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Compliance Audit Report Public Version

Carr Street Generating Station, LP (CSGS)

NERC ID# NCR10354

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Critical Energy Infrastructure Information)
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Date of Audit: February 17 to March 10, 2010

Carr Street Generating Station, LP Compliance Audit Report
March 10, 2010

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Executive Summary

A compliance audit of Carr Street Generating Station, LP (CSGS), NERC ID # NCR 10354 was conducted from February 17, 2010 to March 10, 2010. At the time of the audit, CSGS was registered for the GO/GOP functions.

The audit team evaluated CSGS for compliance with seventeen (17) standards and their ninety (90) requirements and sub-requirements in the 2010 NERC Compliance Monitoring and Enforcement Program (CMEP). The audit team reviewed the NERC Reliability Standards for the period from their effective registration date of August 14, 2009 to February 17, 2010. CSGS submitted information and documentation for the audit team's evaluation of compliance with the requirements. The audit team reviewed and evaluated all information provided by CSGS to assess compliance with standards applicable to CSGS at this time.

Based on the information and documentation provided by CSGS, the audit team found CSGS to be compliant with fourteen standards (14) and sixty-six (66) applicable requirements and sub-requirements. The audit team determined that three (3) standards and twenty-four (24) requirements and sub-requirements were not applicable to CSGS. The audit team identified zero Possible Alleged Violation(s).

There were no ongoing mitigation plans. However, there were two recently completed mitigation plans, which the audit team reviewed with NPCC Enforcement.

Based on auditor review of NPCC site documentation and discussions with Carr Street Generating Station and NPCC Enforcement, Carr Street Generating Station had two self-reported violations associated with FAC-008-1 and FAC-009-1 with a discovery date of September 18, 2009. Carr Street Generating Station, LP did not have a Facility Ratings Methodology required by FAC-008-1 and did not establish Facility Ratings for their solely and jointly owned Facilities that were consistent with the associated Facility Ratings Methodology required by FAC-009-1. Both violations extended back to the time of Carr Street Generating Station's registration with NPCC and NERC on August 14, 2009.

NPCC Enforcement issued their Notice of Alleged Violation and Proposed Penalty or Sanction (NAVAPS) and required mitigation plans for both standards. CSGS submitted their plans for mitigation on December 23, 2009, which were approved by NERC and NPCC. CSGS submitted their completed mitigation plans on February 5, 2010, which was prior to the start of this audit on February 17, 2010. NPCC Enforcement reviewed, accepted and formally verified both the FAC-008-1 and FAC-009-1 mitigation plans on March 5, 2010. Therefore, per NPCC direction, standards FAC-008-1 and FAC-009-1 were audited from February 5, 2010 to February 17, 2010.

Audit Process

The compliance audit process steps are detailed in the NPCC CMEP. The NPCC 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 an audit for compliance with all reliability standards applicable to the functions for which the Registered Entity is registered.* The audit objectives are to:

- Review compliance with the requirements of reliability standards that are applicable to CSGS, based on the functions that CSGS is registered to perform;
- Validate compliance with applicable reliability standards from the NERC 2010 Implementation Plan list of actively monitored standards, and additional NERC Reliability Standards selected by NPCC;
- Validate compliance with applicable regional standards from the NPCC 2010 Implementation Plan list of actively monitored standards;
- Validate evidence of self-reported violations and previous self-certifications;
- Observe and document CSGS's compliance program and culture;
- Review the status of mitigation plans.

Scope

The scope of this off-site compliance audit included the NERC Reliability Standards from the NPCC 2010 Implementation Plan. In addition, this audit included any self-reports, self-certifications, outstanding mitigation plans or remedial action directives which have been completed or pending in the year of the compliance audit.

At the time of the audit, CSGS was registered for the functions of Generator Owner and Generator Operator. The audit team evaluated CSGS for compliance during the period from August 14, 2009 to February 17, 2010.

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. CSGS was informed of NPCC's obligations and responsibilities under the agreement and procedures.

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

The work history for each audit team member was provided to CSGS. CSGS was given an opportunity to object to an audit team member's participation on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with an audit team member's impartial performance of duties. CSGS had not submitted any objections by the stated fifteen day objection due date and accepted the audit team member participants without objection. There have been no denials of or access limitations placed upon this audit team by CSGS.

Methodology

The audit team reviewed the information, data, and evidence submitted by CSGS and assessed compliance with requirements of the applicable reliability standards. Submittal of information and data were sent to NPCC on the scheduled date of the entity review. Additional information relevant to the audit could be submitted until the conclusion of the exit briefing. After that date, only data or information which was relevant to the content of the report or its finding can be submitted upon agreement by the audit team lead.

The audit team requested and received additional information and sought clarification from subject matter experts during the audit. One SME conference call was conducted on Tuesday, March 9, 2010 with CSGS to discuss the evidence submitted for PRC-005-1.

The audit team reviewed documentation provided by CSGS. Data, information and evidence submitted in the form of policies, procedures, e-mails, logs, studies, data sheets, etc. which were validated, substantiated and cross-checked for accuracy as appropriate. Requirements, which required a sampling to be conducted, were developed based upon the significance of the sampling to the reliability of the Bulk Electric System (BES).

Findings were based on the audit team's knowledge of the BES, the NERC Reliability Standards and their professional judgment. All findings were developed based upon the consensus of the audit team.

Company Profile

Carr Street Generating Station, LP

Carr Street Generating Station is a fully owned subsidiary of the Brookfield Renewable Power.

Brookfield Renewable Power Inc., wholly owned by Brookfield Asset Management Inc., has more than 100 years of experience as an owner, operator and developer of hydroelectric power facilities. Its total portfolio includes more than 165 generating facilities with approximately 4,100 megawatts of capacity.

Please visit Brookfield Renewable Power's website at www.brookfieldpower.com

Power Plants

Carr Street Generating Station
Syracuse, New York

Station

The Station has two interconnection points with National Grid at the 115kV Carr Street Substation.

Plant Electrical Output	105 MW Gross		102 MW Net
Unit No.	GTA	GTB	STG
Unit Electrical Output – MW (Winter / Summer) - Volts	(40/32) 115kV	(40/32) 115kV	(25/21) 115kV
Avg. Heat Rate (HHV) – Btu/kwh (kJ/kWh)	total 8,000 Btu/kWh		N/A
Gas Turbine – Manufacturer - Type	GE LM6000 Duel Fuel/Water PA model	GE LM6000 Duel Fuel/Water PA model	Mitsubishi SC-20 Single Flow
Generator – Manufacturer - Volts	Brush Air Cooled 13.8 kV	Brush Air Cooled 13.8 kV	GEC Alstom Air Cooled 13.8 kV
Fuel	Natural Gas Bio-Diesel	Natural Gas Bio-Diesel	243,000 KPPH HP & LP Steam
Control System – Turbine	Woodward Netcon 5000	Woodward Netcon 5000	Woodward 501
Remote Start Capability	No	No	No
Black Start Capability	No	No	No
Operation Date	1993	1993	1993

Audit Participants

The following is a listing of all personnel from the Audit Team and CSGS who were present during the meetings or interviews.

Audit Team Participants

Title	Entity
Lead Compliance Auditor	NPCC
Compliance Auditor	NPCC
Manager - Compliance Audits	NPCC

CSGS Audit Participants

Title	Entity
Manager, Reliability Compliance	US Operations Brookfield Renewable Power, LLC
General Manager	National System Control Center Operations, US Operations Brookfield Renewable Power, LLC
General Manager	Carr Street Generating Station, LP
Director of Operations	Carr Street Generating Station, LP
Instrumentation & Controls Technician	Carr Street Generating Station, LP
Reliability Compliance Analyst	Brookfield Renewable Power, LLC.

Audit Results

The audit team evaluated CSGS for compliance with seventeen (17) standards and their ninety (90) requirements and sub-requirements in the 2010 NERC Compliance Monitoring and Enforcement Program (CMEP). The audit reviewed NERC Reliability Standards for the period from August 14, 2009 to February 17, 2010. CSGS submitted information and documentation for the audit team's evaluation of compliance with requirements. The audit team reviewed and evaluated all information provided by CSGS to assess compliance with standards applicable to CSGS at this time.

Based on the information and documentation provided by CSGS, the audit team found CSGS to be compliant with fourteen standards (14) and sixty-six (66) applicable requirements and sub-requirements. The audit team determined that three (3) standards and twenty-four (24)

requirements and sub-requirements were not applicable to CSGS. The audit team identified zero Possible Alleged Violation(s).

Findings

The following table details the findings for compliance for the scope identified for this audit.

Reliability Standard	Requirement	Finding
COM-002-2	R1	Compliant
CIP-001-1	R1	Compliant
CIP-001-1	R2	Compliant
CIP-001-1	R3	Compliant
CIP-001-1	R4	Compliant
FAC-002-0	R1	Compliant
FAC-002-0	R1.4	Compliant
FAC-002-0	R1.5	Compliant
FAC-008-1	R1	Compliant
FAC-008-1	R1.1	Compliant
FAC-008-1	R1.2	Compliant
FAC-008-1	R1.2.1	Compliant
FAC-008-1	R1.2.2	Compliant
FAC-008-1	R1.3	Compliant
FAC-008-1	R1.3.1	Compliant
FAC-008-1	R1.3.2	Compliant

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FAC-008-1	R1.3.3	Compliant
FAC-008-1	R1.3.4	Compliant
FAC-008-1	R1.3.5	Compliant
FAC-008-1	R2	Not Applicable
FAC-008-1	R3	Not Applicable
FAC-009-1	R1	Compliant
FAC-009-1	R2	Compliant
IRO-001-1	R8	Compliant
IRO-004-1	R4	Compliant
IRO-005-1	R13	Not Applicable
NUC-001-1	R3	Not Applicable
NUC-001-1	R4	Not Applicable
NUC-001-1	R4.1	Not Applicable
NUC-001-1	R4.2	Not Applicable
NUC-001-1	R4.3	Not Applicable
NUC-001-1	R5	Not Applicable
NUC-001-1	R6	Not Applicable
NUC-001-1	R7	Not Applicable
NUC-001-1	R8	Not Applicable
PRC-001-1	R1	Compliant

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PRC-001-1	R2	Compliant
PRC-001-1	R2.1	Compliant
PRC-001-1	R3	Compliant
PRC-001-1	R3.1	Compliant
PRC-001-1	R5	Compliant
PRC-001-1	R5.1	Compliant
PRC-004-1	R2	Compliant
PRC-005-1	R1	Compliant
PRC-005-1	R1.1	Compliant
PRC-005-1	R1.2	Compliant
PRC-005-1	R2	Compliant
PRC-005-1	R2.1	Compliant
PRC-005-1	R2.2	Compliant
PRC-017-0	R1	Not Applicable
PRC-017-0	R1.1	Not Applicable
PRC-017-0	R1.1.1	Not Applicable
PRC-017-0	R1.1.2	Not Applicable
PRC-017-0	R1.1.3	Not Applicable
PRC-017-0	R1.1.4	Not Applicable
PRC-017-0	R1.2	Not Applicable

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PRC-017-0	R1.3	Not Applicable
PRC-017-0	R1.4	Not Applicable
PRC-017-0	R1.5	Not Applicable
TOP-001-1	R3	Compliant
TOP-001-1	R6	Compliant
TOP-001-1	R7	Compliant
TOP-001-1	R7.1	Compliant
TOP-001-1	R7.3	Compliant
TOP-002-2	R3	Compliant
TOP-002-2	R13	Compliant
TOP-002-2	R14	Compliant
TOP-002-2	R14.1	Compliant
TOP-002-2	R14.2	Not Applicable
TOP-002-2	R15	Compliant
TOP-002-2	R18	Compliant
TOP-003-0	R1	Compliant
TOP-003-0	R1.1	Compliant
TOP-003-0	R2	Compliant
TOP-003-0	R3	Compliant
VAR-002-1a	R1	Compliant

VAR-002-1a	R2	Compliant
VAR-002-1a	R2.1	Not Applicable
VAR-002-1a	R2.2	Compliant
VAR-002-1a	R3	Compliant
VAR-002-1a	R3.1	Compliant
VAR-002-1a	R3.2	Compliant
VAR-002-1a	R4	Compliant
VAR-002-1a	R4.1	Compliant
VAR-002-1a	R4.1.1	Compliant
VAR-002-1a	R4.1.2	Compliant
VAR-002-1a	R4.1.3	Compliant
VAR-002-1a	R4.1.4	Compliant
VAR-002-1a	R5	Compliant
VAR-002-1a	R5.1	Compliant

Compliance Culture

CSGS’s compliance culture was reviewed by the audit team.

During all contacts, the CSGS representatives were very professional and positive in their approach to compliance. All additional information and data requested was provided promptly, comprehensively and well organized.

The Manager, Reliability Compliance manages the CSGS Reliability Compliance Program, reports to the General Manager, National System Control Center Operations, and has direct access to both the Senior VP National Control Center and the Chief Operating Officer. The Manager, Reliability Compliance is responsible for keeping the Program fully updated to new changes by actively engaging with Reliability enforcing entities at the global level in US.

The Manager and General Manager, as a team, discuss all reliability compliance issues.

CSGS has created a set of procedures to specifically address the reliability standards as they pertain to its registered functions. Additionally, the audit indicates that an internal training program has also been implemented. Additional information pertaining to the compliance culture of CSGS can found in the Pre-Audit Compliance Survey.