

November 26, 2019

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: **NERC Full Notice of Penalty regarding Avangrid,
FERC Docket No. NP20-_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding Central Maine Power Company (CMP), New York State Electric and Gas Corporation (NYSEG), and Rochester Gas and Electric Corporation (RG&E) (collectively, Avangrid), NERC Registry ID# NCR07029, NCR07181, and NCR07207,² with information and details regarding the nature and resolution of the violations³ discussed in detail in the Settlement Agreement attached hereto (Attachment 1), in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations, and orders, as well as NERC's Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).⁴

NERC is filing this Notice of Penalty with the Commission because Northeast Power Coordinating Council, Inc. (NPCC) and Avangrid have entered into a Settlement Agreement to resolve all outstanding issues arising from NPCC's determination and findings of six moderate risk violations of the Transmission Operations (TOP) Reliability Standards.

¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, *order on reh'g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006); *Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the N. Am. Elec. Reliability Corp.*, Docket No. RM05-30-000 (February 7, 2008); *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 118 FERC ¶ 61,218, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

² CMP was included on the NERC Compliance Registry as a Transmission Operator (TOP) on June 21, 2007; NYSEG was included on the NERC Compliance Registry as a TOP on June 21, 2007; RG&E was included on the NERC Compliance Registry as a TOP on June 21, 2007.

³ For purposes of this document, each violation at issue is described as a "violation," regardless of its procedural posture and whether it was a possible, alleged, or confirmed violation.

⁴ See 18 C.F.R. § 39.7(c)(2) and 18 C.F.R. § 39.7(d).

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202-400-3000 | www.nerc.com

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According to the Settlement Agreement, Avangrid admitted to the violations and agreed to the assessed penalty of four hundred fifty thousand dollars (\$450,000), in addition to other remedies and actions to mitigate the instant violations and facilitate future compliance under the terms and conditions of the Settlement Agreement.

Statement of Findings Underlying the Violations

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement, by and between NPCC and Avangrid. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein. This Notice of Penalty filing contains the basis for approval of the Settlement Agreement by the NERC Board of Trustees Compliance Committee (NERC BOTCC).

In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2019), NERC provides the following summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement. Further information on the subject violations is set forth in the Settlement Agreement and herein.

Violation(s) Determined and Discovery Method								
*SR = Self-Report / SC = Self-Certification / CA = Compliance Audit / SPC = Spot Check / CI = Compliance Investigation								
NERC Violation ID	Standard	Req.	VRF/VSL	Applicable Function(s)	Discovery Method* Date	Violation Start-End Date	Risk	Penalty Amount
NPCC2018020508	TOP-001-3	R9	Medium/ Severe	TOP	SR 10/10/2018	11/28/2017	Moderate	\$450K
NPCC2018020667	TOP-001-3	R13	High/ Severe	TOP	SR 11/14/2018	11/27/2017– 11/28/2017	Moderate	
NPCC2018020509	TOP-001-3	R9	Medium/ Severe	TOP	SR 10/10/2018	11/28/2017	Moderate	
NPCC2018020666	TOP-001-3	R13	High/ Severe	TOP	SR 11/14/2018	11/27/2017– 11/28/2017	Moderate	
NPCC2019020966	TOP-001-4	R9	Medium/ Severe	TOP	SR 1/24/2019	1/11/2019	Moderate	
NPCC2019020965	TOP-001-4	R13	High/ Moderate	TOP	SR 1/24/2019	1/11/2019	Moderate	

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FACTS COMMON TO VIOLATIONS

CMP, NYSEG, and RG&E are subsidiaries of Avangrid Networks, Inc., a utility subsidiary of AVANGRID, Inc. that owns eight electricity, natural gas, or combination utilities in Connecticut, Maine, Massachusetts, and New York. Avangrid collectively serves over 2.2 million electricity customers.

NYSEG and RG&E use the same Energy Management System (EMS) that contains a Transmission Network Analysis (TNA) tool that the registered entities used to perform operator-initiated studies and perform the Real-time Contingency Analysis. On November 27, 2017, a server failed which affected the TNA, and a failover to a backup server was unsuccessful. As a result, neither registered entity was aware that it was unable to perform a Real-time Assessment using TNA because there were no alarms that alerted the System Operator of the loss of the TNA. The System Operator eventually discovered the loss of Real-time Assessment capabilities. By the time NYSEG and RG&E notified NYISO (New York Independent System Operator, the Reliability Coordinator (RC)), the TNA capabilities had returned.

CMP encountered similar violations as NYSEG and RG&E in an incident that occurred on January 11, 2019. A data entry error interrupted connectivity and resulted in the failure of CMP's EMS monitoring and assessment capabilities. The System Operator immediately noticed the failure and communicated it to both a supervisor and the EMS technicians but did not notify the RC as required by the Reliability Standard. By the time CMP notified its RC, ISO New England, the monitoring and assessment capabilities had returned.

TOP-001-3 R9

NPCC determined that, during the event on November 27, 2019, NYSEG and RG&E did not notify NYISO of the unplanned outage of 30 minutes or more of monitoring and assessment capabilities. From the time the System operators of both NYSEG and RG&E were aware of the outage, it took 14 hours and 27 minutes to notify NYISO. By the time NYSEG and RG&E notified NYISO, the monitoring and assessment capabilities had returned. Attachments 1 and 2 include additional facts regarding the violation.

The cause of this violation was lack of detective controls to identify a failure of the monitoring and assessment capabilities to operate, and a lack of effective management oversight including training.

NPCC determined that this violation posed a moderate risk to the reliability of the BPS. Attachment 1 includes the facts regarding the violation that NPCC considered in its risk assessment.

Avangrid submitted its mitigation activities to address the referenced violation. Attachment 1 includes a description of the mitigation activities Avangrid took to address this violation.

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Avangrid certified that it had completed all mitigation activities. NPCC verified that Avangrid had completed all mitigation activities on June 11, 2019. Attachment 1 provides specific information on NPCC's verification of Avangrid's completion of the activities.

TOP-001-3 R13

NPCC determined that, during the event on November 27, 2019, NYSEG and RG&E did not ensure that a Real-time Assessment was performed at least once every 30 minutes. Real-time Assessments were not performed for a total of 9 hours and 20 minutes. Attachments 3 and 4 include additional facts regarding the violation.

The cause of this violation was lack of detective controls to identify a failure of the monitoring and assessment capabilities to operate, and a lack of effective management oversight including training.

NPCC determined that this violation posed a moderate risk to the reliability of the BPS. Attachment 1 includes the facts regarding the violation that NPCC considered in its risk assessment.

Avangrid submitted its mitigation activities to address the referenced violation. Attachment 1 includes a description of the mitigation activities Avangrid took to address this violation.

Avangrid certified that it had completed all mitigation activities. NPCC verified that Avangrid had completed all mitigation activities on June 11, 2019. Attachment 1 provides specific information on NPCC's verification of Avangrid's completion of the activities.

TOP-001-4 R9

NPCC determined that, during the event on January 11, 2019, CMP did not notify ISO New England of an unplanned outage of 30 minutes or more of its monitoring and assessment capabilities. By the time CMP notified ISO New England, the monitoring and assessment capabilities had returned after a loss of one hour and 17 minutes. Attachment 5 includes additional facts regarding the violation.

The cause of this violation was lack of effective management oversight, including insufficient training.

NPCC determined that this violation posed a moderate risk to the reliability of the BPS. Attachment 1 includes the facts regarding the violation that NPCC considered in its risk assessment.

Avangrid submitted its mitigation activities to address the referenced violation. Attachment 1 includes a description of the mitigation activities Avangrid took to address this violation.

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Avangrid certified that it had completed all mitigation activities. NPCC verified that Avangrid had completed all mitigation activities on June 11, 2019. Attachment 1 provides specific information on NPCC's verification of Avangrid's completion of the activities.

TOP-001-4 R13

NPCC determined that, during the event on January 11, 2019, Avangrid did not ensure a Real-time Assessment was performed at least once every 30 minutes. During the event, a Real-time Assessment was not performed for a total of one hour and 17 minutes. Attachment 6 includes additional facts regarding the violation.

The cause of this violation was lack of effective management oversight, including insufficient training.

NPCC determined that this violation posed a moderate risk to the reliability of the BPS. Attachment 1 includes the facts regarding the violation that NPCC considered in its risk assessment.

Avangrid submitted its mitigation activities to address the referenced violation. Attachment 1 includes a description of the mitigation activities Avangrid took to address this violation.

Avangrid certified that it had completed all mitigation activities. NPCC verified that Avangrid had completed all mitigation activities on June 11, 2019. Attachment 1 provides specific information on NPCC's verification of Avangrid's completion of the activities.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, NPCC has assessed a penalty of four hundred and fifty thousand dollars (\$450,000) for the referenced violations. In reaching this determination, NPCC considered the following factors:

1. NPCC aggravated the penalty for the CMP violations because of the prior violations by NYSEG and RG&E that are resolved in the Settlement Agreement;
2. Avangrid had a documented Internal Compliance Program;
3. Avangrid was cooperative throughout the compliance enforcement process;
4. Avangrid accepted responsibility and admitted to these violations;
5. Avangrid agreed to settle these violations and penalty;
6. The violations posed a moderate risk to the reliability of the BPS, as discussed in Attachment 1;

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7. There were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

After consideration of the above factors, NPCC determined that, in this instance, the penalty amount of four hundred fifty thousand dollars (\$450,000) is appropriate and bears a reasonable relation to the seriousness and duration of the violations.

Statement Describing the Assessed Penalty, Sanction, or Enforcement Action Imposed⁵

Basis for Determination

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines, and the Commission's July 3, 2008, October 26, 2009, and August 27, 2010 Guidance Orders,⁶ the NERC BOTCC reviewed the violations on September 19, 2019 and approved the resolution between NPCC and Avangrid. In approving the resolution, the NERC BOTCC reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violations at issue.

For the foregoing reasons, the NERC BOTCC approved the resolution and believes that the assessed penalty of four hundred fifty thousand dollars (\$450,000) is appropriate for the violations and circumstances at issue, and is consistent with NERC's goal to promote and ensure reliability of the BPS.

Pursuant to 18 C.F.R. § 39.7(e), the penalty will be effective upon expiration of the 30-day period following the filing of this Notice of Penalty with FERC, or, if FERC decides to review the penalty, upon final determination by FERC.

Attachments to be Included as Part of this Notice of Penalty

The attachments to be included as part of this Notice of Penalty are the following documents:

1. Settlement Agreement by and between NPCC and Avangrid executed July 1, 2019, included as Attachment 1;

⁵ See 18 C.F.R. § 39.7(d)(4).

⁶ *N. Am. Elec. Reliability Corp.*, "Guidance Order on Reliability Notices of Penalty," 124 FERC ¶ 61,015 (2008); *N. Am. Elec. Reliability Corp.*, "Further Guidance Order on Reliability Notices of Penalty," 129 FERC ¶ 61,069 (2009); *N. Am. Elec. Reliability Corp.*, "Notice of No Further Review and Guidance Order," 132 FERC ¶ 61,182 (2010).

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2. NYSEG's Self-Report of violation TOP-001-3 R9 submitted October 10, 2018, included as Attachment 2;
3. RG&E's Self-Report of violation TOP-001-3 R9 submitted October 10, 2018, included as Attachment 3;
4. NYSEG's Self-Report of violation TOP-001-3 R13 submitted November 14, 2018, included as Attachment 4;
5. RG&E's Self-Report of violation TOP-001-3 R13 submitted November 14, 2018, included as Attachment 5;
6. CMP's Self-Report of violation TOP-001-4 R9 submitted January 24, 2019, included as Attachment 6;
7. CMP's Self-Report of violation TOP-001-4 R13 submitted January 24, 2019, included as Attachment 7.

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Notices and Communications: Notices and communications with respect to this filing may be addressed to the following:

<p>*Persons to be included on the Commission’s service list are indicated with an asterisk. NERC requests waiver of the Commission’s rules and regulations to permit the inclusion of more than two people on the service list.</p> <p>Kristin McKeown General Counsel Northeast Power Coordinating Council, Inc. 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 kmckeown@npcc.org</p> <p>Scott Nied Assistant Vice-President Northeast Power Coordinating Council, Inc. 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 snied@npcc.org</p> <p>Damase Hebert Director, Enforcement Northeast Power Coordinating Council, Inc. 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 dhebert@npcc.org</p>	<p>Edwin G. Kichline* Senior Counsel and Director of Enforcement Oversight North American Electric Reliability Corporation 1325 G Street NW Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile edwin.kichline@nerc.net</p> <p>Alexander Kaplen* Associate Counsel North American Electric Reliability Corporation 1325 G Street NW Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile alexander.kaplen@nerc.net</p>
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Conclusion

NERC respectfully requests that the Commission accept this Notice of Penalty as compliant with its rules, regulations, and orders.

Respectfully submitted,

/s/ Alexander Kaplen
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Senior Counsel and Director of
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Alexander Kaplen
Associate Counsel
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edwin.kichline@nerc.net
alexander.kaplen@nerc.net

cc: Avangrid
NPCC

Attachments

Attachment 1

Settlement Agreement by and between
NPCC and Avangrid executed July 1, 2019

**SETTLEMENT AGREEMENT
OF
NORTHEAST POWER COORDINATING COUNCIL, INC.
AND
NEW YORK STATE ELECTRIC & GAS CORPORATION, ROCHESTER GAS AND
ELECTRIC CORPORATION AND THE CENTRAL MAINE POWER COMPANY**

I. INTRODUCTION

1. Northeast Power Coordinating Council, Inc. (“NPCC”), Central Maine Power Company (“CMP”), New York State Electric & Gas Corporation (“NYSEG”), and Rochester Gas and Electric Corporation (“RG&E”) (collectively, the “Parties”) enter into this Settlement Agreement (“Agreement”) to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in NPCC’s determination and findings, pursuant to the North American Electric Reliability Corporation (“NERC”) Rules of Procedure, of six (6) confirmed violations for the following Registered Entities and Reliability Standard requirements:

Entity	NCR	Reliability Standard	Req.	NPCC Tracking	NERC Tracking
CMP	NCR07029	TOP-001-4	R9	NPCC2019-201763	NPCC2019020966
CMP	NCR07029	TOP-001-4	R13	NPCC2019-201764	NPCC2019020965
NYSEG	NCR07181	TOP-001-3	R9	NPCC2018-201704	NPCC2018020508
NYSEG	NCR07181	TOP-001-3	R13	NPCC2018-201731	NPCC2018020667
RG&E	NCR07207	TOP-001-3	R9	NPCC2018-201705	NPCC2018020509
RG&E	NCR07207	TOP-001-3	R13	NPCC2018-201730	NPCC2018020666

2. CMP, NYSEG, and RG&E are all subsidiaries of Avangrid Networks, Inc., a subsidiary of AVANGRID, Inc. CMP, NYSEG, and RG&E admit to the violations and have agreed to the proposed penalty of \$450,000 in addition to other remedies and actions to mitigate the instant violations and to ensure future compliance under the terms and conditions of the Agreement.
3. For purposes of this Agreement, CMP, NYSEG, and RG&E are at times collectively referred to as “Avangrid.”

II. STIPULATION

4. The facts stipulated herein are stipulated solely for the purpose of resolving, between the Parties, the matters discussed herein and do not constitute stipulations or admissions for any other purpose. The Parties hereby stipulate and agree to the following:

Background

5. The description of the registered entities is including in Section I of Addendum A.

Violations of NERC Reliability Standard

6. On October 10, 2018, NYSEG and RG&E each submitted a Self-Report, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R9. See Section I of the Disposition document (Addendum B) for the description of the violation.
7. On November 14, 2018, NYSEG and RG&E each submitted a Self-Report, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R13. See Section I of the Disposition document (Addendum B) for the description of the violation.
8. On January 24, 2019, CMP submitted two Self-Reports, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R9 and R13. See Section I of the Disposition document (Addendum C) for the description of the violations.

III. PARTIES' SEPARATE REPRESENTATIONS

Statement of NPCC and Summary of Findings

9. NPCC determined that NYSEG and RG&E were in violation of TOP-001-3 R9 because NYSEG and RG&E did not notify the NYISO for 14 hours and 27 minutes of an unplanned outage of 30 minutes or more, of its monitoring and assessment capabilities . By the time NYSEG and RG&E notified NYISO, the monitoring and assessment capabilities had returned.
10. NPCC determined that NYSEG and RG&E were in violation of TOP-001-3 R13 because NYSEG and RG&E did not ensure a Real-time Assessment was performed at least once every 30 minutes.
11. NPCC determined that CMP was in violation of TOP-001-4 R9 because CMP did not notify ISO-New England (ISO-NE) of an unplanned outage of 30 minutes or more, of its monitoring and assessment capabilities. By the time CMP notified ISO-NE, the monitoring and assessment capabilities had returned after a loss of 1 hour and 17 minutes.
12. NPCC determined that CMP was in violation of TOP-001-4 R13 because CMP did not ensure a Real-time Assessment was performed at least once every 30 minutes.
13. NPCC agrees this Agreement is in the best interest of the Parties and in the best interest of Bulk Power System reliability.

Statement of Avangrid

14. Avangrid admits the facts set forth and agreed to by the Parties for purposes of this Agreement constitute violations of the NERC Reliability Standard Requirements listed in the table above.

15. Avangrid agrees to enter into this Agreement with NPCC to avoid extended litigation with respect to the matters described or referred to herein, to avoid uncertainty, and to effectuate a complete and final resolution of the issues set forth herein. Avangrid agrees this Agreement is in the best interest of the parties and in the best interest of Bulk Power System reliability.

IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS

16. NPCC and Avangrid agree that Avangrid has completed certain mitigating actions and NPCC has verified the completion of certain mitigating actions set forth in Section III of the Disposition documents identified as Addendums B and C. All Mitigating Actions, Remedies and Sanctions are discussed in detail in the respective Disposition document identified as Addendums B and C.
17. NPCC considered the specific facts and circumstances of the violations and Avangrid's actions in response to the violation in determining a proposed penalty that meets the requirement in Section 215 of the Federal Power Act that "[a]ny penalty imposed under this section shall bear a reasonable relation to the seriousness of the violation and shall take into consideration the efforts of an entity to remedy the violation in a timely manner." The factors considered by NPCC in the determination of the appropriate penalty are set forth in Section II of the common Disposition document (Addendum A).
18. Based on the above factors, as well as the mitigation actions and preventative measures taken, Avangrid shall pay \$450,000 to NPCC as set forth in this Agreement. Avangrid shall remit the payment to NPCC via check, or by wire transfer to an account to be identified by NPCC within thirty days after the Agreement is either approved by the Federal Energy Regulatory Commission (Commission) or by operation of law. NPCC shall notify NERC, and NERC shall notify the Commission, if the payment is not timely received. If Avangrid does not remit the payment by the required date, interest payable to NPCC will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date that payment is due, and shall be payable in addition to the payment.
19. Failure to make a timely penalty payment or to comply with any of the terms and conditions agreed to herein, or any other conditions of this Agreement shall be deemed to be either the same alleged violations that initiated this Agreement and/or additional violations and may subject Avangrid to new or additional enforcement, penalty or sanction actions in accordance with the NERC Rules of Procedure. Avangrid shall retain all rights to defend against such additional enforcement actions in accordance with NERC Rules of Procedure.

V. ADDITIONAL TERMS

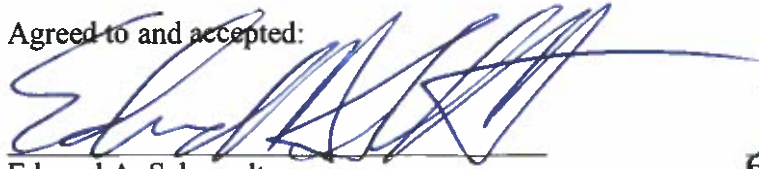
20. The signatories to the Agreement agree that they enter into the Agreement voluntarily and that, other than the recitations set forth herein, no tender, offer or promise of any kind by any member, employee, officer, director, agent or representative of NPCC or Avangrid has been made to induce the signatories or any other party to enter into the Agreement.

21. NPCC shall report the terms of all settlements of compliance matters to NERC. NERC will review the settlement for the purpose of evaluating its consistency with other settlements entered into for similar violations or under other, similar circumstances. Based on this review, NERC will either approve the settlement or reject the settlement and notify NPCC and Avangrid of changes to the settlement that would result in approval. If NERC rejects the settlement, NERC will provide specific written reasons for such rejection and NPCC will attempt to negotiate a revised settlement agreement with Avangrid including any changes to the settlement specified by NERC. If a settlement cannot be reached, the enforcement process shall continue to conclusion. If NERC approves the settlement, NERC will (i) report the approved settlement to the Commission for the Commission's review and approval by order or operation of law and (ii) publicly post this Settlement Agreement.
22. This Agreement shall become effective upon the Commission's approval of the Agreement by order or operation of law as submitted to it or as modified in a manner acceptable to the parties.
23. Avangrid agrees that this Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and Avangrid waives its right to further hearings and appeal, unless and only to the extent that Avangrid contends that any NERC or Commission action on the Agreement contains one or more material modifications to the Agreement. NPCC reserves all rights to initiate enforcement, penalty or sanction actions against Avangrid in accordance with the NERC Rules of Procedure in the event that Avangrid does not comply with the Mitigation Plans and compliance program agreed to in this Settlement Agreement. In the event Avangrid fails to comply with any of the stipulations, remedies, sanctions or additional terms, as set forth in this Agreement, NPCC will initiate enforcement, penalty, or sanction actions against Avangrid to the maximum extent allowed by the NERC Rules of Procedure, up to the maximum statutorily allowed penalty. Except as otherwise specified in this Agreement, Avangrid shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.
24. Avangrid consents to the use of NPCC's determinations, findings, and conclusions set forth in this Agreement for the purpose of assessing the factors, including the factor of determining the company's history of violations, in accordance with the NERC Sanction Guidelines and applicable Commission orders and policy statements. Such use may be in any enforcement action or compliance proceeding undertaken by NERC and/or any Regional Entity; provided, however, that Avangrid does not consent to the use of the specific acts set forth in this Agreement as the sole basis for any other action or proceeding brought by NERC and/or NPCC, nor does Avangrid consent to the use of this Agreement by any other party in any other action or proceeding.
25. Each of the undersigned warrants that he or she is an authorized representative of the entity designated, is authorized to bind such entity and accepts the Agreement on the entity's behalf.

26. The undersigned representative of each party affirms that he or she has read the Agreement, that all of the matters set forth in the Agreement are true and correct to the best of his or her knowledge, information and belief, and that he or she understands that the Agreement is entered into by such party in express reliance on those representations, provided, however, that such affirmation by each party's representative shall not apply to the other party's statements of position set forth in Section III of this Agreement.
27. This Agreement may be signed in counterparts.
28. This Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

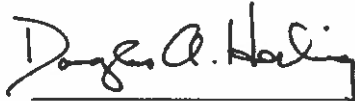
[Signatures on following page]

Agreed to and accepted:



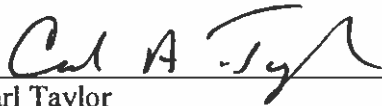
Edward A. Schwerdt
President & CEO
Northeast Power Coordinating Council, Inc.

July 1, 2019
Date



Douglas Herling
President and CEO
Central Maine Power Company

June 27, 2019
Date



Carl Taylor
President and CEO
New York State Electric & Gas Corporation
Rochester Gas and Electric Corporation

6/28/2019
Date

DISPOSITION OF VIOLATION¹ **INFORMATION COMMON TO INSTANT VIOLATIONS**

REGISTERED ENTITIES

NERC REGISTRY ID

Central Maine Power Company (CMP)

NCR07029

New York State Electric & Gas Corporation (NYSEG)

NCR07181

Rochester Gas and Electric Corporation (RG&E)

NCR07207

REGIONAL ENTITY

Northeast Power Coordinating Council, Inc. (NPCC)

I. REGISTRATION INFORMATION

CMP is registered for the following Functions and on the following dates in the NPCC Region.

- DP – 6/21/2007
- TO – 6/21/2007
- TOP – 6/21/2007
- TP – 6/21/2007
- TSP - 6/21/2007

NYSEG is registered for the following Functions and on the following dates in the NPCC Region.

- DP – 6/21/2007
- TO – 6/21/2007
- TOP – 7/1/2016
- TP – 7/1/2016

RG&E is registered for the following Functions and on the following dates in the NPCC Region.

- DP – 6/21/2007
- TO – 6/21/2007
- TOP – 7/1/2016
- TP – 7/1/2016

DESCRIPTION OF THE REGISTERED ENTITIES

Affiliated with Iberdrola SA, AVANGRID owns eight electricity, natural gas or combination utilities in Connecticut, Maine, Massachusetts, and New York. The utilities serve 2.2 million electricity customers, 930,000 natural gas customers, and are recognized for safe, reliable energy delivery, excellent customer service, and a commitment to the community and environment. Avangrid employs approximately 6,500 people. Avangrid

¹ For purposes of this document and Addendums hereto, each violation at issue is described as a “violation,” regardless of its procedural posture and whether it was a possible, alleged or confirmed violation

supports the U.N.'s Sustainability Development Goals, received a Climate Development Project climate score of "A-," the top score received in the utilities sector, and has been recognized for two consecutive years by Ethical Boardroom as the North American utility with the "best corporate governance practices."

Central Maine Power Company (CMP), a subsidiary of Avangrid Networks, Inc., is Maine's largest electricity transmission and distribution utility. Established in 1899, CMP operates approximately 23,500 miles of distribution lines and 2,900 miles of transmission lines. It serves approximately 624,000 customers across 346 communities in central and southern Maine.

- Service Area 11,000 mi² in central and southern Maine.
- Population served 1 million
- Electricity Service 14 counties, 346 cities, towns and townships
- Electricity Customers 624,378
- Residential 557,502
- Non residential 66,876
- Miles of Transmission Lines 2,911
- Miles of Distribution Lines 23,556
- Substations 209
- Electricity Delivered 9,107 GWh
- Employees 846

New York State Electric & Gas Corporation (NYSEG) is a subsidiary of Avangrid Networks, Inc. Established in 1852, NYSEG operates approximately 35,000 miles of electric distribution lines and 4,500 miles of electric transmission lines across more than 40% of upstate New York. It also operates more than 8,150 miles of natural gas distribution pipelines and 20 miles of gas transmission pipelines. It serves approximately 894,000 electricity customers and 266,000 natural gas customers.

- Service Area More than 40% of upstate NY area (20,000 mi²)
- Population served 2.5 million
- Electricity Service 42 counties, 151 cities and villages, 379 towns
- Electricity Customers 893,782
- Residential 771,527
- Non residential 122,255
- Miles of Transmission Lines 4,513
- Miles of Distribution Lines 35,081
- Substations 430
- Electricity Delivered 15,374 GWh
- Employees 1718

Rochester Gas and Electric Corporation (RG&E) is a subsidiary of Avangrid Networks, Inc. Established in 1848, RG&E operates approximately 8,800 miles of electric distribution lines and 1,100 miles of electric transmission lines. It also operates approximately 10,600 miles of natural gas distribution pipelines and 105 miles of gas transmission pipelines. It

serves approximately 378,500 electricity customers and 313,000 natural gas customers in a nine-county region in New York surrounding the City of Rochester.

- Service Area 2,700 mi² in western NY, around Rochester
- Population served 1 million
- Electricity Service 9 counties, 28 cities and villages, 58 towns
- Electricity Customers 378,461
- Residential 337,036
- Non residential 41,585
- Miles of Transmission Lines 1,094
- Miles of Distribution Lines 8,808
- Substations 154
- Electricity Delivered 7,016 GWh
- Employees 726

IS THERE A SETTLEMENT AGREEMENT YES ☒ NO ☐

WITH RESPECT TO THE VIOLATION(S), REGISTERED ENTITY

NEITHER ADMITS NOR DENIES IT (SETTLEMENT ONLY) YES ☐
 ADMITS TO IT YES ☒
 DOES NOT CONTEST IT (INCLUDING WITHIN 30 DAYS) YES ☐

WITH RESPECT TO THE ASSESSED PENALTY OR SANCTION, REGISTERED ENTITY

ACCEPTS IT/ DOES NOT CONTEST IT YES ☒

II. PENALTY INFORMATION

TOTAL ASSESSED PENALTY OR SANCTION OF FOUR HUNDRED FIFTY THOUSAND DOLLARS **\$450,000** FOR **SIX** VIOLATIONS OF RELIABILITY STANDARDS.

(1) REGISTERED ENTITY'S COMPLIANCE HISTORY

PREVIOUSLY FILED VIOLATIONS OF ANY OF THE INSTANT RELIABILITY STANDARD(S) OR REQUIREMENT(S) THEREUNDER
 YES ☐ NO ☒

LIST VIOLATIONS AND STATUS

ADDITIONAL COMMENTS

PREVIOUSLY FILED VIOLATIONS OF OTHER RELIABILITY STANDARD(S) OR REQUIREMENTS THEREUNDER
 YES ☒ NO ☐

LIST VIOLATIONS AND STATUS

- On May 26, 2011, NERC filed a Notice of Penalty with the Commission in Docket No.NP11-199-000. The Notice of Penalty included a settlement agreement between NYSEG and NPCC addressing the following Violation IDs:
 - NPCC201000138 FAC-001-0 R1
 - NPCC201000139 FAC-001-0 R2
 - NPCC201000140 FAC-008-1 R1
 - NPCC201000141 PRC-005-1 R2
- On June 24, 2011, the Commission issued a Notice that it would not review on its motion the Notice of Penalty regarding NYSEG in Docket No.NP11-199-000.

ADDITIONAL COMMENTS

- RG&E has no relevant Operations and Planning (O&P) compliance history.
- CMP has no relevant O&P compliance history.

(2) THE DEGREE AND QUALITY OF COOPERATION BY THE REGISTERED ENTITY (IF THE RESPONSE TO FULL COOPERATION IS “NO,” THE ABBREVIATED NOP FORM MAY NOT BE USED.)

FULL COOPERATION
IF NO, EXPLAIN

YES ☒ NO ☐

(3) THE PRESENCE AND QUALITY OF THE REGISTERED ENTITY’S COMPLIANCE PROGRAM

IS THERE A DOCUMENTED COMPLIANCE PROGRAM
YES ☒ NO ☐ UNDETERMINED ☐
EXPLAIN

Avangrid has a documented NERC Reliability Standards Internal Compliance Program that is designed to ensure AVANGRID Corporate Services is monitoring compliance with all applicable Reliability Standards. The Program provides training for staff with compliance responsibilities, ensuring they have the information required to interpret and develop evidentiary documentation of compliance with the Reliability Standards. The Program is characterized by clear and frequent communication, documentation, and implementation of actions toward compliance, taking into consideration the following:

- Adherence to approved Reliability Standards
- Regular training and awareness programs
- Ongoing communication among all parties involved with the Program
- Creating a culture of accountability
- A documentation framework that supports compliance, and includes clear processes, policies, and procedures
- Creating a culture of continuous improvement via regular assessments, self-assessments, and correction

- Identifying the key individuals who are responsible and accountable as Business Area Leaders and SMEs for applicable portions of the Program
- Reviewing and assist in developing corporate policies, procedures and goals that ensure a strong corporate commitment to compliance
- Adopting reporting procedures to appropriate management and cooperation with regulatory agencies

EXPLAIN SENIOR MANAGEMENT'S ROLE AND INVOLVEMENT WITH RESPECT TO THE REGISTERED ENTITY'S COMPLIANCE PROGRAM, INCLUDING WHETHER SENIOR MANAGEMENT TAKES ACTIONS THAT SUPPORT THE COMPLIANCE PROGRAM, SUCH AS TRAINING, COMPLIANCE AS A FACTOR IN EMPLOYEE EVALUATIONS, OR OTHERWISE.

The NERC Compliance Program at Avangrid is administered by the Corporate Security NERC Compliance group. The NERC Compliance group is responsible for overall program management and standards guidance. Avangrid business areas subject to NERC Standards have direct responsibility for compliance activities. Business area leaders and subject matter experts interact with the NERC Compliance group for implementation of the Program. Corporate Security oversight, including NERC Compliance, is provided by the Corporate Security Committee as described below. More immediate oversight of the NERC Compliance Program at Avangrid Networks is provided by the Avangrid Networks NERC Compliance Committee as described below.

Corporate Security Oversight – Corporate Security Committee

The Corporate Security Committee represents Senior Management at Avangrid. The Committee supports the NERC Compliance Program and provides insight and guidance in reaching a goal of compliance.

The members of the Corporate Security Committee include:

- Chief Executive Officer of AVANGRID
- Chief Executive Officer of Avangrid Networks
- Chief Executive Officer of UIL Holdings Corp.
- Chief Executive Officer of CMP
- Chief Executive Officer of RG&E and NYSEG
- Chief Security Officer and VP, Physical & Cyber Security
- Chief Executive Officer of Avangrid Renewables

NERC Compliance Program Oversight – Avangrid Networks NERC Compliance Committee

The Avangrid Networks NERC Compliance Committee represents Senior Management at Avangrid Networks, NYSEG, RG&E, The United Illuminating Company, CMP and Maine Electric Power Company.

The members of the Avangrid Networks Compliance Committee include:

- Chief Executive Officer of Avangrid Networks

- Chief Executive Officer of UIL Holdings Corp.
- Chief Executive Officer of CMP
- Chief Executive Officer of RG&E and NYSEG
- Chief Security Officer and VP, Physical & Cyber Security
- Business Area Leads (VP or Director) of each business area with major NERC Compliance responsibilities.

The Compliance Committees are responsible and accountable to ensure that Avangrid Networks has an effective NERC Reliability Standards compliance program:

- Sets the tone for a culture of compliance
- Commits required resources to the program
- Monitors overall progress and the organizational impacts of the program
- Resolves escalated issues
- Resolves company-wide and enterprise-wide issues
- Supports compliance group to accomplish program goals
- Evaluates budget recommendations
- Promotes NERC programs throughout the organization
- Acts as conduit to Executive Management, provides information and updates to Executive Staff meetings
- Promotes a consistent approach across AVANGRID companies
- Monitors latest regulatory developments that may impact NERC Program Compliance outcomes
- Provides consulting on program decisions, key issues, and compliance strategy

(4) ANY ATTEMPT BY THE REGISTERED ENTITY TO CONCEAL THE VIOLATION(S) OR INFORMATION NEEDED TO REVIEW, EVALUATE OR INVESTIGATE THE VIOLATION.

YES ☐ NO ☒
IF YES, EXPLAIN

(5) ANY EVIDENCE THE VIOLATION(S) WERE INTENTIONAL (IF THE RESPONSE IS "YES," THE ABBREVIATED NOP FORM MAY NOT BE USED.)

YES ☐ NO ☒
IF YES, EXPLAIN

(6) ANY OTHER MITIGATING FACTORS FOR CONSIDERATION

YES ☐ NO ☒
IF YES, EXPLAIN

(7) ANY OTHER AGGRAVATING FACTORS FOR CONSIDERATION

YES ☐ NO ☒
IF YES, EXPLAIN

(8) ANY OTHER EXTENUATING CIRCUMSTANCES

YES ☐ NO ☒
IF YES, EXPLAIN

OTHER RELEVANT INFORMATION:

NOTICE OF ALLEGED VIOLATION AND PROPOSED PENALTY OR
SANCTION ISSUED

DATE: OR N/A ☒

SETTLEMENT REQUEST DATE

DATE: 1/24/2019 – NYSEG and RG&E

3/8/2019 – CMP

OR N/A ☐

NOTICE OF CONFIRMED VIOLATION ISSUED

DATE: OR N/A ☒

SUPPLEMENTAL RECORD INFORMATION

DATE(S) OR N/A ☒

REGISTERED ENTITY RESPONSE CONTESTED

FINDINGS ☐ PENALTY ☐ BOTH ☐ DID NOT CONTEST ☒

HEARING REQUESTED

YES ☐ NO ☒

DATE

OUTCOME

APPEAL REQUESTED

DISPOSITION OF VIOLATION²

I. VIOLATION INFORMATION

Entity	Reliability Standard	Req	Violation Risk Factor	Violation Severity Level
NYSEG	TOP-001-3	R9	Medium	Severe
NYSEG	TOP-001-3	R13	High	Severe
RG&E	TOP-001-3	R9	Medium	Severe
RG&E	TOP-001-3	R13	High	Severe

PURPOSE OF THE RELIABILITY STANDARD AND TEXT OF RELIABILITY STANDARD AND REQUIREMENT(S)/SUB-REQUIREMENT(S)

The purpose statement of TOP-001-3 provides:

To prevent instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences.

R9 of TOP-001-3 provides:

R9. Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.

R13 of TOP-001-3 provides:

R13. Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.

VIOLATION DESCRIPTIONS (2)

On October 10, 2018, NYSEG and RG&E each submitted a Self-Report, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R9 for an incident that occurred on November 27-28, 2017.

On November 14, 2018, NYSEG and RG&E each submitted a Self-Report, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R13 for an incident that occurred on November 27-28, 2017.

² For purposes of this document and Addendums hereto, each violation at issue is described as a “violation,” regardless of its procedural posture and whether it was a possible, alleged or confirmed violation

Description of November 27-28, 2017 Incident at NYSEG and RG&E

The facts and circumstances surrounding this incident apply to both NYSEG and RG&E. As part of its Energy Management System (EMS), NYSEG and RG&E use the same Transmission Network Analysis (TNA) tool, which performs the following monitoring and assessment applications: State Estimator (SE), Contingency Analysis (RTCA), and Power Flow (PF). NYSEG and RG&E perform Real-time Assessments using the TNA.

On November 27, 2017 at 7:03 PM, a server failed affecting the TNA. A failover to a backup server was unsuccessful. These servers provide database services to and from the TNA. Since neither server was online, alarms that otherwise would have been generated for the System Operator to become aware of the loss of TNA were not generated. Instead, the alert messages being generated were archiving within the server log file. At the time, the system in place did not support text messaging and/or alarm signaling to the System Operator or outside of the Control Center.

During the failure of the server and the loss of the TNA, the supervisory control and data acquisition (SCADA) and the ICCP link to the NYISO remained operational.

By 7:34 PM, neither NYSEG nor RG&E performed a Real-time Assessment within 30 minutes and neither System Operator made a request to the NYISO to perform the Real-time Assessment on the behalf of either NYSEG or RG&E.

On November 28, 2017 at 1:00 AM, the RG&E System Operator discovered the lack of ability to perform a power system study using the TNA. He notified the NYSEG System Operator who also discovered the lack of ability to perform a power system study using the TNA. Neither System Operator had any alarms showing the loss of the TNA, but they were both now aware the TNA is not working. At this point, NYSEG and RG&E became aware of the loss of monitoring and assessment capabilities.

By 1:31 AM, neither NYSEG nor RG&E notified the NYISO of any “unplanned outages of 30 minutes or more for monitoring and assessment capabilities”. (TOP-001-3, R9).

At 2:00 AM, the on-call Avangrid Networks EMS technician, who had been called by the NYSEG operator, arrived at the Energy Control Center and contacted Siemens. Siemens began to remotely debug.

At 4:53 AM, Siemens was able to restore the primary failed server. Within two minutes, the TNA tool was restored (also restoring the SE, RTCA, and PF). At this point, monitoring and assessment capabilities returned and Real-time Assessment’s resumed for both NYSEG and RG&E.

At 2:57 PM, the NYISO became aware of the incident upon the submittal by NYSEG and RG&E of an EOP-004 (within 24 hour) report.

NYSEG and RG&E were in violation of TOP-001-3, R9. Neither NYSEG nor RG&E notified the NYISO of the unplanned outage of 30 minutes or more of its monitoring and assessment capabilities (the TNA) during the outage. From the time the System Operators of both NYSEG and RG&E were aware of the outage, it took 14 hours and 27 minutes to notify the NYISO. By that time, the monitoring and assessment capabilities had returned.

NYSEG and RG&E were in violation of TOP-001-3, R13. Neither NYSEG nor RG&E ensured a Real-time Assessment was performed at least once every 30 minutes. Real-time Assessments were not performed for 9 hours and 50 minutes. (9 hour and 20 minute violation).

The root cause of both violations was lack of effective detective controls to identify a failure of the TNA tool to operate and the lack of effective management oversight including training. The lack of effective detective controls was evidenced by the inability to extract and disseminate the health status of the TNA and the lack of descriptive EMS alarms to the System Operators and EMS Support Teams.

The lack of effective management oversight was evidenced by the failure of the System Operators to notify the RC of its inability to perform a Real-time Assessment and its loss of monitoring and assessment capabilities. The System Operators and supervisors were unaware of the compliance obligations and the reliability benefits obtained by notifying the RC of a loss of monitoring and assessment capabilities. The Operator Training Program did not contain the appropriate depth to ensure that System Operators and supervisors understand the compliance and reliability implications when a loss of monitoring and assessment capabilities occurs.

TOP-001-4, R9 RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

The violation of TOP-001-3 R9 posed a moderate risk to the reliability of the bulk power system (BPS).

R9 Potential: The failure to notify the RC of an unplanned outage of monitoring and assessment capabilities (ability to perform a Real-time Assessment) of 30 minutes or more left the RC unaware of the loss in situational awareness of two of its TOPs. As such, the RC would not necessarily be aware that it may have to take support actions to address the lack of NYSEG/RG&E monitoring and assessment capabilities. The risk posed is that if a system event occurred during this timeframe, neither RG&E, NYSEG, nor NYISO would have had the necessary situational awareness to respond. In this case, neither NYSEG nor RG&E directly notified the NYISO of the loss of monitoring capabilities. The NYISO only became aware upon receipt of the EOP-004 report after monitoring had been restored.

R9 Actual: In this case, the lack of notification of the loss of assessment capabilities was exacerbated because neither NYSEG nor RG&E took action to perform manual Real-time Assessments on their respective transmission Facilities. The system conditions during this violation were normal and there were no emergencies that occurred during the loss.

However, had a contingency event actually occurred during this timeframe, NPCC cannot be sure that NYISO would have acted timely since the NYISO was otherwise unaware. The risk to the reliability of the BPS is reduced a degree due to the fact that both NYSEG and RG&E are TOPs for only the sub-200kV transmission facilities in their respective TOP footprints. The NYISO is the TOP for all transmission Facilities above 200kV in New York State. Furthermore, the Control Centers at NYISO and RG&E/NYSEG all get the exact same BES SCADA data and calculate the same BES contingencies. During the event, NYISO was still receiving RG&E/NYSEG data via the ICCP and did not lose its capability to monitor the RG&E and NYSEG TOP areas. Verbal communication between RG&E/NYSEG and NYISO remained and if an event requiring assistance occurred during the violation, such communication increases the likelihood that NYISO would have contacted NYSEG/RG&E to coordinate providing the necessary assistance.

TOP-001-4, R13 RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

The violation of TOP-001-3 R13 posed a moderate risk to the reliability of the BPS.

R13 Potential: The failure to ensure a Real-time Assessment is performed at least once every 30 minutes increases the risk that System Operators could be unaware of changing system conditions or parameters at hand and therefore would not allow them to proactively mitigate system conditions that could result in instability, uncontrolled separation, or cascading outages. In this case, RG&E and NYSEG failed to perform a Real-time Assessment for its transmission system for nine hour and fifty minutes.

R13 Actual: In this case, failure to ensure that a Real-time Assessment is performed at least once every 30 minutes was exacerbated because neither NYSEG nor RG&E notified the RC of the outage. Although a Coordinated Functional Registration (CFR) Agreement exists between the NYISO and NYSEG/RG&E for TOP-001-3 R13, the CFR Agreement establishes NYISO's capabilities and responsibilities to assist both NYSEG and RG&E with performing a Real-time Assessment when the notification is actually made to NYISO by either NYSEG or RG&E. The Control Centers at NYISO and RG&E/NYSEG all get the exact same BES SCADA data and calculate the same BES contingencies. During the event, NYISO was still receiving RG&E/NYSEG data via the ICCP and did not lose its capability to monitor the RG&E and NYSEG TOP areas. Verbal communication between RG&E/NYSEG and NYISO remained and if an event requiring assistance occurred during the violation, such communication increases the likelihood that NYISO would have contacted NYSEG/RG&E to coordinate providing the necessary assistance. The system conditions during this violation were normal and there were no emergencies that occurred during the loss. However, there is still a degree of uncertainty that had a contingency event actually occurred during this timeframe, that NYISO would have acted timely to perform an RTA on behalf of NYSEG/RG&E since the NYISO was otherwise unaware.

No actual harm is known to have occurred as a result of these NYSEG and RG&E violations.

II. DISCOVERY INFORMATION**METHOD OF DISCOVERY**

SELF-REPORT
 SELF-CERTIFICATION
 COMPLIANCE AUDIT
 COMPLIANCE VIOLATION INVESTIGATION
 SPOT CHECK
 COMPLAINT
 PERIODIC DATA SUBMITTAL
 EXCEPTION REPORTING

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DURATION DATE(S):

- For TOP-001-3 R9, the violation began at 1:31 AM on November 28, 2017 (30 minutes after the System Operator was aware of the loss of monitoring and assessment capabilities) and ended at 2:57 PM on November 29, 2017, when the NYISO became aware of the loss of monitoring and assessment capabilities due to the submission of an EOP-004 report. By that time, the monitoring and assessment capabilities had returned. (14 hour and 27 minute violation).
- For TOP-001-3 R13, the violation began at 7:34 PM on November 27, 2017, when neither NYSEG nor RG&E performed a Real-time Assessment within 30 minutes nor did either System Operator make a request to the NYISO to perform the Real-time Assessment on the behalf of either NYSEG or RG&E and ended on 4:53 AM on November 28, 2017 when the primary server was restored and Real-time Assessments resumed. (9 hour and 20 minute violation).

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY

- 10/10/18 – Self-Report for TOP-001-3 R9
- 11/14/18 – Self-Report for TOP-001-3 R13

IS THE VIOLATION STILL OCCURRING YES ☐ NO ☒
 IF YES, EXPLAIN

REMEDIAL ACTION DIRECTIVE ISSUED YES ☐ NO ☒
 PRE TO POST JUNE 18, 2007 VIOLATION YES ☐ NO ☒

III. MITIGATION INFORMATION

FORMAL MITIGATION PLAN REQUIRED YES ☐ NO ☒

MITIGATION COMPLETED YES ☒ NO ☐

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

To mitigate this violation, NYSEG and RG&E

1. Issued interim email directives, temporary operating directives, and held meetings with all System Operators on specific actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13) before the official cycle training could be accomplished. Completed 11/28/17. Note: Additional mitigation was implemented as a result of the CMP PNC, this was completed by 4/24/2019.
2. Installed a TNA Health Check Monitor on the New York EMS, which enhanced awareness of EMS health and RTA capability. Completed the week of 12/20/2017.
3. Added EMS alarms to prompt the System Operator to perform the RTA and notify NYISO when the SE/CA are inoperable. Completed 4/24/2019.
4. Enhanced the notifications of EMS health check alarms to the EMS support group. Completed 4/24/2019.
5. Amended the New York system operation written procedures to provide specific actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13). Completed 1/19/18. Note: Additional mitigation was implemented as a result of the CMP PNC, this was completed by 4/24/2019.
6. Amended the 2019 cycle training to train all System Operators on the enhanced procedures, enhanced alarms, and management expectations around actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13). Completed 2/14/18. Note: Additional mitigation was implemented as a result of the CMP PNC, this was completed by 4/24/2019.
7. Analyzed the methodology for staffing and assignment of responsibilities at the New York Control Center. The analysis was performed to ensure that the responsibilities assigned to the System Operators allow them to remain focused on the transmission system during times of tool outages or loss of monitoring. Completed 4/24/2019.
8. Developed staffing plan to hire six (6) new System Operators at the New York Control Center. The new hires will be added to ensure that there is one System Operator in the ECC focusing on the operation and security tasks of the bulk power system at all times while the other can attend to other tasks. These positions will start at approximately \$90,000 per year and within 3 years advance to the fully qualified pay of \$115,000 per year. With overheads the approximate total cost of these new positions when fully qualified will be

\$1,100,000 per year. Staffing plan completed 4/24/2019, hiring process in progress.

LIST OF EVIDENCE REVIEWED BY REGIONAL ENTITY TO EVALUATE COMPLETION OF MITIGATION PLAN (FOR CASES IN WHICH MITIGATION IS NOT YET COMPLETED, LIST EVIDENCE REVIEWED FOR COMPLETED MILESTONES)

1. Documentation of the interim directives that were given to New York System Operators.
2. Documentation of the TNA Health Check Monitor that was installed on the New York EMS.
3. Screenshots and an explanation of the relevant new Siemens EMS alarms that were enhanced and installed to increase System Operator awareness and direct the System Operator to take R9 and R13 action when the SE/CA become inoperable.
4. The revised System Operations procedures that explain the actions related to R9 and R13 that the System Operator is to take as soon as he becomes aware of an EMS/RTA issue.
5. An Avangrid developed analysis of the staffing methodology of the New York Control Center that described how Electric Operations and Operational Smart Grids (OSG) support capabilities are being enhanced.
6. The training material from the 2019 Quarterly System Operator Training that shows:
 - a. That both incidents were shared and reviewed as Lessons Learned during 2019 Training to show System Operators what happened.
 - b. An explanation of the expected System Operator mandatory actions for R9 and R13
 - c. An explanation of the revised/enhanced System Operations procedures that apply to R9 and R13 that show the expected actions in writing
 - d. An explanation of the new/enhanced EMS alarms including the health monitor. This also included clarifications of what some of the existing alarms mean.
 - e. An explanation of new/enhanced/existing process for notifying the EMS Support Teams of EMS/SE/CA issues.
7. A listing of all New York NERC Certified Operators with their NERC Certification number.
8. A dated sign-in log for the 2019 New York cycle training that was compared to the list of New York NERC Certified Operators to show that all New York NERC Certified Operators received the training on all of the above.

EXHIBITS:

SOURCE DOCUMENTS

- Self-Report for TOP-001-3 R9 – October 10, 2018
- Self-Report for TOP-001-3 R13 – November 14, 2018

MITIGATION PLAN

CERTIFICATION BY REGISTERED ENTITY

6/11/2019

VERIFICATION BY REGIONAL ENTITY

6/11/2019

DISPOSITION OF VIOLATION³

I. VIOLATION INFORMATION

Entity	Reliability Standard	Req	Violation Risk Factor	Violation Severity Level
Central Maine Power Company (CMP)	TOP-001-4	R9	Medium	Severe
Central Maine Power Company (CMP)	TOP-001-4	R13	High	Moderate

PURPOSE OF THE RELIABILITY STANDARD AND TEXT OF RELIABILITY STANDARD AND REQUIREMENT(S)/SUB-REQUIREMENT(S)

The purpose statement of TOP-001-4 provides:

To prevent instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences.

R9 of TOP-001-4 provides:

R9. Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.

R13 of TOP-001-4 provides:

R13. Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.

VIOLATION DESCRIPTION

On January 24, 2019, CMP submitted two Self-Reports, stating that as a Transmission Operator (TOP), it was in violation with TOP-001-3, R9 and R13 for an incident that occurred on January 11, 2019.

³ For purposes of this document and Addendums hereto, each violation at issue is described as a “violation,” regardless of its procedural posture and whether it was a possible, alleged or confirmed violation

January 11, 2019 Incident at CMP

As part of its Energy Management System (EMS), performs monitoring and assessment using a State Estimator (SE) and Real-time Contingency Analysis (RTCA) tool. CMP uses these tools to perform Real-time Assessments.

On January 11, 2019 at 11:26 AM, an inadvertent database modification (data entry error) interrupted connectivity and resulted in the failure of the SE and RTCA. The System Operator immediately noticed the failure and communicated it to a Supervisor and the EMS technicians.

During the interruption of connectivity and the failure of the SE and RTCA, the supervisory control and data acquisition (SCADA) and the ICCP link to ISO New England (ISO-NE) remained operational.

By 11:57 AM, CMP had not notified ISO-NE of the loss of its monitoring and assessment capabilities. Additionally, CME had not performed a Real-time Assessment within the previous 30 minutes and had not requested that ISO-NE perform the Real-time Assessment on its behalf.

At 12:43 PM, connectivity was restored and the SE and RTCA returned to operational status. At this point, monitoring and assessment capabilities returned and the performance of Real-time Assessment's resumed.

CMP was in violation of TOP-001-4, R9. CMP did not notify ISO-NE of an unplanned outage of 30 minutes or more of its monitoring and assessment capabilities (the SE and RTCA) during the outage. From the time the System Operator was aware of the outage of the monitoring and assessment capabilities, it took one hour and 17 minutes for the monitoring and assessment capabilities to return.

CMP was in violation of TOP-001-4, R13. CMP did not ensure a Real-time Assessment was performed at least once every 30 minutes. Real-time Assessments were not performed for one hour and 17 minutes.

The root cause of both violations was lack of effective management oversight including training. The lack of effective management oversight was evidenced by the failure of the System Operators to notify the RC of its inability to perform a Real-time Assessment and its loss of monitoring and assessment capabilities. The System Operators and supervisors were unaware of the compliance obligations and the reliability benefits obtained by notifying the RC of a loss of monitoring and assessment capabilities. The Operator Training Program may not have contained the appropriate depth to ensure that System

Operators and supervisors understand the compliance and reliability implications when a loss of monitoring and assessment capabilities occurs.

A contributing cause was the lack of the sharing of lessons learned from the 2017 NYSEG and RG&E incident with the Maine System Operators and supervisors during the Maine 2018 cycle training.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

The violation of TOP-001-4 R9 posed a moderate risk to the reliability of the BPS.

R9 Potential: The failure to notify the RC of an unplanned outage of monitoring and assessment capabilities (ability to perform a Real-time Assessment) within 30 minutes left the RC unaware of the loss in situational awareness of a TOP. As such, the RC would not necessarily be aware that it may have to take support actions to address the lack of CMP monitoring and assessment capabilities. The risk is if a system event occurred during this timeframe, neither CMP, nor ISO-NE would have had the necessary situational awareness to respond. In this case, CMP never directly notified the ISO-NE of a loss of monitoring capability that exceeded 30 minutes.

R9 Actual: In this case, the lack of notification of the loss of assessment capabilities was exacerbated because CMP did take action to perform a manual Real-time Assessments on its transmission Facilities. The system conditions during this violation were normal and there were no emergencies that occurred during the loss. However, had a contingency event actually occurred during this timeframe, NPCC cannot be certain that ISO-NE would have acted timely since ISO-NE was otherwise unaware. The Control Centers at CMP and ISO-NE all get the exact same BES SCADA data and calculate the same BES contingencies. During the event, ISO-NE was still receiving CMP data via the ICCP and did not lose its capability to monitor the CMP TOP areas. Verbal communication between CMP and ISO-NE remained and if an event requiring assistance occurred during the violation, such communication increases the likelihood that ISO-NE would have contacted CMP to coordinate providing the necessary assistance.

TOP-001-4, R13 RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

The violation of TOP-001-4 R13 posed a moderate risk to the reliability of the BPS.

R13 Potential: The failure to ensure a Real-time Assessment is performed at least once every 30 minutes increases the risk that System Operators could be unaware of changing system conditions or parameters at hand and therefore would not allow them to proactively mitigate system conditions that could result in instability, uncontrolled separation, or cascading outages. In this case, CMP failed to perform a Real-time Assessment for its transmission system for 46 minutes upon expiration of the 30 minute obligation to perform a refresh.

R13 Actual: In this case, the failure to ensure a Real-time Assessment is performed at least once every 30 minutes was exacerbated because CMP did not notify the RC of the

unplanned outage of 30 minutes or more. The risk to the reliability of the BPS was otherwise reduced because, under the process used in the ISO-NE area, the two Control Centers perform R13 analysis in joint fashion on all BES facilities in the CMP TOP footprint. CMP is Local Control Center TOP and ISO-NE is the Main TOP. The Control Centers at ISO-NE and CMP get the exact same BES SCADA data and calculate the same BES contingencies. During the event, ISO-NE was still receiving CMP data via the ICCP and did not lose its capability to monitor the CMP TOP area. Verbal communication between CMP and ISO-NE remained and if an event requiring assistance occurred during the violation, such communication increases the likelihood that ISO-NE would have contacted CMP to coordinate providing the necessary assistance. The system conditions during this violation were normal and there were no emergencies that occurred during the loss. However, there is still a degree of uncertainty that had a contingency event actually occurred during this timeframe, that ISO-NE would have acted timely to perform an RTA on behalf of CMP since the ISO-NE was otherwise unaware.

No actual harm is known to have occurred as a result of these CMP violations.

II. DISCOVERY INFORMATION

METHOD OF DISCOVERY

SELF-REPORT
 SELF-CERTIFICATION
 COMPLIANCE AUDIT
 COMPLIANCE VIOLATION INVESTIGATION
 SPOT CHECK
 COMPLAINT
 PERIODIC DATA SUBMITTAL
 EXCEPTION REPORTING

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DURATION DATE(S):

- For both TOP-001-4 R9 and R13, the violation began at 11:57 am on January 11, 2019 (30 minutes after the outage of monitoring and assessment capabilities and the loss of the ability to Perform Real-time Assessments) and ended at 12:43 pm on January 11, 2019 when monitoring and assessment capabilities had returned and the Real-time Assessments resumed. (46 minute violation).

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY

- 1/24/19 – Self-Report for TOP-001-4 R9 and R13

IS THE VIOLATION STILL OCCURRING YES ☐ NO ☒
 IF YES, EXPLAIN

REMEDIAL ACTION DIRECTIVE ISSUED YES ☐ NO ☒
 PRE TO POST JUNE 18, 2007 VIOLATION YES ☐ NO ☒

III. MITIGATION INFORMATION

FORMAL MITIGATION PLAN REQUIRED YES ☐ NO ☒

MITIGATION PLAN COMPLETED YES ☒ NO ☐

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE.

To mitigate this violation, CMP

1. Issued interim email directives, temporary operating directives, and held meetings with all System Operators on specific actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13) before the official cycle training could be accomplished. Completed 1/24/2019.
2. Added an alarm on the GE XA-21 EMS to prompt the System Operator to notify ISONE that the SE/CA are inoperable. Completed 3/18/2019.
3. Amended the Maine system operation written procedures to provide specific actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13). Completed 4/24/2019.
4. Amended the 2019 cycle training to train all Maine System Operators on the enhanced procedures, enhanced alarms, and management expectations around actions required to be taken during the loss of monitoring and assessment capabilities and the loss of the ability to perform a Real-time Assessment (i.e. related to R9 and R13). Completed 3/31/2019.
5. Analyzed the methodology for staffing and assignment of responsibilities at the Maine Control Center. The analysis was performed to ensure that the responsibilities assigned to the System Operators allow them to remain focused on the transmission system during times of tool outages or loss of monitoring. Completed 4/24/2019.
6. Developed staffing plan to hire five (5) new System Operators at the Maine Control Center. The new hires will be added to ensure that there is one System Operator in the ECC focusing on the operation and security tasks of the bulk power system at all times while the other can attend to other tasks. These positions will start at approximately \$90,000 per year and within 3 years advance to the fully qualified pay of \$115,000 per year. With overheads the approximate total cost of these new positions when fully qualified will be \$950,000 per year. Staffing plan completed 4/24/2019, hiring process in progress.

LIST OF EVIDENCE REVIEWED BY REGIONAL ENTITY TO EVALUATE COMPLETION OF MITIGATION PLAN (FOR CASES IN WHICH MITIGATION IS NOT YET COMPLETED, LIST EVIDENCE REVIEWED FOR COMPLETED MILESTONES)

1. The revised System Operations procedures that explain the actions related to R9 and R13 that the System Operator is to take as soon as he becomes aware of an EMS/RTA issue.
2. Screenshots and an explanation of the relevant new GE XA-21 EMS alarms that were enhanced and installed to increase System Operator awareness and direct the System Operator to take R9 and R13 action when the SE/CA become inoperable.
3. An Avangrid developed analysis of the staffing methodology of the Augusta Control Center that described how Electric Operations and Operational Smart Grids (OSG) support capabilities are being enhanced.
4. The training material from the 2019 Quarterly System Operator Training that shows:
 - a. That both incidents were shared and reviewed as Lessons Learned during 2019 Training to show System Operators what happened.
 - b. An explanation of the expected System Operator mandatory actions for R9 and R13
 - c. An explanation of the revised/enhanced System Operations procedures that apply to R9 and R13 that show the expected actions in writing
 - d. An explanation of the new/enhanced EMS alarms including the health monitor. This also included clarifications of what some of the existing alarms mean.
 - e. An explanation of new/enhanced/existing process for notifying the EMS Support Teams of EMS/SE/CA issues.
5. A listing of all Maine based NERC Certified Operators with their NERC Certification number.
6. A dated sign-in log for the 2019 Maine cycle training that was compared to the list of NERC Certified Operators to show that all Maine NERC Certified Operators received the training on all of the above.

EXHIBITS:

SOURCE DOCUMENT

January 19, 2019 Self-Report

MITIGATION PLAN

CERTIFICATION BY REGISTERED ENTITY

6/11/2019

VERIFICATION BY REGIONAL ENTITY

6/11/2019


Attachment 2

NYSEG's Self-Report of violation TOP-001-3

R9 submitted October 10, 2018

VIEW SELF-REPORT: TOP-001-3 R9. (COMPLETED)

 This item was submitted by Julie King (Julie.King@Avangrid.com) on 10/10/2018 

 Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: NYSEG

NERC Registry ID: NCR07181

JRO ID:

CFR ID: CFR00182, CFR00183 with NYISO

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-3

Applicable Requirement: R9.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 11/28/2017

Beginning Date of Possible Violation: 11/27/2017

End or Expected End Date of Possible Violation: 11/28/2017

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

No notification to the RC (NYISO) was made.

At 19:03 on 11/27/2017, an Oracle server failed affecting Siemens Transmission Network Analysis (TNA) Applications (SE, CA, power flows, and study CA). The expected failover to the backup Oracle server was not successful. The Oracle server provides database service to/from the TNA and other applications within the Siemens system. There were no alarms or obvious indications to the System Operator of TNA failure. Siemens TNA generates alarms which require System Operator acknowledgement for the following conditions: SE solution non-convergence, two minute periodic SE/SA program execution has stalled and/or failed and/or is manually disabled, the Ginna Nuclear Plant Monitored Contingency SA solution did not converge, real-time SA base case solution non-converged and/or has stalled. All Siemens TNA alarm processing depends on a functioning Oracle database to operate successfully.

At 19:06 on 11/27/2017, the Prime Oracle server at Kirkwood (NYSEG General Office) encountered a sequence of errors. Siemens found generic errors associated with a device exceeding acceptable levels: no hardware error status in the database storage array and/or on the drive or controller itself. Oracle processes generated several alert messages. Oracle alert messages archive within an Oracle server log message file, and do not currently support a means of text messaging and/or alarm display tele-signaling. The alert messages were detected by Siemens Support upon logging into the Energy Control System and collecting log message file information for root cause analysis up to a point where its internal message buffer filled to capacity. The Oracle server remained on-line while in a state of suspended activity. The backup Oracle server in Vestal identified a problem with the primary Oracle server but did not automatically take over as primary.



At approximately 01:00 on 11/28/2017, the Rochester System Operator began their morning outage studies, and was unable to log into study mode TNA. The Rochester System Operator contacted the NYSEG System Operator. The NYSEG System Operator was also unable to log into study mode TNA. No TNA alarms were posted to the Power Apps Alarm. At the very least System Operator should have become aware that he had no TNA at this time and informed the RC. System Operator monitors and acknowledges Power APPs alarms, although during the interim of the Oracle outage no Power APPs alarms were generated (Power APPs alarms depend on a functioning Oracle database platform for successful processing). No notification to the RC (NYISO) was made.

At 01:53 on 11/28/2017, the NYSEG System Operator contacted the on-call Avangrid Networks Operational Smart Grids person. The Avangrid Networks Operational Smart Grids person arrived at the Energy Control Center and contacted Siemens Minneapolis.

At 02:00 on 11/28/2017, Siemens Minneapolis contacted Avangrid Networks ECS Oracle database administrator. Siemens Minneapolis logged into the Production System remotely from Minneapolis and executed a sequence of debug and subsequent resolution steps on Oracle.

At 04:53 on 11/28/2017, Siemens Minneapolis reset the alert message buffer(s), reset error code(s) on Oracle. The Oracle processes restored, and the Oracle server assumed its role as primary server. Real-Time TNA restarted its normal 2 minute periodic cycle.

Are Mitigating Activities in progress or completed? Yes

 An informal Mitigation Plan will be created upon submittal of this Self-Report with mitigating activities. If you would like to formalize that Mitigation Plan, please contact the Region. 

If Yes, Provide description of Mitigating Activities:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Provide details to prevent recurrence:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

12/20/2017

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
No data available in table			

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Loss of updated real time assessment compromises NYSEG and RGE System Operators' ability to detect and act upon potential power system contingencies to fulfill their obligation as a Transmission Operator for any real time power system changes. All SCADA functions were fully operational throughout this event.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

CCAP Discussion Summary
Brief Event Text: Loss of Real-Time assessment Applications (State Estimator, Contingency Analysis, power flows, and study Contingency Analysis) for a duration of 9 hours and 50 minutes. Real-time monitoring (SCADA functions) were not impacted and were fully functional throughout this event.
Internal Discussion Date: August 6, 2018
NERC Tracking ID: NP20171127_NYSEG-RochesterG&E

External Discussion Date: TBD
NERC EA Process Category: 1h

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)


Attachment 3

RG&E's Self-Report of violation TOP-001-3 R9

submitted October 10, 2018

VIEW SELF-REPORT: TOP-001-3 R9. (COMPLETED)

 This item was submitted by Julie King (Julie.King@Avangrid.com) on 10/10/2018 

 Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: Rochester Gas and Electric

NERC Registry ID: NCR07207

JRO ID:

CFR ID: CFR00182, CFR00183 with NYISO

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-3

Applicable Requirement: R9.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 11/28/2017

Beginning Date of Possible Violation: 11/27/2017

End or Expected End Date of Possible Violation: 11/28/2017

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

No notification to the RC (NYISO) was made.

At 19:03 on 11/27/2017, an Oracle server failed affecting Siemens Transmission Network Analysis (TNA) Applications (SE, CA, power flows, and study CA). The expected failover to the backup Oracle server was not successful. The Oracle server provides database service to/from the TNA and other applications within the Siemens system. There were no alarms or obvious indications to the System Operator of TNA failure. Siemens TNA generates alarms which require System Operator acknowledgement for the following conditions: SE solution non-convergence, two minute periodic SE/SA program execution has stalled and/or failed and/or is manually disabled, the Ginna Nuclear Plant Monitored Contingency SA solution did not converge, real-time SA base case solution non-converged and/or has stalled. All Siemens TNA alarm processing depends on a functioning Oracle database to operate successfully.

At 19:06 on 11/27/2017, the Prime Oracle server at Kirkwood encountered a sequence of errors. Siemens found generic errors associated with a device exceeding acceptable levels: no hardware error status in the database storage array and/or on the drive or controller itself. Oracle processes generated several alert messages. Oracle alert messages archive within an Oracle server log message file, and do not currently support a means of text messaging and/or alarm display telesignaling. The alert messages were detected by Siemens Support upon logging into the Energy Control System and collecting log message file information for root cause analysis up to a point where its internal message buffer filled to capacity. The Oracle server remained on-line while in a state of suspended activity. The backup Oracle server in Vestal identified a problem with the primary Oracle server but did not automatically take over as primary.


At approximately 01:00 on 11/28/2017, the Rochester System Operator began their morning outage studies, and was unable to log into study mode TNA. The Rochester System Operator contacted the NYSEG System Operator. The NYSEG System Operator was also unable to log into study mode TNA. No TNA alarms were posted to the Power Apps Alarm. At the very least System Operator should have become aware that he had no TNA at this time and informed the RC. System Operator monitors and acknowledges Power APPs alarms, although during the interim of the Oracle outage no Power APPs alarms were generated (Power APPs alarms depend on a functioning Oracle database platform for successful processing). No notification to the RC (NYISO) was made.

At 01:53 on 11/28/2017, the NYSEG System Operator contacted the on-call Avangrid Networks Operational Smart Grids person. The Avangrid Networks Operational Smart Grids person arrived at the Energy Control Center and contacted Siemens Minneapolis.

At 02:00 on 11/28/2017, Siemens Minneapolis contacted Avangrid Networks ECS Oracle database administrator. Siemens Minneapolis logged into the Production System remotely from Minneapolis and executed a sequence of debug and subsequent resolution steps on Oracle.

At 04:53 on 11/28/2017, Siemens Minneapolis reset the alert message buffer(s), reset error code(s) on Oracle. The Oracle processes restored, and the Oracle server assumed its role as primary server. Real-Time TNA restarted its normal 2 minute periodic cycle.

Are Mitigating Activities in progress or completed? Yes

 An informal Mitigation Plan will be created upon submittal of this Self-Report with mitigating activities. If you would like to formalize that Mitigation Plan, please contact the Region.

If Yes, Provide description of Mitigating Activities:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Provide details to prevent recurrence:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

12/20/2017

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
No data available in table			

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Loss of updated real time assessment compromises NYSEG and RGE System Operators' ability to detect and act upon potential power system contingencies to fulfill their obligation as a Transmission Operator for any real time power system changes. All SCADA functions were fully operational throughout this event.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

CCAP Discussion Summary

Brief Event Text: Loss of Real-Time assessment Applications (State Estimator, Contingency Analysis, power flows, and study Contingency Analysis) for a duration of 9 hours and 50 minutes. Real-time monitoring (SCADA functions) were not impacted and were fully functional throughout this event.

Internal Discussion Date: August 6, 2018

NERC Tracking ID: NP20171127_NYSEG-RochesterG&E

External Discussion Date: TBD

NERC EA Process Category: 1h

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

Attachment 4

NYSEG's Self-Report of violation TOP-001-3

R13 submitted November 14, 2018

 This item was submitted by Julie King (Julie.King@Avangrid.com) on 11/14/2018

 Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: NYSEG

NERC Registry ID: NCR07181

JRO ID:

CFR ID: CFR00182, CFR00183 with NYISO

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-3

Applicable Requirement: R13.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 11/28/2017

Beginning Date of Possible Violation: 11/27/2017

End or Expected End Date of Possible Violation: 11/28/2017

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

At 19:03 on 11/27/2017, an Oracle server failed affecting Siemens Transmission Network Analysis (TNA) Applications (SE, CA, power flows, and study CA). The expected failover to the backup Oracle server was not successful. The Oracle server provides database service to/from the TNA and other applications within the Siemens system. There were no alarms or obvious indications to the System Operator of TNA failure. Siemens TNA generates alarms which require System Operator acknowledgement for the following conditions: SE solution non-convergence, two minute periodic SE/SA program execution has stalled and/or failed and/or is manually disabled, the Ginna Nuclear Plant Monitored Contingency SA solution did not converge, real-time SA base case solution non-converged and/or has stalled. All Siemens TNA alarm processing depends on a functioning Oracle database to operate successfully.

At 19:06 on 11/27/2017, the Prime Oracle server at Kirkwood encountered a sequence of errors. Siemens found generic errors associated with a device exceeding acceptable levels: no hardware error status in the database storage array and/or on the drive or controller itself. Oracle processes generated several alert messages. Oracle alert messages archive within an Oracle server log message file, and do not currently support a means of text messaging and/or alarm display tele-signaling. The alert messages were detected by Siemens Support upon logging into the Energy Control System and collecting log message file information for root cause analysis up to a point where its internal message buffer filled to capacity. The Oracle server remained on-line while in a state of suspended activity. The backup Oracle server in Vestal identified a problem with the primary Oracle server but did not automatically take over as primary.

At approximately 01:00 on 11/28/2017, the Rochester System Operator began their morning outage studies, and was unable to log into study mode TNA. The Rochester System Operator contacted the NYSEG System Operator. The NYSEG System Operator was also unable to log into study mode TNA. No TNA alarms were posted to the Power Apps Alarm. At the very least System Operator should have become aware that he had no TNA at this time and informed the RC. System Operator monitors and acknowledges Power APPs alarms, although during the interim of the Oracle outage no Power APPs alarms were generated (Power APPs alarms depend on a functioning Oracle database platform for successful processing). No notification to the RC (NYISO) was made.

At 01:53 on 11/28/2017, the NYSEG System Operator contacted the on-call Avangrid Networks Operational Smart Grids person. The Avangrid Networks Operational Smart Grids person arrived at the Energy Control Center and contacted Siemens Minneapolis.

At 02:00 on 11/28/2017, Siemens Minneapolis contacted Avangrid Networks ECS Oracle database administrator. Siemens Minneapolis logged into the Production System remotely from Minneapolis and executed a sequence of debug and subsequent resolution steps on Oracle.

At 04:53 on 11/28/2017, Siemens Minneapolis reset the alert message buffer(s), reset error code(s) on Oracle. The Oracle processes restored, and the Oracle server assumed its role as primary server. Real-Time TNA restarted its normal 2 minute periodic cycle.

Are Mitigating Activities in progress or completed? Yes

If Yes, Provide description of Mitigating Activities:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Provide details to prevent recurrence:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receive Oracle database and Computer system text messages.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

12/31/2017

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
No data available in table			

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Loss of updated real time assessment compromises NYSEG and RGE System Operators' ability to detect and act upon potential power system contingencies to fulfill their obligation as a Transmission Operator for any real time power system changes. All SCADA functions were fully operational throughout this event.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

Self-Reported due to previous NYSEG Self-Report on TOP-001-3 R9 NPCC2018020508

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

Attachment 5

RG&E's Self-Report of violation TOP-001-3 R13

submitted November 14, 2018

 This item was submitted by Julie King (Julie.King@Avangrid.com) on 11/14/2018

 Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: Rochester Gas and Electric

NERC Registry ID: NCR07207

JRO ID:

CFR ID: CFR00182, CFR00183 with NYISO

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-3

Applicable Requirement: R13.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 11/28/2017

Beginning Date of Possible Violation: 11/27/2017

End or Expected End Date of Possible Violation: 11/28/2017

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

At 19:03 on 11/27/2017, an Oracle server failed affecting Siemens Transmission Network Analysis (TNA) Applications (SE, CA, power flows, and study CA). The expected failover to the backup Oracle server was not successful. The Oracle server provides database service to/from the TNA and other applications within the Siemens system. There were no alarms or obvious indications to the System Operator of TNA failure. Siemens TNA generates alarms which require System Operator acknowledgement for the following conditions: SE solution non-convergence, two minute periodic SE/SA program execution has stalled and/or failed and/or is manually disabled, the Ginna Nuclear Plant Monitored Contingency SA solution did not converge, real-time SA base case solution non-converged and/or has stalled. All Siemens TNA alarm processing depends on a functioning Oracle database to operate successfully.

At 19:06 on 11/27/2017, the Prime Oracle server at Kirkwood encountered a sequence of errors. Siemens found generic errors associated with a device exceeding acceptable levels: no hardware error status in the database storage array and/or on the drive or controller itself. Oracle processes generated several alert messages. Oracle alert messages archive within an Oracle server log message file, and do not currently support a means of text messaging and/or alarm display tele-signaling. The alert messages were detected by Siemens Support upon logging into the Energy Control System and collecting log message file information for root cause analysis up to a point where its internal message buffer filled to capacity. The Oracle server remained on-line while in a state of suspended activity. The backup Oracle server in Vestal identified a problem with the primary Oracle server but did not automatically take over as primary.

At approximately 01:00 on 11/28/2017, the Rochester System Operator began their morning outage studies, and was unable to log into study mode TNA. The Rochester System Operator contacted the NYSEG System Operator. The NYSEG System Operator was also unable to log into study mode TNA. No TNA alarms were posted to the Power Apps Alarm. System Operator monitors and acknowledges Power APPs alarms, although during the interim of the Oracle outage no Power APPs alarms were generated (Power APPs alarms depend on a functioning Oracle database platform for successful processing). As a result, no notification to the RC (NYISO) was made, and no request was made to NYISO to activate the agreement for utilization of the NYISO's Real-time Assessment of the New York Control Area to meet the requirement to perform a Real-time Assessment every 30 minutes.

At 01:53 on 11/28/2017, the NYSEG System Operator contacted the on-call Avangrid Networks Operational Smart Grids person. The Avangrid Networks Operational Smart Grids person arrived at the Energy Control Center and contacted Siemens Minneapolis.

At 02:00 on 11/28/2017, Siemens Minneapolis contacted Avangrid Networks ECS Oracle database administrator. Siemens Minneapolis logged into the Production System remotely from Minneapolis and executed a sequence of debug and subsequent resolution steps on Oracle.

At 04:53 on 11/28/2017, Siemens Minneapolis reset the alert message buffer(s), reset error code(s) on Oracle. The Oracle processes restored, and the Oracle server assumed its role as primary server. Real-Time TNA restarted its normal 2 minute periodic cycle.

Are Mitigating Activities in progress or completed? Yes

If Yes, Provide description of Mitigating Activities:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receives Oracle database and Computer system text messages.

Provide details to prevent recurrence:

Siemens added a TNA health check alarm during the week of December 20, 2017. The TNA health check alarm, which is generated if the last valid solution time stamp is greater than two minutes into the past, is sent to the Historical Interface System. The TNA health check alarm is then sent to Operations SCADA Group cell phones. Avangrid Networks Operational Smart Grids has also implemented a stale data check feature developed in-house. Operational Smart Grid Support staff now receives Oracle database and Computer system text messages.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

12/31/2017

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
No data available in table			

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Loss of updated real time assessment compromises NYSEG and RGE System Operators' ability to detect and act upon potential power system contingencies to fulfill their obligation as a Transmission Operator for any real time power system changes. All SCADA functions were fully operational throughout this event.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

Self Report due to previous RGE Self-Report on TOP-001-3 R9 NPCC2018020509

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

Attachment 6

CMP's Self-Report of violation TOP-001-4 R9

submitted January 24, 2019

VIEW SELF-REPORT: TOP-001-4 R9. (COMPLETED)

This item was submitted by Julie King (Julie.King@Avangrid.com) on 1/24/2019

Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: Central Maine Power Company

NERC Registry ID: NCR07029

JRO ID:

CFR ID:

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-4

Applicable Requirement: R9.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 1/14/2019

Beginning Date of Possible Violation: 1/11/2019

End or Expected End Date of Possible Violation: 1/11/2019

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

On 1/11/2019, the CMP Energy Management System (EMS) State Estimator (SE) and Contingency Analysis (CA) applications failed to function between 11:26 AM and 12:43 PM, approximate duration of 1 hour and 17 minutes. The cause for the failure was due to an inadvertent database modification (data entry error) which 'broke' the model connectivity resulting in SE application failing. The total duration in which SE and CA were inoperable was approximately 1 hour and 17 minutes. Once the inadvertent modification (data entry error) was identified and corrected, the SE and CA applications resumed to normal operation and convergent solutions. No emergency actions were required. Throughout the 1 hour and 17 minutes of SE and CA unavailability, no events on the system occurred that required emergency actions by the CMP System Operators. ISO-NE maintained monitoring capability and normal contingency alarming for all 69 kV and above facilities.

The failure of the SE and CA applications was directly attributable to the inadvertent database modification (data entry error) resulting in breaking the SE model's connectivity.

The CMP System Operator notified the EMS Support Staff and the Control Room Supervisor of the loss of SE and CA; however, the CMP System Operator failed to notify the ISO-NE of the loss of SE and CA. The CMP System Operator also neglected to perform a manual real-time assessment during the period that SE and CA failed to function.

The CMP System Operators on shift during the loss of the State Estimator and Contingency Analysis event failed to adhere to Energy Control Center (ECC) procedure (ECC Reporting and Notification Procedure Rev 19, page 7 of pdf, highlighted section) requiring notification to the ISO-NE and performance of a real-time assessment every 30 minutes (ECC Use of Real-time Analysis Tools Rev 6, section 3.1.3, page 1).

The applicable procedures are: AVANGRID Networks ECC Reporting and Notification Procedure and AVANGRID Networks ECC Use of Real-time Analysis Tools (copies provided).

Are Mitigating Activities in progress or completed? Yes

An informal Mitigation Plan will be created upon submittal of this Self-Report with mitigating activities. If you would like to formalize that Mitigation Plan, please contact the Region.

If Yes, Provide description of Mitigating Activities:

- Complete - 01-14-19 Email to Operators reinforcing Monitoring-Notification-Logging for events involving the electric system or system tools, copy provided.
- In Progress - In-person conversations with each crew until all Operators have had a chance to discuss the 01-11-19 event, completed by 02-15-19.
- In Progress - Work with ECC Training to prepare and deliver in Cycle 2 a review of Reporting and Notification Procedure and Use of Real-Time Analysis Tools

procedures. Cycle 2 training activities will occur between 04-15-19 and 05-09-19.

- In Progress - Discuss adding text to alarms in EMS that prompt needed responses by 05-31-19.

Provide details to prevent recurrence:

The mitigation actions described above are expected to prevent any future occurrences of non-compliance.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

5/31/2019

MITIGATING ACTIVITIES			
Title	Due Date	Description	Prevents Recurrence
Email to Operators	1/14/2019	Email to Operators reinforcing Monitoring-Notification-Logging for events involving the electric system or system tools, copy provided	Yes
In-person conversations	2/15/2019	In-person conversations with each crew until all Operators have had a chance to discuss the 01-11-19 event, completed by 02-15-19.	Yes
ECC Cycle 2 training	5/9/2019	Work with ECC Training to prepare and deliver in Cycle 2 a review of Reporting and Notification Procedure and Use of Real-Time Analysis Tools procedures. Cycle 2 training activities will occur between 04-15-19 and 05-09-19.	Yes
Alarm text	5/31/2019	Discuss adding text to alarms in EMS that prompt needed responses by 05-31-19.	Yes

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Throughout the 1 hour and 17 minutes of SE and CA unavailability, no events on the system occurred that required emergency actions by the CMP System Operators. ISO-NE maintained monitoring capability and normal contingency alarming for all 69 kV and above facilities.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

Attachment 7

CMP's Self-Report of violation TOP-001-4 R13

submitted January 24, 2019

This item was submitted by Julie King (Julie.King@Avangrid.com) on 1/24/2019

Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: Central Maine Power Company

NERC Registry ID: NCR07029

JRO ID:

CFR ID:

Entity Contact Information: Julie King

REPORTING INFORMATION

Applicable Standard: TOP-001-4

Applicable Requirement: R13.

Applicable Sub Requirement(s):

Applicable Functions: TOP

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 1/14/2019

Beginning Date of Possible Violation: 1/11/2019

End or Expected End Date of Possible Violation: 1/11/2019

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

On 1/11/2019, the CMP Energy Management System (EMS) State Estimator (SE) and Contingency Analysis (CA) applications failed to function between 11:26 AM and 12:43 PM, approximate duration of 1 hour and 17 minutes. The cause for the failure was due to an inadvertent database modification (data entry error) which 'broke' the model connectivity resulting in SE application failing. The total duration in which SE and CA were inoperable was approximately 1 hour and 17 minutes. Once the inadvertent modification (data entry error) was identified and corrected, the SE and CA applications resumed to normal operation and convergent solutions. No emergency actions were required. Throughout the 1 hour and 17 minutes of SE and CA unavailability, no events on the system occurred that required emergency actions by the CMP System Operators. ISO-NE maintained monitoring capability and normal contingency alarming for all 69 kV and above facilities.

The failure of the SE and CA applications was directly attributable to the inadvertent database modification (data entry error) resulting in breaking the SE model's connectivity.

The CMP System Operator notified the EMS Support Staff and the Control Room Supervisor of the loss of SE and CA; however, the CMP System Operator failed to notify the ISO-NE of the loss of SE and CA. The CMP System Operator also neglected to perform a manual real-time assessment during the period that SE and CA failed to function.

The CMP System Operators on shift during the loss of the State Estimator and Contingency Analysis event failed to adhere to Energy Control Center (ECC) procedure (ECC Reporting and Notification Procedure Rev 19, page 7 of pdf, highlighted section) requiring notification to the ISO-NE and performance of a real-time assessment every 30 minutes (ECC Use of Real-time Analysis Tools Rev 6, section 3.1.3, page 1).

The applicable procedures are: AVANGRID Networks ECC Reporting and Notification Procedure and AVANGRID Networks ECC Use of Real-time Analysis Tools (copies provided).

Are Mitigating Activities in progress or completed? Yes

An informal Mitigation Plan will be created upon submittal of this Self-Report with mitigating activities. If you would like to formalize that Mitigation Plan, please contact the Region.

If Yes, Provide description of Mitigating Activities:

Complete - 01-14-19 Email to Operators reinforcing Monitoring-Notification-Logging for events involving the electric system or system tools, copy provided.

In Progress - In-person conversations with each crew until all Operators have had a chance to discuss the 01-11-19 event, completed by 02-15-19.

In Progress - Work with ECC Training to prepare and deliver in Cycle 2 a review of Reporting and Notification Procedure and Use of Real-Time Analysis Tools procedures.

Cycle 2 training activities will occur between 04-15-19 and 05-09-19.
In Progress - Discuss adding text to alarms in EMS that prompt needed responses by 05-31-19.

Provide details to prevent recurrence:

The mitigation actions described above are expected to prevent any future occurrences of non-compliance.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

5/31/2019

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
Email to Operators	1/14/2019	• 01-14-19 Email to Operators reinforcing Monitoring-Notification-Logging for events involving the electric system or system tools, copy provided.	Yes
In-person conversations	2/15/2019	• In-person conversations with each crew until all Operators have had a chance to discuss the 02-15-19 event.	Yes
ECC Cycle 2 Training	5/9/2019	• Work with ECC Training to prepare and deliver in Cycle 2 a review of Reporting and Notification Procedure and Use of Real-Time Analysis Tools procedures.	Yes
Alarm Text	5/31/2019	• Discuss adding text to alarms in EMS that prompt needed responses.	Yes

Potential Impact to the Bulk Power System: Minimal

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Throughout the 1 hour and 17 minutes of SE and CA unavailability, no events on the system occurred that required emergency actions by the CMP System Operators. ISO-NE maintained monitoring capability and normal contingency alarming for all 69 kV and above facilities.

Provide detailed description of Actual Risk to Bulk Power System:

None

Additional Comments:

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)