

# **PJM Transmission Owner/Transmission Operator Reliability Audit Program**

**Revision: 07  
Effective Date: 12/5/2019**

**Prepared by:  
Reliability Compliance  
Department**

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## Table of Contents

1. Purpose .....	3
2. Audit Frequency and Scope.....	3
3. Audit Procedure .....	4
3.1. Scheduling and PJM Audit Team Makeup .....	4
3.2. Pre-On-Site Activity .....	5
3.3. On-Site Activity.....	6
3.4. Post On-Site Activity .....	7
4. Sample Audit Schedule.....	8
5. Revision History .....	9

## 1. Purpose

PJM Interconnection, LLC (PJM) is the registered Transmission Operator (TOP) with the exception<sup>1</sup> of a few facilities in its footprint. PJM, as the TOP, relies on the Transmission Owners (Member TOs) in its region to perform certain reliability tasks. The purpose of the PJM Transmission Owner/Transmission Operator (TO/TOP) Reliability Audit Program is to verify that the Member TOs satisfactorily perform the reliability tasks that are shared with or assigned to them by PJM, as outlined in the latest approved version of the PJM TO/TOP Matrix.<sup>2</sup> The PJM TO/TOP Reliability Audit validates the PJM Member TO's performance of the assigned or shared tasks through an evaluation of the Member TO's ability to comply with those assigned or shared tasks.

The assigned or shared reliability tasks include implementation of Operating Instructions or directives issued by PJM as the Transmission Operator (TOP), Balancing Authority (BA), and Reliability Coordinator (RC). The reliability tasks also include adherence to processes defined in the PJM Manuals<sup>3</sup>, as required by the PJM Operating Agreement, PJM Consolidated Transmission Owners' Agreement, and the PJM Reliability Assurance Agreement, collectively called "The Agreements".<sup>4</sup>

This document describes and defines the process that PJM uses to conduct the PJM TO/TOP Reliability Audits and provides an overview of various activities that occur leading up to and following a PJM TO/TOP Reliability Audit.

## 2. Audit Frequency and Scope

PJM will perform a TO/TOP Reliability Audit of each applicable TO within the PJM region on a rolling 3 year cycle, visiting approximately one third of our member TOs every year. The schedule of the PJM TO/TOP Reliability Audits for the following year will be compiled in the previous year and that schedule will be sent to ReliabilityFirst (RF) 60 days prior to the end of the year.

Requests for delay of a PJM TO/TOP Reliability Audit will be considered by PJM. PJM will communicate any changes in the schedule of the PJM TO/TOP Reliability Audits to RF within 10 days of making such a change.

RF staff will perform a TO/TOP Reliability Audit each year from among the TOs scheduled for audit that year. RF staff will also attend one of the PJM TO/TOP Reliability Audits to observe the conduct of the Audit.

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<sup>1</sup> Facilities at or below 138 kV that are owned and operated by American Electric Power (AEP) as the TOP, DOE equipment at the Portsmouth Centrifuge facility and facilities owned and operated by ITCI as the TOP

<sup>2</sup> <http://www.pjm.com/library/compliance.aspx>

<sup>3</sup> <http://www.pjm.com/library/manuals.aspx>

<sup>4</sup> <http://www.pjm.com/library/governing-documents.aspx>

The PJM Audit Team will use the assigned or shared tasks identified in the PJM TO/TOP Matrix to ensure objectives associated with the NERC Reliability Standards are assessed. In addition, PJM Manuals contain requirements for TOs to adhere to in order to assure compliance by both the TO and PJM as the TOP.

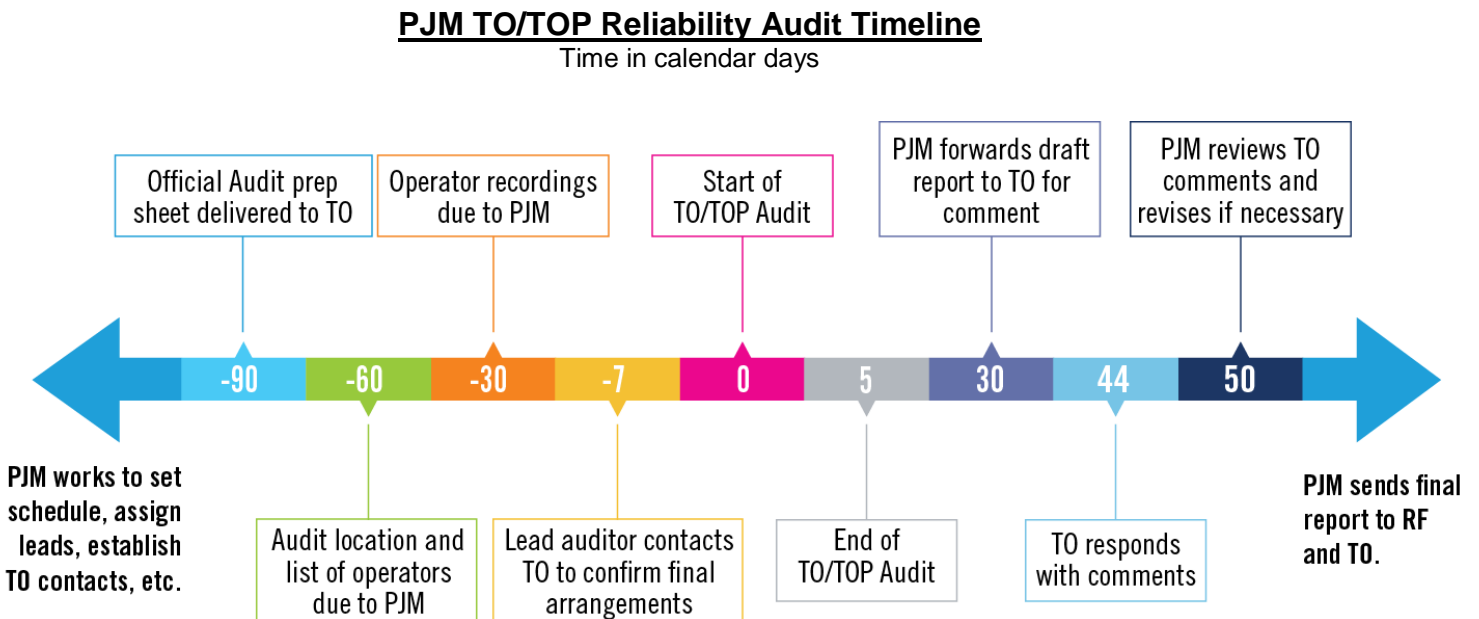
The Reliability Compliance Department will be the contact group for all questions regarding the PJM TO/TOP Reliability Audits as well as the maintenance of the program documents and coordination of the staffing the PJM Audit Teams.

### 3. Audit Procedure

This section provides an overview of the activities in a PJM TO/TOP Reliability Audit. The main steps include the following:

1. Scheduling and PJM Audit Team makeup
2. Pre-On-Site Activity
3. On-Site Activity
4. Post-On-Site Activity

The following graphic shows a timeline of the activities leading up to and after a PJM TO/TOP Reliability Audit.



#### 3.1. Scheduling and PJM Audit Team Makeup

The PJM Audit Team will be led by a representative of the Reliability Compliance department and team members may consist of the following:

1. Additional representative(s) from the Reliability Compliance department

2. Representative from the PJM System Operations Division
3. Representative from the PJM System Operator Training department or the PJM State and Member Training department
4. Representative from the PJM Legal department
5. RF may send observer(s) with a 30-day notice to the PJM and the applicable Member TO
6. Additionally, the PJM audit team may include an observer from another TO, if agreed to by the TO being audited.

The Member TO to be audited will be consulted prior to the appointment of all PJM Audit Team members. If the Member TO has an objection to the appointment of a PJM Audit Team member, the Member TO shall notify PJM and a substitute PJM Audit Team member will be appointed. PJM employees are bound by the confidentiality provisions as set forth in Section 18.17 of the PJM Operating Agreement. Accordingly, PJM Audit Team members will not execute any additional Non-Disclosure Agreements with the TO being audited prior to or during the conduct of the audit.

The PJM Audit Team members will be chosen based on their qualifications and experience in a variety of areas, some of which may include (but are not limited to):

- Extensive knowledge of NERC and Regional Entity Reliability Standards
- Bachelor degree in engineering, or related technical field with 8 to 10 years of related experience OR no degree with at least 10 plus years of related experience/education resulting in demonstrated ability to perform the major duties required of an auditor on the PJM Audit Team
- Compliance seminars and workshops
- PJM Operator Seminar
- Auditor training
- Auditor certification
- Auditing experience
- Knowledge of compliance enforcement
- NERC Reliability Standard drafting team participation
- On-the-Job-training achieved through observation of audits
- Regulatory experience in utilities/energy industry or other industries
- Working knowledge of the operation or planning of the Bulk Electric System (BES) and supporting technologies
- The PJM TO/TOP Reliability Audit Program Lead or the Manager of Reliability Compliance department determination that the potential PJM Audit Team member “meets qualifications”

### **3.2. Pre-On-Site Activity**

1. An initial PJM TO/TOP Reliability Audit notification will be sent to the Member TO being audited at least 60 calendar days in advance of the audit and will include a request for specific evidence of compliance that can be made available to the PJM Audit Team for review prior to the On-Site Activity (see Section 3.3). The Member TO will have 30 calendar days to provide the requested information. The requested list of operators on-shift will be sent to the PJM State and Member Training department for review.

2. The PJM Audit Team leader will provide the PJM Audit Team members with the following information upon receipt or as soon as practical, prior to the PJM TO/TOP Reliability Audit:
  - Electronic versions of any supporting files and documents sent by the Member TO to be audited
  - A sample on-site audit agenda and an agenda for any pre-audit meetings
3. The PJM Audit Team leader will coordinate the travel arrangements and confirmation of accommodations for the PJM Audit Team but it is ultimately the responsibility of each PJM Audit Team member to ensure and confirm their own travel arrangements.
4. As needed, the PJM Audit Team will meet prior to the on-site audit to identify areas requiring further investigation, discuss concerns, coordinate the interview process, and assign responsibilities during the on-site visit. This meeting may take place at the audited TO's facility or at a location agreed upon by the PJM Audit Team.
5. Using the list of operators supplied by the Member TO, the PJM State and Member Training department will produce PJM Learning Management System reports to satisfy several assigned or shared tasks related to Member TO operator training.

### **3.3. On-Site Activity**

1. During the on-site visit, the PJM Audit Team will:
  - Interview the Member TO's operations, planning, and management personnel, as appropriate
  - Inspect the Member TO's primary Control Center and backup control center facilities and equipment
  - Review all necessary documents and data
  - Review and validate the Member TO's performance on all shared and assigned tasks listed within the PJM TO/TOP Matrix
2. After reviewing and assessing evidence for all effective assigned or shared tasks within the PJM TO/TOP Matrix, the PJM Audit Team will present the preliminary findings to the host Member TO during the closing presentation. Preliminary findings will be noted as follows:
  - "Area of Concern" will note a deficiency in the Member TO's evidence that could present a potential compliance issue in a future TO/TOP Reliability Audit
  - "Recommendation" will be noted in an area where the PJM Audit Team feels that there is an opportunity for the Member TO to improve its operating procedure(s) and/or evidence of compliance
  - "Positive Observation" will be recognized to acknowledge evidence, best practices, or techniques that go beyond what is needed to prove compliance
  - "Potential Non-Compliance" will note an instance where the PJM Audit Team feels that based on the evidence presented the Member TO failed to

comply with the assigned or shared task identified in the PJM TO/TOP Matrix

### **3.4. Post On-Site Activity**

1. The PJM Audit Team leader will prepare and provide draft of the audit report to the PJM Audit Team for comments. The PJM Audit Team leader will address comments received from the PJM Audit Team and provide the Member TO with a copy of the draft audit report. The goal of the PJM Audit Team is to provide this draft audit report within 30 calendar days of completion of the On-Site Activity. The draft audit report will not be publicly disclosed.
2. PJM will request the Member TO to provide comments on the draft audit report within two weeks of receipt.
3. The PJM Audit Team leader and the PJM Audit Team will review and incorporate the Member TO comments as appropriate and finalize the audit report. The PJM Audit Team leader will send a copy of the finalized audit report to the audited Member TO and RF.
4. The PJM Reliability Compliance department will be responsible for processing all Potential Non-Compliance in accordance with PJM's Internal Compliance Program (ICP) as well as tracking the implementation of all mitigating actions.
5. The PJM Audit Team leader will present the Potential Issue(s) to Sr. Director, Compliance and Reliability Standards and Manager, Reliability Compliance Department, within seven calendar days of the conclusion of the On-Site Activity. The PJM Audit Team leader will follow PJM's Regulatory Oversight and Compliance Committee (ROCC) process that employs a deliberative method to evaluate whether a Potential Non-Compliance identified during the On-Site Activity presents a Potential Non-Compliance Since PJM is the registered TOP for the PJM Region, PJM executive management has the ultimate decision making authority to determine whether a potential violation has occurred and whether PJM must submit a self-report for such a potential violation to RF.
6. PJM staff will maintain a publically viewable summary of all unique positive observations.

## 4. Sample Audit Schedule

	Day 1	Day 2	Day 3
8:30 – 9:00	PJM Audit Team arrives	Member TO evidence presentation	Member TO evidence presentation
9:00 – 9:30	PJM Audit Team Opening Presentation/		
9:30 – 10:00			
10:00 – 10:30	Member TO Opening Presentation		
10:30 – 11:00			
11:00 – 11:30			
11:30 - 12:00			
12:00 – 12:30	Lunch	Lunch	Lunch
12:30 – 1:00			
1:00 – 1:30	Member TO evidence presentation	Member TO evidence presentation	PJM Audit Team meets privately
1:30 – 2:00			
2:00 – 2:30			
2:30 – 3:00			
3:00 – 3:30			PJM Audit Team closing presentation
3:30 – 4:00			
4:00 – 4:30			
4:30 – 5:00			



## 5. Revision History

<b>Revision 07</b>		<b>Effective Date: 12/5/19</b>
Written by	Mark Kuras	
Reviewed by	Reliability Compliance department	
Approved by	Michel Del Viscio	
Reason	Annual review. 1. Consistently use RF for ReliabilityFirst 2. Changed NERC and Regional Coordination to Reliability Compliance throughout 3. Revised for more term consistency 4. Replaced Eckenrod with Del Viscio 5. Removed the requirement to look at inactive versions of NERC standards	
<b>Next Review Due Date</b>	12/5/20	

<b>Revision 06</b>		<b>Effective Date: 1/22/18</b>
Written by	Srinivas Kappagantula, Mark Kuras	
Reviewed by	Thomas Moleski, Mark Holman, Rob Eckenrod	
Approved by	Rob Eckenrod	
Reason	Annual review. 1. Reorganized sections according to the actual conduct of the TO/TOP Reliability Audit 2. Number and format changes 3. Added Potential Issues and clarified PJM's ICP process to be followed when Potential Issues are identified. 4. Added details on interaction with RF.	
<b>Next Review Due Date</b>	1/22/19	

<b>Revision 05</b>		<b>Effective Date: 5/4/15</b>
Written by	Angela D'Alessandro	

Reviewed by	Mark Kuras, Thomas Moleski, Mark Holman, Rob Eckenrod, Srinivas Kappagantula
Approved by	Tom Bowe
Reason	Annual review. General cleanup for consistency. As per the <i>ReliabilityFirst</i> 3 Year Appraisal Report for PJM's LCC (dated 3 Jan 2014)-PJM added Audit Team member knowledge/experiences to Section 4.
<b>Next Review Due Date</b>	1/1/2018

<b>Revision 04</b>		<b>Effective Date: 1/16/14</b>
Written by	Mark Kuras	
Reviewed by	Tom Moleski	
Approved by	Tom Bowe	
Reason	Annual Review. Refreshed to clarify the deliverables at the close of the on-site visit. Expanded to expressly include the Audit Team's duty to report Areas of Concern to PJM's Chief Compliance Officer. Added SERC members to audit program. General cleanup of unused parts. As per the <i>ReliabilityFirst</i> Audit and Appraisal Procedure for PJM's LCC (dated 3 Jan 2014)-PJM Made 3-year audit schedule rotation stronger. Added notification of <i>ReliabilityFirst</i> for audit schedule changes. Added preliminary audit findings groups. Added that <i>ReliabilityFirst</i> employees may act as an observer. Added that final reports will be forwarded to <i>ReliabilityFirst</i> .	
<b>Next Review Due Date</b>	1/16/15	

<b>Revision 03</b>		<b>Effective Date: 07/29/11</b>
Writer	Mark Kuras	
Reviewer	Patrick Brown	
Approver	Patrick Brown	
Reason Written	Annual Review	

<b>Next Review Due Date</b>	07/01/12
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<b>Revision 02</b>		<b>Effective Date: 03/11/10</b>
Writer	Mark Kuras	
Reviewer	Patrick Brown	
Approver	Patrick Brown	
Reason Written	Annual Review	
<b>Next Review Due Date</b>	03/10/11	

<b>Revision 01</b>		<b>Effective Date: 09/04/08</b>
Writer	Mark Kuras	
Reviewer	Patrick Brown	
Approver	Patrick Brown	
Reason Written	Remove references to NERC Readiness Audits. Add consideration of providing documentation to the Audit Team up-front at discretion of the Transmission Owner. Clarify responsibilities of Audit Team Leader. Resolve some confusion with TO and TOP responsibilities. Revise Typical Audit Schedule. Remove sample questionnaires, make separate document.	
<b>Next Review Due Date</b>	09/03/09	

<b>Revision 00</b>		<b>Effective Date: 8/27/07</b>
Writer	Leanne Harrison	
Reviewer	Joe Willson	
Approver	Alicia Daugherty	
Reason Written	Complete re-write of former LCC Audit Program/Procedure rewritten to focus on compliance instead of reliability consistent with PJM Manuals, NERC	

	and Regional Entity standards.
<b>Next Review Due Date</b>	7/27/08