



Compliance Audit Report Public Version

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

**Midwest Independent Transmission
System Operator, Inc.
NERC ID # - NCR00826**

**Date of Audit
November 3-10, 2009**

**Date of Report
November 30, 2009**

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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.

An on-site compliance audit of the Midwest Independent Transmission System Operator, Inc. (Midwest ISO) was conducted on November 3-10, 2009. The audit was led by the ReliabilityFirst Corporation (ReliabilityFirst), with the participation of the Midwest Reliability Organization (MRO) and the SERC Reliability Corporation (SERC). This audit was conducted in accordance with the ReliabilityFirst Compliance Monitoring and Enforcement Program (CMEP). At the time of the audit, the Midwest ISO was registered (NCR00826) for the Balancing Authority (BA), Interchange Authority (IA), Reliability Coordinator (RC), Planning Authority (PA), and Transmission Service Provider (TSP) functions that it performs in the ReliabilityFirst, MRO, and SERC regions.

The audit team evaluated the Midwest ISO for compliance with 113 requirements in 32 NERC Reliability Standards and 14 requirements in 4 ReliabilityFirst Standards for the period from June 18, 2007 to November 10, 2009. The Midwest ISO provided information and documentation to aid the audit team's evaluation of compliance with the standards. The audit team reviewed and evaluated all information provided by Midwest ISO to assess compliance with standards applicable to the BA, IA, PA, RC and TSP functions. The Midwest ISO is registered for the BA function under a Joint Registration Organization (JRO00001) in all three regions.

Based on the information and documentation provided by the Midwest ISO, the audit team made the following determinations: The Midwest ISO was found to be compliant with all 112 applicable requirements in 32 applicable NERC Reliability Standards. One requirement in one of the NERC Standards was determined to be not applicable to the Midwest ISO for the functions it currently performs. The Midwest ISO was also found to be compliant with all 14 applicable requirements of the four applicable ReliabilityFirst Standards. The Midwest ISO was not audited for compliance with any MRO or SERC regional standards or requirements.

The Midwest ISO had no ongoing Mitigation Plans for the standards audited.

Audit Process

The compliance audit process steps are detailed in the Reliability*First* CMEP. The Reliability*First* CMEP generally conforms to the United States Government Accountability Office Government Auditing Standards and other generally accepted audit practices.

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 to:

- Review Midwest ISO's compliance with the requirements of Reliability Standards that are applicable to the Midwest ISO based on the Midwest ISO's registered functions.
- Validate compliance with applicable Reliability Standards from the NERC 2009 Implementation Plan list of actively monitored standards.
- Validate evidence of self-reported violations and previous self-certifications, confirm compliance with other requirements of the Reliability Standards, and review the status of associated Mitigation Plans.
- Document the Midwest ISO's compliance program and culture.
- Validate compliance with other NERC Reliability Standards outside the 2009 implementation plan as selected by Reliability*First*, MRO, or SERC.
- Validate compliance with applicable Reliability*First* Reliability Standards that are applicable to Midwest ISO. (No MRO or SERC Reliability Standards were included within the scope of the audit)

Scope

The scope of the compliance audit included applicable NERC Reliability Standards in the NERC 2009 CMEP Implementation Plan, additional NERC Reliability Standards selected by Reliability*First*, MRO or SERC and all applicable Reliability*First* standards, self-certifications, and Mitigation Plans as appropriate.

Confidentiality and Conflict of Interest

Confidentiality and Conflict of Interest of the audit team are governed under the Reliability*First* Delegation Agreement with NERC and Section 1500 of the NERC Rules of Procedure. The Midwest ISO was informed of the Reliability*First* obligations and responsibilities under the agreement and procedures. The work history for each audit team member was provided to the Midwest ISO. The Midwest ISO was given an opportunity to object to an audit team member on

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

the basis of a possible conflict of interest or the existence of other circumstances that could interfere with the audit team member's impartial performance of duties. The Midwest ISO did not submit any objections by the stated fifteen day objection due date and by this action accepted the audit team member participants without objection. ReliabilityFirst found no conflict of interest for any of the audit team members.

On-site Audit

The Midwest ISO is currently subject to a compliance audit at a minimum of once every three years as provided by the NERC Rules of Procedure. Within ReliabilityFirst, MRO and SERC, every RC, BA, and Transmission Operator (TOP), listed in the NERC compliance registry is subject to an on-site audit once every three years. Midwest ISO was provided with a 90 day notification of this scheduled audit and at that time all necessary documents required by the ReliabilityFirst audit process were provided. The following documents were provided as part of the notification:

- 90 day Notification letter which contained a request for evidence , information, and data submittals
- Compliance Audit Survey
- Audit Agenda as applicable
- Internal Compliance Program Survey
- Audit Team Work History with discussion of the objection process
- General Instructions for Data or Information Submittals
- Compliance Questionnaire and Reliability Standard Audit Worksheets (QRSAWs)

The documents listed above were provided to the Midwest ISO electronically.

ReliabilityFirst discussed the use of technical experts with the Midwest ISO primary compliance contact and indicated that the audit team would welcome the use of technical experts by the Midwest ISO as it deemed necessary to explain their compliance to the standards. As such, the Midwest ISO was notified to provide any technical experts or personnel that it deemed necessary in order to provide the audit team an understanding of the evidence provided to demonstrate compliance.

An audit agenda and schedule were provided to the Midwest ISO in advance to allow the necessary time to prepare for the audit. Midwest ISO's cooperation and flexibility with the agenda was appreciated by the audit team.

This audit was conducted in the Midwest ISO offices using material provided by the Midwest ISO. The audit team reviewed the Midwest ISO compliance processes for all applicable standards with the Midwest ISO technical experts and requested additional information to clarify information previously supplied to the team. These interviews in conjunction with evidence provided, supplied the audit team with a basis for using professional judgment when validating compliance to the Reliability Standards.

Methodology

The audit team reviewed the evidence provided by the Midwest ISO for each of the Reliability Standards and requirements that apply to the functions performed by the company to assess the Midwest ISO's compliance with those Reliability Standards and associated requirements. The audit team reviewed each requirement, discussed the levels of compliance, and addressed each team member's observations from the audit to determine its findings from the review. The audit team also visited the Midwest ISO Control Rooms in Carmel, IN and St. Paul, MN to verify evidence of compliance to appropriate NERC and Reliability *First* Standards.

Opening Briefing

An Opening Briefing was conducted on November 3, 2009 in Carmel, IN and on November 10, 2009 in St. Paul, MN to discuss the following:

- Introduction of Audit Team
- Audit Objective and Scope
- Confidentiality of Information and Conflict of Interest
- Audit Team Expectations
- Discussion on Clarification Requests
- Audit Process
- Exit Briefing and Schedule

Audit

At the Carmel, IN location, the audit team worked in two groups. The applicable standards were divided between the two groups and each group reviewed each requirement assigned to it to determine if the Midwest ISO was compliant to the requirement. Each of the two groups shared its findings with the other to determine the Midwest ISO's compliance to each of the standards. The audit team reviewed all requirements of the functions applicable to the Midwest ISO to assess the Midwest ISO's compliance to the requirements. The audit team strived to follow the agenda and schedule. Upon request, the Midwest ISO provided additional information or clarified existing information during the review of its material with their subject matter experts.

Exit Briefing

The audit team conducted an exit briefing with the Midwest ISO staff on November 6, 2009 in Carmel, IN and on November 10, 2009 in St. Paul, MN utilizing a PowerPoint presentation. The status of the on-site audit process was discussed, followed by the audit scope, preliminary audit findings, the compliance audit report process, items for consideration, and confidentiality of information. The Midwest ISO was provided an opportunity to ask questions that the audit team then addressed.

Company Profile

The Midwest ISO performs the following NERC functions in the ReliabilityFirst, MRO, and SERC Regions and is registered with NERC and the three regions for each of them:

- Balancing Authority (BA) – JRO00001
- Interchange Authority (IA)
- Reliability Coordinator (RC)
- Planning Authority (PA)
- Transmission Service Provider (TSP)

The Midwest ISO is a nonprofit, member-based organization governed by an independent eight-member Board of Directors, with seven independent directors elected by the membership, plus the Chief Executive Officer of the Midwest ISO. Midwest ISO is headquartered in Carmel, Indiana with operations centers in Carmel and St. Paul, Minnesota. The Midwest ISO ensures reliable operation of, and equal access to, 93,600 miles of interconnected, high voltage power lines in 13 U.S. states, including Illinois, Indiana, Iowa, Kentucky, Ohio, Michigan, Minnesota, Missouri, Montana, North Dakota, Pennsylvania, South Dakota, and Wisconsin. The Midwest ISO's footprint also includes the Canadian province of Manitoba.

The Midwest ISO Reliability Coordinator and Balancing Authority area includes about 93,600 miles of high voltage transmission lines at 500 kV, 345 kV, 230 kV, 161 kV, 138 kV, 120 kV, and 115 kV voltage levels. The Midwest ISO has a total of 741 interconnection points with neighboring systems. The Midwest ISO is the Transmission Service Provider for these facilities but does not own or operate them. It does perform a portion of the Balancing Authority Functions as outlined in JRO00001 and is responsible for matching generation with load. The Midwest ISO is the Market Operator and Reliability Coordinator for its area. The Midwest ISO uses security constrained economic dispatch to match generation with load and to maintain the line loading within safe operating limits.

The Midwest ISO normally peaks in the summer and had an all-time electric summer peak load of 116,030 MW for its market area and 136,520 MW for its reliability coordination area. The energy for the load is provided by the generator owners and operators as controlled by the market mechanisms within the Midwest ISO area.

As of January 6, 2009, the Midwest ISO assumed specific Balancing Authority tasks and responsibilities under JRO0001.

Audit Specifics

The compliance audit was conducted on November 3-6, 2009 at the Midwest ISO office in Carmel, IN and on November 10, 2009 in St. Paul MN.

Audit Team

The members of the joint ReliabilityFirst, MRO, and SERC audit team are listed below:

Audit Team Role	Title	Company
Lead, Team 1 lead	Senior Consultant	ReliabilityFirst
Member Team 2 lead	Manager of Compliance Audits	ReliabilityFirst
Member	Audit Specialist	MRO
Member	Manager of Compliance Audits	SERC
Member	Senior Engineer	ReliabilityFirst
Member	RFC Consultant	RNJ-Energy
Member	RFC Consultant	Sander-Reber
Observer	Regional Coordinator	NERC
Observer	Regional Coordinator	NERC

Midwest ISO Audit Participants

The Midwest ISO staff members that participated in the audit are listed in the following table:

Title	Company
Legal	Midwest ISO
Senior Manager Outage Coordination	Midwest ISO
Senior Manager Shift Operations	Midwest ISO
Senior Operations Specialist	Midwest ISO
Scheduling Lead, Midwest ISO	Midwest ISO
Senior Manager, Change Management and Quality Assurance	Midwest ISO
Lead Sub Regional Reliability Planning	Midwest ISO
Technical Manager Business Continuity	Midwest ISO
Paralegal	Midwest ISO
Reliability Coordinator	Midwest ISO
Business Analyst	Midwest ISO
Manager, Technical Training	Midwest ISO
Director, Business Continuity	Midwest ISO
Reliability Coordinator	Midwest ISO

Title	Company
Expansion Planning Engineer	Midwest ISO
Manager, Access Management	Midwest ISO
Lead, Cyber Security	Midwest ISO
Senior Operations, Procedures and Compliance	Midwest ISO
Senior Manager Operation Procedures & Compliance	Midwest ISO
Training Administrator II	Midwest ISO
Human Resources, Manager EE Relations and Staffing	Midwest ISO
Reliability Coordinator	Midwest ISO
Reliability Coordinator	Midwest ISO
Manager, Regulatory Studies	Midwest ISO
Director West Regional Operations	Midwest ISO
Technical Manager, Real Time Operations	Midwest ISO
VP Transmission Asset Management	Midwest ISO
Engineer I	Midwest ISO
Engineer	Midwest ISO
Manager Regulatory Studies	Midwest ISO
Attorney	Midwest ISO
Manager East Regional Operations Engineer	Midwest ISO
Senior Manager, Regional Operations	Midwest ISO
Lead Support Information Technology	Midwest ISO
Balancing Authority Operator	Midwest ISO
Senior Manager, East Regional Operations	Midwest ISO
Compliance Attorney	Midwest ISO
Deputy General Counsel	Midwest ISO
Manager System Wide RT Operations	Midwest ISO
Lead Transmission Security Planning	Midwest ISO
Principal Operations Compliance Engineer	Midwest ISO
Senior Director UDS, EMS, Compliance & Training	Midwest ISO
Director Expansion Planning	Midwest ISO
Engineer II	Midwest ISO
Lead, Transmission Capacity Calculations	Midwest ISO
Attorney	Midwest ISO
Senior Director Regional Operations	Midwest ISO

Audit Results

After reviewing all of the evidence presented, the Midwest ISO was found to be compliant with all 112 applicable requirements and all 32 applicable NERC Reliability Standards that apply to the functions it is registered to perform in the ReliabilityFirst, MRO and SERC Regions. One requirement in one of the NERC Standards was determined to be not applicable to the Midwest

ISO for the functions it currently performs. The Midwest ISO was also found to be compliant with the 14 applicable requirements of four applicable Reliability *First* Standards.

Findings

The following table provides the auditor findings relating to evidence reviewed for compliance with the Reliability Standards within the scope of the audit.

Midwest ISO On-site Audit Findings Table

Reliability Standard	Requirement	Finding
BAL-002-0	R1.	Compliant
BAL-002-0	R3.	Compliant
BAL-005-0b	R2.	Compliant
BAL-005-0b	R10.	Compliant
CIP-001-1	R1.	Compliant
CIP-001-1	R2.	Compliant
CIP-001-1	R3.	Compliant
CIP-001-1	R4.	Compliant
COM-001-1	R1.	Compliant
COM-002-2	R1.	Compliant
EOP-001-0	R1.	Compliant
EOP-001-0	R3.	Compliant
EOP-001-0	R4.	Compliant
EOP-001-0	R5.	Compliant
EOP-001-0	R6.	Compliant
EOP-001-0	R7.	Compliant
EOP-002-2	R1.	Compliant
EOP-002-2	R2.	Compliant
EOP-002-2	R3.	Compliant
EOP-002-2	R4.	Compliant
EOP-002-2	R5.	Compliant
EOP-002-2	R6.	Compliant
EOP-002-2	R7.	Compliant
EOP-002-2	R8.	Compliant
EOP-002-2	R9.	Compliant
EOP-003-1	R1.	Compliant
EOP-003-1	R3.	Compliant
EOP-003-1	R5.	Compliant
EOP-003-1	R6.	Compliant
EOP-005-1	R5.	Compliant

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Reliability Standard	Requirement	Finding
EOP-005-1	R6.	Compliant
EOP-005-1	R7.	Compliant
EOP-005-1	R11.	Compliant
EOP-006-1	R2.	Compliant
EOP-006-1	R5.	Compliant
EOP-008-0	R1.	Compliant
FAC-010-2	R2.	Compliant
FAC-011-2	R2.	Compliant
FAC-014-2	R5.	Compliant
IRO-001-1	R2.	Compliant
IRO-001-1	R3.	Compliant
IRO-001-1	R7.	Compliant
IRO-001-1	R8.	Compliant
IRO-001-1	R9.	Compliant
IRO-002-1	R1.	Compliant
IRO-002-1	R4.	Compliant
IRO-002-1	R5.	Compliant
IRO-002-1	R6.	Compliant
IRO-002-1	R7.	Compliant
IRO-002-1	R8.	Compliant
IRO-003-2	R1.	Compliant
IRO-003-2	R2.	Compliant
IRO-004-1	R1.	Compliant
IRO-004-1	R2.	Compliant
IRO-004-1	R3.	Compliant
IRO-004-1	R4.	Compliant
IRO-004-1	R5.	Compliant
IRO-004-1	R6.	Compliant
IRO-004-1	R7.	Compliant
IRO-005-2	R1.	Compliant
IRO-005-2	R2.	Compliant
IRO-005-2	R3.	Compliant
IRO-005-2	R4.	Compliant
IRO-005-2	R5.	Compliant
IRO-005-2	R6.	Compliant
IRO-005-2	R7.	Compliant
IRO-005-2	R8.	Compliant
IRO-005-2	R9.	Compliant
IRO-005-2	R10.	Compliant
IRO-005-2	R11.	Compliant

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Reliability Standard	Requirement	Finding
IRO-005-2	R12.	Compliant
IRO-005-2	R13.	Compliant
IRO-005-2	R15.	Compliant
IRO-005-2	R16.	Compliant
IRO-005-2	R17.	Compliant
IRO-006-3	R1.	Compliant
IRO-006-3	R2.	Compliant
IRO-006-3	R3.	Compliant
IRO-006-3	R4.	Compliant
IRO-006-3	R5.	Compliant
IRO-006-3	R6.	Compliant
PER-001-0	R1.	Compliant
PER-002-0	R1.	Compliant
PER-002-0	R2.	Compliant
PER-002-0	R3.	Compliant
PER-002-0	R4.	Compliant
PER-003-0	R1.	Compliant
PER-004-1	R1.	Compliant
PER-004-1	R2.	Compliant
PER-004-1	R3.	Compliant
PER-004-1	R4.	Compliant
PER-004-1	R5.	Compliant
PRC-001-1	R1.	Compliant
PRC-001-1	R6.	Compliant
TOP-001-1	R3.	Compliant
TOP-001-1	R6.	Compliant
TOP-001-1	R8.	Compliant
TOP-002-2	R1.	Compliant
TOP-002-2	R3.	Compliant
TOP-002-2	R4.	Compliant
TOP-002-2	R9.	Compliant
TOP-002-2	R17.	Compliant
TOP-002-2	R18.	Compliant
TOP-002-2	R19.	Compliant
TOP-006-1	R2.	Compliant
TOP-006-1	R6.	N/A
TOP-006-1	R7.	Compliant
TOP-007-0	R4.	Compliant
TPL-001-0	R1.	Compliant
TPL-002-0	R1.	Compliant

Reliability Standard	Requirement	Finding
TPL-003-0	R1.	Compliant
BAL-002-RFC-02	R1.	Compliant
BAL-002-RFC-02	R2.	Compliant
BAL-002-RFC-02	R3.	Compliant
BAL-002-RFC-02	R4.	Compliant
BAL-502-RFC-02	R1.	Compliant
BAL-502-RFC-02	R2.	Compliant
EOP-001-RFC-01	R1.	Compliant
EOP-001-RFC-01	R2.	Compliant
EOP-001-RFC-01	R3.	Compliant
EOP-501-RFC-01	R1.	Compliant
EOP-501-RFC-01	R2.	Compliant
EOP-501-RFC-01	R3.	Compliant
EOP-501-RFC-01	R4.	Compliant
EOP-501-RFC-01	R5.	Compliant

Compliance Culture

The Midwest ISO provided documentation to demonstrate its compliance to the requirements of the applicable standards. The Midwest ISO completed the *Compliance Audit Survey, Registered Entity's Internal Compliance Program Survey*, and the documentation section of the NERC Questionnaires and Reliability Standard Audit Worksheets (QRSAW).

The Midwest ISO developed its Corporate Compliance Master Plan as the umbrella program that includes the NERC Compliance program. The Midwest ISO formed the Corporate Compliance Oversight Committee to oversee compliance activities to ensure compliance to applicable NERC Standards. The committee is chaired by the Chief Financial Officer, and also consists of the Vice President, General Counsel and Secretary, and the Vice President Standards Compliance &

Strategy. The Vice President Standards Compliance & Strategy also serves as the Compliance Officer for NERC compliance.

The members of the Corporate Compliance Oversight Committee have direct access to the CEO and the Midwest ISO's Board of Directors, but are not directly responsible for maintaining compliance with individual requirements. The Corporate Compliance Oversight Committee provides high-level oversight for all Midwest ISO compliance activities and supports a culture of compliance within the Midwest ISO. The committee advises and assists the company with respect to compliance with all applicable laws, regulations, standards and other related requirements, and establishes and oversees the appropriate actions required to achieve this objective.

The Midwest ISO also formed the Corporate Compliance Management Team consisting of top and mid-management personnel. It reports directly to the Corporate Compliance Oversight Committee, and is responsible for developing and implementing the Midwest ISO's Corporate Compliance Master Plan. The Corporate Compliance Management Team's responsibilities include identifying and pursuing opportunities for ongoing improvement to ensure effective compliance management for the Midwest ISO Corporate Compliance Policy.

The Midwest ISO compliance program is independent from departments responsible for compliance. The NERC standards portion of the Midwest ISO compliance program is administered by the Standards Compliance and Strategy Department which does not have direct responsibility for compliance to NERC standards. For the past three years the Midwest ISO brought in an independent outside entity to provide an objective assessment of its compliance. Self assessments are performed at least annually to prepare for self certification.

The Midwest ISO provides annual compliance training for its entire staff and the staff is required to annually certify that they received the training. Employees involved in compliance participate in national and regional compliance and ethics training. The Midwest ISO also provides NERC compliance training to its NERC certified operators.

The Midwest ISO material submitted for the audit was well organized and complete. The staff was knowledgeable and able to answer the questions asked by the audit team. The Midwest ISO staff was able to supply additional evidence of compliance in a timely manner when requested by the audit team. The Midwest ISO's quick response to additional questions is evidence of a comprehensive compliance program and competent, knowledgeable staff.

The training and guidance by corporate management provide strength to the Midwest ISO compliance program.