



Compliance Audit Report Public Version

**Louisiana Generating LLC (LAGN)
NCR01265
October 4, 2007**

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

November 15, 2007

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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.

Louisiana Generating LLC (LAGN) was audited on October 4, 2007 for compliance with the requirements contained in the NERC Reliability Standards that are currently enforceable and apply to LAGN's operation.

This audit focused on documents and other evidence provided to SERC by the staff of LAGN, and did not include any evidence obtained through system observation or inspection. The findings of the audit are based on the state of compliance 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 LAGN staff to demonstrate valid evidence of meeting each individual requirement and sub-requirement contained in the twenty standards that had been previously identified by SERC to LAGN as subject to this audit. LAGN 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 LAGN was judged to be compliant. Likewise, if any of the requirements or sub-requirements were not fully met, then LAGN 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.

LAGN provided adequate evidence of compliance for all of the reliability standards assessed. The Audit Team found no possible compliance violations with any of the requirements audited.

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 registered¹. The audit objectives are:

- Independently and objectively review LAGN's compliance with the requirements of the reliability standards that are applicable to LAGN based on Louisiana Generating's 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.

¹ North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

Scope

The scope of the LAGN audit was to look at all operating-related standards that are in the NERC 2007 Compliance Monitoring and Enforcement Plan. Of the standards that apply to LAGN, 17 were selected for review in this audit.

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 standards applicable to LAGN in the NERC 2007 Enforcement Plan relative to system operations, and any standards that are currently covered by a mitigation plan. These standards were grouped and scheduled during the day to make the most efficient use of the LAGN staff's time. The LAGN staff had been briefed on the standards that were to be addressed so that documentation and evidence of compliance could be assembled in advance of the interviews.

A single team of auditors and subject matter experts were identified; the single team audited all applicable standards in scope. The team had a moderator who initiated dialogue on each standard requirement, requested compliance evidence, and documented the evidence and LAGN staff response. This was done by asking LAGN staff to demonstrate valid evidence of meeting each and every individual requirement and sub-requirement contained in the standards that had been previously identified by SERC to LAGN as subject to this audit. LAGN staff responded by providing evidence in the form of reports, procedures, studies, and other documents. LAGN 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.

Discrepancies between the requirement and the evidence provided were the subject of dialogue among the team members and LAGN 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 LAGN did not have sufficient evidence to support a finding of compliance, a possible violation would be identified by the team and LAGN staff.

The Audit Team conducted an Exit Briefing immediately following the audit with LAGN compliance audit participants and higher level LAGN management personnel. The Audit Team shared its preliminary results verbally and via a presentation. The LAGN audit participants asked questions and commented on the Audit Team's findings.

Company Profile

Louisiana Generating LLC is part of NRG Energy, Inc. which owns and operates a diverse portfolio of power-generating facilities, primarily in Texas and the northeast, South Central region which consist of Louisiana Generating LLC and Western regions of the United States. Its operations include base load, intermediate, peaking, and cogeneration facilities and thermal

energy production. The regions are each led by a Regional President that report to the CEO of NRG Energy, Inc. NRG also has ownership interests in generating facilities in Australia, Germany and Brazil.

Louisiana Generating's electric portfolio consists of over 2395 MW of generation. LAGN is a transmission-dependent control area; it utilizes the transmission systems of its Transmission Providers (Cleco Power LLC, American Electric Power (AEP) West and Entergy Corp.) to transmit energy from its generating units to its customers. LAGN serves 11 cooperatives (all 11 cooperatives are in Louisiana with load in ~54 of the 64 Parishes) in its Balancing Authority footprint.

LAGN operates a control room in New Roads, Louisiana, for its transmission switching and monitoring and some balancing authority functions. The control room also provides a backup location for Balancing Authority functions performed at another site. NRG performs most of the Balancing Authority functions at the Princeton, New Jersey control center.

LAGN owns a single 24-mile, 138 kV radial transmission line that is located between two substations in its system. LAGN also owns transformers and high side equipment in its substations. In November 2006, the Southwest Power Pool, as the Independent Coordination of Transmission for the Entergy's transmission system, became LAGN's Reliability Coordinator. Prior to that time, Entergy served as LAGN's Reliability Coordinator.

LAGN is generally a winter peaking utility. The all time peak load was reported in advance as 2099 MW, on December 8, 2006. Relative to Transmission Planning, LAGN has the following networked interconnection tie-lines with other, neighboring systems:

- One 500 kV synchronous interconnection point with Entergy
- One 230 kV synchronous interconnection point with Entergy
- One 138 kV synchronous interconnection point with Entergy
- One 115 kV synchronous interconnection point with Entergy

It should be noted that LAGN does not own transmission lines. LAGN's one 24-mile radial 138kV line identified previously has been declared by SERC as not being a transmission line according to NERC's definition. Since LAGN is a transmission-dependent Balancing Authority, the switching in its substations is performed under the direction of NERC-registered transmission operators Entergy Corp, CLECO Power LLC and American Electric Power transmission companies.

Louisiana Generating LLC (LAGN) is registered in SERC as a Balancing Authority, Generator Operator, Generator Owner, Load-Serving Entity, Purchasing-Selling Entity, Resource Planner, Transmission Owner, Reserve Sharing Group and Distribution Planner.

Audit Specifics

The compliance audit was conducted on October 04, 2007 at the Louisiana Generating's Operations Center in New Roads, Louisiana.

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The LAGN Balancing Authority functions are performed from two separate locations. Transmission operations, monitoring the transmission interface equipment of the cooperatives, voltage control and transmission-related load shedding are the responsibility of the LAGN operations at the LAGN facility located in New Roads, Louisiana. Generation load balancing, including capacity balance-related load shedding, is the responsibility of the NRG control area operators located in Princeton, New Jersey. LAGN has two control centers. The Balancing Authority function is managed out of Princeton by NRG Power Marketing Inc. The transmission group operates from the control center located in New Roads, LA.

SERC Compliance coordinated the event with a single Audit Team who worked in the same room to review evidence and conduct interviews. Keith Comeaux, from the Compliance department, led the audit for Louisiana Generating.

Audit Team

Audit Team Role	Name	Title	Company
Audit Team Leader	Ralph Anderson	Senior Compliance Auditor	SERC
Member	Mickey Bellard	Compliance Auditor	SERC
Member	James Harrell	Compliance Auditor	SERC
Member	Earl Shockley	NERC Regional Compliance Program Coordinator	NERC
Member	Roman Carter	Manager, Reliability Standards	Southern

AUDIT RESULTS

The audit began at 8:30 a.m., October 4, 2007 with an opening presentation by Ralph Anderson, SERC Audit Team Leader. He reviewed the NERC compliance plan for 2007 in general, and how it applied to LAGN specifically. He introduced and reviewed the standards to be covered in the audit, and addressed both the expectations of LAGN 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. The staff of LAGN was introduced, and general housekeeping matters explained. A presentation of Louisiana Generating's overall compliance structure and activities was conducted by Keith Comeaux, Manager of Louisiana Generating Compliance Department.

The Audit Team agreed to use one team for the sake of efficiency, and the individual auditing of standards began at 9:20 a.m. The single Audit Team initially reviewed the entity registration status with LAGN staff to verify the applicability of each standard. Each standard's audit began with a recitation of each requirement and an explanation, if requested by LAGN. LAGN staff would then present evidence of how this requirement was met, 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. The Audit Team developed consensual approval or concern on each of the requirements, and then explained the outcome to LAGN staff before proceeding to the next requirement. At that point, the team moderator would record the evidence presented to satisfy the requirement and the team's recommendation on that requirement using the standard worksheet.

After completing a review of all applicable requirements in the standard, the overall compliance to that standard was reviewed first by the team and LAGN staff, and then by the Audit Team Leader. Any concerns or dissention with the recommendation was offered, and the Audit Team leader would indicate support or disagreement with the recommendation. Dialogue would ensue to the point of decision on the part of the Audit Team Leader. Following this review, the standard worksheet would be updated with the compliance recommendation.

The review of all applicable standards was completed at approximately 2:40 p.m. The Audit Team met to review and discuss the findings. At approximately 3:10 p.m, October 4, 2007, the

moderator collected all notes and evidence as needed and began to finalize the standards worksheets. The Audit Team Leader began to develop the Exit Briefing with the help of all team members. This work facilitated the consensus of the full team on the content of the Exit Briefing, and re-affirmed the findings and recommendations.

The Exit Briefing was presented to the assembled Audit Team and LAGN staff at 4:00 p.m., October 4, 2007, which was followed by an informal response from LAGN staff. The Audit Team Leader solicited both informal comments from LAGN staff, and requested that they fill out formal feedback forms for submission to SERC. The Audit Team left the LAGN meeting room at approximately 4:30 p.m., October 4, 2007.

Findings

The following table details the summarized auditor notes relating to evidence reviewed for compliance with the monitored reliability standards.

Reliability Standard	Auditor Notes	Finding
BAL-001-0	Reviewed and validated the last 12 months of CPS calculations. LAGN reported meeting CPS1 and CPS2 to its region on a monthly basis. R3/R4 not assessed as Entity does not receive any overlap regulation service.	Compliant
BAL-002-0	Reviewed the data to calculate DCS for the last 12 months. The last four quarterly reports of DCS were reported to the region and were found compliant.	Compliant
BAL-003-0	LAGN presented evidence of how LAGN calculates its Frequency Bias setting. 2007 Frequency Bias and Estimated Peak Demand Request provided to SERC 12/21/2006	Compliant
CIP-001-1	LAGN provided evidence on how sabotage events will be identified and reported to local and federal officials, neighboring entities and to regulatory bodies. Interviews with LAGN operations and security employees revealed that the employees are aware and have been trained on the procedures. Review of Corporate intranet programs and business unit specific documents supported this evidence.	Compliant
CIP-002-1 through CIP-009-1	LAGN is following the implementation plan for these standards.	Begin Work
COM-001-1	LAGN is not a NERC Net user and R6 didn't apply. Communications verified: both voice and data. Review scheme Figure 1 of Telecomm detail procedure. Review of Operations center hotlines page to other entities Figure 3 same procedure. Reviewed quarterly logs for indication of telecomm tests. LAGN provided a Hotline manual which included testing procedures for Hotline system. Team reviewed e-ticket trouble ticket May 8, 2007, SERC hotline, and e-request ticket dated October 18, 2005. For Balancing Authority Princeton backup center procedure April 30, 2007 and August 1, 2007. Verified primary English language is used for real-time communications.	Compliant

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Reliability Standard	Auditor Notes	Finding
EOP-001-0	<p>LAGN provided Operating agreements with neighboring Balancing Authorities. Reviewed Southwest Power Pool's (SPP) Reliability Coordinator agreement dated October 16, 2006. Reviewed list of participants coordinated by SPP.</p> <p>R2 was not applicable to LAGN. Capacity and Energy emergency plans detail the emergency procedures and the duties they perform during an emergency. Includes contacting the Reliability Coordinator, Local Law enforcement, 417 forms, etc. A handout was provided showing on what page of the Emergency plan each of the components are located. Capacity (CEEP Page 11, 18, 17, 14, 5, 16) energy emergency plan. The pages were cross-referenced and verified with EOP document attachment. Evidence of coordinating the LAGN emergency plans was provided. Reviewed Standard Operating System. "SERC planned outage reporting and compliance procedure" RC-SERC-002 7/20/07. 5/7/07 earlier document.</p>	Compliant
EOP-003-1	<p>R1, R5, and R6 – No events have occurred in the last 12 months.</p> <p>R2 – LAGN does not have an UVLS. LAGN showed evidence of their UFLS scheme. Provided document and contained the information on UF and UV.</p> <p>R3 – The region requires that LAGN has a load shedding plan and participates on regional coordination activities. The evidence is in the form of the regional report for spreadsheet and communication.</p> <p>R4 – LAGN criteria is based on frequency. This is documented in the UFLS program document. Provided information that steps were based on Frequency and Hz rate of decay in three steps.</p> <p>R7 – The LAGN UFLS program document includes coordination of the items listed in R7 with their UFLS. U.F relay settings: Team reviewed relay settings for plant under-frequency generators all LAGN units. All relay settings are below entities three steps in their procedure.</p> <p>R8 – LAGN Load Shed Procedure dated May 2007 meets the requirement.</p>	Compliant

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Reliability Standard	Auditor Notes	Finding
EOP-005-1	<p>R1 – Not applicable to LAGN.</p> <p>R2 – Not applicable to LAGN.</p> <p>R3 – Not applicable to LAGN.</p> <p>R4 – Not applicable to LAGN.</p> <p>R5 – LAGN tests its backup communications on a weekly basis. Referred to the documents provided under COM-001, BSRP Pages 9 and 10 Communications equipment test: See COM 1 documentation.</p> <p>R6, R7 – LAGN operating personnel participate in its Reliability Coordinator sponsored restoration training and simulation activities on an annual basis. The last simulation was dated May 17, 2007.</p> <p>R8 – Not applicable to LAGN.</p> <p>R9 – Not applicable to LAGN.</p> <p>R10 – Not applicable to LAGN.</p> <p>R11 - LAGN has not experienced an isolation event in the last 12 months.</p>	Compliant
EOP-006-1	Not applicable – LAGN is not registered as a Reliability Coordinator.	Not Applicable
EOP-008-0	The LAGN Back up Control Center Procedure. Telecommunications detail document Pages 2 and 3 dated May 2007 and Balancing Authority Back up Control Center Procedure Telecommunications detail document Pages 3 and 4 covers the requirements of the standard. Periodic annual testing verified. Plan updated annually as of April 2007 and August 2007, procedure requires annual test and review. Reviewed BUCC BA-Transfer sign off sheet May 1, 2007. Transfer time less than one hour Information was provided that showed compliance.	Compliant
EOP-009-0	LAGN Blackstart Capabilities letter indicating that they are not part of plan.	Compliant
FAC-003-1	Not applicable to LAGN	Not Applicable
FAC-008-1	Not part of LAGN Audit scope.	Not assessed
FAC-009-1	Not part of LAGN Audit scope.	Not assessed
IRO-001-1	Since LAGN is not a Reliability Coordinator, only R8 in this standard applies. LAGN provided evidence (operator logs) to show compliance with this standard. Provided documents highlighting authority to take actions in compliance with NERC standards to show employees have the authority to and shall comply with Reliability Coordinator directives. Reviewed SPP Reliability Coordinator agreement for coordination and compliance October 16, 2006. Reliability Coordinator questionnaires did not indicate any problems.	Compliant

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Reliability Standard	Auditor Notes	Finding
IRO-004-1	All LAGN data is submitted via its Reliability Coordinator's portal, in the Reliability Coordinator Scheduling System. Copies of the data requirement were provided, outage scheduler forms were included. Reviewed two examples of redispatch and interchange curtailment. They followed the Reliability Coordinator commands. Reviewed evidence of redispatch and LAGN System Operations Dept. Reviewed e-mail copy of logs detailing action coordination with Reliability Coordinator, June 19, 2007.	Compliant
IRO-014-1	Not applicable – LAGN is not a registered Reliability Coordinator.	Not Applicable
IRO-015-1	Not applicable – LAGN is not a registered Reliability Coordinator.	Not Applicable
IRO-016-1	Not applicable – LAGN is not a registered Reliability Coordinator.	Not Applicable
PER-002-0	LAGN has an operations training program. Training documentation confirms that personnel have received additional training required by LAGN's training program, NERC Standards and SERC Supplements.	Compliant
PER-003-0	LAGN provided List of NERC certified Transmission Operators with their credential numbers – all Balancing Authority responsible personnel. Reviewed shift schedule and NERC responsibility.	Compliant
PER-004-1	Not applicable – LAGN is not a registered Reliability Coordinator.	Not Applicable
PRC-004-1	Not part of LAGN Audit scope.	Not assessed
PRC-005-1	Not part of LAGN Audit scope.	Not assessed
PRC-008-0	Not part of LAGN Audit scope.	Not assessed
PRC-010-0	Not part of LAGN Audit scope.	Not Assessed
PRC-011-0	Not part of LAGN Audit scope.	Not Assessed
PRC-016-0	Not part of LAGN Audit scope.	Not Assessed
PRC-017-0	Not part of LAGN Audit scope.	Not Assessed
PRC-021-1	Not part of LAGN Audit scope.	Not Assessed
TOP-003-0	LAGN provided copy of its Reliability Coordinator Generator Outage form showing daily reporting requirements supplied to Reliability Coordinator. Team also reviewed SERC Planned Outage Reporting Compliance Procedure RC-SERC-002 May 7, 2007.	Compliant
TOP-004-1	LAGN is not registered as a Transmission Operator.	Not Applicable
TOP-005-1	The Reliability Coordinator did not report any problems with LAGN regarding this standard via the questionnaire. LAGN does not receive ISN data. LAGN data is provided via its Reliability Coordinator web portal tool. The neighboring questionnaires did not reveal any data sharing concerns with LAGN.	Compliant
TOP-007-0	LAGN is not registered as a Transmission Operator or Reliability Coordinator.	Not Applicable

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Reliability Standard	Auditor Notes	Finding
TPL-001-0	Not part of LAGN Audit scope.	Not Assessed
TPL-002-0	Not part of LAGN Audit scope.	Not Assessed
TPL-003-0	Not part of LAGN Audit scope.	Not Assessed
TPL-004-0	Not part of LAGN Audit scope.	Not Assessed
VAR-001-1	LAGN provided operating agreements, oasis informational documents, and reactive resource procurements as evidence for R5. LAGN purchases reactive services for each MW purchased on the OASIS transmission reservation system. This is a requirement for purchasing a transmission reservation. (Verified e-mail) LAGN was audited as a PSE based on registration and applicability.	Compliant

Conclusions

LAGN provided evidence of compliance with all of the applicable monitored reliability standards as specified in the scope of this audit.

SUMMARY OF LAGN RESPONSE TO THE AUDIT FINDINGS

LAGN agrees with the findings as noted by the audit team.

APPENDIX I – APPLICABLE RELIABILITY STANDARDS

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
BAL-001-0	All	Real Power Balancing Control Performance	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.	Yes
BAL-002-0	All	Disturbance Control Performance	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.	Yes
BAL-003-0	All	Frequency Response and Bias	BA	This standard provides a consistent method for calculating the Frequency Bias component of ACE.	Yearly or by request.	Yes

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
CIP-001-1	All	Sabotage Reporting	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.	Yes
CIP-002-1 through CIP-009-1	All	Critical Infrastructure Protection Standards	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
COM-001-1	R2 and R5	Telecommunications	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.	Yes
EOP-001-0	All	Emergency Operations Planning	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.	Yes

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
EOP-003-1	All	Load Shedding Plans	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.	Yes
EOP-005-1	All	System Restoration Plans	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.	Yes
EOP-006-1	All	Reliability Coordination – System Restoration	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	Plans for Loss of Control Center Functionality	BA, RC, TOP	Each reliability entity must have a plan to continue reliability operations in the event its control center becomes inoperable.	By request.	Yes
EOP-009-0	All	Documentation of Blackstart Generating Unit Test Results	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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
FAC-003-1	All	Vegetation Management	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
FAC-008-1	All	Facility Ratings Methodology	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	Establish and Communicate Facility Ratings	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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
IRO-001-1	All	Reliability Coordination – Responsibilities and Authorities	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.	Yes
IRO-004-1	All	Reliability Coordination — Operations Planning	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 (BES) can be operated reliably in anticipated normal and Contingency conditions.	By request.	Yes
IRO-014-1	All	Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators	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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
IRO-015-1	All	Notifications and Information Exchange Between Reliability Coordinators	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	Coordination of Real-time Activities Between Reliability Coordinators	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	Operating Personnel Training	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.	Yes
PER-003-0	All	Operating Personnel Credentials	BA, RC, TOP	Certification of operating personnel is necessary to ensure minimum competencies for operating a reliable Bulk Electric System (BES).	By request latest certification information and present calendar year plus previous calendar year staffing plan.	Yes
PER-004-1	All	Reliability Coordination — Staffing	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	Analysis and Mitigation of Transmission and Generation Protection System Misoperations	DP*, GO, TO	Provide trip operation/misoperation information per regional process.	By request – last 12 months of protection system Misoperation analysis.	Yes

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
PRC-005-1	All	Transmission and Generation Protection System Maintenance and Testing	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
PRC-008-0	All	Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program	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.	Yes
PRC-010-0	All	Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program.	DP, LSE, TO, TOP	ASSESS design and effectiveness of UVLS programs	By request – current assessment.	Yes
PRC-011-0	All	UVLS System Maintenance and Testing	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.	Yes
PRC-016-0	All	Special Protection System Misoperations	DP, GO, TO	DOCUMENT/analyze misoperations	By request – last 12 months of special protection system Misoperation analysis.	Yes
PRC-017-0	All	Special Protection System Maintenance and Testing	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
PRC-021-1	All	Under-Voltage Load Shedding Program Data	DP, TO	DOCUMENTATION of undervoltage load shedding program.	By request – latest UVLS data.	Yes

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Critical Energy Infrastructure Information) – Has Been Removed

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
TOP-003-0	All	Planned Outage Coordination	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.	Yes
TOP-004-1	R6	Transmission Operations	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	Operational Reliability Information	BA, PSE, RC, TOP	To ensure reliability entities have the operating data needed to monitor system conditions within their areas.	By request.	Yes
TOP-007-0	All	Reporting System Operating Limit (SOL) and Interconnection Reliability	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
TPL-001-0	All	System Performance Under Normal (No Contingency) Conditions	PA, TPL	System performance under normal conditions	By request – latest annual assessment.	No
TPL-002-0	All	System Performance Following Loss of a Single Bulk Electric System Element	PA, TPL	System performance under single contingency	By request – latest annual assessment.	No

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to LAGN?
TPL-003-0	All	System Performance Following Loss of Two or More Bulk Electric System Elements	PA, TPL	System performance under multiple contingencies	By request – latest annual assessment.	No
TPL-004-0	All	System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements	PA, TPL	System performance under extreme contingencies	By request – latest annual assessment.	No
VAR-001-1	All	Voltage and Reactive Control	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.	Yes