



NORTHEAST POWER COORDINATING COUNCIL, INC.  
1040 AVE. OF THE AMERICAS, NEW YORK, NY 10018 (212) 840-1070 FAX (212) 302-2782

# **Operations and Planning Compliance Audit Report Public Version**

**New York Independent System Operator  
NERC ID# - NCR07160**

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

**Date of Audit: February 10, 2014 to February 12, 2014  
Audit Period: December 10, 2010 to January 10, 2014  
Date of Report: March 21, 2014**

## Table of Contents

---

Executive Summary.....	1
Audit Process .....	2
Objectives .....	2
Scope .....	2
Confidentiality and Conflict of Interest.....	3
Methodology .....	3
Company Profile .....	3
Audit Participants .....	4
Audit Findings .....	6
Recommendations .....	9
Compliance Culture.....	9

## Executive Summary

Northeast Power Coordinating Council (NPCC) conducted an Operations and Planning compliance Audit of New York Independent System Operator (NYISO), NERC ID NCR07160 from February 10, 2014 to February 12, 2014.

At the time of the Audit, NYISO was registered for the functions of Balancing Authority (BA), Interchange Authority (IA), Planning Authority (PA), Reliability Coordinator (RC), Resource Planner (RP), Transmission Operator (TOP), Transmission Planner (TP), and Transmission Service Provider (TSP). This audit was for the BA, RC and TOP Registered Functions of NYISO for the audit period.

The table below identifies key Functions performed on behalf of NYISO:

Functional Model Interface	Registered Entity NERC ID
Reliability Coordinator (RC)	NYISO - NCR07160
Balancing Authority (BA)	NYISO - NCR07160
Transmission Operator (TOP)	NYISO - NCR07160
Planning Authority (PA)	NYISO - NCR07160
Transmission Planner (TP)	NYISO - NCR07160
Resource Planner (RP)	NYISO - NCR07160

The Audit team evaluated NYISO for compliance with one hundred and twenty nine (129) requirements in the 2014 NERC Compliance Monitoring and Enforcement Program (CMEP) and the NPCC CMEP Implementation Plan. The team assessed compliance with the NERC Reliability Standards (and Regional Reliability Standards if applicable) for the period of December 10, 2010 to January 10, 2014. NYISO submitted evidence for the team's evaluation of compliance with requirements. The team reviewed and evaluated all evidence provided to assess compliance with reliability standards applicable to NYISO at this time. Based on the evidence provided, the team's findings are summarized in Table 1 below:

	No Finding	Possible Violation	Open Enforcement Action*	Not Applicable	Total
Reliability Standard Requirements	125	0	0	4	129

\*OEA's with newly identified PVs are counted in the PV column only; not in the OEA column. OEA's without newly identified PVs are counted in the OEA column.

The team notified NYISO of zero (0) Areas of Concern<sup>1</sup> and zero (0) Recommendations.

The findings included in this report are the same as the findings presented to NYISO during the exit briefing. The findings are further explained in the Audit Findings section and the Findings table of the report. The Findings table includes information of the Audit team's findings of applicability and compliance to the NERC Reliability Standards and applicable Regional Reliability Standards within the scope of the compliance Audit. Possible Violations will be processed as outlined in the NERC CMEP and the NPCC CMEP Implementation Plan. There were no open mitigation plans; therefore, none were reviewed by the team.

The NPCC audit team lead certifies that the Audit team adhered to all applicable requirements of the NERC Rules of Procedure (ROP) and Compliance Monitoring and Enforcement Program (CMEP).<sup>2</sup>

## Audit Process

---

The compliance Audit process steps are detailed in the NERC Rules of Procedure, the NERC CMEP, and the NPCC CMEP Implementation Plan. The Compliance Monitoring and Enforcement Program generally conforms to the United States Government Auditing Standards and other generally accepted audit practices.

## Objectives

All registered entities are subject to compliance assessments with all reliability standards applicable to the functions for which the registered entity is registered<sup>3</sup> in the Region(s) performing the assessment. The Audit objectives are to:

- Review compliance with the requirements of reliability standards that are applicable to NYISO , based on the functions that NYISO is registered to perform;
- Validate compliance with applicable Reliability Standards from the NERC 2014 Implementation Plan list of actively monitored standards and additional NERC Reliability Standards selected by NPCC;
- Validate compliance with applicable Regional Reliability Standards from the NPCC 2014 Implementation Plan list of actively monitored standards, if applicable;
- Validate evidence of self-reported violations and previous self-certifications;
- Observe and document NYISO 's compliance program and culture;
- Review the status of open mitigation plans.

## Scope

The scope of the compliance Audit included the NERC Reliability Standards from the NPCC 2014 CMEP Implementation Plan. In addition, this Audit included a review of mitigation plans or

---

<sup>1</sup> Per FERC Guidance Order on Compliance Audits Conducted by the Electric Reliability Organization and Regional Entities, dated January 15, 2009

<sup>2</sup> This statement replaces the Regional Entity Self-Certification process.

<sup>3</sup> NERC Rules of Procedure, Appendix 4C, Section 3.1, Compliance Audits.

remedial action directives that were open during the Audit. The team did not expand the scope of the Audit beyond what was stated in the notification package. The scope of the audit was limited to the applicable NERC Reliability Standards for NYISO's BA, RC and TOP Registered Functions for the audit period.

## Confidentiality and Conflict of Interest

Confidentiality and conflict of interest of the Audit team are governed under the NPCC Delegation Agreement with NERC and Section 1500 of the NERC Rules of Procedure. NYISO was informed of NPCC's obligations and responsibilities under the agreement and procedures. The work history for each team member was provided to NYISO, which was given an opportunity to object to a team member's participation on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with a team member's impartial performance of duties. NYISO had not submitted any objections by the stated 15-day objection due date and accepted the team member participants without objection. There were no denials or access limitations placed upon this team by NYISO.

## Methodology

The Audit team reviewed the evidence submitted by NYISO and assessed compliance with requirements of the applicable reliability standards. NPCC provided NYISO with a Request for Information (RFI) prior to commencement of the Audit. NYISO provided pre-Audit evidence at the time requested, or as agreed upon, by NPCC. Additional evidence could be submitted until the agreed-upon deadline prior to the exit briefing. After that date, only data or information that was relevant to the content of the report or its finding could be submitted with the agreement of the audit team lead.

The Audit team reviewed documentation provided by NYISO and requested additional evidence and sought clarification from subject matter experts during the Audit. Evidence submitted in the form of policies, procedures, emails, logs, studies, data sheets, etc. were validated, substantiated, and cross-checked for accuracy as appropriate. Where sampling was applicable to a requirement, the sample set was determined by a statistical methodology, along with professional judgment.

Findings were based on the facts and documentation reviewed, the team's knowledge of the bulk electric system (BES), the NERC Reliability Standards, and professional judgment. All findings were developed based upon the consensus of the team.

## Company Profile

The New York Independent System Operator, Inc. (NYISO) was formed in 1997 and commenced operations in 1999 as a not-for-profit corporation regulated by the Federal Energy Regulatory Commission (FERC) and governed by a 10-member Board of Directors. The NYISO Code of Conduct, which is contained in Attachment F to the NYISO's Open Access Transmission Tariff, requires that Board members and all employees will be independent from any business, financial or operating ties to any stakeholders in the NYISO's markets.

The NYISO operates the bulk power system contiguous with the New York State geographic boundary. The NYISO's various authorities are expressly detailed in two Federal Energy Regulatory Commission approved tariffs, commonly called the Open Access Transmission Tariff and the Market Services Tariff. These tariffs are further supported by the Transmission Owner – NYISO Agreement and The NYISO Agreement.

The NYISO directs all bulk power transmission system activities relative to operations, including continuous reliability analysis, resource commitment, real-time dispatch and voltage control. Some physical functions such as the adjustment of phase angle regulators or voltage control devices are carried out under direction of the NYISO by the eight transmission owner control rooms. The NYISO administers all electricity markets in New York, including Real time and Day-Ahead energy, six ancillary services, and provides auctions for financial transmission rights. The NYISO also provides short and long term comprehensive planning functions.

Organizationally, the NYISO is comprised of two major areas based on the functional roles of ensuring the reliability of the electric system and administering the electric markets in New York. Grid Operations is a single department reporting to the Chief Operating Officer and is located in the Power Control Center. Day-ahead resource commitment, real time dispatch and auxiliary market operations are all conducted by the Operations Department. System and Resource Planning also reports to the Chief Operating Officer. System and Resource Planning is responsible for assessing needs over a 10-year horizon and evaluating the feasibility of projects proposed to meet those needs. It accomplishes its assessments through numerous studies; the most prominent of which are the Reliability Needs Assessment, the Area Transmission Review and the Comprehensive Reliability Plan. Together, Grid Operations and Resource Planning ensure the security and reliability of the Bulk Power System. Information Technology reports to the Senior Vice President and CIO. IT includes IT Software Technologies, IT Infrastructure, Enterprise Architecture, IT Security Governance, as well as Facilities.

## Audit Participants

Following is a list of all personnel from the NPCC Audit team and NYISO who were directly involved during the meetings and interviews.

### NPCC Team Members

Role	Title	Entity
Audit Manager	Manager, Audits and Investigations, O&P	NPCC
Audit Team Lead	Lead Auditor	NPCC
Auditor	Lead Auditor	NPCC
Auditor	Lead Auditor	NPCC
Auditor	Lead Auditor	NPCC
Auditor	Lead Auditor	NPCC
Auditor	Lead Auditor	NPCC

Audit Support	Manager, Audits and Investigations, CIP	NPCC
Observer	Auditor	NPCC

## FERC

Role	Title	Entity
FERC Observer	Electrical Engineer	FERC

## NYISO Participants

Title	Entity
VP Operations	NYISO
Manager, Grid Operations	NYISO
RM Operator	NYISO
Manager, Energy Market Operations	NYISO
Supervisor, IT Security Governance	NYISO
Compliance Attorney	NYISO
Manager, Operations Engineering	NYISO
Supervisor, Power System Application	NYISO
Reliability Senior Analyst	NYISO
Supervisor, Reliability Compliance and Assessment	NYISO
Shift Supervisor	NYISO
Manager, Reliability, Compliance and Industry Affairs	NYISO
Reliability Senior Engineer	NYISO
Supervisor, IT Operations	NYISO
RM Operator	NYISO
Chief System Operator	NYISO
Generation Operator	NYISO
System Operator	NYISO
Manager, IT Operations Services	NYISO
Supervisor, Grid Operations System Operator Training	NYISO
Supervisor, Network, Telecomm & Telemetry Services	NYISO

Generation Operator	NYISO
Supervisor, Scheduling	NYISO

## Audit Findings

The following information details the compliance findings for the reliability standards and requirements identified in the scope of this Audit.

Standard	Req.	Finding
BAL-002-1	R3.	No Finding
BAL-003-0.1b	R2.	No Finding
CIP-001-2a	R1.	No Finding
CIP-001-2a	R2.	No Finding
CIP-001-2a	R3.	No Finding
CIP-001-2a	R4.	No Finding
COM-001-1.1	R1.	No Finding
COM-001-1.1	R2.	No Finding
COM-001-1.1	R3.	No Finding
COM-001-1.1	R5.	No Finding
COM-002-2	R2.	No Finding
EOP-001-2.1b	R1.	No Finding
EOP-001-2.1b	R2.	No Finding
EOP-001-2.1b	R3.	No Finding
EOP-002-3.1	R1.	No Finding
EOP-002-3.1	R7.	No Finding
EOP-002-3.1	R8.	No Finding
EOP-003-2	R1.	No Finding
EOP-003-2	R8.	No Finding
EOP-005-2	R1.	No Finding
EOP-005-2	R2.	No Finding
EOP-005-2	R3.	No Finding
EOP-005-2	R4.	No Finding
EOP-005-2	R6.	No Finding
EOP-005-2	R9.	No Finding
EOP-005-2	R10.	No Finding
EOP-005-2	R11.	No Finding
EOP-006-2	R1.	No Finding
EOP-006-2	R2.	No Finding
EOP-006-2	R3.	No Finding
EOP-006-2	R4.	No Finding
EOP-006-2	R5.	No Finding
EOP-008-1	R1.	No Finding



<b>EOP-008-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R3.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R4.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R5.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R6.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R7.</b>	<b>No Finding</b>
<b>EOP-008-1</b>	<b>R8.</b>	<b>No Finding</b>
<b>FAC-014-2</b>	<b>R2.</b>	<b>No Finding</b>
<b>FAC-014-2</b>	<b>R5.</b>	<b>No Finding</b>
<b>IRO-002-2</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-002-2</b>	<b>R5.</b>	<b>No Finding</b>
<b>IRO-002-2</b>	<b>R6.</b>	<b>No Finding</b>
<b>IRO-002-2</b>	<b>R8.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R2.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R3.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R4.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R5.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R6.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R7.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R8.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R9.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R10.</b>	<b>No Finding</b>
<b>IRO-005-3.1a</b>	<b>R12.</b>	<b>No Finding</b>
<b>IRO-006-5</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-006-EAST-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-006-EAST-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>IRO-006-EAST-1</b>	<b>R3.</b>	<b>No Finding</b>
<b>IRO-006-EAST-1</b>	<b>R4.</b>	<b>No Finding</b>
<b>IRO-008-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-008-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>IRO-008-1</b>	<b>R3.</b>	<b>No Finding</b>
<b>IRO-009-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>IRO-009-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>IRO-014-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>MOD-004-1 For BA only,</b>	<b>R10.</b>	<b>N/A</b>
<b>MOD-004-1 For BA only,</b>	<b>R11.</b>	<b>N/A</b>
<b>MOD-008-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>MOD-008-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>MOD-008-1</b>	<b>R4.</b>	<b>No Finding</b>
<b>NUC-001-2</b>	<b>R4.</b>	<b>N/A</b>
<b>NUC-001-2</b>	<b>R9.</b>	<b>N/A</b>
<b>PER-001-0.2</b>	<b>R1.</b>	<b>No Finding</b>

PER-003-1	R1.	No Finding
PER-003-1	R2.	No Finding
PER-003-1	R3.	No Finding
PER-004-2	R1.	No Finding
PER-005-1	R1.	No Finding
PER-005-1	R2.	No Finding
PER-005-1	R3.	No Finding
PRC-001-1	R1.	No Finding
PRC-001-1	R2.	No Finding
PRC-001-1	R3.	No Finding
PRC-001-1	R4.	No Finding
PRC-001-1	R5.	No Finding
PRC-001-1	R6.	No Finding
TOP-001-1a	R1.	No Finding
TOP-001-1a	R2.	No Finding
TOP-001-1a	R3.	No Finding
TOP-001-1a	R5.	No Finding
TOP-001-1a	R6.	No Finding
TOP-001-1a	R7.	No Finding
TOP-001-1a	R8.	No Finding
TOP-002-2.1b	R1.	No Finding
TOP-002-2.1b	R2.	No Finding
TOP-002-2.1b	R3.	No Finding
TOP-002-2.1b	R4.	No Finding
TOP-002-2.1b	R5.	No Finding
TOP-002-2.1b	R6.	No Finding
TOP-002-2.1b	R7.	No Finding
TOP-002-2.1b	R8.	No Finding
TOP-002-2.1b	R9.	No Finding
TOP-002-2.1b	R10.	No Finding
TOP-002-2.1b	R11.	No Finding
TOP-002-2.1b	R16.	No Finding
TOP-002-2.1b	R17.	No Finding
TOP-002-2.1b	R18.	No Finding
TOP-002-2.1b	R19.	No Finding
TOP-004-2	R1.	No Finding
TOP-004-2	R2.	No Finding
TOP-004-2	R3.	No Finding
TOP-004-2	R4.	No Finding
TOP-004-2	R5.	No Finding
TOP-004-2	R6.	No Finding
TOP-007-0	R1.	No Finding
TOP-007-0	R2.	No Finding
TOP-007-0	R3.	No Finding

<b>TOP-007-0</b>	<b>R4.</b>	<b>No Finding</b>
<b>TOP-008-1</b>	<b>R1.</b>	<b>No Finding</b>
<b>TOP-008-1</b>	<b>R2.</b>	<b>No Finding</b>
<b>TOP-008-1</b>	<b>R3.</b>	<b>No Finding</b>
<b>TOP-008-1</b>	<b>R4.</b>	<b>No Finding</b>
<b>VAR-001-3</b>	<b>R1.</b>	<b>No Finding</b>
<b>VAR-001-3</b>	<b>R2.</b>	<b>No Finding</b>
<b>VAR-001-3</b>	<b>R3.</b>	<b>No Finding</b>
<b>VAR-001-3</b>	<b>R4.</b>	<b>No Finding</b>

## Recommendations

---

The Audit team identified and informed NYISO of zero (0) Recommendations.

## Compliance Culture

---

NYISO exhibited a positive commitment to compliance with the NERC standards. This commitment was apparent after reviewing the procedures and the evidence provided that the procedures were being followed. The NYISO audit team responded to requests for further information in a very timely and professional manner. Their responses addressed the standards' requirements, and the presentation and content of both the original and follow-up information was expertly done. The auditors would like to acknowledge the NYISO team for the support they offered us throughout the audit by providing a comprehensive audit evidence package.