



Compliance Audit Report Public Version

**Old Dominion Electric Cooperative
(ODEC) - NCR00859
August 23, 2007**

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

October 4, 2007

Table of Contents

Table of Contents	2
Executive Summary	3
Audit Process	4
Objectives.....	4
Scope	4
Methodology	4
Company Profile	5
Audit Specifics	5
Audit Results	6
Findings	7
Conclusions	10
Summary of Old Dominion Electric Cooperative's Response to the Audit Findings	11
Appendix 1 – Applicable Reliability Standards	13

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.

Old Dominion Electric Cooperative (ODEC) was audited on August 23, 2007 for compliance with the requirements contained in the NERC Reliability Planning Standards that are currently enforceable and apply to ODEC's operation. This audit focused on documents and other evidence provided to SERC by the staff of ODEC, 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 ODEC staff to show valid evidence of meeting each individual requirement and sub-requirement contained in the ten Planning standards that had been previously identified by SERC to ODEC as subject to this audit. ODEC 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 ODEC was judged to be compliant. Likewise, if any of the requirements or sub-requirements were not fully met, then ODEC 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.

The audit team determined that ODEC does not own Undervoltage Load Shedding equipment and therefore, three of the audited standards, PRC-010-0, PRC-011-0 and PRC-021-1, are not applicable to ODEC. The audit team was provided evidence that ODEC's Clover Power Station Special Protection System is jointly owned with Dominion Virginia Power and that Dominion Virginia Power has sole responsibility for analyzing and reporting misoperations and for the maintenance and testing program requirements of standards PRC-016-0 and PRC-017-0, therefore these standards are not applicable to ODEC. The audit team found ODEC in possible violation of two standards, FAC-008-1 – Facility Ratings Methodology and PRC-005-1 – Transmission and Generation Protection Systems Maintenance and Testing. ODEC's Facility Ratings Methodology (FRM) does not include the required statement that the Facility Rating shall equal the most limiting applicable Equipment Rating of the individual equipment that comprises the facility. Additionally, ODEC's FRM does not include the full scope of equipment required to be addressed in requirement 1.2.1 of the standard. ODEC's generation Protection Systems Maintenance and Testing Program does not address voltage and current sensing devices, as specified in the NERC Glossary of Terms Used in Reliability Standards definition for Protection Systems. ODEC was determined to be compliant with the remaining three standards audited.

The possible compliance violations along with this compliance audit report will be provided to the regional entity (SERC) compliance staff for processing through the NERC 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.¹ The audit objectives are:

- Independently review ODEC's compliance with the requirements of the reliability standards that are applicable to ODEC based on the ODEC registered functions.
- Monitor applicable reliability standards from the NERC 2007 Implementation Plan list of actively monitored standards.

Scope

The scope of the audit of ODEC was to look at all planning-related standards in the NERC 2007 Compliance Monitoring and Enforcement Plan. SERC audits planning-related and operating-related standards at different times to minimize impact on entity staff, and to recognize the somewhat seasonal availability of different staff groups. Operating Audits are generally held in the spring and fall of the year, and planning audits held in the middle of the year. Of the 18 standards that apply to ODEC, 10 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 of the standards that apply to ODEC in the NERC 2007 Compliance Monitoring and Enforcement Program that pertain to system planning. The audit was scheduled during normal business hours and standards were grouped to minimize imposition and make the most efficient use of ODEC staff's time. ODEC's staff had been briefed on the standards that were to be addressed so that documentation and evidence of compliance could be assembled.

One team of three SERC staff auditors and an Audit Team Leader (ATL) conducted the audit of ODEC. The audit team had a moderator who would initiate dialogue on each standard requirement and request evidence of compliance. A second auditor served as a scribe to document the evidence presented, staff responses, and auditor comments. The moderator, third auditor, and scribe when possible, reviewed the evidence and questioned ODEC staff to obtain sufficient understanding of the evidence and processes to enable a determination of compliance with standard requirements. This process was used to determine compliance with each individual requirement and sub-requirement of the ten standards that had been previously identified by SERC to ODEC as subject to this audit. ODEC staff responded by providing evidence in the form of reports, procedures, policies, studies and other documents. ODEC 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

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

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

Company Profile

Old Dominion Electric Cooperative (ODEC) is a Generation and Transmission (G&T) Cooperative based in Glen Allen, Virginia. ODEC's service area spans two Reliability Regions; SERC and RFC. ODEC's summer 2006 Peak Demand (SERC & RFC) was 2598 MWs and the winter 2006/2007 Peak Demand (SERC & RFC) was 2526 MWs, the majority of which (2/3) is in the SERC Region. ODEC is registered in the SERC Region as a Distribution Provider, Generator Operator, Generator Owner, Purchasing-Selling Entity and Load-Serving Entity.

ODEC has 12 total distribution cooperative members. Ten members are situated in Virginia, one in Maryland and one in Delaware. Nine cooperatives are within the SERC region and six in the RFC Region. Four cooperatives have load in both SERC and RFC. ODEC files on behalf of nine members: BARC Electric Cooperative, Community Electric Cooperative, Mecklenburg Electric Cooperative, Northern Neck Electric Cooperative, Northern Virginia Electric Cooperative, Prince George Electric Cooperative, Rappahannock Electric Cooperative, Southside Electric Cooperative and Shenandoah Valley Electric Cooperative. Through ODEC's distribution cooperatives, they service approximately 400,000 customers in the SERC Region.

ODEC owns two generation stations in the SERC Region, Louisa Generation Station and Marsh Run Generation Station. The Louisa Generation Station has five Gas Turbines with a combined output of 515 MWs. The Marsh Run Generation Station has three Gas Turbines with a combined output of 515 MWs. Both Louisa and Marsh Run can be fired off natural-gas or fuel oil.

ODEC and Dominion Virginia Power jointly own two generation stations. ODEC owns 414 MWs or 50% of the Clover Power Station and 221 MWs or 11.6% of the North Anna Nuclear Power Station. Dominion Virginia Power is contractually responsible for SERC compliance activities at both jointly owned facilities.

ODEC does not own any transmission facilities within the SERC region, relying on Dominion Virginia Power and PJM for transmission service requirements. ODEC's nine members have load interconnections with Dominion Virginia Power at numerous locations throughout the Dominion Virginia Power service area at voltages ranging from 12 kV to 230 kV. ODEC directly interconnects with Dominion Virginia Power at two 230 kV locations as part of their generation stations; Louisa and Marsh Run.

Audit Specifics

The compliance audit was conducted on August 23, 2007 at the Old Dominion Electric Cooperative office in Glen Allen, Virginia.

Audit Team

Audit Team Role	Name	Title	Company
Lead	Ralph Anderson	Senior Compliance Auditor	SERC
Member	Mickey Bellard	Compliance Auditor	SERC
Member	James Harrell	Compliance Auditor	SERC
Member	John Wolfmeyer	Compliance Engineer	SERC

Audit Results

The audit began at 8:00 a.m., August 23, 2007 with an opening presentation by Ralph Anderson, SERC Senior Auditor and Audit Team Leader (ATL). He reviewed the NERC Compliance Monitoring and Enforcement Program for 2007 in general, and how it applied to ODEC specifically. He introduced and reviewed the standards to be covered in the audit, and addressed both the expectations of ODEC staff and the quality of evidence to be presented. He also covered the basic procedure for the audit, and the rules of conduct. Each member of the audit team was introduced and professional affiliations identified. The opening presentation was followed by an introduction of participating ODEC staff, and an overview of ODEC's operations, corporate organization and compliance activities by Mark Ringhausen, Director of Transmission.

The audit team initially reviewed the registration status of ODEC with ODEC staff to verify application of each standard. Each standard's audit began with a recitation of each requirement and an explanation, if requested by ODEC. ODEC 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 ODEC 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 Auditor 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 ODEC 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 RSAW would be updated with the compliance recommendation.

The review of all applicable standards was completed at approximately 12:00 p.m. and the audit team met to review and discuss the findings. At approximately 1:00 p.m., the audit team collected all notes and evidence as needed and began to finalize the RSAWs. The ATL began to develop the exit briefing with the help of all team members, by using a projector connected to his laptop. This facilitated the consensus of the full team on the content of the exit briefing, and re-affirmed the team's findings and recommendations.

The exit briefing was presented to the assembled audit team and ODEC staff at approximately 3:00 p.m., August 23, 2007 and was followed by an informal response from ODEC staff. The ATL solicited both informal comments from the ODEC staff, and requested that they fill out formal feedback forms for submission to SERC and NERC. The audit team left the ODEC meeting room at approximately 4:00 p.m., August 23, 2007.

Findings

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

Reliability Standard	Auditor Notes	Finding
BAL-001-0	Not applicable – ODEC is not a BA	NA
BAL-002-0	Not Applicable – ODEC is not a BA, RSG or RRO	NA
BAL-003-0	Not Applicable – ODEC is not a BA or RC	NA
CIP-001-1	Applies to ODEC but not within scope of this planning audit	NA
CIP-002-1 through CIP-009-1	Applies to ODEC but not within scope of this planning audit	NA
COM-001-1	Not Applicable – ODEC is not a TO, BA, RC or NERCNet User Organization	NA
EOP-001-0	Not Applicable – ODEC is not a TO or BA	NA
EOP-003-1	Not Applicable – ODEC is not a TO or BA	NA
EOP-005-1	Not Applicable – ODEC is not a TO or BA	NA
EOP-006-1	Not Applicable – ODEC is not a RC	NA
EOP-008-0	Not Applicable – ODEC is not a TO, BA or RC	NA
EOP-009-0	Applies to ODEC but not within scope of this planning audit	NA
FAC-003-1	Not Applicable – ODEC is not a TO or RRO	
FAC-008-1	<p>ODEC's Facility Ratings Methodology Procedure states that ODEC generating units will be tested in accordance with the requirements of PJM Manual 21 – Rules and Procedures for Determining Generator Capability, and that this will be the method used for testing units to determine output capability. (R1)</p> <p>PJM Manual 21 does not include a limiting element statement (R1.1)</p> <p>The scope of equipment addressed by PJM Manual 21 includes only generator output (R1.2)</p> <p>PJM Manual 21 requires consideration of all items covered in R1.3 (R1.3.1 through R1.3.5)</p> <p>FRM is owned by and available for review by PJM (TOP, TP, BA, and RC) (R2)</p> <p>There have been no requests to review ODEC's FRM</p> <p>ODEC is determined to be in possible violation of R1.1 and R1.2.</p>	Possible Violation

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Reliability Standard	Auditor Notes	Finding
FAC-009-1	<p>ODEC provided screenshots from PJM Interconnection's eGADS program proving submission and indicating the results of Summer and Winter Capacity Tests used for determination of Facility Ratings in accordance with their current Facility Ratings Methodology. (R1)</p> <p>ODEC provided screenshots from PJM Interconnection's eGADS program proving submission and indicating the results of Summer and Winter Capacity Tests used for determination of Facility Ratings in accordance with their current Facility Ratings Methodology for three Marsh Run units after modifications were made affecting unit capability. (R2)</p> <p>The eGADS program is owned by PJM and is used for submission of test results used to determine Facility Ratings. PJM serves as TOP, BA, RC, TP and PA for ODEC. (R2)</p>	Compliant
IRO-001-1	Applies to ODEC but not within scope of this planning audit	NA
IRO-004-1	Applies to ODEC but not within scope of this planning audit	NA
IRO-014-1	Not Applicable – ODEC is not a RC	NA
IRO-015-1	Not Applicable – ODEC is not a RC	NA
IRO-016-1	Not Applicable – ODEC is not a RC	NA
PER-002-0	Not Applicable – ODEC is not a BA or TO	NA
PER-003-0	Not Applicable – ODEC is not a BA, TO or RC	NA
PER-004-1	Not Applicable – ODEC is not a RC	NA
PRC-004-1	<p>ODEC does not own a Transmission Protection System and therefore, requirement 1 does not apply.</p> <p>ODEC requires, through their Analysis and Mitigation of Protection System Misoperations: PRC-004-1 procedure that an Incident Report be submitted by plant personnel for any event that would impact the plant's ability to operate under its normal capabilities. The criterion for determining what makes up a reportable incident is outlined in an Incident Reporting Procedure. The Louisa Power Stations Incident Reporting Procedure outlines the requirements for an Incident Report. These reports serve as ODEC's method for documenting analysis of misoperations and development of Corrective Action Plans, meeting the requirements of R2.</p> <p>ODEC has not had a generation Protection System misoperation, and therefore did not have any Corrective Action Plans to review. ODEC's submission of Letter of Certification for PRC-004-1-G also indicated that they have had no misoperations. ODEC is compliant with Requirement R3.</p>	Compliant

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Reliability Standard	Auditor Notes	Finding
PRC-005-1	<p>ODEC has an established generation Protection System maintenance and testing program. Their program includes the intervals and basis for maintenance and testing activities and provides a summary of maintenance and test procedures. The procedure does not, however, address voltage and current sensing devices. Review of maintenance records indicates that maintenance and testing of these devices has occurred and is on schedule. ODEC is found to be in possible violation of requirement 1 as a documentation issue only.</p> <p>No requests have been made of ODEC to provide documentation of their maintenance and testing program to SERC. Maintenance and testing records for ODEC's Louisa Power Station were reviewed and found to be completed on time in accordance with their procedure. ODEC is compliant with requirement 2.</p>	Possible Violation
PRC-008-0	<p>ODEC's UFLS Maintenance Program Compliance Procedure indicated that ODEC is responsible for compliance with the standard, but that each of ODEC's nine member cooperatives are responsible for maintaining and implementing a maintenance and testing program for their area. Member maintenance and testing programs, provided for all nine members, listed maintenance and testing intervals and procedures, individual relay trip frequencies, load, timing and date of last maintenance. (R1 & R2)</p> <p>There have been no requests from the Regional Reliability Organization (SERC) for ODEC to provide UFLS program results. (R2)</p>	Compliant
PRC-010-0	Verified that ODEC does not own any UVLS equipment. Standard is not applicable to ODEC.	NA
PRC-011-0	Verified that ODEC does not own any UVLS equipment. Standard is not applicable to ODEC.	NA
PRC-016-0	ODEC has joint ownership, with Dominion Virginia Power, of the Clover Power Station SPS. Documentation was provided to verify that Dominion Virginia Power has responsibility for analyzing and reporting misoperations on this system. Dominion Virginia Power's reporting records also indicate that they are responsible for the requirements of this standard.	NA
PRC-017-0	ODEC has joint ownership, with Dominion Virginia Power, of the Clover Power Station SPS. Documentation was provided to verify that Dominion Virginia Power has responsibility for meeting the requirements of this standard. Dominion Virginia Power's reporting records also indicate that they are responsible for the requirements of this standard.	NA
PRC-021-1	Verified that ODEC does not own any UVLS equipment. Standard is not applicable to ODEC.	NA
TOP-003-0	Applies to ODEC but not within scope of this planning audit	NA
TOP-004-1	Not Applicable – ODEC is not a TO	NA
TOP-005-1	Applies to ODEC but not within scope of this planning audit	NA
TOP-007-0	Not Applicable – ODEC is not a TO or RC	NA
TPL-001-0	Not Applicable – ODEC is not a PA or TP	NA
TPL-002-0	Applies to ODEC but not within scope of this planning audit	NA

Reliability Standard	Auditor Notes	Finding
TPL-003-0	Applies to ODEC but not within scope of this planning audit	NA
TPL-004-0	Applies to ODEC but not within scope of this planning audit	NA
VAR-001-1	Applies to ODEC but not within scope of this planning audit	NA

Conclusions

Old Dominion Electric Cooperative (ODEC) was audited on five of the ten monitored Planning standards identified as being applicable to ODEC as a Distribution Provider, Generator Operator, Generator Owner and Load-Serving Entity. ODEC provided evidence of compliance with all of the applicable monitored reliability standards except for FAC-008-1 – Facility Ratings Methodology and PRC-005-1 – Transmission and Generation Protection Systems Maintenance and Testing.

The audit team determined that ODEC is in possible violation of FAC-008-1 – Facility Ratings Methodology when, after reviewing the evidence provided, it was determined that their FRM does not contain a limiting element statement per requirement R1.1, and that it does not address the full scope of equipment established in requirement R1.2.1.

The audit team determined that ODEC is in possible violation of PRC-005-1 – Transmission and Generation Protection System Maintenance and Testing when, after reviewing the evidence provided, it was determined that their Maintenance and Testing Program did not include voltage and current sensing devices per requirement 1. Voltage and current sensing devices are identified as part of a Protection System by the NERC Glossary of Terms Used in Reliability Standards. It was noted, however, that ODEC's maintenance records indicated that these devices are being tested and maintained on schedule. This possible violation is determined to be a documentation issue only.

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

Summary of Old Dominion Electric Cooperative's Response to the Audit Findings

ODEC provides the following comments on the SERC Compliance Audit Report. ODEC agrees with the SERC Audit Report on the standards that SERC determined that ODEC was either 'NA' or 'Compliant'. So our comments will be on the two standards that SERC has listed as 'Possible Violation'. These two standards are: FAC-008-1 and PRC-005-1.

FAC-008-1: Facility Ratings Methodology. This standard applies to ODEC as a Generator Owner and more specifically, to our Louisa (515MWs) and Marsh Run (515MWs) generation facilities. As outlined in the SERC Compliance Audit Report, the two requirements that are at issue are Requirements R1.1 and R1.2.

Requirement R1.1 deals with the identification of the limiting element for the generation facility per the current version of this standard (FAC-008-1). The overall intent of the entire standard is to ensure that the Reliability Coordinator, Balancing Authority and Transmission Operator for our generation facilities have the correct and accurate ratings so they can operate the system reliably. The rating process for ODEC is covered by PJM's (ODEC's Reliability Coordinator, Balancing Authority and Transmission Operator) Manual 21 for testing for Generation Facilities. In each summer and winter period, both of ODEC's generation facilities are tested to determine the actual ratings of each unit. Certainly, this is the best method to ensure that the actual generation rating is known and verified. The issue of the limiting element is not critical to the reliability of the system. The determination of the rating/capability of the generation facilities is a critical issue. The limiting element was in the standard for the Transmission Owner function in the rating of Transmission Facilities and the industry missed this fact when the standard was approved in Version 1 with the addition of the Generator Owner applicability. In fact, the industry is in the process of correcting this error through changes to FAC-008-1 as shown in Version 2 of the FAC-008 (FAC-008-2). In FAC-008-2, the requirement to identify the limiting element for Generator Owners has been removed. ODEC would therefore, be compliant with the new FAC-008-2 Standard as currently drafted via the NERC standard process.

Requirement 1.2 deals with the method for determining the Rating for the major bulk electric system equipment that comprises the Facility. The issue here is the method used by PJM does not specifically state, other than the generator, that the method includes other bulk electric system elements as listed in R1.2.1. The method of testing the generation units each summer and winter certainly will capture all limiting factors within the generation facility whether they are listed in R1.2.1 or not. Certainly, this is a reliable process as it will determine the limiting factor via actual testing of the generation facility. As in R1.1, the proposed FAC-008-2, under consideration at NERC, would remove this requirement and ODEC would be compliant with FAC-008-2 if it was in effect today.

ODEC has met the intent of the standard, FAC-008-1, with its summer and winter testing of our generation facilities and this is being validated by proposed industry changes contemplated to FAC-008-2 under consideration at NERC.

PRC-005-1: Generation Protection System Maintenance and Testing. This standard applies to ODEC as a Generator Owner and more specifically, to our Louisa and Marsh Run generation facilities. At issue here is that in our Compliance Process for this standard, ODEC did not specifically identify that we test our Voltage and Current Sensing Devices per R1 in the standard. ODEC agrees that our procedure did not include language for testing of our Voltage and Current Sensing Devices per R1 at the time of the SERC Audit. ODEC, as was noted by the SERC Audit Report, did provide evidence that ODEC has tested these devices per the ODEC Maintenance and Testing Program. ODEC has revised its Compliance Procedure for PRC-005-1 and our Revision 1; dated 9/1/2007, for PRC-005-1 now includes the language for testing of our Voltage and Current Sensing Devices as is the requirement in the standard (Revision 1 of our ODEC Compliance Procedure is available to SERC upon request). This was a minor oversight that did not negatively impact the reliability of the bulk electric system as the actual maintenance and testing of our Voltage and Current Sensing Devices is being performed.

ODEC has been meeting the requirements of PRC-005-1 at all times, but agrees that ODEC's Version 0 Compliance Procedure for PRC-005-1 did not include the language for testing of our Voltage and Current Sensing Devices even though testing was being performed and documentation of the testing was provided to SERC during the Audit.

Thank you for your consideration of our comments in your final determination of compliance,

Old Dominion Electric Cooperative
October 3, 2007

APPENDIX 1 – APPLICABLE RELIABILITY STANDARDS

Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or No
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.	NO
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.	NO

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or No
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.	NO
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.	NO
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.	NO

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or No
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	NO
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.	NO
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.	NO
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 ODEC? Yes or No
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 ODEC? Yes or No
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 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 ODEC? Yes or No
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.	NO
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.	By request latest certification information and present calendar year plus previous calendar year staffing plan.	NO
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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or 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
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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or No
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
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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or No
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
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

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Std #	Requirements	Standard	Who	Purpose	Monitoring Timeframe	Applicable to ODEC? Yes or 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

Determination Summary for Possible Violations Identified in an Audit

Regional Tracking Number 07-157
Entity Old Dominion Electric Cooperative
Audit Date 8/23/2007
Standard FAC-008-1
Requirement R1

Sufficient Basis for Violation

Factual Basis **FACTS:**
ODEC uses a PJM-developed procedure for the determination of their generator ratings. The procedure is very thorough with respect to the generator, ambient conditions, and other factors relating to generator output, but the specific components of R1.2.1 are not addressed. Similarly, because the other components are not addressed, there is no statement similar to that in R1.1 regarding identification of the limiting component.

Conclusion Violation Summary **CONCLUSION:**
The Entity was unable to produce a statement that the facility rating was equal to the limiting component. Therefore the entity is in violation of R1.1. This is a Level 1 non-compliance. The Entity was unable to produce evidence that the specific components listed in R1.2.1 were included in the rating methodology. This is a violation of R1.2.1. This is a Level 3 non-compliance.

NERC BOTCC Determination The NERC BOTCC affirmed SERC Reliability Corporation's determination to exercise enforcement discretion to impose a zero dollar (\$0) penalty against Old Dominion Electric Cooperative, 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 violations at issue.

NERC Violation Number SERC200700010

NOC Number NOC-8

NOP Number NOP-8

FERC Docket Number NP08-32-000

Determination Summary for Possible Violations Identified in an Audit

Regional Tracking Number 07-158
Entity Old Dominion Electric Cooperative
Audit Date 8/23/2007
Standard PRC-005-1
Requirement R1

Sufficient Basis for Violation

Factual Basis FACTS:
The Glossary defines a Protection System as: "[p]rotective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry". The Entity's protection system program was fully documented except for a description of the maintenance intervals and their bases for voltage and current sensing devices. The entity was able to produce evidence that those components were being tested with the relays, and that the maintenance and testing was on schedule, but that fact was absent from the program description.

Conclusion Violation Summary CONCLUSION:
The Entity was unable to present evidence that maintenance and testing intervals and their basis, or a summary of maintenance and testing procedures for voltage and current sensing devices, was extant in their Protection System Maintenance and Testing Program. This is a violation of R1. The Entity was able to produce evidence that testing of voltage and current sensing devices was being performed at regular intervals in accordance with R2. The Entity is not in violation of R2 of the standard. This is a Level 1 non-compliance.

NERC BOTCC Determination The NERC BOTCC affirmed SERC Reliability Corporation's determination to exercise enforcement discretion to impose a zero dollar (\$0) penalty against Old Dominion Electric Cooperative, 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 violations at issue.

NERC Violation Number SERC200700011

NOC Number NOC-8

NOP Number NOP-8

FERC Docket Number NP08-32-000