



**MIDWEST
RELIABILITY
ORGANIZATION**

380 St. Peter Street, Ste. 800, Saint Paul, MN 55102

MidwestReliability.org

P.651.855.1760

F.651.855.1712

COMPLIANCE AUDIT REPORT

PUBLIC VERSION

Confidential and Non-Public Information Removed

Date(s) of Off-Site Field Work: September 3 – 20, 2013
Date of Report: October 15, 2013

Tatanka Wind Power, LLC

NERC Compliance Registry ID: **NCR10245**



Table of Contents

Executive Summary	1
Registered Entity Profile	3
Internal Compliance Program and Controls	3
Audit Scope	3
Audit Process	4
Objectives	5
Methodology	5
Conflict of Interest and Confidentiality Rules	6
Audit Results	6
Possible Violation(s)	6
MRO Contact Information	8
Appendix I	10
MRO Audit Staff	10
Registered Entity Participants and Observers	10



Executive Summary

Midwest Reliability Organization (MRO)¹ conducted a compliance audit of Tatanka Wind Power, LLC (TWP), North American Electric Reliability Corporation (NERC) Compliance Registry Number NCR10245, for the planned audit period of April 29, 2008, to September 2, 2013. Within the scope of the audit, TWP was registered² for the following functions:

- Generator Operator (GOP)
- Generator Owner (GO)

TWP's Primary Compliance Officer was provided notice of the compliance audit on June 18, 2013, and an initial Request for Information (RFI) was provided to TWP's Primary Compliance Contact on June 18, 2013. The off-site portion of the compliance audit was conducted during the period of September 3, 2013 to September 20, 2013.

The audit scope included the applicable Reliability Standards from the 2013 [Compliance Monitoring and Enforcement Program](#) (CMEP). MRO's audit team reviewed the applicable Reliability Standards³ for the period of April 29, 2008 to September 2, 2013.

The MRO audit team determined that the following Reliability Standards were not applicable to TWP: NUC-001-2, EOP-005-2, PRC-017-0.

During the course of the audit, a possible violation was discovered for the following requirement(s):

1. *FAC-008-3 R1, Facility Ratings. Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer and the high side terminals of the main step up transformer if the Generator Owner owns the main step up transformer.*
R1.1 The documentation shall contain assumptions used to rate the generator and at least one of the following:
 - *Design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications,*

¹ MRO is a [Regional Entity](#) in North America operating under authority from regulators in the United States and Canada through a delegation agreement with the [North American Electric Reliability Corporation \(NERC\)](#). In the United States, MRO operates under the authority found in Section 215 of the Federal Power Act, through the Federal Energy Regulatory Commission (FERC or Commission) and through other arrangements in Manitoba and Saskatchewan. The primary focus of MRO is assessing compliance with Reliability Standards on entities that own, operate or use [the Bulk Electric System](#) (BES), performing assessments of the BES, and technical analysis of matters impacting the reliability of the BES in the north central part of North America. For more information on MRO, please refer to www.midwestreliability.org.

² Each owner, user, or operator of the BES is listed on a registry which can be found on [NERC's website](#). Entities on the registry are referred to as "Registered Entities".

³ An entire list of Reliability Standards can be found on [NERC's website](#).



engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice that has been verified by testing or engineering analysis.

- Operational information such as commissioning test results, performance testing or historical performance records, any of which may be supplemented by engineering analyses.*

R1.2 The documentation shall be consistent with the principle that the Facility Ratings do not exceed the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

- 2. FAC-008-3 R2, Facility Ratings. Each Generator Owner shall have a documented methodology for determining Facility Ratings (Facility Ratings methodology) of its solely and jointly owned equipment connected between the location specified in R1 and the point of interconnection with the Transmission Owner that contains all of the following:*

R2.2 The underlying assumptions, design criteria, and methods used to determine the Equipment Ratings identified in Requirement R2, Part 2.1 including identification of how each of the following were considered:

R2.2.1 Equipment Rating standard(s) used in development of this methodology.

R2.2.2 Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications.

R2.2.3 Ambient conditions (for particular or average conditions or as they vary in real-time).

R2.2.4 Operating limitations.

R2.4. The process by which the Rating of equipment that comprises a Facility is determined.

R2.4.1 The scope of equipment addressed shall include, but not be limited to, conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.

These audit results are further explained later in this report. Any possible violations are processed through the CMEP.

MRO staff followed the applicable requirements of the [Rules of Procedure](#) (ROP) and CMEP in the conduct of the compliance audit.

Within the scope of this compliance audit, there were no open, pending, or recently completed mitigation plans reviewed by the audit team. Any open remedies from settlements regarding past violations of Reliability Standards were not included in the scope of the compliance audit unless specified in the audit scope.



Registered Entity Profile

Tatanka Wind Power, LLC is a limited liability company organized under the laws of Delaware, which is 100% owned by Tatanka Wind Holding LLC, a Delaware limited liability company, 100% of the Class B membership interests of which are in turn owned by Tatanka Finance LLC, a Delaware limited liability company, which is in turn, owned 100% by Acciona Wind Energy USA LLC, a Delaware limited liability company.

Tatanka Wind Power, LLC (TWP) is an intermittent wind generation resource, consisting of 120, 1.5MW AW77/1500 GLII Wind Turbine Generators (WTG) for an aggregate capability of 180MW, located in in Dickey and McIntosh Counties, North Dakota and McPherson County, South Dakota. TWP contains voltage levels of 12kV at the WTG, which is then raised to 34.5kV through the collection system and finally to 230kV through the 13 miles of radial interconnection line to the only point of interconnection at Montana Dakota Utilities Company's (MDU) 230kV Tatanka North Substation (Tatanka Interconnection Substation, G132) located on the Ellendale to Tatanka 230kV transmission line and the Tatanka to Merricourt 230kV transmission line.

Internal Compliance Program and Controls

Within the scope of the compliance audit, TWP's compliance program and related controls applicable to the Reliability Standards were reviewed. For enforcement purposes, an entity's internal compliance program and other pertinent information are reviewed by the MRO enforcement staff and may be considered during any enforcement proceedings resulting from a finding of a possible violation as a result of the compliance audit.

Audit Scope

MRO performed the compliance audit according to the planned scope and timing previously communicated to TWP, and included the Reliability Standards from [MRO's Implementation Plan](#) for an audit period of April 29, 2008 to September 2, 2013.

TWP is registered for the following functions:

- Generator Operator (GOP)
- Generator Owner (GO)

The following Reliability Standards were included in the scope of the compliance audit:

<u>Standard(s)</u>	<u>Requirements</u>	<u>Title</u>
EOP-004-1	R3	Disturbance Reporting
EOP-005-2	R14, R15, R16, R17, R18	System Restoration Plans
FAC-002-1	R1	Coordination of Plans For New Generation, Transmission, and End-User Facilities
FAC-008-3	R1, R2, R6, R7	Facility Ratings



IRO-005-3a	R10	Reliability Coordination-Current Day Operations
NUC-001-2	R4, R5, R9	Nuclear Plant Interface Coordination
PRC-001-1	R1, R2, R3, R5	System Protection Coordination
PRC-005-1b	R1, R2	Transmission and Generation Protection System Maintenance and Testing
PRC-017-0	R1, R2	Special Protection System Maintenance and Testing
PRC-023-2	R1, R2, R3, R4, R5	Transmission Relay Loadability
TOP-001-1a	R3, R6, R7	Reliability Responsibilities and Authorities
TOP-002-2b	R3, R13, R14, R15, R18	Normal Operations Planning
VAR-002-1.1b	R1, R2, R3	Generator Operation for Maintaining Network Voltage Schedules

The MRO audit team determined that the following Reliability Standard(s) or requirement(s) *were not* applicable to TWP during the compliance audit:

1. NUC-001-2, Nuclear Plant Interface Coordination.
2. EOP-005-2, System Restoration Plans.
3. PRC-017-0, Special Protection System Maintenance and Testing.

Audit Process

MRO conducts compliance audits in accordance with the current version of the CMEP and ROP (as approved by the Federal Energy Regulatory Commission for entities in the United States or through other arrangements in Manitoba and Saskatchewan), and generally conforms to the United States Government Accountability Office Government Auditing Standards and other generally accepted audit practices applicable to the conduct of the work. The compliance audit process steps can be found in the NERC CMEP.

Compliance audits are conducted to obtain reasonable assurance of compliance with the applicable Reliability Standards. The compliance audit includes requests for data, such as program documents, procedures, and performance records, considered necessary to provide reasonable assurance of any findings or conclusions. Audit procedures include tests of documentary evidence supporting compliance, tests of the assertions made regarding compliance, and direct confirmation of actions taken as part of compliance with the Reliability Standards.

If possible violations are identified the matter is turned over to MRO Risk Assessment and Mitigation staff to initiate mitigation and enforcement proceedings under the CMEP. The staff will contact the designated Primary Compliance Contact, or TWP may contact MRO staff at any time. Upon validation by Enforcement staff, TWP will be provided a written notice of the alleged violation within a reasonable timeframe that shall include the due process protections under the CMEP.

TWP is encouraged to maintain an adequate internal compliance program designed to ensure compliance with Reliability Standards to protect the reliability of the Bulk Electric System



(BES). The program should contain internal controls designed to detect, correct and prevent recurrence of compliance violations.

Objectives

Entities that own, operate, or use the BES in North America are subject to compliance audits for applicable Reliability Standards based upon the functions performed within the scope of the compliance audit. The primary audit objectives are to:

1. Provide reasonable assurance of compliance to the identified applicable Reliability Standards.
2. Provide a reasonable basis for all determinations of any findings or conclusions.
3. Evaluate and identify the internal controls utilized by the Registered Entity for performance measurement(s) within their compliance program.

Methodology

The audit team reviewed the information, data, and evidence submitted by TWP and assessed compliance with requirements of the applicable Reliability Standards. Submittal of information and data to MRO occurred before the scheduled date of the entity review, or within the submittal parameters as described in subsequent RFIs.

Based upon the evaluation of initial information provided to the audit team, supplemental RFIs were requested and clarifications were sought from subject matter experts.

MRO staff was provided the necessary information and adequate access to subject matter experts without unreasonable restrictions.

The audit team reviews documentation and evidence provided by TWP, such as programs, policies, procedures, emails, logs, studies, data sheets, and other relevant information. Where evaluation of compliance with a Requirement involved sampling, the necessary samples were developed according to the NERC Sampling Methodology Guidelines. MRO audit staff obtained sufficient, appropriate evidence to provide a reasonable basis for any findings and conclusions.

The audit report is subject to review by MRO executive staff and any findings are subject to a second, independent review by MRO Risk Assessment and Mitigation staff, which is not included in this report. If there are findings as a result of the compliance audit, Risk Assessment and Mitigation staff from MRO will contact TWP.



Conflict of Interest and Confidentiality Rules

Confidentiality and Conflict of Interest of MRO audit staff are governed under the MRO Regional Delegation Agreement with NERC; Section 1500 of the NERC ROP; MRO Policy and Procedure 5: Confidentiality; MRO Policy and Procedure 10: Conflict of Interest; and the MRO employee handbook. TWP was informed of MRO's obligations and responsibilities under the Regional Delegation Agreement and NERC ROP and was provided with a list of MRO audit staff and corresponding work histories. There have been no denials of or access limitations placed upon this audit team, and no objections to MRO staff assignments on the compliance audit.

Audit Results

Possible Violation(s)

Based upon the scope and conduct of the compliance audit, the audit team identified a finding of the following possible violation:

1. *FAC-008-3 R1, Facility Ratings. Each Generator Owner shall have documentation for determining the Facility Ratings of its solely and jointly owned generator Facility(ies) up to the low side terminals of the main step up transformer if the Generator Owner does not own the main step up transformer and the high side terminals of the main step up transformer if the Generator Owner owns the main step up transformer.*

R1.1 The documentation shall contain assumptions used to rate the generator and at least one of the following:

- Design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice that has been verified by testing or engineering analysis.*
- Operational information such as commissioning test results, performance testing or historical performance records, any of which may be supplemented by engineering analyses.*

R1.2 The documentation shall be consistent with the principle that the Facility Ratings do not exceed the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.

2. *FAC-008-3 R2, Facility Ratings. Each Generator Owner shall have a documented methodology for determining Facility Ratings (Facility Ratings methodology) of its solely and jointly owned equipment connected between the location specified in R1 and the point of interconnection with the Transmission Owner that contains all of the following:*



R2.2 The underlying assumptions, design criteria, and methods used to determine the Equipment Ratings identified in Requirement R2, Part 2.1 including identification of how each of the following were considered:

R2.2.1 Equipment Rating standard(s) used in development of this methodology.

R2.2.2 Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications.

R2.2.3 Ambient conditions (for particular or average conditions or as they vary in real-time).

R2.2.4 Operating limitations.

R2.4. The process by which the Rating of equipment that comprises a Facility is determined.

R2.4.1 The scope of equipment addressed shall include, but not be limited to, conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.

The aforementioned possible violation(s) and the audit report will be provided to MRO Risk Assessment and Mitigation staff to initiate mitigation and enforcement proceedings under the CMEP, which will consider the matters in this report consistent with the applicable requirements of the CMEP. The staff will contact the designated Primary Compliance Contact or TWP may contact MRO staff at any time.



MRO Contact Information

Any questions regarding this compliance audit report can be directed to:

Midwest Reliability Organization

Attn: Thomas P. Tierney, Director of Compliance

380 St. Peter Street, Suite 800



St. Paul, MN 55102

tp.tierney@midwestreliability.org

(651) 855-1745



On behalf of MRO, this report was prepared and reviewed by:

Audit Team Lead	Signature	Date
Carol Gerou		10/15/2013
Director of Compliance	Signature	Date
Thomas P. Tierney		10/15/2013



Appendix I

MRO Audit Staff

Title	Entity
Compliance Engineer	MRO
Compliance Audit Specialist	MRO

Registered Entity Participants and Observers

Title	Entity
Director, Operations and Maintenance Compliance Manager	Acciona Energy North America Corporation, on behalf of TWP
Director, System Operation Center	Acciona Energy North America Corporation, on behalf of TWP
SCADA Engineer	Acciona Energy North America Corporation, on behalf of TWP
Regulatory Compliance Analyst	Acciona Energy North America Corporation, on behalf of TWP
Compliance Officer Vice President, Construction and Operations & Maintenance Services	Acciona Energy North America Corporation, on behalf of TWP
Vice President and General Counsel	Acciona Energy North America Corporation, on behalf of TWP
Wind Farm Site Manager, TWP	Acciona Energy North America Corporation, on behalf of TWP
Manager, Engineering	Acciona Energy North America Corporation, on behalf of TWP
Senior Operations Engineer	Acciona Energy North America Corporation, on behalf of TWP
Operations Engineer	Acciona Energy North America Corporation, on behalf of TWP