

**Final Compliance NERC Audit Report  
TXU Portfolio Management Company LP  
Luminant  
Audit Date: June 27, 2007**

**Public Version**

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# Executive Summary

The on-site compliance audit of TXU Portfolio Management Company LP was conducted on June 27, 2007. The 2007 NERC Actively Monitored Standards that were reviewed based on of TXU Portfolio's registration as a Generation Operator (GOP). The audit team consisted of members from NERC and Texas Regional Entity (Texas RE).

From the documentation provided and reviewed and interviews conducted, TXU Portfolio Management Company LP met all of the applicable 2007 NERC Standard requirements.

## Audit Process (NERC)

The compliance audit process steps are detailed in the [NERC CMEP](#).

## Audit Objectives

The criteria for this audit is based on the premise that a three year (minimum) compliance audit be conducted. The audit is designed to verify that all NERC Criteria are met and documented as appropriate for that entity.

## Scope

The scope of this compliance audit is inclusive of the requirements of the NERC Standards that are actively monitored for 2007 and any other FERC or NERC BOT approved standards that may apply at the time of the audit. The audit was performed by members of the Texas RE and a NERC Compliance Coordinator.

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 list of actively monitored NERC Standards for 2007 was sent to TXU Portfolio Management Company LP in advance. There were also RSAW documents sent to help provide a structure of what the audit team would be looking for during the site audit. A date was set for the site visit to the TXU Portfolio Management Company LP facility. During the on site audit, management was interviewed to answer or clarify questions that the audit team had regarding the responses to the questionnaire. The Texas RE audit team interviewed appropriate personnel and reviewed documents substantiating that operations personnel are trained and capable of following the criteria to ensure reliable operations from that entity. The audit team also interviewed additional IT, Communications and Planning personnel to obtain answers to questions and verify documentation when necessary.

An exit briefing was conducted as a forum for the audit team to offer informational recommendations for consideration in future audits. These recommendations are not included in this audit report. The audit team shared its preliminary results verbally with the entity during the exit briefing.

## **Company Profile**

TXU Portfolio Management Company LP is located in downtown Dallas, Texas.

Note: TXU Portfolio Management Company LP's name will be changed to Luminant Energy when the registration paperwork is submitted to the Texas RE.

Luminant Energy optimizes performance of the generation assets of TXU Power (d/b/a "Luminant Power") and sources the electricity requirements for its Retail Electric Provider (REP) affiliate, TXU Energy. Luminant Energy manages the commodity exposure of the Luminant Power generation fleet and TXU Energy retail portfolio through asset management and hedging activities. Luminant Energy provides TXU Energy with the electricity and related services to meet retail customer demand and the operating requirements of ERCOT. Luminant Energy also supports Luminant Power in selling forward generation and seeking to maximize the economic benefit of Luminant Power's generation fleet. Luminant Energy also buys and sells electricity in the spot and short-term market and executes longer-term forward electricity purchase and sales agreements. In its hedging activities, Luminant Energy enters into contracts for the physical delivery of electricity and natural gas and exchanges traded and "over-the-counter" financial contracts and bilateral contracts with producers, generators, and end-use customers.

As part of its asset management function, Luminant Energy dispatches the natural gas, nuclear and solid-fueled generating units owned and operated by Luminant Power. Luminant Energy's dispatching activities are performed through a centrally-managed real-time operational staff that synthesizes operational activities across the fleet and interfaces with various wholesale market participants. Luminant Energy coordinates the overall commercial strategy for these plants working closely with Luminant Power. In addition, Luminant Energy manages the fuel procurement requirements for the natural gas-fueled generation plants.

Luminant Energy also engages in commercial operations such as physical purchases, storage and sales of natural gas, electricity and natural gas trading and third-party asset management. Luminant Energy's natural gas operations include well-head production contracts, transportation agreements, storage leases and retail sales. It manages approximately 18 billion cubic feet of natural gas storage capacity and has a presence outside of Texas in both electricity and natural gas commodity trading. In addition, Luminant Energy is active in the renewable energy market. It is currently the largest purchaser of wind-generated electricity in Texas and the fifth largest purchaser in the United States.

## **Audit Specifics**

The audit was conducted on **June 27, 2007** at the TXU Portfolio Management Company LP's headquarters in Dallas, Texas. The attendance list was as follows:

### **Audit Team:**

<b>Audit Team Role</b>	<b>Name</b>	<b>Title</b>	<b>Company</b>
Lead	Robert Potts	Sr. Reliability Analyst	Texas RE
Member	Frank Vick	Reliability Analyst	Texas RE
Member	Bob Collins	Compliance Engr./Analyst	Texas RE
Member	Jacqueline Power	Regional Compliance Coordinator	NERC

### **TXU Portfolio Management LP Audit Participants:**

<b>Name</b>	<b>Title</b>	<b>TXU Portfolio Management LP Organization</b>
Rick Terrill		TXU Power-Gen. Planning
Randa Stephenson	Compliance Director	TXU Wholesale
Larry Gurley		TXU Wholesale
Henry Durrwachter		TXU Wholesale

# Audit Results

## Findings

The Compliance Audit Team found that TXU Portfolio Management Company LP was compliant with the following 2007 actively monitored NERC Standards at the time of the audit.

Reliability Standard	Auditor Notes	Finding
CIP-001-1	Included in Appendix 2: Confidential Security Sensitive Information	Compliant
CIP-002-CIP-009	Example logs provided and reviewed by TRE	Reviewed
IRO-001-1	Documentation provided of training program	Compliant
IRO-004-1	Documentation provided of logs and screen shots	Compliant
TOP-003-0	Documentation provided of logs and screen shots	Compliant

### **CIP-002 through CIP -009**

TXU Wholesale has created a steering committee to review CIP-002 through CIP-009-1. In accordance with CIP-003 R2, TXU Wholesale has designated a manager with responsibility for implementation. TXU Wholesale has developed a methodology to identify critical and/or cyber critical assets, as well as a methodology to perform the risk based assessment on those assets. A high level action plan, with milestones, has been created to identify and address compliance of critical or cyber critical assets. Full compliance assessment will be conducted in the future, in accordance with NERC's implementation schedule for these standards. **COMPLIANT**

### **IRO-001-1**

TXU provided a well documented procedure and training program and proof of training on following RC directives and logging. Example logs were provided.

Requirement 8 – **COMPLIANT**

**IRO-004-1**

TXU provided documentation of logs and screen shots covering resource plans and schedules that showed that they are providing the required study information by 16:00 CST daily or sooner as expected by ERCOT.

Requirement 4 – **COMPLIANT**

**TOP-003-0**

TXU provided documentation of logs and screen shots that showed that they are providing the required planned outage information for ERCOT daily studies.

Requirements 1, 2, 3 - **COMPLIANT**

***Conclusions***

TXU Portfolio Management Company LP was found in compliance with the standards that were audited.

**Summary of Response to the Audit Findings**

Summarize statements received from TXU Portfolio Management Company LP regarding the audit findings and the draft audit report. Responses in writing from TXU Portfolio Management should be requested.

TXU Portfolio had no responses regarding the audit findings and the draft audit report.

## Appendix 1 — Applicable Reliability Standards

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to TXU Portfolio? 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.	N
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.	N
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.	N

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to TXU Portfolio? Yes or No</b>
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.	Y
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.	Y
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.	N
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.	N
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	N

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to TXU Portfolio? 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 5 years.	N
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.	N
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.	N
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.	Y
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 4 quarterly outage reports.	N
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.	N

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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.	N
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.	Y
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.	Y

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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.	N
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.	N
IRO-016-1	All	<b>Coordination of Real-time Activities Between Reliability Coordinators</b>	RC	that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas	Rolling 12 months of information provided on request.	N
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.	N
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.	N
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.	N

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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.	N
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.	N
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.	N
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.	N
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.	N
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.	N

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to TXU Portfolio? Yes or No</b>
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.	N
PRC-021-1	All	<b>Under-Voltage Load Shedding Program Data</b>	DP, TO	DOCUMENTATION of undervoltage load shedding program	By request – latest UVLS data.	N
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.	Y
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.	N
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.	N
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.	N

<b>Std #</b>	<b>Requirements</b>	<b>Standard</b>	<b>Who</b>	<b>Purpose</b>	<b>Monitoring Timeframe</b>	<b>Applicable to TXU Portfolio? 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.	N
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.	N
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.	N
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.	N
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.	N

## **Appendix 2 — Confidential: Security Sensitive Information**

No confidential or security sensitive information has been provided by TXU or has been included in this report.