements or sub-requirements were not fully met, then Cottonwood was judged to have a possible violation of the standard. In other words, only a score of 100% is identified as compliant; 99% and below is a possible violation.

Cottonwood was found to be in compliance with all but one of the standards that were audited. The audit team identified a possible violation of PRC-005-1 - Transmission and Generation Protection System Maintenance and Testing, Requirement 1. DC Control Circuitry maintenance and testing intervals, their basis, and a summary of maintenance and testing procedures were not specifically stated in Cottonwood's published maintenance and testing program document. However, documentation of relay maintenance and testing indicates that Cottonwood is performing the required maintenance and testing in conjunction with relay maintenance. The audit team has identified this possible violation as a documentation only issue.

The audit team acknowledges Cottonwood's efforts in establishing their Reliability Standards Compliance Program, their strong commitment to compliance with the standards and to ensuring the reliability of the bulk electric system (BES).

The possible compliance violation will be processed through the SERC Compliance Monitoring and Enforcement Program. Any further actions related to possible compliance violations will be through that process.

## AUDIT PROCESS

### ***Objectives***

All registered entities are subject to audit for compliance with all reliability standards applicable to the functions for which the registered entity is registered.<sup>1</sup> The audit objectives are:

- Independently and objectively review Cottonwood's compliance with the requirements of the reliability standards that are applicable to Cottonwood based on Cottonwood's registered functions in the bulk electric system as determined by SERC.
- Validate compliance with applicable reliability standards from the NERC 2007 Implementation Plan list of actively monitored standards.

### ***Scope***

The scope of the audit of Cottonwood was to look at all Generator Owner related standards that are in the NERC 2007 Compliance Monitoring and Enforcement Plan. Of the eight standards that apply to Cottonwood, eight were selected for review in this audit. Of these eight standards, three standards were not assessed EOP-009, PRC-016 and PRC-017, as shown in the findings table below.

Note: For the 2007 compliance program, the monitoring period for the compliance audit will be the past 12 months or periods specified in individual reliability standards. The monitoring period is not limited to the time period for which penalties and sanctions are assessed.

### ***Methodology***

The audit was conducted by reviewing all of the standards that apply to Cottonwood in the NERC 2007 Enforcement Plan. These standards were grouped and scheduled during the day to make the most efficient use of Cottonwood staff's time. The Cottonwood staff had been briefed on the standards that were to be addressed so that documentation and evidence of compliance could be assembled.

A team of auditors and subject matter experts were identified and conducted the audit of Cottonwood. The audit team had a moderator who would initiate dialogue on each standard requirement, request compliance evidence, and document the evidence and Cottonwood staff response. This was done by asking Cottonwood staff to show valid evidence of meeting each and every individual requirement and sub-requirement contained in the eight standards that had been previously identified by SERC to Cottonwood as subject to this audit. Cottonwood staff responded by providing evidence in the form of reports, procedures, studies, and other documents. Cottonwood staff would then cite specific portions of the evidence that demonstrated compliance. This evidence and the citations were documented by the scribe on the Reliability Standard Audit Worksheet (RSAW) and evaluated by the audit team for the level of compliance and agreement with the requirement. Discrepancies between the requirement and the evidence provided were the subject of dialogue among the team members and Cottonwood staff members until it could be agreed that each requirement was met by the cited evidence or other evidence offered. If it was felt that, after all evidence had been presented and discussed, that Cottonwood did not have sufficient evidence to support a finding of compliance, a possible violation would be identified by the team and the Cottonwood staff would be informed.

---

<sup>1</sup> North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

### **Company Profile**

Cottonwood's parent company is Kelson Energy, Inc which is in turn held by Kelson Holdings, LLC. Kelson Energy, Inc. owns and manages three other natural gas-fired generating facilities in addition to Cottonwood, including Magnolia Energy LP (also in SERC), Redbud Energy LP (SPP) and Dogwood Energy LLC (SPP). Kelson Energy out sources certain services for its plants, including plant operations to North American Energy Services (NAES) for all four plants, and energy management to a different entity for each plant. Currently, Merrill Lynch functions as the energy manager for Cottonwood. Within Kelson Energy, each plant, including Cottonwood, has a President (Asset Manager) that is ultimately responsible for the profit and loss of the plant. Each President reports directly to the CEO of Kelson Energy. Cottonwood's Plant Manager, although he is a NAES employee, also reports to the President of Cottonwood.

Cottonwood is a natural gas-fired, combined cycle electricity generating facility located in Deweyville, Newton County, Texas approximately 30 miles northeast of Beaumont, Texas. The plant is nominally rated at 1,230 Megawatts (ISO conditions) at 500 kV, and provides power to Entergy's Hartburg substation through two 500 kV lines.

### **Audit Specifics**

The compliance audit was conducted on October 30, 2007 at the Cottonwood site located at 976 County Road 4213, Deweyville, Texas.

### **Audit Team**

<b>Audit Team Role</b>	<b>Name</b>	<b>Title</b>	<b>Company</b>
Lead	James Harrell	Compliance Auditor	SERC
Member	Mike Vastano	Compliance Auditor	SERC
Member	John Troha	Manager, Operations	SERC
Member	Phil Winston	Manager, Protection & Control	Georgia Power Company

## **AUDIT RESULTS**

The audit team arrived at the Cottonwood Energy Power Plant at 7:45 a.m., October 30, 2007 and was required to present identification and sign the Cottonwood daily log-in sheet. The audit team viewed a required plant safety orientation film at 8:00 a.m., October 30, 2007. After viewing the safety film the audit team was escorted to a conference room to set up for the audit. At 8:20 a.m. the plant fire alarm sounded and the audit team, along with all other plant personnel, evacuated the building. The plant safety procedure went into effect and a roll call was completed; all persons were accounted for. After the all clear was sounded the audit team returned to the conference room.

The audit began at 8:35 a.m., October 30, 2007 with an opening presentation by James Harrell, SERC Compliance Auditor and Audit Team Lead (ATL). He reviewed the NERC compliance plan for 2007 in general, and how it applied to Cottonwood specifically. He introduced and reviewed the standards to be covered in the audit, and addressed both the expectations of Cottonwood staff and the quality of evidence to be presented. He also covered the basic procedure for the audit, and the bounding rules of conduct. Each member of the audit team was

introduced and professional affiliation identified. His presentation was followed by a brief presentation covering the background of Cottonwood and its compliance activities. The staff of Cottonwood was introduced, and general housekeeping matters explained.

The audit team initially reviewed the registration status of Cottonwood with the Cottonwood staff to verify application of each standard. Each standard's audit began with a recitation of each requirement and an explanation, if requested by the Cottonwood staff. The Cottonwood staff would then present evidence of meeting this requirement, or cite evidence in material already presented to the team. At that point, the evidence was reviewed and dialogue took place until the team reached a point of satisfaction with the evidence. Consensual approval or concern was reached on each of the requirements, and explained to the Cottonwood staff before proceeding to the next requirement. At that point the team scribe would record the evidence presented to satisfy the requirement and the team's recommendation on that requirement using the Reliability Standard Audit Worksheet (RSAW).

After completing a review of all applicable requirements in the standard, the overall compliance to that standard was reviewed first by the team and Cottonwood staff, and then by the ATL. Any concerns or dissention with the recommendation was offered, and the ATL would indicate support or disagreement with the recommendation. Dialogue would ensue to the point of decision on the part of the ATL. Following this review, the Reliability Standard Audit Worksheet (RSAW) would be updated by the scribe with the compliance recommendation.

The review of all applicable standards was completed at approximately 3:15 p.m., October 30, 2007 and the audit team met to review and discuss the findings. Following these discussions, the scribe collected all notes and evidence as needed and began to finalize the RSAW. The ATL began to develop the exit briefing with the help of all team members by using a projector attached to his laptop computer. This facilitated the consensus of the full team on the content of the exit briefing, and re-affirmed the findings.

The exit briefing was presented to the assembled Audit Team and Cottonwood staff at approximately 4:45 p.m., October 30, 2007 and was followed by an informal question and response period. The ATL solicited both informal comments from Cottonwood staff, along with requesting that they fill out formal feedback forms for submission to SERC. The audit team left the Cottonwood meeting room at approximately 5:45 p.m., October 30, 2007.

**Findings**

<b>Reliability Standard</b>	<b>Auditor Notes</b>	<b>Finding</b>
BAL-001-0	Not Applicable – Cottonwood Energy, LP is not a BA	NA
BAL-002-0	Not Applicable – Cottonwood Energy, LP is not a BA, RSG or RRO	NA
BAL-003-0	Not Applicable – Cottonwood Energy, LP is not a BA	NA
CIP-001-1	Not Applicable – Cottonwood Energy, LP is not a BA, RC, TOP or GOP	NA
CIP-002-1 through CIP-009-1	Applies to Cottonwood Energy, LP as currently registered, but not assessed in this audit	Not Assessed
COM-001-1	Not Applicable – Cottonwood Energy, LP is not a BA, TO or RC	NA
EOP-001-0	Not Applicable – Cottonwood Energy, LP is not a BA, TOP	NA
EOP-003-1	Not Applicable – Cottonwood Energy, LP is not a BA, TOP	NA
EOP-005-1	Not Applicable – Cottonwood Energy, LP is not a BA, TOP	NA
EOP-006-1	Not Applicable – Cottonwood Energy, LP is not an RC	NA
EOP-008-0	Not Applicable – Cottonwood Energy, LP is not a BA, TOP or RC	NA
EOP-009-0	Applies to Cottonwood Energy, LP as currently registered. However, Cottonwood Energy, LP is not a blackstart plant and is not in the region's blackstart plan; thus, this standard was not assessed	Not Assessed
FAC-003-1	Not Applicable – Cottonwood Energy, LP is not a RRO, TO	NA
FAC-008-1	Applies to Cottonwood Energy, LP as currently registered. Regarding requirements 1, 2 and 3 Cottonwood Energy provided evidence in the form of the document entitled Plant Procedure CEC-NRS-800 and appendix to the document. Cottonwood Energy, LP was found by the audit team to meet all standard requirements through the evidence provided.	Compliant
FAC-009-1	Applies to Cottonwood Energy, LP as currently registered. Regarding requirement 1, Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-900, Procedure CEC-NRS-800 with Methodology table and Attachment 3 and Cottonwood Energy Facility Engineering and Configuration Control Procedure with checklist.  Regarding requirement 2, Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-900, FAC-009 SERC Certification statement dated 08/30/09 and a copy of an e-mail from their BA/TOP to confirm the receipt of Cottonwood Facility ratings.  Cottonwood Energy, LP was found by the audit team to meet all standard requirements through the evidence provided.	Compliant
IRO-001-1	Not Applicable – Cottonwood Energy, LP is not a RRO, BA, GOP, LSE, PSE, RC, TOP or TSP	NA

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

Reliability Standard	Auditor Notes	Finding
IRO-004-1	<p>Applies to Cottonwood Energy, LP as currently registered since Cottonwood Energy, LP is not a Reliability Coordinator requirement 4 was the only requirement applicable to Cottonwood Energy, LP.</p> <p>Regarding requirement 4, Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-1200 and Cottonwood Energy Facility Dispatch Availability Form for the next day.</p> <p>Cottonwood Energy, LP was found by the audit team to meet all standard requirements through the evidence provided.</p>	Compliant
IRO-014-1	Not Applicable – Cottonwood Energy, LP is not a RC	NA
IRO-015-1	Not Applicable – Cottonwood Energy, LP is not a RC	NA
IRO-016-1	Not Applicable – Cottonwood Energy, LP is not a RC	NA
PER-002-0	Not Applicable – Cottonwood Energy, LP is not a BA or TOP	NA
PER-003-0	Not Applicable – Cottonwood Energy, LP is not a BA, TOP or RC	NA
PER-004-1	Not Applicable – Cottonwood Energy, LP is not a RC	NA
PRC-004-1	<p>Applies to Cottonwood Energy, LP as currently registered.</p> <p>Requirement 1 is not applicable to a Generator Owner (GO).</p> <p>Regarding requirement 2, Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-2000 with Attachment 1, Misoperations Log and Protective Relay Misoperation Report Event 8/18/07 and 8/19/07. Additionally, Cottonwood Energy, LP had a generator relay operation July 31, 2007 which is documented in the Protective Relay Misoperation Report 7/31/07. This relay operation was identified as a correct operation. No other operations are noted.</p> <p>Regarding requirement 3 Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-2000.</p> <p>Cottonwood Energy, LP was found by the audit team to meet all standard requirements through the evidence provided.</p>	Compliant

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

Reliability Standard	Auditor Notes	Finding
PRC-005-1	<p>Applies to Cottonwood Energy, LP as currently registered.</p> <p>Regarding requirement 1 states that” Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a Generation Protection System shall have protection system maintenance and testing program for protection systems that affect the reliability of the BES. The program shall include: maintenance and testing intervals and their basis. Summary of maintenance and testing procedures”; the team determined a Possible Violation for this requirement. Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-2100. However the audit team reviewed the evidence provided by Cottonwood Energy, LP to verify that Cottonwood Energy, LP has maintenance and testing program for the Protection System regarding DC control circuitry. The documentation is such that Cottonwood Energy, LP is doing the testing of their DC control circuitry but it is not specifically stated in their published maintenance and testing program to include the maintenance and testing intervals or summary of maintenance and testing procedures. Due to this finding, the audit team unanimously found Cottonwood Energy, LP in possible violation of requirement 1 and determined that it was a documentation only issue.</p> <p>Regarding requirement 2 Cottonwood Energy, LP provided evidence in the form of the documents entitled Plant Procedure CEC-NRS-2100 with Attachment 4 and testing reports from Infrasource Dashiell, LLC relay testing reports.</p> <p>Cottonwood Energy, LP was found by the audit team to meet NERC reliability standard requirement 2 through the evidence provided.</p>	Possible Violation
PRC-008-0	Not Applicable – Cottonwood Energy, LP is not a TO or DP	NA
PRC-010-0	Not Applicable – Cottonwood Energy, LP is not a TO, DP,LSE or TOP	NA
PRC-011-0	Not Applicable – Cottonwood Energy, LP is not a TO or DP	NA
PRC-016-0	Applies to Cottonwood Energy, LP as currently registered. However, it was verified that Cottonwood Energy, LP does not have an SPS, thus this standard was not assessed	Not Assessed
PRC-017-0	Applies to Cottonwood Energy, LP as currently registered. However, it was verified that Cottonwood Energy, LP does not have an SPS, thus this standard was not assessed.	Not Assessed
PRC-021-1	Not Applicable – Cottonwood Energy, LP is not a TO or DP	NA
TOP-003-0	Not Applicable – Cottonwood Energy, LP is not a BA,GOP,RC or TOP	NA
TOP-004-1	Not Applicable – Cottonwood Energy, LP is not a TOP	NA
TOP-005-1	Not Applicable – Cottonwood Energy, LP is not a BA, TOP, RC or PSE	NA
TOP-007-0	Not Applicable – Cottonwood Energy, LP is not a TOP or RC	NA
TPL-001-0	Not Applicable – Cottonwood Energy, LP is not a PA or TPL	NA
TPL-002-0	Not Applicable – Cottonwood Energy, LP is not a PA or TPL	NA
TPL-003-0	Not Applicable – Cottonwood Energy, LP is not a PA or TPL	NA

<b>Reliability Standard</b>	<b>Auditor Notes</b>	<b>Finding</b>
TPL-004-0	Not Applicable – Cottonwood Energy, LP is not a PA or TPL	NA
VAR-001-1	Not Applicable – Cottonwood Energy, LP is not a TOP	NA

### ***Conclusions***

Cottonwood was found to be in compliance with the standards that were audited with the exception of NERC Reliability Standard PRC-005-1. The possible violation was regarding the Transmission and Generation Protection System Maintenance and Testing PRC-005-1, requirement 1. Cottonwood's relay maintenance and testing documentation showed that Cottonwood is performing DC Control Circuit testing, but it is not specifically stated in Cottonwoods published maintenance and testing program document to include the maintenance and testing intervals, basis for intervals, or summary of maintenance and testing procedures. This was determined to be a documentation only issue.

The possible compliance violation, along with this compliance audit report, will be provided to the SERC compliance staff for processing through the NERC CMEP. Any further actions related to possible compliance violations will be through that process.

Cottonwood exhibited a strong desire and willingness to continue improvement of their compliance effort in the future. Cottonwood personnel were very well prepared for the audit and showed tremendous pride in their work.

## **SUMMARY OF COTTONWOOD ENERGY, LP RESPONSE TO THE AUDIT FINDINGS**

Cottonwood Energy, LP (Cottonwood) concurs with the SERC Audit Team's conclusion that there was an administrative oversight in Cottonwood's published Transmission and Generation Protection System Maintenance and Testing procedure, CEC-NRS-2100. Cottonwood's procedure was created to address NERC Standard PRC-005-1 and SERC's Supplement on Maintenance and Testing Protection Systems, but the procedure did not specifically address DC Control Circuitry as required by requirement 1 of PRC-005-1. It should be noted that the SERC Supplement on Maintenance and Testing Protection Systems does not specifically mention DC Control Circuitry, and the only place DC Control Circuitry is mentioned is NERC's Glossary of Terms under Protection Systems. Nonetheless, Cottonwood provided sufficient documentation to show that the actual testing of the DC Control Circuitry is being performed in conjunction with Relay Testing.

As a result, Cottonwood has revised its Transmission and Generation Protection System Maintenance and Testing procedure, CEC-NRS-2100 to include DC Control Circuitry maintenance and testing intervals, their basis, and a summary of maintenance and testing procedures. In addition, Cottonwood is preparing the SERC Mitigation Plan Submittal and the SERC Mitigation Plan Completion forms for submittal to SERC.

## APPENDIX 1 — APPLICABLE RELIABILITY STANDARDS

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to COTTON WOOD ENERGY, LP? Yes or No
BAL-001-0	All	<b>Real Power Balancing Control Performance</b>	BA	To maintain Interconnection steady-state frequency within defined limits by balancing real power demand and supply in real-time.	The data that supports the calculation of CPS1 and CPS2 (Attachment 1-BAL-001-0) are to be retained in electronic form for at least a one-year period. If the CPS1 and CPS2 data for a Balancing Authority Area are undergoing a review to address a question that has been raised regarding the data, the data are to be saved beyond the normal retention period until the question is formally resolved. Each Balancing Authority shall retain for a rolling 12-month period the values of: one-minute average ACE (ACEi), one-minute average Frequency Error, and, if using variable bias, one-minute average Frequency Bias.	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
BAL-002-0	All	<b>Disturbance Control Performance</b>	BA, RSG, RRO	To ensure the Balancing Authority is able to utilize its Contingency Reserve to balance resources and demand and return Interconnection frequency within defined limits.	Compliance for DCS will be evaluated for each reporting period. Reset is one calendar quarter without a violation.  The data that support the calculation of DCS are to be retained in electronic form for at least a one-year period.	No
BAL-003-0	All	<b>Frequency Response and Bias</b>	BA	This standard provides a consistent method for calculating the Frequency Bias component of ACE.	Yearly or by request.	No
CIP-001-1	All	<b>Sabotage Reporting</b>	RC, BA, TOP, GOP, LSE	Disturbances or unusual occurrences, suspected or determined to be caused by sabotage, shall be reported to the appropriate systems, governmental agencies, and regulatory bodies.	By request and any events in the last year.	No
CIP-002-1 through CIP-009-1	All	<b>Critical Infrastructure Protection Standards</b>	BA, GO, GOP, IA, LSE, NERC, RC, RRO, TO, TOP, TSP	Cyber Security Standards-Follow revised Implementation Plan for Cyber Security Standards CIP-002-1 through CIP-009-1	By request.	Yes

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
COM-001-1	R2 and R5	<b>Telecommunications</b>	TO, BA, RC, NERCNet User Organizations.	Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.	By request.	No
EOP-001-0	All	<b>Emergency Operations Planning</b>	BA, TOP	Each Transmission Operator and Balancing Authority needs to develop, maintain, and implement a set of plans to mitigate operating emergencies. These plans need to be coordinated with other Transmission Operators and Balancing Authorities, and the Reliability Coordinator.	By request.	No
EOP-003-1	All	<b>Load Shedding Plans</b>	BA, TOP	A Balancing Authority and Transmission Operator operating with insufficient generation or transmission capacity must have the capability and authority to shed load rather than risk an uncontrolled failure of the Interconnection.	R1, R5, R6 – Event Driven. Has an event occurred in the past year?  R2, R3, R4, R7, R8 – By request	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
EOP-005-1	All	<b>System Restoration Plans</b>	BA, TOP	To ensure plans, procedures, and resources are available to restore the electric system to a normal condition in the event of a partial or total shut down of the system	By request. Note: entity must follow the timelines specified in the standard: show that the plan is reviewed annually; simulation or testing must be done every five years.	No
EOP-006-1	All	<b>Reliability Coordination – System Restoration</b>	RC	The Reliability Coordinator must have a coordinating role in system restoration to ensure reliability is maintained during restoration and priority is placed on restoring the Interconnection.	By request.	No
EOP-008-0	All	<b>Plans for Loss of Control Center Functionality</b>	BA, RC, TOP	Each reliability entity must have a plan to continue reliability operations in the event its control center becomes inoperable.	By request.	No
EOP-009-0	All	<b>Documentation of Blackstart Generating Unit Test Results</b>	GO, GOP	To ensure that the quantity and location of system blackstart generators are sufficient and that they can perform their expected functions.	By request. Note entity must meet testing frequency specified in EOP-007-0.	Yes
FAC-003-1	All	<b>Vegetation Management</b>	RRO, TO	To improve the reliability of the electric transmission systems by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW, maintaining clearances between transmission lines	By request – program documentation and last four quarterly outage reports.	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
FAC-008-1	All	<b>Facility Ratings Methodology</b>	GO, TO	To ensure that Facility Ratings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on an established methodology	By request the current methodology and any superseded portions of the methodology within the past 12 months.	Yes
FAC-009-1	All	<b>Establish and Communicate Facility Ratings</b>	GO, TO	To ensure that Facility Ratings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on an established methodology or methodologies.	By request.	Yes

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to COTTON WOOD ENERGY, LP? Yes or No
IRO-001-1	All	<b>Reliability Coordination – Responsibilities and Authorities</b>	BA, GOP, LSE, PSE, RC, RRO, TOP, TSP	Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.	By request.	No
IRO-004-1	All	<b>Reliability Coordination — Operations Planning</b>	BA, GO, GOP, LSE, RC, TO, TOP, TSP	Each Reliability Coordinator must conduct next-day reliability analyses for its Reliability Coordinator Area to ensure the Bulk Electric System can be operated reliably in anticipated normal and Contingency conditions.	By request.	Yes

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
IRO-014-1	All	<b>Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators</b>	RC	To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.	By request.	No
IRO-015-1	All	<b>Notifications and Information Exchange Between Reliability Coordinators</b>	RC	To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.	Rolling 12 months of information provided on request.	No
IRO-016-1	All	<b>Coordination of Real-time Activities Between Reliability Coordinators</b>	RC	To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas	Rolling 12 months of information provided on request.	No
PER-002-0	All	<b>Operating Personnel Training</b>	BA, TOP	Each Transmission Operator and Balancing Authority must provide their personnel with a coordinated training program that will ensure reliable system operation.	By request training program and training records.	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
PER-003-0	All	<b>Operating Personnel Credentials</b>	BA, RC, TOP	Certification of operating personnel is necessary to ensure minimum competencies for operating a reliable Bulk Electric System.	By request latest certification information and present calendar year plus previous calendar year staffing plan.	No
PER-004-1	All	<b>Reliability Coordination — Staffing</b>	RC	Reliability Coordinators must have sufficient, competent staff to perform the Reliability Coordinator functions.	By request – Each Reliability Coordinator shall keep evidence of compliance for the previous two calendar years plus the current year.	No
PRC-004-1	All	<b>Analysis and Mitigation of Transmission and Generation Protection System Misoperations</b>	DP, GO, TO	Provide trip operation/misoperation information per regional process.	By request – last 12 months of protection system Misoperation analysis.	Yes
PRC-005-1	All	<b>Transmission and Generation Protection System Maintenance and Testing</b>	DP, GO, TO	Document/implement transmission protection system maintenance/testing/monitoring PROGRAM	By request – maintenance and testing program and testing records to show that testing intervals are on schedule.	Yes

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
PRC-008-0	All	<b>Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program</b>	DP, TO	Document/implement UFLS maintenance/testing PROGRAM	By request – maintenance and testing program and testing records to show that testing intervals are on schedule.	No
PRC-010-0	All	<b>Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program.</b>	DP, LSE, TO, TOP	ASSESS design and effectiveness of UVLS programs	By request – current assessment.	No
PRC-011-0	All	<b>UVLS System Maintenance and Testing</b>	DP, TO	Document/implement UVLS maintenance/testing PROGRAM	By request – maintenance and testing program and testing records to show that testing intervals are on schedule.	No
PRC-016-0	All	<b>Special Protection System Misoperations</b>	DP, GO, TO	DOCUMENT/analyze misoperations	By request – last 12 months of special protection system Misoperation analysis.	Yes
PRC-017-0	All	<b>Special Protection System Maintenance and Testing</b>	DP, GO, TO	Document/implement SPS maintenance/testing PROGRAM	By request – maintenance and testing program and testing records to show that testing intervals are on schedule.	Yes

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
PRC-021-1	All	<b>Undervoltage Load Shedding Program Data</b>	DP, TO	DOCUMENTATION of undervoltage load shedding program	By request – latest UVLS data.	No
TOP-003-0	All	<b>Planned Outage Coordination</b>	BA, GOP, RC, TOP	Scheduled generator and transmission outages that may affect the reliability of interconnected operations must be planned and coordinated among Balancing Authorities, Transmission Operators, and Reliability Coordinators.	By request.	No
TOP-004-1	R6	<b>Transmission Operations</b>	TOP	To ensure that the transmission system is operated so that instability, uncontrolled separation, or cascading outages will not occur as a result of the most severe single Contingency and specified multiple Contingencies.	By request – Each Transmission Operator shall keep 90 days of historical data for Measure 1. Each Transmission Operator shall have current, in-force policies and procedures, as evidence of compliance to Measure 2.	No
TOP-005-1	All	<b>Operational Reliability Information</b>	BA, PSE, RC, TOP	To ensure reliability entities have the operating data needed to monitor system conditions within their areas.	By request.	No
TOP-007-0	All	<b>Reporting System Operating Limit (SOL) and Interconnection Reliability</b>	RC, TOP	Ensure SOL and IROL violations are being reported to the Reliability Coordinator so that the Reliability Coordinator may evaluate actions being taken and direct additional corrective actions as needed.	Event driven.	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to COTTON WOOD ENERGY, LP? Yes or No</b>
TPL-001-0	All	<b>System Performance Under Normal (No Contingency) Conditions</b>	PA, TPL	System performance under normal conditions	By request – latest annual assessment.	No
TPL-002-0	All	<b>System Performance Following Loss of a Single Bulk Electric System Element</b>	PA, TPL	System performance under single contingency	By request – latest annual assessment.	No
TPL-003-0	All	<b>System Performance Following Loss of Two or More Bulk Electric System Elements</b>	PA, TPL	System performance under multiple contingencies	By request – latest annual assessment.	No
TPL-004-0	All	<b>System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements</b>	PA, TPL	System performance under extreme contingencies	By request – latest annual assessment.	No

Confidential Information (including Privileged and  
Critical Energy Infrastructure Information) – Has Been Removed

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to COTTON WOOD ENERGY, LP? Yes or No
VAR-001-1	All	<b>Voltage and Reactive Control</b>	PSE, TOP	To ensure voltage levels, reactive flows, and reactive resources are monitored, controlled, and maintained within limits in real time to protect equipment and the reliable operation of the Interconnection.	By request – last 12 months of data.	No

## ***Determination Summary for Possible Violations Identified in an Audit***

---

***Regional  
Tracking Number***      07-217

***Entity***                      Cottonwood Energy, LP

***Audit Date***                10/30/2007

***Standard***                  PRC-005-1

***Requirement***              R1

---

***Sufficient Basis  
for Violation***             

***Factual Basis***              Audit Screening worksheet states:  
Entity's Transmission and Generation Protection System Maintenance and Testing Program does not include maintenance intervals, basis for intervals or summary procedures for DC Control Circuits. Evidence provided indicates that the entity is performing DC Control Circuit testing in conjunction with, and on the same intervals as, relay maintenance and testing. Issue is a documentation issue only.

---

***Conclusion  
Violation  
Summary***                      The Entity is in violation of NERC standard PRC-005-1, R1 because its documentation of Transmission Protection System Maintenance and Testing doesn't include maintenance intervals and basis. Violation Severity Level was determined to be lower based on incomplete documentation of testing intervals.

---

***NERC BOTCC  
Determination***              The NERC BOTCC affirmed SERC Reliability Corporation's determination to exercise enforcement discretion to impose a zero dollar (\$0) penalty against Cottonwood Energy, LP, based upon the NERC BOTCC's review of the applicable requirements of the Commission approved Reliability Standards and the underlying facts and circumstances of the violation at issue.

---

***NERC Violation  
Number***                      SERC200700047

***NOC Number***                NOC-42

***NOP Number***                NOP-28

***FERC Docket  
Number***                      NP08-14-000