

NERC TOP Certification Report

New York State Electric and Gas NCR07181

Site Visit Conducted
September 22 - 24, 2015

Interim Report Date
October 13, 2015

Final Report Date
June 6, 2016

RELIABILITY | ACCOUNTABILITY



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Introduction

This report presents the results of the NPCC led Certification Team's (CT) efforts to endorse the New York State Electric and Gas (NYSEG) (NCR07181) as a Transmission Operator (TOP) in the NPCC's area of responsibility certified by the North American Electric Reliability Corporation (NERC). NYSEG's TOP certification was prompted by the expected Bulk Electric System (BES) footprint changes and implementation of Coordinated Functional Registration (CFR) agreements that will be in effect on July 1, 2016.

TOPs have a primary responsibility for maintaining the real-time reliability of the local system, and operate, or direct the operations of the transmission facilities. Acceptable reliability levels can be maintained only if the TOPs, and other entities that make up the Interconnection, function in accordance with good operating practices and reliability criteria defined by the NERC Reliability Standards. Good operating practices include, but are not limited to, full compliance with the NERC Reliability Standards without regard to economic consideration or burdening neighboring systems.

Certification Team

Following notification of NYSEG's request for certification and registration as a TOP, which was received on October 29, 2014, a CT was formed and a Certification evaluation date was selected to perform an on-site visit. The rosters for members of both the CT and NYSEG participants are listed in Attachment 1.

Objective and Scope

The objective of the CT evaluation was to assess NYSEG's processes, procedures, tools, training and personnel that allow it to perform the function of a TOP. The scope of the evaluation included:

1. Interviewing NYSEG's management and reviewing pertinent documentation for verification of basic requirements for TOP operation
2. Reviewing procedures and other documentation developed by NYSEG to meet the applicable standards/requirements
3. Interviewing NYSEG system operations personnel
4. Reviewing NYSEG's primary capabilities, Energy Management System (EMS), communication facilities, operator displays, etc.
5. Performing other validation reviews as considered necessary.

An on-site review was held at the NYSEG's Primary Control Center, which is also the Rochester Gas and Electric Backup Control Center on September 22 - 24, 2015.

Overall Conclusion

The certification process was completed in accordance with the NERC Rules of Procedure (ROP) to determine if NYSEG has the necessary processes, procedures, tools, training and personnel to perform the function as a NERC-certified TOP. NYSEG presented evidence related to the applicable standards/requirements for the CT to review. Based on this evidentiary review, the CT has reasonable assurance that NYSEG will have the processes, procedures, tools, training and personnel in place to reliably perform the TOP function.

Therefore, the CT recommends that the Northeast Power Coordinating Council (NPCC) approve certification of NYSEG as a NERC-certified TOP subject to NYSEG demonstrating completion of all attachment 3 items, and forward such approval to NERC for final review and approval.

The CT found the NYSEG operators to be equipped with the necessary operating tools, and they are prepared to perform the TOP operations. All of NYSEG's operators are NERC-certified operators.

Certification Team Determinations

The CT found that NYSEG is prepared and qualified to operate as a NERC-certified TOP based on its review of the evidence presented by NYSEG. The CT recommends that NYSEG be certified by NERC to operate as a TOP.

Items that Required Completion

At the conclusion of the site visit, it was agreed that certain items required completion prior to the certification review approval of NYSEG as a TOP and a tentative schedule for completion was agreed to. The list of these items is included as Attachment 3. Evidence of completion of these items has been provided to the CT for review and confirmation. The CT has completed its review, and is satisfied that all items have been completed. Having confirmed that the items identified in Attachment 3 are completed, it is the recommendation of the CT that NYSEG be granted Certification as a TOP effective July 1, 2016.

Findings

There exist no findings which would prevent NYSEG to operate as a NERC-certified TOP.

Positive Observations

The CT noted the following positive aspects that will enhance NYSEG's performance as a TOP:

1. Robust security plan and program
2. Strong operator awareness of TOP responsibilities
3. Well established operating processes
4. Leveraging existing documented processes utilized at CMP

Company History – Background

Corporate

New York State Electric & Gas (NYSEG) is a subsidiary of AVANGRID, which is a diversified energy and utility company with two primary lines of business in 25 states. AVANGRID Networks is the line of business that includes eight electric and natural gas utilities with operations throughout New England and New York State. 98% of AVANGRID Networks' assets are in regulated utilities, including, NYSEG, Rochester Gas and Electric (RG&E), Central Maine Power (CMP), and United Illuminating.

System Overview

NYSEG serves 879,000 electricity customers across more than 40 percent of upstate New York, or about 18,400 square miles.

NYSEG owns approximately 4,560 circuit miles of sub-transmission and transmission facilities operating at 34.5kV, 46kV, 69kV, 115kV, 230kV and 345kV. NYSEG reports to the NERC Transmission Availability Data System (TADS) that they own approximately 238 miles of overhead and underground 230kV transmission facilities, and 531 miles of overhead 345kV transmission facilities. NYSEG owns approximately 32,400 circuit miles of distribution facilities operating at 4.8kV, 12.5kV, 13.2kV and 34.5kV.

The NYSEG sub-transmission and transmission systems interconnect with:

- Central Hudson Gas & Electric (CHG&E)
- Consolidated Energy Company of New York (ConEd)
- National Grid (NGrid), New York Power Authority (NYPA)
- Rochester Gas & Electric (RG&E) and
- Several municipalities, co-operatives and rural electric authorities (REA) in New York State, and with First Energy in Pennsylvania.

Company Details – Operating Facility

Control Center/SCADA System Description

New York State Electric & Gas maintains a 24/7 Energy Control System with Supervisory Control and Data Acquisition (SCADA) to obtain real time transmission, generation and protection and control data to monitor the transmission system. The Energy Control Center Operators use this system to monitor and control the Transmission System and to provide and receive data to/from the NYISO and other TO's using Inter-Control Room Communications Protocol (ICCP) links. This system includes a primary and back-up system at the Energy Control Center and a system located at an Alternate Energy Control Center site for reliability. New York State Electric & Gas provides data to the NYISO via InterControl Room Communications Protocol (ICCP) links pursuant to the NYISO Control Center Requirements manual. The NYISO routes ICCP data to others. New York State Electric & Gas has voice communications with the NYISO and New York TOs and TOPs which includes phone networks, NYISO/TO Emergency Hotline System and satellite phones. The NYISO maintains voice communications using autodial capable circuits with all the neighboring Reliability Coordinators and Balancing Authorities, plus as a backup there are satellite phones. For communication with New York State Electric & Gas at the primary ECC, the NYISO maintains Direct Ring Down Circuits with redundant backup Ring Down Circuits using a different provider. In addition the NYISO has a satellite phone capable of communicating with similar phones maintained at the New York State Electric & Gas ECC. For data circuits, the NYISO Data Link communication for the neighboring Reliability Coordinators is provided through the ICCP data network using a Frame Relay topology. The Data Link communications for the Transmission Operators uses ICCP and has a redundant ICCP frame network using a different telemetry provider. IT support for these voice and data circuits are available 24/7 through the NYISO IT Network Operations Center.

New York State Electric & Gas maintains the AVANGRID Networks ECC Transmission Operating Responsibilities procedure, IUSA ECC Reactive Supply and Voltage Control Procedure, IUSA ECC Use of EMS Subsystems Procedure, IUSA ECC New York Reactive Supply and Voltage Control, and IUSA ECC New York Day-Ahead Operating Plan. The ECC operating staff have access to real-time power system monitoring tools to notify operators of any real-time limit violations and power flow analysis tools that include online load flow capability and contingency analysis results. Thermal limits are developed by AVANGRID Networks System Engineering for NYSEG and RG&E. System Engineering maintains FAC procedures. System-wide voltage limits are developed by System Planning and are maintained on the AVANGRID Networks intranet.

Documentation List

Copies of all of the supporting NYSEG documents that are collected as evidence of their preparedness will be kept as a record of evidence to support the CT's recommendation. These documents will be retained at the NPCC offices in New York City, NY for a period of six (6) years after issuance of the Final Report and recommendation.

None of the documents listed below are included with the distribution of this summary report. Due to the confidential nature of this material, these documents are available for review at the NPCC offices after proper authorization is obtained through NPCC and NERC:

- Questionnaire
- Master Matrix
- NYSEG's various (TOP) evidence files
- Presentations made by the CT and NYSEG

Attachment 1 – Certification Team

TOP Certification Team

Table 1: TOP Certification Team		
Name	Position	Organization
David Cerasoli	Team Member	NPCC
Daniel Grinkevich	Team Lead	NPCC
Frank Lembo	Team Member	NPCC
Aaron Markham	Team Member	NYISO
John Muir	Team Member	NPCC
Kim Pitchell	Team Member	NPCC
John Ravalli	Team Member	NPCC
Peter Scalici	Team Member	NPCC
Mike Schiavone	Team Member	National Grid
Jim Stuart	Team Member	NERC

NYSEG Personnel

Table 2: NYSEG Personnel Participants	
Name	Position
Sarah Miller	ECC NERC Compliance Lead Analyst
Julie King	NERC Compliance Lead Analyst
Dave Cadregari	NERC Compliance Lead Analyst
Frank Stento	NYSEG System Operator
Jerry Griffis	NYSEG System Operator
Mark Stevens	CMP Maine ECC Supervisor
Brian Gordon	NYSEG Operator Support Staff Supervisor
Steve Miner	OT Telecom
Will Nichols	Manager – ECC
Mike Craven	Directing Manager – ECC
Tim Storrs	Telecom Supervisor
Peter Biddle	Manager ECC OT
Mike Demyan	ECC – OT SCADA
Craig Baranowksi	ECC Training Supervisor
Jeff Crandell	Supervisor Dispatch and ECC

Attachment 2 – Certification Process Steps

Documentation Review

Using professional judgment, the CT reviewed the Questionnaire, the Master Matrix, and requested documents to determine the submitted documentation provided assurance that NYSEG has the processes, procedures, tools, training and personnel to continue to operate as a NERC-certified TOP.

The Master Matrix is a spreadsheet created using the VRF Matrix available on NERC’s website under the Standards link, and eliminating all functions other than the TOP function. Using the Master Matrix spreadsheet, the CT cataloged the documentation evidence provided by NYSEG. The spreadsheet contains all the applicable NERC Standards and associated Requirements for an entity to be evaluated as a NERC-certified TOP. In the certification review process, the CT inserted the appropriate NYSEG document references in which evidence provided by NYSEG met the applicable Standards and Requirements.

Applications Review

The on-site visit focused on reviewing documentation, evaluating control centers’ configurations, interview of NYSEG’s operators and other appropriate personnel, evaluating the TOP EMS applications and operator toolset that NYSEG has available for their operators.

Attachment 3 – Items Required to be Completed for Operation

All items listed below requiring completion prior to the certification review approval of NYSEG as a TOP must be closed to the satisfaction of the CT prior to the issuance of the Final Report.

1. Signed CFR agreement and matrix should be provided to the CT for review.
2. Provide signed copy of procedure for implementing CIP-002-5.1.
3. Provide a final version of BES Cyber System Categorization listing.
4. Provide a final version of BES Cyber System list.
5. PER-003-1 R2: Provide operator certification numbers.
6. PER-005-2 R3: Complete the documentation of reliability related tasks for operators and provide verification that operators can complete the tasks.
7. PER-005-2 R5: Complete survey and provide training to applicable support personnel.
8. FAC-014-2 R2: Provide final version of “SOL methodology”.
9. TOP-003-1 R3: Provide final version of “IUSA ECC Maintenance and Emergency Repair of ECC Equipment Procedure” .
10. TOP-004 R6: Provide final version of “IUSA ECC Reactive Supply and Voltage Control”
 1. Finalize any draft documents.