

October 30, 2014

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 Florida Reliability Coordinating Council, Inc.,
FERC Docket No. NP15-_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding Florida Reliability Coordinating Council, Inc. (FRCC), NERC Registry ID# NCR00026,² 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)).³

FRCC is a not-for-profit corporation formed in 1996 and is one of eight Regional Entities delegated authority from NERC. The FRCC Member Services Division provides non-statutory service as a Planning Authority (PA) and the Reliability Coordinator (RC) for the FRCC Region. The FRCC Region encompasses peninsular Florida east of the Apalachicola River. There are 10 NERC-registered Balancing Authorities and 16 NERC-registered Transmission Operators (TOPs) within the FRCC Region. The historical all-time peak load was 52,368 MW on January 11, 2010. There are approximately 12,050 miles of Bulk Electric

¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards* (Order No. 672), III FERC Stats. & Regs. ¶ 31,204 (2006); *Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the North American Electric Reliability Corporation*, Docket No. RM05-30-000 (February 7, 2008). See also 18 C.F.R. Part 39 (2014). *Mandatory Reliability Standards for the Bulk-Power System*, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), *reh'g denied*, 120 FERC ¶ 61,053 (2007) (Order No. 693-A). See 18 C.F.R § 39.7(c)(2).

² FRCC was included on the NERC Compliance Registry as a Planning Authority (PA) and Reliability Coordinator (RC) on May 29, 2007.

³ See 18 C.F.R § 39.7(c)(2) and 18 C.F.R § 39.7(d).

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System (BES) transmission system within the FRCC Region. There is approximately 54,000 MW of installed generation within the FRCC Region. FRCC does not own any transmission or generation assets. FRCC utilizes an agent, Florida Power & Light Company (FPL), to perform the Real-Time and Next-Day planning RC functions. The agent has the responsibility and authority to take any action necessary to maintain the reliability of the FRCC bulk power system (BPS). FRCC has specific processes and procedures to ensure that its agent and the operating entities within the RC footprint maintain the reliability of the FRCC Region.

NERC is filing this Notice of Penalty with the Commission because SERC Reliability Corporation (SERC) and FRCC have entered into a Settlement Agreement to resolve all outstanding issues arising from SERC's determination and findings of the violations⁴ addressed in this Notice of Penalty. According to the Settlement Agreement, FRCC neither admits nor denies the violations, but has agreed to the assessed penalty of eighty-five thousand dollars (\$85,000), 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. Accordingly, the violations in this Full Notice of Penalty are being filed in accordance with the NERC Rules of Procedure and the CMEP.

Statement of Findings Underlying the Violations

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement, which is included as Attachment A. 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 (2014), NERC provides the following summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement, as discussed in greater detail below.

⁴ 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.

NERC Violation ID	Reliability Std.	Req.	VRF/VSL*	Applicable Function(s)	Total Penalty
SERC2014013439	EOP-008-0	R1: R1.5	Medium/ Severe	RC	\$85,000
SERC2012011649	IRO-002-2	R7	High/ Severe		
SERC2012011650	IRO-002-2	R8	High/ Moderate		
SERC2012011651	IRO-008-1	R2	High/ Severe		

*Violation Risk Factor (VRF) and Violation Severity Level (VSL)

This Settlement Agreement resolves violations arising out of an event taking place from August 8, 2012 to August 9, 2012 (the Event).

FRCC has an agreement in place with FPL that designates FPL to act as an agent of FRCC to perform the RC function. The FRCC RC operators are located at the FPL system control center. On August 8, 2012, a core router pair (primary and secondary) supporting the communications network for FRCC’s energy management system (EMS) at FPL’s primary control center malfunctioned due to a buffer overrun. The buffer overrun disrupted the link controlling the transfer process to the secondary router, which in turn caused a shutdown of the communications network supporting FPL EMS and Supervisory Control and Data Acquisition (SCADA) system. The failure of the communications network rendered the EMS inaccessible from system operator consoles. FPL support personnel began to failover the system to the emergency backup system. FRCC was able to access fully its EMS/SCADA data three hours later.

EOP-008-0 R1: R1.5 (SERC2014013439)

On February 20, 2014, FRCC submitted a SERC-initiated Self-Report to SERC stating that it was in violation of EOP-008-0 R1.5. Prior to the Event, FRCC failed to conduct adequate periodic tests to ensure viability of the plan to continue reliability operations in the event its control center became inoperable. FRCC was unable to activate the backup control center because, due to incorrect configuration, workstations used for the EMS client at the backup control center could not use authentication servers located on the primary control center secure network. FRCC did not identify the incorrect network configuration during its testing of the plan because its testing plans did not incorporate the disabling of the authentication servers. As a result, FRCC did not identify the network configuration issue during tests, which resulted in the inability to access the backup control center

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during the Event and demonstrated that the plan was not viable. See Attachment E to the Settlement Agreement for a more detailed discussion of the violation.

SERC determined the duration of the violation to be from June 18, 2007, the date the Standard became mandatory and enforceable, through August 9, 2012, when FRCC corrected the login configuration issue and gained full operational control of the backup control center.

SERC determined that this violation posed a serious or substantial risk to the reliability of the BPS. Specifically, FRCC's failure to test adequately its plan to continue reliable operations in the event its control center became inoperable resulted in a failure to identify a flaw in the plan such that the plan was not viable. Proper testing of the plan would have identified the configuration errors involving the authentication servers and allowed the activation of the backup control center after the primary control center became inoperable. FRCC lost the ability for approximately three hours to monitor continuously its RC Area and to ensure that System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) monitoring and derivations continued while its main monitoring system was unavailable.

There was no actual harm to the BPS. FRCC had and used certain monitoring capabilities to maintain situational awareness during the Event. FRCC monitored the system frequency through a parallel control room feed independent of the EMS/SCADA and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL's total generation. FPL's system operator had direct telecommunication with personnel at FPL's generation sites, which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL-interconnected entities and the FRCC state hotline. During the Event, FRCC requested that entities within its RC Area remain on schedule and notify FRCC if they were off schedule or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the Event that they were experiencing such problems. FRCC worked with the adjacent RC to identify any schedule deviations, periodically communicated any schedule deviations to FPL's system operators, and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the Event as requested by FRCC. Finally, there were no de-energized FRCC BES elements and no exceeded SOLs during the Event.

FRCC's Mitigation Plan (SERCMIT010489) to address this violation was submitted as complete to SERC on February 20, 2014.

FRCC's Mitigation Plan stated FRCC had taken the following actions to mitigate the violation:

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1. reconfigured the workstations at the local backup control center and the remote backup control center to use the authentication servers at both the primary and the backup control center which remedied and provided testing via real-time operations to validate the remediation of the login configuration issue identified during the Event;
2. retired the emergency backup system as part of a planned upgrade; and
3. tested the upgraded EMS pursuant to the requirements of EOP-008-1, which included objectives for operating from the backup control center for a minimum of two consecutive hours.

See Attachment E to the Settlement Agreement for a more detailed discussion of the mitigation activity and evidence of completion.

FRCC certified on February 28, 2014 that the above Mitigation Plan requirements were completed on October 18, 2013.

On October 18, 2014, SERC verified that FRCC's Mitigation Plan was complete.

IRO-002-2 R7 (SERC2012011649) and IRO-002-2 R8 (SERC2012011650)

On December 21, 2012, FRCC submitted Self-Reports to SERC stating that it was in violation of IRO-002-2 R7 and R8. FRCC failed to monitor continuously its RC Area and did not ensure SOL and IROL monitoring and derivations continued when the main monitoring system was unavailable, in violation of IRO-002-2 R7. During the Event, FRCC was unable to access the EMS/SCADA data in order to monitor interconnections and BES elements in the FRCC footprint and relied on manual monitoring processes. The Real-Time Contingency Analysis (RTCA) program, which is FRCC's primary tool to assess the reliability of the BPS, was also unable to function properly. As a result, FRCC could not simulate contingencies for the real-time network or identify resulting BPS reliability issues using the SOL and IROL violation limits and constraints information from the RTCA. FRCC also lost the use of the Inter-Control Center Protocol data link that receives BPS information from other FRCC member utilities for the RC function during the Event.

FRCC failed to control its RC analysis tools and did not have a procedure in place to mitigate the effects of analysis tool outages, in violation of IRO-002-2 R8. FRCC had a backup EMS procedure that it implemented during the Event, but the backup EMS also failed due to a login configuration issue that resulted in the inability to use the analysis tools. FRCC had procedures to address the loss of its EMS or RTCA, but FRCC did not have procedures in place to mitigate the effects of simultaneous outages of

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EMS/SCADA and RTCA. FRCC provided evidence that it has authority for approvals for planned maintenance and outages of the analysis tool as required by the Standard.

See Attachment B (for IRO-002-2 R7) and Attachment C (for IRO-002-2 R8) to the Settlement Agreement for a more detailed discussion of the violations.

SERC determined the duration of the violations to be from August 8, 2012 at 10:19 p.m., when FRCC lost the ability to monitor the RC Area and control its RC analysis tools, through August 9, 2012 at 1:09 a.m., when FRCC regained the ability to monitor the RC Area and control its RC analysis tools.

SERC determined that these violations posed a serious or substantial risk to the reliability of the BPS. Specifically, FRCC lost the ability for approximately three hours to monitor continuously its RC Area and to ensure that SOL and IROL monitoring and derivations continued while its main monitoring system was unavailable. FRCC also lost control of its RC analysis tools and did not have procedures in place to mitigate the loss of those tools.

There was no actual harm to the BPS. FRCC had and used certain monitoring capabilities to maintain situational awareness during the Event. FRCC monitored the system frequency through a parallel control room feed independent of the EMS/SCADA and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL's total generation. FPL's system operator had direct telecommunication with personnel at FPL's generation sites, which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL-interconnected entities and the FRCC state hotline. During the Event, FRCC requested that entities within its RC Area remain on schedule and notify FRCC if they were off schedule or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the Event that they were experiencing such problems. FRCC worked with the adjacent RC to identify any schedule deviations, periodically communicated any schedule deviations to FPL's system operators, and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the Event as requested by FRCC. Finally, there were no de-energized FRCC BES elements and no exceeded SOLs during the Event.

FRCC's Mitigation Plan (SERCMIT009206-2) to address these violations was submitted as complete to SERC on January 16, 2014.

FRCC's Mitigation Plan stated FRCC had taken the following actions to mitigate the violation:

1. upgraded its SCADA/EMS;

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2. reconfigured workstations at the local and remote backup control centers;
3. approved and implemented an interim procedure to mitigate the effect of analysis tool outages; and
4. approved and implemented the final version of the above procedure.

See Attachment B (for IRO-002-2 R7) and Attachment C (for IRO-002-2 R8) to the Settlement Agreement for a more detailed discussion of the mitigation activity and evidence of completion.

FRCC certified on January 17, 2014 that the above Mitigation Plan requirements were completed on January 11, 2013.

On February 11, 2014, SERC verified that FRCC's Mitigation Plan was complete.

IRO-008-1 R2 (SERC2012011651)

On December 21, 2012, FRCC submitted a Self-Report to SERC stating that it was in violation of IRO-008-1 R2. SERC determined FRCC failed to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area was exceeding any IROs or was expected to exceed any IROs. See Attachment D to the Settlement Agreement for a more detailed discussion of the violation.

SERC determined the duration of the violation to be from August 8, 2012 at 10:48 p.m., 30 minutes after FRCC last conducted a Real-Time Assessment, through August 9, 2012 at 1:09 a.m., when FRCC regained the ability to monitor the RC Area and perform a Real-Time Assessment.

SERC determined that this violation posed a serious or substantial risk to the reliability of the BPS. Specifically, FRCC lost the ability to perform a real-time assessment of the BES to determine if its Wide Area was exceeding or expecting to exceed any IROs, which may have limited FRCC's ability to prevent instability, uncontrolled separation, or cascading outages, which may have adversely affected the reliability of the BPS.

There was no actual harm to the BPS. FRCC had and used certain monitoring capabilities to maintain situational awareness during the event. FRCC monitored the system frequency through a parallel control room feed independent of the EMS/SCADA and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL's total generation. FPL's system operator had direct telecommunication with personnel at FPL's generation sites, which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL-interconnected entities and the FRCC state hotline. During the

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Event, FRCC requested that entities within its RC Area remain on schedule and notify FRCC if they were off schedule or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the Event that they were experiencing such problems. FRCC worked with the adjacent RC to identify any schedule deviations, periodically communicated any schedule deviations to FPL's system operators, and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the Event as requested by FRCC. Finally, there were no de-energized FRCC BES elements and no exceeded SOLs during the Event.

FRCC's Mitigation Plan (SERCMIT009207-1) to address this violation was submitted as complete to SERC on January 16, 2014.

FRCC's Mitigation Plan stated FRCC had taken the following actions to mitigate the violation:

1. upgraded its SCADA/EMS;
2. reconfigured workstations at the local and remote backup control centers;
3. approved and implemented an interim procedure to mitigate the effect of analysis tool outages; and
4. approved and implemented the final version of the above procedure.

See Attachment E to the Settlement Agreement for a more detailed discussion of the mitigation activity and evidence of completion.

FRCC certified on January 17, 2014 that the above Mitigation Plan requirements were completed on January 11, 2013.

On February 11, 2014, SERC verified that FRCC's Mitigation Plan was complete.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, SERC has assessed a penalty of eighty-five thousand dollars (\$85,000) for the referenced violations. In reaching this determination, SERC considered the following factors:

1. the violations constituted FRCC's first occurrence of violations of the subject NERC Reliability Standards;

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2. FRCC had an internal compliance program at the time of the violation which SERC considered a mitigating factor. See Attachment A to the Settlement Agreement for a detailed description of the ICP;
3. FRCC self-reported the violations, as described above;
4. FRCC was cooperative throughout the compliance enforcement process;
5. there was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
6. each of the violations posed a serious or substantial risk to the reliability of the BPS, as discussed above; and
7. there were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

After consideration of the above factors, SERC determined that, in this instance, the penalty amount of eighty-five thousand dollars (\$85,000) 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 Settlement Agreement and supporting documentation on October 1, 2014 and approved the Settlement Agreement. In approving the Settlement Agreement, the NERC BOTCC reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violations at issue.

In reaching this determination, the NERC BOTCC also considered the factors considered by SERC as listed above.

⁵ See 18 C.F.R. § 39.7(d)(4).

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

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For the foregoing reasons, the NERC BOTCC approved the Settlement Agreement and believes that the assessed penalty of eighty-five thousand dollars (\$85,000) 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:

- a) Settlement Agreement by and between SERC and FRCC executed October 23, 2014, included as Attachment A;
 - a. Disposition of Violation: Information Common to Instant Violations, included as Attachment A to the Settlement Agreement;
 - b. Disposition of Violation for IRO-002-2 R7, included as Attachment B to the Settlement Agreement;
 - c. Disposition of Violation for IRO-002-2 R8, included as Attachment C to the Settlement Agreement;
 - d. Disposition of Violation for IRO-008-1 R2, included as Attachment D to the Settlement Agreement; and
 - e. Disposition of Violation for EOP-008-0 R1, included as Attachment E to the Settlement Agreement.
- b) Record documents for the violation of EOP-008-0 R1 (SERC2014013439), included as Attachment B:
 1. FRCC's Source Document dated February 20, 2014;
 2. FRCC's Mitigation Plan designated as SERCMIT010489 submitted February 20, 2014; and
 3. FRCC's Certification of Mitigation Plan Completion dated February 28, 2014.
- c) Record documents for the violations of IRO-002-2 R7 (SERC2012011649) and IRO-002-2 R8 (SERC2012011650), included as Attachment C:
 1. FRCC's Source Document for IRO-002-2 R7 dated December 21, 2012;
 2. FRCC's Source Document for IRO-002-2 R8 dated December 21, 2012;

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3. FRCC's Mitigation Plan designated as SERCMIT009206-2 submitted January 16, 2014; and
 4. FRCC's Certification of Mitigation Plan Completion dated January 17, 2014.
- d) Record documents for the violation of IRO-008-1 (SERC2012011651), included as Attachment D:
1. FRCC's Source Document dated December 21, 2012;
 2. FRCC's Mitigation Plan designated as SERCMIT009207-1 submitted January 16, 2014; and
 3. FRCC's Certification of Mitigation Plan Completion dated January 17, 2014.

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

<p>Gerald W. Cauley President and Chief Executive Officer North American Electric Reliability Corporation 3353 Peachtree Road NE Suite 600, North Tower Atlanta, GA 30326 (404) 446-2560</p> <p>Charles A. Berardesco* Senior Vice President and General Counsel North American Electric Reliability Corporation 1325 G Street N.W., Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile charles.berardesco@nerc.net</p> <p>James M. McGrane* Managing Counsel – Enforcement SERC Reliability Corporation 3701 Arco Corporate Drive, Suite 300 Charlotte, NC 28273 (704) 494-7787 (704) 357-7914 – facsimile jmcgrane@serc1.org</p>	<p>Sonia C. Mendonça* Associate General Counsel and Senior Director of Enforcement North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile sonia.mendonca@nerc.net</p> <p>Edwin G. Kichline* Senior Counsel and Associate Director, Enforcement Processing North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile edwin.kichline@nerc.net</p> <p>Stacy Dochoda* FRCC President/CEO Florida Reliability Coordinating Council, Inc. 3000 Bayport Drive, Suite 600 Tampa, Florida, 33607-8407 (813) 207-7960 (813) 289-5646 – facsimile sdochoda@frcc.com</p>
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<p>Marisa A. Sifontes* General Counsel Drew R. Slabaugh* Legal Counsel Rebecca A. Lindensmith* Legal Counsel SERC Reliability Corporation 3701 Arco Corporate Drive, Suite 300 Charlotte, NC 28273 (704) 494-7775 (704) 414-5244 (704) 414-5230 (704) 357-7914 – facsimile msifontes@serc1.org dslabaugh@serc1.org rlindensmith@serc1.org</p> <p>Andrea B. Koch* Director of Compliance and Analytics SERC Reliability Corporation 3701 Arco Corporate Drive, Suite 300 Charlotte, NC 28273 (704) 940-8219 (704) 357-7914 – facsimile akoch@serc1.org</p> <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>Richard A. Gilbert* Member Services Regulatory Director Florida Reliability Coordinating Council, Inc. 3000 Bayport Drive, Suite 600 Tampa, Florida, 33607-8407 (813) 321-6256 (813) 289-5646 – facsimile rgilbert@frcc.com</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,

Gerald W. Cauley
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/s/ Edwin G. Kichline
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cc: Florida Reliability Coordinating Council, Inc.
SERC Reliability Corporation

Attachments

Attachment A

Settlement Agreement by and between SERC and FRCC executed October 23, 2014

AA. Disposition of Violation: Information Common to Instant Violations

AB. Disposition of Violation for IRO-002-2 R7

AC. Disposition of Violation for IRO-002-2 R8

AD. Disposition of Violation for IRO-008-1 R2

AE. Disposition of Violation for EOP-008-0 R1

SETTLEMENT AGREEMENT
OF
SERC RELIABILITY CORPORATION
AND

FLORIDA RELIABILITY COORDINATING COUNCIL, INC.

I. INTRODUCTION

1. SERC Reliability Corporation (SERC) and Florida Reliability Coordinating Council, Inc. (FRCC) enter into this Settlement Agreement (Settlement Agreement) to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in SERC's determination and findings, pursuant to the North American Electric Reliability Corporation (NERC) Rules of Procedure, of four confirmed violations.

Reliability Standard	Requirement	SERC Tracking No.	NERC Tracking No.
IRO-002-2	R7	SERC2012-401649	SERC2012011649
IRO-002-2	R8	SERC2012-401650	SERC2012011650
IRO-008-1	R2	SERC2012-401651	SERC2012011651
EOP-008-0	R1	SERC2014-402015	SERC2014013439

2. FRCC neither admits nor denies the four violations and has agreed to the proposed penalty of eighty-five thousand dollars (\$85,000) in addition to other remedies and actions to mitigate the instant violations and to ensure future compliance under the terms and conditions of the Settlement Agreement.

II. STIPULATION

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

Background

4. See Section I of the Common Disposition document (Attachment A) for a description of FRCC.

Violations of NERC Reliability Standards

5. See Section I of the relative Disposition documents (Attachments B through E) for the description of the violations.

III. PARTIES' SEPARATE REPRESENTATIONS

Statement of SERC and Summary of Findings

6. SERC determined that FRCC was in violation of IRO-002-2 R7 because FRCC did not continuously monitor its Reliability Coordinator Area and did not ensure System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) monitoring and derivations continued when the main monitoring system was unavailable. There was one violation included in the Disposition document, Attachment B.
7. SERC determined that FRCC was in violation of IRO-002-2 R8 because FRCC did not control its Reliability Coordinator analysis tools and did not have procedure in place to mitigate the effects of analysis tool outages. There was one violation included in the Disposition document, Attachment C.
8. SERC determined that FRCC was in violation of IRO-008-1 R2 because FRCC did not perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area was exceeding any IROLs or was expected to exceed any IROLs. There was one violation included in the Disposition document, Attachment D.
9. SERC determined that FRCC was in violation of EOP-008-0 R1 because FRCC did not conduct adequate periodic tests to ensure viability of the plan to continue reliability operations in the event its control center became inoperable. There was one violation included in the Disposition document, Attachment E.
10. SERC addresses the risk of each violation to the bulk power system (BPS) in the Disposition documents.
11. SERC agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of BPS reliability.

Statement of FRCC

12. FRCC neither admits nor denies that the facts set forth and agreed to by the parties for purposes of this Settlement Agreement constitute violations of the Standards and Requirements listed in the table above.
13. FRCC has agreed to enter into this Settlement Agreement with SERC 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. FRCC agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of BPS reliability.

14. Following the August 8-9, 2012 event, FRCC Regulatory staff performed a thorough review of all Reliability Standards applicable to the Reliability Coordinator (RC) function, in accordance with the FRCC Internal Compliance Program for the RC and Planning Authority functions. This review included a targeted review of Reliability Standards related to system monitoring, which prompted submission of the four Self-Reports. These reviews helped provide recommendations for the actions taken to mitigate these issues. Upon identifying the cause of this event, the FRCC RC, the RC Agent, the FRCC Operating Reliability Subcommittee (ORS) and the FRCC Operating Committee (OC) created the FRCC RC Conservative Operations Procedure that is now used to mitigate the effects of outages of analysis tools to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC Agent's Energy Management System (EMS) / supervisory control and data acquisition (SCADA) system. In addition to the new procedure, a previously scheduled upgrade to the RC Agent's EMS was implemented shortly after the event which provides additional redundancy by providing the RC function with access to four EMS servers at two geographically diverse locations. The new configuration also allows more frequent use of each EMS server to ensure availability during unscheduled EMS outages. This upgrade also allows for more adequate testing of the failover processes and helps the RC agent identify any potential issues right away.

As a result of the event, the FRCC RC and RC Agent have implemented new procedures and developed a better awareness of potential EMS server failure modes. The actions above along with the RC Agent EMS upgrade not only mitigate the identified issues but also decrease the likelihood of similar issues from occurring.

IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS

15. SERC and FRCC agree that FRCC has completed the mitigating actions and SERC has verified the completion of the mitigating actions set forth in Section III of the relative Disposition documents (Attachments B through E). The Mitigating Actions, Remedies and Sanctions are discussed in detail in the relative Disposition documents (Attachments B through E).
16. SERC staff also considered the specific facts and circumstances of the violations and FRCC's actions in response to the violations 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.”¹ The factors considered by SERC staff in the determination of the appropriate penalty are set forth in Section II of the Common Disposition document.

17. Based on the above factors, as well as the mitigation actions and preventative measures taken, FRCC shall pay eighty-five thousand dollars (\$85,000) to SERC as set forth in this Settlement Agreement. FRCC shall remit the payment to SERC via check, or by wire transfer to an account to be identified by SERC within thirty days after the Agreement is either approved by the Federal Energy Regulatory Commission (Commission) or by operation of law. SERC shall notify NERC, and NERC shall notify the Commission, if the payment is not timely received. If FRCC does not remit the payment by the required date, interest payable to SERC 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.
18. 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 Settlement Agreement shall be deemed to be either the same alleged violations that initiated this Settlement Agreement and/or additional violations and may subject FRCC to new or additional enforcement, penalty or sanction actions in accordance with the NERC Rules of Procedure. FRCC shall retain all rights to defend against such additional enforcement actions in accordance with NERC Rules of Procedure.

V. ADDITIONAL TERMS

19. The signatories to the Settlement Agreement agree that they enter into the Settlement 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 SERC or FRCC has been made to induce the signatories or any other party to enter into the Settlement Agreement. The signatories agree that the terms and conditions of this Settlement Agreement are consistent with the Commission’s regulations and orders, and NERC’s Rules of Procedure.
20. SERC 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 SERC and FRCC 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 SERC will attempt to negotiate a revised settlement agreement with FRCC including any changes to the settlement specified by NERC. If a settlement cannot be reached, the enforcement process shall

¹ 16 U.S.C. § 824o(e)(6).

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.

21. This Settlement Agreement shall become effective upon the Commission's approval of the Settlement Agreement by order or operation of law as submitted to it or as modified in a manner acceptable to the parties.
22. FRCC agrees that this Settlement Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and FRCC waives its right to further hearings and appeal, unless and only to the extent that FRCC contends that any NERC or Commission action on the Settlement Agreement contains one or more material modifications to the Settlement Agreement. SERC reserves all rights to initiate enforcement, penalty or sanction actions against FRCC in accordance with the NERC Rules of Procedure in the event that FRCC does not comply with the Mitigation Plans and compliance program agreed to in this Settlement Agreement. In the event FRCC fails to comply with any of the stipulations, remedies, sanctions or additional terms, as set forth in this Settlement Agreement, SERC will initiate enforcement, penalty, or sanction actions against FRCC to the maximum extent allowed by the NERC Rules of Procedure, up to the maximum statutorily allowed penalty. Except as otherwise specified in this Settlement Agreement, FRCC shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.
23. FRCC consents to the use of SERC's determinations, findings, and conclusions set forth in this Settlement 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 FRCC does not consent to the use of the specific acts set forth in this Settlement Agreement as the sole basis for any other action or proceeding brought by NERC and/or SERC, nor does FRCC consent to the use of this Settlement Agreement by any other party in any other action or proceeding.
24. 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 Settlement Agreement on the entity's behalf.
25. The undersigned representative of each party affirms that he or she has read the Settlement Agreement, that all of the matters set forth in the Settlement Agreement are true and correct to the best of his or her knowledge, information and belief, and that he or she understands that the Settlement 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 Settlement Agreement.

26. The Settlement Agreement may be signed in counterparts.

27. This Settlement Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

*Remainder of page intentionally blank.
Signatures to be affixed to the following page.*

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 EIGHTY-FIVE THOUSAND DOLLARS (\$85,000) FOR FOUR 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 IN THE SERC REGION

YES NO

LIST VIOLATIONS AND STATUS

Not applicable

ADDITIONAL COMMENTS

Not applicable

PREVIOUSLY FILED VIOLATIONS OF OTHER RELIABILITY STANDARD(S) OR REQUIREMENTS THEREUNDER IN THE SERC REGION

YES NO

LIST VIOLATIONS AND STATUS

Not applicable

ADDITIONAL COMMENTS

Not applicable

(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 YES NO
 IF NO, EXPLAIN

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

IS THERE A DOCUMENTED COMPLIANCE PROGRAM
 YES NO
 EXPLAIN

FRCC implemented a formal ICP on December 12, 2012. Prior to that date, FRCC relied on approved procedures and processes, its culture of compliance, staff, and the ICP of its reliability coordinator agent. Minor changes to the ICP are approved by the Member Service regulatory director, who is responsible for the oversight of the ICP. The Member Service regulatory director reports directly to FRCC's president and chief executive officer (CEO) and has direct access to the FRCC board of directors as needed for compliance related matters. Significant changes to the ICP are approved by FRCC's president and CEO. The Member Service regulatory director, in conjunction with FRCC's vice president of planning and operations, is responsible for the implementation of the ICP. The ICP is fully supported by FRCC's president and CEO, senior management, and the board of directors. FRCC has sufficient staff and budget for the ICP. The ICP includes provisions for an annual review to ensure that compliance is maintained. The ICP also includes provisions for annual training of employees having a direct responsibility for compliance to ensure they understand their compliance responsibilities. Employees without a direct responsibility for compliance are given an overview awareness presentation. FRCC's ICP calls for disciplinary action against FRCC employees involved in an intentional violation of NERC Reliability Standards.

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.

As noted above, the Member Service regulatory director reports directly to FRCC's president and chief executive officer (CEO) and has direct access to the FRCC board of directors as needed for compliance related matters. Significant changes to the ICP are approved by FRCC's president and CEO. The Member Service regulatory director, in conjunction with FRCC's vice president of planning and operations, is responsible for the implementation of the ICP. The ICP is fully supported by FRCC's president and CEO, senior management, and the board of directors.

(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 DISCUSSIONS COMMENCED

DATE: March 13, 2014 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 NO CONTEST

HEARING REQUESTED

YES NO

DATE

OUTCOME

APPEAL REQUESTED

SETTLEMENT AGREEMENT BETWEEN SERC AND FRCC, executed
October 23, 2014

DISPOSITION OF VIOLATION¹
Dated October 23, 2014

NERC TRACKING NO. SERC TRACKING NO.
SERC2012011649 SERC2012-401649

I. VIOLATION INFORMATION

RELIABILITY STANDARD	REQUIREMENT(S)	SUB-REQUIREMENT(S)	VRF(S)	VSL(S)
IRO-002-2	R7		High	Severe

VIOLATION(S) APPLIES TO THE FOLLOWING FUNCTIONS IN THE SERC
REGION:

BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
								X						

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

The purpose statement of IRO-002 provides:

Reliability Coordinators need information, tools and other capabilities to perform their responsibilities.

IRO-002 R7 provides:

R7. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.

VIOLATION DESCRIPTION

On December 21, 2012, FRCC submitted a Self-Report to SERC stating that, as a Reliability Coordinator (RC), it was in violation of IRO-002-2 R7. FRCC did not continuously monitor its RC Area and did not ensure System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) monitoring and derivations continued when the main monitoring system was unavailable.

¹ For purposes of this document and attachments 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.

FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an agent of FRCC to perform the RC function. The FRCC RC operators are located at the FPL system control center.

This violation resulted from two incidents that occurred on August 8, 2012 and August 9, 2012.

At 10:19 p.m. on August 8, 2012, a core router pair (primary and secondary) supporting the communications network for FRCC's Energy Management System (EMS) at FPL's primary control center malfunctioned due to a buffer overrun. The EMS machines are accessed from the control center communications network. The buffer overrun disrupted the link controlling the transfer process to the secondary router, which in turn caused a shutdown of the communications network supporting FPL's Supervisory Control and Data Acquisition (SCADA) / EMS. The failure of the communications network rendered the EMS inaccessible from system operator consoles. SERC determined that the core router pair that malfunctioned was associated with communication networks and data communication links between discrete Electronic Security Perimeters, and therefore were exempt from the CIP Standards.

At 10:37 p.m. on August 8, 2012, FPL's support personnel began to failover the system to the emergency backup system (EBS). The failover process continued until 12:01 a.m. on August 9, 2012. All attempts to log in by remote and on-site FPL personnel to the EBS failed because of a login configuration issue that was remedied at approximately 12:35 a.m. on August 9, 2012.

By 12:21 a.m. on August 9, 2012, approximately one-third of FPL's substation assets were communicating data to the EBS, allowing partial monitoring of FPL's transmission system. This partial visibility of the FPL system was the result of a routing issue. This partial monitoring via the EBS was not available at the FRCC RC console, so the FRCC RC relocated to a FPL SCADA/EMS support staff console which provided the partial visibility. At 12:53 a.m. on August 9, 2012, FRCC was able to access the SCADA/EMS data. At 1:09 a.m. on August 9, 2012, FPL re-established normal operations.

During this event, FRCC was unable to access the SCADA/EMS data in order to monitor interconnections and Bulk Electric System (BES) elements in the FRCC footprint and relied on manual monitoring processes. The Real Time Contingency Analysis (RTCA) program, which is FRCC's primary tool to assess the reliability of the BES, was also unable to function properly. As a result, FRCC could not simulate contingencies for the real-time network or identify resulting BES reliability issues using the SOL and IROL violation limits and constraints information from the RTCA from 10:19 p.m. on August 8, 2012 until 1:09 a.m. on August 9, 2012. FRCC also lost the use of the Inter-Control Center Protocol data link that receives BES information from other FRCC member utilities for the RC function during the event.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

This violation posed a serious and substantial risk to the reliability of the bulk power system (BPS). SERC determined that the violation posed a serious and substantial risk because, for approximately three hours, FRCC lost the ability to continuously monitor its RC area and to ensure that SOL and IROL monitoring and derivations continued while its main monitoring system was unavailable. This failure put the BPS within the FRCC RC area at increased risk for the duration of the event. However, FRCC had and used certain monitoring capabilities to maintain situational awareness during the event. FRCC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL’s total generation. FPL’s system operator had direct telecommunication with personnel at FPL’s generation sites which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL’s interconnected entities and the FRCC state hotline. During the event, FRCC requested that entities within its RC area remain on schedule and notify FRCC if they were off schedule, or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the event that they were experiencing such problems. FRCC worked with the adjacent RC, Southern Company, to identify any schedule deviations and periodically communicated any schedule deviations identified by Southern Company to FPL’s system operators and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the event as requested by FRCC. No FRCC BES elements de-energized and no SOLs were exceeded during the event.

II. DISCOVERY INFORMATION

METHOD OF DISCOVERY

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

DURATION DATE(S)

8/8/2012 at 10:19 p.m. (when FRCC lost the ability to monitor the RC Area) through 8/9/2012 at 1:09 a.m. (when FRCC regained the ability to monitor the RC Area)

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY 12/21/12

IS THE VIOLATION STILL OCCURRING YES NO

IF YES, EXPLAIN

REMEDIAL ACTION DIRECTIVE ISSUED	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
PRE TO POST JUNE 18, 2007 VIOLATION	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>

III. MITIGATION INFORMATION

FOR FINAL ACCEPTED MITIGATION PLAN:

MITIGATION PLAN NO.	SERCMIT009206-2
DATE SUBMITTED TO REGIONAL ENTITY	1/16/14
DATE ACCEPTED BY REGIONAL ENTITY	1/20/14
DATE APPROVED BY NERC	2/19/14
DATE PROVIDED TO FERC	2/21/14

IDENTIFY AND EXPLAIN ALL PRIOR VERSIONS THAT WERE ACCEPTED OR REJECTED, IF APPLICABLE

MITIGATION PLAN COMPLETED YES NO

EXPECTED COMPLETION DATE	1/11/13
	(Submitted as complete)
EXTENSIONS GRANTED	N/A
ACTUAL COMPLETION DATE	1/11/13
DATE OF CERTIFICATION LETTER	1/17/14
CERTIFIED COMPLETE BY REGISTERED ENTITY AS OF	1/11/13
VERIFIED COMPLETE BY REGIONAL ENTITY AS OF	2/11/14 ²

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

To mitigate this violation, FRCC:

- 1) Upgraded its SCADA/EMS to provide improvements over the previous system in both network and server resiliency. With the upgrade, there is now a fully redundant backup system with all new network and server hardware with a failover scheme. As part of the normal operational posture both the main control center and back-up control center systems are configured to run, thus assuring full functionality of all the systems. The main control center and back-up control center sites are connected via dedicated high speed links through which near real-time data replication occurs. This upgrade was planned for prior to the August 2012 event;
- 2) In addition, the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied the log-in configuration issue identified during the event;

² This Disposition Document serves as SERC's Verification of Mitigation Plan Completion.

- 3) Approved and implemented an interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA), during the loss of its SCADA/EMS and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS; and
- 4) Approved and implemented the final version of the FRCC RC Conservative Operations Procedure.

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

SERC reviewed the following evidence submitted by FRCC as evidence of completion of its Mitigation Plan:

- 1) A document containing a checklist used to verify the transition to the new EMS system, which includes tests performed during the week of the transition and the day of the transition. The document also shows RCIS messages announcing the transition and the completion of the EMS system upgrades;
- 2) Minutes from monthly meetings of the Operating Reliability Subcommittee in which changes to the conservative operations procedure were discussed and approved; and
- 3) A copy of the updated conservative operations procedure that identifies the triggers to implement the procedure, and the corresponding actions and communications that the RC system operator should invoke for partial or total loss of the RC agent's EMS monitoring capabilities. The procedure specifically states steps to be taken if EMS monitoring capabilities are lost for more than 30 minutes.

EXHIBITS:

SOURCE DOCUMENT

FRCC Self-Report dated December 21, 2012

MITIGATION PLAN

FRCC Mitigation Plan submitted on January 16, 2014

CERTIFICATION BY REGISTERED ENTITY

FRCC Certification of Completed Mitigation Plan dated January 17, 2014

VERIFICATION BY REGIONAL ENTITY

This Disposition document serves as SERC's Verification of Mitigation Plan Completion.

DISPOSITION OF VIOLATION¹
Dated October 23, 2014

NERC TRACKING NO. SERC TRACKING NO.
SERC2012011650 SERC2012-401650

I. VIOLATION INFORMATION

RELIABILITY STANDARD	REQUIREMENT(S)	SUB-REQUIREMENT(S)	VRF(S)	VSL(S)
IRO-002-2	R8		High	Moderate

VIOLATION(S) APPLIES TO THE FOLLOWING FUNCTIONS IN THE SERC
REGION:

BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
								X						

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

The purpose statement of IRO-002 provides:

Reliability Coordinators need information, tools and other capabilities to perform their responsibilities.

IRO-002-2 R8 provides:

R8. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages.

VIOLATION DESCRIPTION

On December 21, 2012, FRCC submitted a Self-Report to SERC stating that, as a Reliability Coordinator (RC), it was in violation of IRO-002-2 R8. FRCC did not control its RC analysis tools and did not have procedures in place to mitigate the effects of analysis tool outages.

FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an agent of FRCC to perform the RC function. The FRCC RC operators are located at the FPL system control center.

¹ For purposes of this document and attachments 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.

This violation resulted from two incidents that occurred on August 8, 2012 and August 9, 2012.

At 10:19 p.m. on August 8, 2012, a core router pair (primary and secondary) supporting the communications network for FRCC's Energy Management System (EMS) at FPL's primary control center malfunctioned due to a buffer overrun. The EMS machines are accessed from the control center communications network. The buffer overrun disrupted the link controlling the transfer process to the secondary router, which in turn caused a shutdown of the communications network supporting FPL's Supervisory Control and Data Acquisition (SCADA) / EMS. The failure of the communications network rendered the EMS inaccessible from system operator consoles. SERC determined that the core router pair that malfunctioned were Cyber Assets associated with communication networks and data communication links between discrete Electronic Security Perimeters, and therefore were exempt from the CIP Standards.

At 10:37 p.m. on August 8, 2012, FPL's support personnel began to failover the system to the emergency backup system (EBS). The failover process continued until 12:01 a.m. on August 9, 2012. All attempts to log in by remote and on-site FPL personnel to the EBS failed because of a login configuration issue that was remedied at approximately 12:35 a.m. on August 9, 2012.

By 12:21 a.m. on August 9, 2012, approximately one-third of FPL's substation assets were communicating data to the EBS, allowing partial monitoring of FPL's transmission system. This partial visibility of the FPL system was the result of a routing issue. This partial monitoring via the EBS was not available at the FRCC RC console, so the FRCC RC relocated to a FPL SCADA/EMS support staff console which provided the partial visibility. At 12:53 a.m. on August 9, 2012, FRCC was able to access the SCADA/EMS data. At 1:09 a.m. on August 9, 2012, FPL re-established normal operations.

During this event, FRCC was unable to access the SCADA/EMS data in order to monitor interconnections and Bulk Electric System (BES) elements in the FRCC footprint and relied on manual monitoring processes. The Real Time Contingency Analysis (RTCA) program, which is FRCC's primary tool to assess the reliability of the BES, was also unable to function properly. As a result, FRCC could not simulate contingencies for the real-time network or identify resulting BES reliability issues using the SOL and IROL violation limits and constraints information from the RTCA from 10:19 p.m. on August 8, 2012 until 1:09 a.m. on August 9, 2012. FRCC also lost the use of the Inter-Control Center Protocol data link that receives BES information from other FRCC member utilities for the RC function during the event.

FRCC had a back-up EMS procedure which it implemented during the event, but the back-up EMS also failed due to a login configuration issue which resulted in the inability to use the analysis tools. FRCC had procedures to address the loss of its EMS or RTCA, but FRCC did not have procedures in place to mitigate the effects of simultaneous outages of SCADA/EMS and RTCA. FRCC provided evidence that it has

authority for approvals for planned maintenance and outages of the analysis tool as required by the Standard.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

This violation posed a serious and substantial risk to the reliability of the bulk power system. SERC determined that the violation posed a serious and substantial risk because, for approximately three hours, FRCC lost control of its RC analysis tools and did not have procedures in place to mitigate the loss of those tools. This failure put the BPS within the FRCC RC area at increased risk for the duration of the event. However, FRCC had and used certain monitoring capabilities to maintain situational awareness. FRCC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL’s total generation. FPL’s system operator had direct telecommunication with personnel at FPL’s generation sites which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL’s interconnected entities and the FRCC state hotline. During the event, FRCC requested that entities within its RC area remain on schedule and notify FRCC if they were off schedule, or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the event that they were experiencing such problems. FRCC worked with the adjacent RC, Southern Company, to identify any schedule deviations and periodically communicated any schedule deviations identified by Southern Company to FPL’s system operators and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the event as requested by FRCC. No FRCC BES elements de-energized and no SOLs were exceeded during the event.

II. DISCOVERY INFORMATION

METHOD OF DISCOVERY

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

DURATION DATE(S)

8/8/2012 at 10:19 p.m. (when FRCC lost the ability to control its RC analysis tools)
 through 8/9/2012 at 1:09 a.m. (when FRCC regained the ability to control its RC analysis tools)

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY 12/21/12

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

FOR FINAL ACCEPTED MITIGATION PLAN:

MITIGATION PLAN NO. SERCMIT009206-2
 DATE SUBMITTED TO REGIONAL ENTITY 1/16/14
 DATE ACCEPTED BY REGIONAL ENTITY 1/20/14
 DATE APPROVED BY NERC 2/19/14
 DATE PROVIDED TO FERC 2/21/14

IDENTIFY AND EXPLAIN ALL PRIOR VERSIONS THAT WERE ACCEPTED OR REJECTED, IF APPLICABLE

MITIGATION PLAN COMPLETED YES NO

EXPECTED COMPLETION DATE 1/11/13
 (Submitted as complete)
 EXTENSIONS GRANTED N/A
 ACTUAL COMPLETION DATE 1/11/13
 DATE OF CERTIFICATION LETTER 1/17/14
 CERTIFIED COMPLETE BY REGISTERED ENTITY AS OF 1/11/13
 VERIFIED COMPLETE BY REGIONAL ENTITY AS OF 2/11/14²

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

To mitigate this violation, FRCC:

- 1) Upgraded its SCADA/EMS to provide improvements over the previous system in both network and server resiliency. With the upgrade, there is now a fully redundant backup system with all new network and server hardware with a failover scheme. As part of the normal operational posture both the main control center and back-up control center systems are configured to run, thus assuring full functionality of all the systems. The main control center and back-up control center sites are connected via dedicated high speed links through which near real time data replication occurs. This upgrade was planned for prior to the August 2012 event;
- 2) In addition, the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the

² This Disposition Document serves as SERC's Verification of Mitigation Plan Completion.

- authentication servers at both the primary and the backup control center which remedied the log in configuration issue identified during the event;
- 3) Approved and implemented an interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA), during the loss of its SCADA/EMS and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS; and
 - 4) Approved and implemented the final version of the FRCC RC Conservative Operations Procedure.

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

SERC reviewed the following evidence submitted by FRCC as evidence of completion of its Mitigation Plan:

- 1) A document containing a checklist used to verify the transition to the new EMS system, which includes tests performed during the week of the transition and the day of the transition. The document also shows RCIS messages announcing the transition and the completion of the EMS system upgrades;
- 2) Minutes from monthly meetings of the Operating Reliability Subcommittee in which changes to the conservative operations procedure were discussed and approved; and
- 3) A copy of the updated conservative operations procedure that identifies the triggers to implement the procedure, and the corresponding actions and communications that the RC system operator should invoke for partial or total loss of the RC agent's EMS monitoring capabilities. The procedure specifically states steps to be taken if EMS monitoring capabilities are lost for more than 30 minutes.

EXHIBITS:

SOURCE DOCUMENT

FRCC Self-Report dated December 21, 2012

MITIGATION PLAN

FRCC Mitigation Plan submitted on January 16, 2014

CERTIFICATION BY REGISTERED ENTITY

FRCC Certification of Completed Mitigation Plan dated January 17, 2014

VERIFICATION BY REGIONAL ENTITY

This Disposition document serves as SERC's Verification of Mitigation Plan Completion.

DISPOSITION OF VIOLATION¹
Dated October 23, 2014

NERC TRACKING NO. SERC TRACKING NO.
SERC2012011651 SERC2012-401651

I. VIOLATION INFORMATION

RELIABILITY STANDARD	REQUIREMENT(S)	SUB-REQUIREMENT(S)	VRF(S)	VSL(S)
IRO-008-1	R2.		High	Severe

VIOLATION(S) APPLIES TO THE FOLLOWING FUNCTIONS IN THE SERC REGION:

BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
								X						

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

The purpose statement of IRO-008 provides:

To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the Bulk Electric System is assessed during the operations horizon.

IRO-008-1 R2 provides:

R2. Each Reliability Coordinator shall perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs.

VIOLATION DESCRIPTION

On December 21, 2012, FRCC submitted a Self-Report to SERC stating that, as a Reliability Coordinator (RC), it was in violation of IRO-008-1 R2. FRCC did not perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area was exceeding any Interconnection Reliability Operating Limits (IROLs) or was expected to exceed any IROLs.

FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an agent of FRCC to perform the RC function. The FRCC RC operators are located at the FPL system control center.

¹ For purposes of this document and attachments 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.

This violation resulted from two incidents that occurred on August 8, 2012 and August 9, 2012.

At 10:19 p.m. on August 8, 2012, a core router pair (primary and secondary) supporting the communications network for FRCC's Energy Management System (EMS) at FPL's primary control center malfunctioned due to a buffer overrun. The EMS machines are accessed from the control center communications network. The buffer overrun disrupted the link controlling the transfer process to the secondary router, which in turn caused a shutdown of the communications network supporting FPL's Supervisory Control and Data Acquisition (SCADA) / EMS. The failure of the communications network rendered the EMS inaccessible from system operator consoles. SERC determined that the core router pair that malfunctioned were associated with communication networks and data communication links between discrete Electronic Security Perimeters, and therefore were exempt from the CIP Standards.

At 10:37 p.m. on August 8, 2012, FPL's support personnel began to failover the system to the emergency backup system (EBS). The failover process continued until 12:01 a.m. on August 9, 2012. All attempts to log in by remote and on-site FPL personnel to the EBS failed because of a login configuration issue that was remedied at approximately 12:35 a.m. on August 9, 2012.

By 12:21 a.m. on August 9, 2012, approximately one-third of FPL's substation assets were communicating data to the EBS, allowing partial monitoring of FPL's transmission system. This partial visibility of the FPL system was the result of a routing issue. This partial monitoring via the EBS was not available at the FRCC RC console, so the FRCC RC relocated to a FPL SCADA/EMS support staff console which provided the partial visibility. At 12:53 a.m. on August 9, 2012, FRCC was able to access the SCADA/EMS data. At 1:09 a.m. on August 9, 2012, FPL re-established normal operations.

During this event, FRCC was unable to access the SCADA/EMS data in order to monitor interconnections and Bulk Electric System (BES) elements in the FRCC footprint and relied on manual monitoring processes. The Real Time Contingency Analysis (RTCA) program, which is FRCC's primary tool to assess the reliability of the BES, was also unable to function properly. As a result, FRCC could not simulate contingencies for the real-time network or identify resulting BES reliability issues using the SOL and IROL violation limits and constraints information from the RTCA from 10:19 p.m. on August 8, 2012 until 1:09 a.m. on August 9, 2012. FRCC last conducted a Real-Time Assessment at 10:18 p.m. on August 8, 2012. FRCC also lost the use of the Inter-Control Center Protocol data link that receives BES information from other FRCC member utilities for the RC function during the event. As a result, FRCC was unable to perform a Real-Time Assessment at least once every 30 minutes.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

This violation posed a serious and substantial risk to the reliability of the bulk power system. SERC determined that the violation posed a serious and substantial risk because,

for approximately three hours, FRCC lost the ability to perform a Real-Time Assessment to determine if its Wide Area was exceeding any IROLs or was expected to exceed any IROLs. This failure put the BPS within the FRCC RC area at increased risk for the duration of the event. However, FRCC had and used certain monitoring capabilities to maintain situational awareness during the event. FRCC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL's total generation. FPL's system operator had direct telecommunication with personnel at FPL's generation sites which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL's interconnected entities and the FRCC state hotline. During the event, FRCC requested that entities within its RC area remain on schedule and notify FRCC if they were off schedule, or experienced significant Area Control Error. No entities within the FRCC RC area notified FRCC during the event that they were experiencing such problems. FRCC worked with the adjacent RC, Southern Company, to identify any schedule deviations and periodically communicated any schedule deviations identified by Southern Company to FPL's system operators and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the event as requested by FRCC. No FRCC BES elements de-energized and no SOLs were exceeded during the event.

II. DISCOVERY INFORMATION

METHOD OF DISCOVERY

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

DURATION DATE(S)

8/8/2012 at 10:48 p.m. (30 minutes after FRCC last conducted a Real-Time Assessment) through 8/9/2012 at 1:09 a.m. (when FRCC regained the ability to monitor the RC Area and perform a Real-Time Assessment)

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY 12/21/12

- 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

FOR FINAL ACCEPTED MITIGATION PLAN:

MITIGATION PLAN NO.	SERCMIT009207-1
DATE SUBMITTED TO REGIONAL ENTITY	1/16/14
DATE ACCEPTED BY REGIONAL ENTITY	1/20/14
DATE APPROVED BY NERC	2/19/14
DATE PROVIDED TO FERC	2/21/14

IDENTIFY AND EXPLAIN ALL PRIOR VERSIONS THAT WERE ACCEPTED OR REJECTED, IF APPLICABLE

MITIGATION PLAN COMPLETED YES NO

EXPECTED COMPLETION DATE	1/11/13 (Submitted as complete)
EXTENSIONS GRANTED	N/A
ACTUAL COMPLETION DATE	1/11/13
DATE OF CERTIFICATION LETTER	1/17/14
CERTIFIED COMPLETE BY REGISTERED ENTITY AS OF	1/11/13
VERIFIED COMPLETE BY REGIONAL ENTITY AS OF	2/11/14 ²

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

To mitigate this violation, FRCC:

- 1) Upgraded its SCADA/EMS to provide improvements over the previous system in both network and server resiliency. With the upgrade, there is now a fully redundant backup system with all new network and server hardware with a failover scheme. As part of the normal operational posture both the main control center and back-up control center systems are configured to run, thus assuring full functionality of all the systems. The main control center and back-up control center sites are connected via dedicated high speed links through which near real time data replication occurs. This upgrade was planned for prior to the August 2012 event;
- 2) In addition, the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied the log in configuration issue identified during the event;
- 3) Approved and implemented an interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any

² This Disposition Document serves as SERC's Verification of Mitigation Plan Completion.

- IROLs or is expected to exceed any IROLs during the loss of its SCADA/EMS; and
- 4) Approved and implemented the final version of the FRCC RC Conservative Operations Procedure.

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

SERC reviewed the following evidence submitted by FRCC as evidence of completion of its Mitigation Plan:

- 1) A document containing a checklist used to verify the transition to the new EMS system, which includes tests performed during the week of the transition and the day of the transition. The document also shows RCIS messages announcing the transition and the completion of the EMS system upgrades;
- 2) Minutes from monthly meetings of the Operating Reliability Subcommittee in which changes to the conservative operations procedure were discussed and approved; and
- 3) A copy of the updated conservative operations procedure that identifies the triggers to implement the procedure, and the corresponding actions and communications that the RC system operator should invoke for partial or total loss of the RC agent's EMS monitoring capabilities. The procedure specifically states steps to be taken if EMS monitoring capabilities are lost for more than 30 minutes.

EXHIBITS:

SOURCE DOCUMENT

FRCC Self-Report dated December 21, 2012

MITIGATION PLAN

FRCC Mitigation Plan submitted on January 16, 2014

CERTIFICATION BY REGISTERED ENTITY

FRCC Certification of Completed Mitigation Plan dated January 17, 2014

VERIFICATION BY REGIONAL ENTITY

This Disposition document serves as SERC's Verification of Mitigation Plan Completion.

DISPOSITION OF VIOLATION¹
Dated October 23, 2014

NERC TRACKING NO. SERC TRACKING NO.
SERC2014013439 SERC2014-402015

I. VIOLATION INFORMATION

RELIABILITY STANDARD	REQUIREMENT(S)	SUB-REQUIREMENT(S)	VRF(S)	VSL(S)
EOP-008-0	R1	R1.5	Medium	Severe

VIOLATION(S) APPLIES TO THE FOLLOWING FUNCTIONS IN THE SERC
REGION:

BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
								X						

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

The purpose statement of EOP-008 provides:

Each reliability entity must have a plan to continue reliability operations in the event its control center becomes inoperable.

EOP-008-0 R1 provides:

R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:

R1.1. The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.

R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.

R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.

R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.

¹ For purposes of this document and attachments 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.

R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.

R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.

R1.7. The plan shall be reviewed and updated annually.

R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.

VIOLATION DESCRIPTION

On February 20, 2014, Florida Reliability Coordinating Council, Inc. (FRCC) submitted a SERC-initiated Self-Report to SERC stating that, as a Reliability Coordinator (RC), it was in violation of EOP-008-0 R1.5. FRCC failed to conduct adequate periodic tests to ensure viability of the plan to continue reliability operations in the event its control center became inoperable.

FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an agent of FRCC to perform the RC function. The FRCC RC operators are located at the FPL system control center.

This violation resulted from two incidents that occurred on August 8, 2012 and August 9, 2012.

At 10:19 p.m. on August 8, 2012, a core router pair (primary and secondary) supporting the communications network for FRCC's Energy Management System (EMS) at FPL's primary control center malfunctioned due to a buffer overrun. The EMS machines are accessed from the control center communications network. The buffer overrun disrupted the link controlling the transfer process to the secondary router, which in turn caused a shutdown of the communications network supporting FPL's Supervisory Control and Data Acquisition (SCADA) / EMS. The failure of the communications network rendered the EMS inaccessible from system operator consoles. SERC determined that the core router pair that malfunctioned was associated with communication networks and data communication links between discrete Electronic Security Perimeters, and therefore were exempt from the CIP Standards.

At 10:37 p.m. on August 8, 2012, FPL's support personnel began to failover the system to the emergency backup system (EBS). The failover process continued until 12:01 a.m. on August 9, 2012. All attempts to log in to the EBS by remote and on-site FPL personnel failed because of a login configuration issue that was remedied at approximately 12:35 a.m. on August 9, 2012.

By 12:21 a.m. on August 9, 2012, approximately one-third of FPL's substation assets were communicating data to the EBS, allowing partial monitoring of FPL's transmission system. This partial visibility of the FPL system was the result of a routing issue. This partial monitoring via the EBS was not available at the FRCC RC console, so the FRCC RC relocated to a FPL SCADA/EMS support staff console which provided the partial

visibility. At 12:53 a.m. on August 9, 2012, FRCC was able to access the SCADA/EMS data. At 1:09 a.m. on August 9, 2012, FPL re-established normal operations.

FRCC was unable to activate the back-up control center because workstations used for the EMS client at the back-up control center were incorrectly configured to use authentication servers located on the primary control center secure network. The proper configuration should have been to use one authentication server at the primary control center and one at the backup control center. As a result, when the network at the primary control center was not available, both authentication servers were also unavailable and FRCC was unable to login at the back-up control center.

FRCC did not identify the incorrect network configuration during its testing of the plan because its testing plans did not incorporate the disabling of the authentication servers. As a result, the network configuration issue was not identified during tests, which resulted in the inability to access the back-up control center during the August event and demonstrated that the plan was not viable.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

This violation posed a serious and substantial risk to the reliability of the bulk power system (BPS). SERC determined that the violation posed a serious and substantial risk because FRCC's failure to adequately test its plan to continue reliable operations in the event its control center became inoperable resulted in a failure to identify a flaw in the plan such that the plan was not viable. Proper testing of the plan would have identified the configuration errors involving the authentication servers and allowed the activation of the backup control center after the primary control center became inoperable. Instead, because FRCC failed to identify the configuration error, it lost the ability for approximately three hours to continuously monitor its RC area and to ensure that SOL and IROL monitoring and derivations continued while its main monitoring system was unavailable. This failure put the BPS within the FRCC RC area at increased risk for the duration of the event. However, FRCC had and used certain monitoring capabilities to maintain situational awareness during the event. FRCC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net MW display with real-time telemetry data from FPL generation sites constituting approximately 79% of FPL's total generation. FPL's system operator had direct telecommunication with personnel at FPL's generation sites which allowed for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, FRCC had the ability to monitor changes in tie-line flows and voltages using telecommunications with FPL's interconnected entities and the FRCC state hotline. During the event, FRCC requested that entities within its RC area remain on schedule and notify FRCC if they were off schedule, or developed significant Area Control Error. No entities within the FRCC RC area notified FRCC during the event that they were experiencing such problems. FRCC worked with the adjacent RC, Southern Company, to identify any schedule deviations and periodically communicated any schedule deviations identified by Southern Company to FPL's system operators and instructed the FPL system operators to adjust generation output as appropriate. These manual adjustments to generation output continued for the duration of the event as

requested by FRCC. No FRCC BES elements de-energized and no SOLs were exceeded during the event.

II. DISCOVERY INFORMATION

METHOD OF DISCOVERY

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

DURATION DATE(S)

6/18/2007 (when the Standard became mandatory and enforceable) until 8/9/2012 (when FRCC corrected the login configuration issue and gained full operational control of the back-up control center)

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY 2/20/14

- 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

FOR FINAL ACCEPTED MITIGATION PLAN:

- MITIGATION PLAN NO. SERCMIT010489
- DATE SUBMITTED TO REGIONAL ENTITY 2/20/14
- DATE ACCEPTED BY REGIONAL ENTITY 3/12/14
- DATE APPROVED BY NERC 4/9/14
- DATE PROVIDED TO FERC 4/10/14

IDENTIFY AND EXPLAIN ALL PRIOR VERSIONS THAT WERE ACCEPTED OR REJECTED, IF APPLICABLE

MITIGATION PLAN COMPLETED YES NO

EXPECTED COMPLETION DATE 10/18/13

(Submitted as complete)

EXTENSIONS GRANTED N/A

ACTUAL COMPLETION DATE	10/18/13
DATE OF CERTIFICATION LETTER	2/28/14
CERTIFIED COMPLETE BY REGISTERED ENTITY AS OF	10/18/13
VERIFIED COMPLETE BY REGIONAL ENTITY AS OF	10/18/14 ²

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

To mitigate this violation, FRCC:

- 1) Reconfigured the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) to use the authentication servers at both the primary and the backup control center which remedied and provided testing via real time operations to validate the remediation of the login configuration issue identified during the August 8-9, 2012 EMS outage;
- 2) Retired the EBS as part of a planned upgrade;
- 3) Tested the upgraded EMS pursuant to the requirements of EOP-008-1, which included objectives for operating from the Backup Control Center for a minimum of two consecutive hours.

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

SERC reviewed the following evidence submitted by FRCC as evidence of completion of its Mitigation Plan:

- 1) A post-event analysis report detailing how FRCC restored functionality until the reconfiguration could take place;
- 2) A copy of the EMS implementation plan that outlines all the procedures to be performed as part of the retirement of the old system and the upgrade to the new EMS, and indicates the times that each step was taken;
- 3) A training outline and documentation of the individual participation in training and execution of an annual backup control center assessment; and
- 4) A copy of the system operators log for October 18, 2013 indicating that control was successful transferred to the backup control center and restored to the primary control center with no problems.

EXHIBITS:

SOURCE DOCUMENT
FRCC Self-Report dated February 20, 2014

MITIGATION PLAN
FRCC Mitigation Plan submitted on February 20, 2014

CERTIFICATION BY REGISTERED ENTITY

² This Disposition Document serves as SERC's Verification of Mitigation Plan Completion.

FRCC Certification of Completed Mitigation Plan dated February 28, 2014

VERIFICATION BY REGIONAL ENTITY

This Disposition document serves as SERC's Verification of Mitigation Plan Completion.

Attachment B

**Record documents for the violation of
EOP-008-0 R1 (SERC2014013439)**

**B-1. FRCC's Source Document dated
March 22, 2013**

**B-2. FRCC's Mitigation Plan designated as
SERCMIT010489 submitted February 20,
2014**

**B-3. FRCC's Certification of Mitigation
Plan Completion dated February 28, 2014**

This item was submitted by Carlos Maldonado (cmaldonado@frcc.com) on 2/20/2014

FORM INFORMATION

Registered Entity: Florida Reliability Coordinating Council, Inc.

NERC Registry ID: NCR00026

JRO ID:

CFR ID:

Entity Contact Information: Carlos Maldonado

REPORTING INFORMATION

Applicable Standard: EOP-008-0

Applicable Requirement: R1.

Applicable Sub Requirement(s): R1.5.

Applicable Functions: RC

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: 2/11/2014

Beginning Date of Possible Violation: 6/18/2007

End or Expected End Date of Possible Violation: 8/9/2012

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

Possible Violation: On August 8, 2012 the FRCC RC Energy Management System (EMS) was unavailable. The EMS outage on August 8-9, 2012 was caused when a core router pair (primary and secondary) malfunctioned resulting in a shutdown of the communications network supporting the EMS. The plans used by the FRCC Reliability Coordinator for the loss of control center functionality, includes using a separate Emergency Backup System (EBS) in the event of a loss of the primary EMS. Testing of the EBS includes procedures and responsibilities for conducting periodic tests at least annually. However, the annual tests of the EBS did not adequately simulate the unique failure mode experienced during this event and therefore did not ensure viability of the plan with respect to this unique failure mode.

Are Mitigating Activities in progress or completed? Yes

If Yes, Provide description of Mitigating Activities:

The workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied and provided testing via real time operations to validate the remediation of the log in configuration issue identified during the August 8-9, 2012 EMS outage.

Provide details to prevent recurrence:

On November 10, 2012 the EBS system was retired and an enhanced upgraded Energy Management System (EMS) was put into service. With this upgrade, there is a new backup system with new network and server hardware.

Date Mitigating Activities are expected to be completed or were completed:

Potential Impact to the Bulk Power System:

Moderate

Actual Impact to the Bulk Power System:

Minimal

Provide detailed description of Potential Risk to Bulk Power System:

Not ensuring that a simulating potential failure modes could lead to a less than adequate viable annual test of the EBS which could result in the EBS not being available in the event of loss of control center functionality.

Provide detailed description of Actual Risk to Bulk Power System:

On August 8, 2012 the EBS was unavailable for approximately 2 hours during the loss of control center functionality which prevented visibility of a portion of the RC's area during this time.

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.)

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 2/20/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 2/20/2014

SECTION A: COMPLIANCE NOTICES & MITIGATION PLAN REQUIREMENTS

A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "[Attachment A - Compliance Notices & Mitigation Plan Requirements](#)" to this form.

[Yes] A.2 I have reviewed Attachment A and understand that this Mitigation Plan Submittal Form will not be accepted unless this box is checked.

SECTION B: REGISTERED ENTITY INFORMATION

B.1 Identify your organization

Company Name: Florida Reliability Coordinating Council, Inc.

Company Address: 3000 Bayport Drive

Tampa, Florida 33607

Compliance Registry ID: NCR00026

B.2 Identify the individual in your organization who will be the Entity Contact regarding this Mitigation Plan.

Name: Carlos Maldonado

SECTION C: IDENTIFICATION OF ALLEGED OR CONFIRMED VIOLATION(S) ASSOCIATED WITH THIS MITIGATION PLAN

C.1 This Mitigation Plan is associated with the following Alleged or Confirmed violation(s) of Reliability Standard listed below.

Standard: EOP-008-0

Requirement	Regional ID	NERC Violation ID	Date Issue Reported
R1.	SERC2014-402015	SERC2014013439	2/20/2014

C.2 Identify the cause of the Alleged or Confirmed violation(s) identified above:

Possible Violation: On August 8, 2012 the FRCC RC Energy Management System (EMS) was unavailable. The EMS outage on August 8-9, 2012 was caused when a core router pair (primary and secondary) malfunctioned resulting in a shutdown of the communications network supporting the EMS. The plans used by the FRCC Reliability Coordinator for the loss of control center functionality, includes using a separate Emergency Backup System (EBS) in the event of a loss of the primary EMS. Testing of the EBS includes procedures and responsibilities for conducting periodic tests at least annually. However, the annual tests of the EBS did not adequately simulate the unique failure mode experienced during this event and therefore did not ensure viability of the plan with respect to this failure mode.

[Attachments \(\)](#)

C.3 Provide any additional relevant information regarding the Alleged or Confirmed violations associated with this MitigationPlan:

During the August 8-9, 2012 RC Agent EMS outage the emergency procedure includes switching to the Emergency Backup System (EBS). The initial attempt to access the EBS failed due to both login authentication servers for the clients at the RC Agent's Remote Backup Control Center (RBCC) and Local Backup Control Center (LBCC) being configured to servers on the network which had shut down. Within 2 hours of discovery, the EBS was correctly configured which enabled visibility to the RC's area.

[Attachments \(\)](#)

SECTION D: DETAILS OF PROPOSED MITIGATION PLAN

D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the Alleged or Confirmed violations identified above in Part C.1 of this form:

-----Completed Milestone Steps-----

A: The workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied and provided testing via real time operations to validate the remediation of the log in configuration issue identified during the August 8-9, 2012 EMS outage.
(Completed: August 9, 2012)

B: The EBS was retired as part of a planned upgrade on November 10, 2012.
(Completed: November 10, 2012)

C: The upgraded EMS was annually tested as per the Loss of Control Center Functionality Operating Plan (EOP-008-1). The testing included objectives for operating from

the Backup Control Center for a minimum of two consecutive hours.
(Completed: October 18, 2013)

[Attachments \(\)](#)

D.2 Provide the date by which full implementation of the Mitigation Plan will be, or has been, completed with respect to the Alleged or Confirmed violations identified above. State whether the Mitigation Plan has been fully implemented:

10/18/2013

D.3 Enter Milestone Activities, with due dates, that your organization is proposing, or has completed, for this Mitigation Plan:

No Milestones Defined

SECTION E: INTERIM AND FUTURE RELIABILITY RISK

E.1 Abatement of Interim BPS Reliability Risk: While your organization is implementing this Mitigation Plan the reliability of the Bulk Power Supply (BPS) may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take to mitigate this increased risk to the reliability of the BPS. (Additional detailed information may be provided as an attachment):

This mitigation plan was completed on October 18, 2013. There was minimal additional risk during implementation of this mitigation plan.

[Attachments \(\)](#)

E.2 Prevention of Future BPS Reliability Risk: Describe how successful completion of this Mitigation Plan will prevent or minimize the probability that your organization incurs further risk of Alleged violations of the same or similar reliability standards requirements in the future. (Additional detailed information may be provided as an attachment):

The EBS was retired and an enhanced upgraded Energy Management System (EMS) was put into service. With this upgrade, there is a new backup system with new network and server hardware that was annually tested per EOP-008-1 on October 18, 2013.

[Attachments \(\)](#)

SECTION F: AUTHORIZATION

An authorized individual must sign and date this Mitigation Plan Submittal Form. By doing so, this individual, on behalf of your organization:

- a) Submits this Mitigation Plan for acceptance by SERC and approval by NERC, and
- b) If applicable, certifies that this Mitigation Plan was completed on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and
- c) Acknowledges:
 - I am Richard Gilbert of Florida Reliability Coordinating Council, Inc.
 - I am qualified to sign this Mitigation Plan on behalf of Florida Reliability Coordinating Council, Inc.
 - I understand Florida Reliability Coordinating Council, Inc.'s obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure, including Appendix 4 (Compliance Monitoring and Enforcement Program of the North American Electric Reliability Corporation (NERC CMEP))
 - I have read and am familiar with the contents of this Mitigation Plan
 - Florida Reliability Coordinating Council, Inc. agrees to comply with, this Mitigation Plan, including the timetable completion date, as accepted by SERC and approved by NERC

SECTION G: REGIONAL ENTITY CONTACT

SERC Single Point of Contact (SPOC)

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 2/28/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 2/28/2014

MEMBER MITIGATION PLAN CLOSURE

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SERC to verify completion of the Mitigation Plan. SERC may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6) Data or information submitted may become part of a public record upon final disposition of the possible violation, therefore any confidential information contained therein should be marked as such in accordance with the provisions of Section 1500 of the NERC Rules of Procedure.

Name of Registered Entity submitting certification:

Florida Reliability Coordinating Council, Inc.

Name of Standard of mitigation violation(s):

EOP-008-0

Requirement	Tracking Number	NERC Violation ID
R1.	SERC2014-402015	SERC2014013439

Date of completion of the Mitigation Plan:

10/18/2013

No Milestones Defined

Summary of all actions described in Part D of the relevant mitigation plan:

As a result of the EOP-008-0 R1.5 Self Report, the FRCC RC Agent was able to resolve the EBS login configuration issue within 2 hours of recognizing the fault during the August 8-9, 2012 EMS outage. Following the event, the EBS system was retired on November 10, 2012 as part of a planned upgrade and replaced with a new EMS and backup system. Upon upgrading to this new system, an annual test was conducted on October 18, 2013 as per the Loss of Control Center Functionality Operating Plan (EOP-008-1) which included objectives for operating from the Backup Control Center for a minimum of two consecutive hours.

Description of the information provided to SERC for their evaluation *

The following documents are attached as evidence:

FRCC Post-Event Analysis Report FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring (August 8-9, 2012): A - FRCC RC Post-Event Analysis Report_August 8-9 2012 Event_102312_FINAL.pdf (Page 6 & Page 11)

FRCC RC Agent EMS Migration to Version 2.5 Implementation Plan: B - RC_Agent_EMS_Migration_to_version_2_5.pdf

10-18-13 Back Up Control Center Assessment: C - 2013 - 10 - 18 BUCC Assessment.pdf

10-18-13 System Operators Log: C - SysOp_log_10-18-13.pdf

I certify that the Mitigation Plan for the above-named violation has been completed on the date shown above. In doing so, I certify that all required Mitigation Plan actions described in Part D of the relevant Mitigation Plan have been completed, compliance has been restored, the above-named entity is currently compliant with all of the requirements of the referenced standard, and that all information submitted is complete, true and correct to the best of my knowledge.

Attachment C

**Record documents for the violations of
IRO-002-2 R7 (SERC2012011649) and
IRO-002-2 R8 (SERC2012011650)**

**C-1. FRCC's Source Document for IRO-
002-2 R7 dated December 21, 2012**

**C-2. FRCC's Source Document for IRO-
002-2 R8 dated December 21, 2012**

**C-3. FRCC's Mitigation Plan designated as
SERCMIT009206-2 submitted January 16,
2014**

**C-4. FRCC's Certification of Mitigation
Plan Completion dated January 17, 2014**

VIEW SELF-REPORT: IRO-002-2 R7. (COMPLETED)

 This item was submitted by Richard Gilbert (rgilbert@frc.com) on 12/21/2012 

FORM INFORMATION 

Registered Entity:	Florida Reliability Coordinating Council, Inc.
NERC Registry ID:	NCR00026
JRO ID:	
CFR ID:	
Entity Contact Information:	Richard Gilbert

REPORTING INFORMATION 

Applicable Standard:	IRO-002-2
Applicable Requirement:	R7.
Applicable Sub Requirement(s):	
Applicable Functions:	RC

Has a Possible violation of this standard and requirement previously been reported or discovered:

Has this Possible Violation previously been reported to other Regions:

Date Possible Violation was discovered:

Beginning Date of Possible Violation:

End or Expected End Date of Possible Violation:

Is the violation still occurring?

Provide detailed description and cause of Possible Violation:

Possible Violation: Although the FRCC RC had a back-up EMS which also failed, the FRCC Reliability Coordinator was not able to ensure SOL and IROL monitoring and derivations continued during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

Additional Details:

Note: The FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an Agent of FRCC to perform the Reliability Coordinator (RC) function. The FRCC RC operators are located at FPL's System Control Center (SCC) in Miami, Florida.

The FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring Event on August 8-9, 2012 prompted a compliance review of associated NERC Reliability Standards. During the review it was discovered the FRCC Reliability Coordinator (RC) was not able to ensure SOL and IROL monitoring and derivations continued during the loss of its SCADA/EMS and its Real Time Contingency Analysis (RTCA) application.

The FRCC RC's loss of monitoring tools (SCADA/EMS and RTCA) resulted in significant loss of monitoring capability of the FRCC Bulk Electric System (BES); however the FRCC RC operators did take steps to minimize the potential impact to reliability of the BES. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then actual load to generation balancing deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the duration

of the event as requested by the FRCC RC.

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

Are Mitigating Activities in progress or completed?

No

Potential Impact to the Bulk Power System:

Minimal

Provide detailed description of Potential Impact to Bulk Power System:

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

Actual Impact to the Bulk Power System:

Minimal

Provide detailed description of Actual Impact to Bulk Power System:

The FRCC RC's loss of monitoring tools (SCADA/EMS and RTCA) resulted in significant loss of monitoring capability of the FRCC Bulk Electric System (BES); however the FRCC RC operators did take steps to minimize the potential impact to reliability of the BES. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then actual load to generation balancing deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the duration of the event as requested by the FRCC RC.

Additional Comments:

The attached file is summary of the IRO-002-2 R7 Self-Report.

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.)

VIEW SELF-REPORT: IRO-002-2 R8. (COMPLETED)

 This item was submitted by Richard Gilbert (rgilbert@frc.com) on 12/21/2012 

FORM INFORMATION 

Registered Entity:

NERC Registry ID:

JRO ID:

CFR ID:

Entity Contact Information:

REPORTING INFORMATION 

Applicable Standard:

Applicable Requirement:

Applicable Sub Requirement(s):

Applicable Functions:

Has a Possible violation of this standard and requirement previously been reported or discovered:

Has this Possible Violation previously been reported to other Regions:

Date Possible Violation was discovered:

Beginning Date of Possible Violation:

End or Expected End Date of Possible Violation:

Is the violation still occurring?

Provide detailed description and cause of Possible Violation:

Possible Violation: Although the FRCC RC had a back-up EMS procedure which was implemented, the back-up EMS also failed and the FRCC Reliability Coordinator did not have a procedure in place to mitigate the effects of both outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA), during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

Additional Details:
 Note: The FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an Agent of FRCC to perform the Reliability Coordinator (RC) function. The FRCC RC operators are located at FPL's System Control Center (SCC) in Miami, Florida.

The FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring Event on August 8-9, 2012 prompted a compliance review of associated NERC Reliability Standards. During the review it was discovered the FRCC Reliability Coordinator (RC) did not have a procedure in place to mitigate the effects of both outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA).

Although, during the August 8-9, 2012 loss of monitoring tools (SCADA/EMS and RTCA) and not having a procedure in place to mitigate the effects of analysis tool outages, the FRCC RC did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate Area Control Error (ACE) deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the duration of the event as

requested by the FRCC RC.

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

Are Mitigating Activities in progress or completed?

If Yes, Provide description of Mitigating Activities:

An interim FRCC Reliability Coordinator procedures was implemented on December 10, 2012 to mitigate the effects of analysis tool outages.
A Mitigation Plan will be developed and submitted to SERC in January 2013.

Provide details to prevent recurrence:

A FRCC Reliability Coordinator procedure was implemented on December 10, 2012 to mitigate the effects of analysis tool outages.

Date Mitigating Activities are expected to be completed or were completed:

Potential Impact to the Bulk Power System:

Minimal

Provide detailed description of Potential Impact to Bulk Power System:

Although, during the August 8-9, 2012 loss of monitoring tools (SCADA/EMS and RTCA) and not having a procedure in place to mitigate the effects of analysis tool outages, the FRCC RC did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate Area Control Error (ACE) deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the duration of the event as requested by the FRCC RC.

Actual Impact to the Bulk Power System:

Minimal

Provide detailed description of Actual Impact to Bulk Power System:

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

Additional Comments:

The attached file is a summary of IRO-002-2 R8 Self-Report.

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.)

A [previous version](#) of the this Mitigation Plan exists

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 1/16/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 1/16/2014

SECTION A: COMPLIANCE NOTICES & MITIGATION PLAN REQUIREMENTS

A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "[Attachment A - Compliance Notices & Mitigation Plan Requirements](#)" to this form.

[Yes] A.2 I have reviewed Attachment A and understand that this Mitigation Plan Submittal Form will not be accepted unless this box is checked.

SECTION B: REGISTERED ENTITY INFORMATION

B.1 Identify your organization

Company Name:

Company Address:

Compliance Registry ID:

B.2 Identify the individual in your organization who will be the Entity Contact regarding this Mitigation Plan.

Name:

SECTION C: IDENTIFICATION OF ALLEGED OR CONFIRMED VIOLATION(S) ASSOCIATED WITH THIS MITIGATION PLAN

C.1 This Mitigation Plan is associated with the following Alleged or Confirmed violation(s) of Reliability Standard listed below.

Standard:

Requirement	Regional ID	NERC Violation ID	Date Issue Reported
R7.	SERC2012-401649	SERC2012011649	12/21/2012
R8.	SERC2012-401650	SERC2012011650	12/21/2012

C.2 Identify the cause of the Alleged or Confirmed violation(s) identified above:

R7: Although the FRCC RC had a back-up EMS which also failed, the FRCC Reliability Coordinator was not able to ensure SOL and IROL monitoring and derivations continued during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

R8: Although the FRCC RC had a back-up EMS procedure which was implemented, the back-up EMS also failed and the FRCC Reliability Coordinator did not have a procedure in place to mitigate the effects of both outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA), during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

[Attachments \(0\)](#)

C.3 Provide any additional relevant information regarding the Alleged or Confirmed violations associated with this MitigationPlan:

The FRCC has an agreement in place with "Entity A" that designates "Entity A" to act as an Agent of FRCC to perform the Reliability Coordinator (RC) function. The FRCC RC operators are located at "Entity A's" System Control Center (SCC).

The FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring Event on August 8-9, 2012 prompted a compliance review of associated NERC Reliability Standards. During the review it was discovered the FRCC Reliability Coordinator (RC) did not have a procedure in place to mitigate the effects of both outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA).

Although, during the August 8-9, 2012 loss of monitoring tools (SCADA/EMS and RTCA) and not having a procedure in place to mitigate the effects of analysis tool outages, the FRCC RC did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including "Entity A's" System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of "Entity A's" generation sites. "Entity A's" System Operator had direct telecommunication with personnel at "Entity A's" generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with "Entity A's" interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the "Entity

A" Balancing Authority (BA) within the FRCC were on schedule low deviation between the Southeastern Reliability Corporation (SE RC) region and the FRCC region would be attributed to and corrected by "Entity A". Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate Area Control Error (ACE) deviations identified by the SE RC to "Entity A's" System Operators and instruct the "Entity A" System Operators to adjust generation output. These manual adjustments to generation output continued for the duration of the event as requested by the FRCC RC.

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

[Attachments \(\)](#)

SECTION D: DETAILS OF PROPOSED MITIGATION PLAN

D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the Alleged or Confirmed violations identified above in Part C.1 of this form:

Completed Mitigation Activities-----

A. The FRCC RC Agent upgraded its SCADA/EMS on November 10, 2012 which provides improvements over the previous system in both network and server resiliency. With the upgrade, there is now a fully redundant backup system with all new network and server hardware. Additionally, the upgrade provides a four system configuration (two at the main control center and two at the back-up control center) with a failover scheme and connectivity such that any set of servers can be online (ENABLED) at any time. As part of the normal operational posture, during a month, both the main control center and back-up control center systems are configured to run as ENABLED, thus assuring full functionality of all the systems. The main control center and back-up control center sites are connected via dedicated high speed links through which near real time data replication occurs to maintain all systems current with the ENABLED system.

In addition, the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied the log in configuration issue identified during the event.

Completed date: November 10, 2012

B. The FRCC Operating Reliability Subcommittee (ORS), during their November 13, 2012 meeting approved an interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA), during the loss of its SCADA/EMS and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS.

Completed date: November 13, 2012

C. The ORS approved interim FRCC RC Conservative Operations Procedure was provided to the FRCC RCs on November 15, 2012 and implemented on the same date.

Completed date: November 15, 2012

D. FRCC Member Service Operating Committee (MS-OC) during their December 10, 2012 meeting approved the interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA) and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS.

Completed date: December 10, 2012

E. The FRCC Member Service Operating Committee (MS-OC) approved the final version of the FRCC RC Conservative Operations Procedure (FRCC-MS-RC-003) on January 11, 2013. The procedure was implemented the same day.

Completed date: January 11, 2013

[Attachments \(\)](#)

D.2 Provide the date by which full implementation of the Mitigation Plan will be, or has been, completed with respect to the Alleged or Confirmed violations identified above. State whether the Mitigation Plan has been fully implemented:

1/11/2013

D.3 Enter Milestone Activities, with due dates, that your organization is proposing, or has completed, for this Mitigation Plan:

No Milestones Defined

SECTION E: INTERIM AND FUTURE RELIABILITY RISK

E.1 Abatement of Interim BPS Reliability Risk: While your organization is implementing this Mitigation Plan the reliability of the Bulk Power Supply (BPS) may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take to mitigate this increased risk to the reliability of the BPS. (Additional detailed information may be provided as an attachment):

The mitigation plan for IRO-002-2 R7 and R8 was completed on 1/11/2013. There was minimal additional risk during implementation of this Mitigation Plan.

[Attachments \(\)](#)

E.2 Prevention of Future BPS Reliability Risk: Describe how successful completion of this Mitigation Plan will prevent or minimize the probability that your organization incurs further risk of Alleged violations of the same or similar reliability standards requirements in the future. (Additional detailed information may be provided as an attachment):

The completion of this Mitigation Plan establishes a FRCC RC specific procedure 'FRCC RC Conservative Operations Procedure (FRCC-MS-RC-003)'. The procedure will provide written guidance to the FRCC RC for monitoring SOLs and IROLs during the loss of the RC's analysis tools including its EMS/SCADA and the Real Time Contingency Analysis (RTCA) program.

[Attachments \(\)](#)

SECTION F: AUTHORIZATION

An authorized individual must sign and date this Mitigation Plan Submittal Form. By doing so, this individual, on behalf of your organization:

- a) Submits this Mitigation Plan for acceptance by SERC and approval by NERC, and
- b) If applicable, certifies that this Mitigation Plan was completed on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and
- c) Acknowledges:
 - I am Richard Gilbert of Florida Reliability Coordinating Council, Inc.
 - I am qualified to sign this Mitigation Plan on behalf of Florida Reliability Coordinating Council, Inc.
 - I understand Florida Reliability Coordinating Council, Inc.'s obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure, including Appendix 4 (Compliance Monitoring and Enforcement Program of the North American Electric Reliability Corporation (NERC CMEP))
 - I have read and am familiar with the contents of this Mitigation Plan
 - Florida Reliability Coordinating Council, Inc. agrees to comply with, this Mitigation Plan, including the timetable completion date, as accepted by SERC and approved by NERC

SECTION G: REGIONAL ENTITY CONTACT 

SERC Single Point of Contact (SPOC)

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 1/17/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 1/17/2014

MEMBER MITIGATION PLAN CLOSURE

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SERC to verify completion of the Mitigation Plan. SERC may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6) Data or information submitted may become part of a public record upon final disposition of the possible violation, therefore any confidential information contained therein should be marked as such in accordance with the provisions of Section 1500 of the NERC Rules of Procedure.

Name of Registered Entity submitting certification:

Florida Reliability Coordinating Council, Inc.

Name of Standard of mitigation violation(s):

IRO-002-2

Requirement	Tracking Number	NERC Violation ID
R7.	SERC2012-401649	SERC2012011649
R8.	SERC2012-401650	SERC2012011650

Date of completion of the Mitigation Plan:

1/11/2013

No Milestones Defined

Summary of all actions described in Part D of the relevant mitigation plan:

As a result of the IRO-002-2 R7 and R8 Self Reports, the FRCC RC Agent upgraded its SCADA/EMS which provides improvements over the previous system in both network and server resiliency as described in Milestone A of this Mitigation Plan.

In addition to the EMS system upgrades, a new FRCC RC Conservative Operations Procedure was created. This procedure is to be used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA) and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS. An interim Conservative Operations Procedure was reviewed and approved by the FRCC Operating Reliability Subcommittee (ORS) and provided to the FRCC RCs on November 15, 2012. The final version of the procedure was reviewed, approved and implemented by the FRCC Member Services Operating Committee (MS-OC) on January 11, 2013.

Description of the information provided to SERC for their evaluation *

Evidence was provided on original closure form submitted to SERC on 11/22/13. Below is the evidence for additional language in milestone step A which explains mitigation of the EBS log in issue.

Post-Event Analysis Report FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring (August 8-9, 2012): FRCC RC Post-Event Analysis Report_August 8-9 2012 Event_102312_FINAL.pdf (Pages 6, 7 & 11)

I certify that the Mitigation Plan for the above-named violation has been completed on the date shown above. In doing so, I certify that all required Mitigation Plan actions described in Part D of the relevant Mitigation Plan have been completed, compliance has been restored, the above-named entity is currently compliant with all of the requirements of the referenced standard, and that all information submitted is complete, true and correct to the best of my knowledge.

Attachment D

Record documents for the violation of IRO-008-1 (SERC2012011651)

**D-1. FRCC's Source Document dated
December 21, 2012**

**D-2. FRCC's Mitigation Plan designated as
SERCMIT009207-1 submitted January 16,
2014**

**D-3. FRCC's Certification of Mitigation
Plan Completion dated January 17, 2014**

VIEW SELF-REPORT: IRO-008-1 R2. (COMPLETED)

This item was submitted by Richard Gilbert (rgilbert@frc.com) on 12/21/2012

FORM INFORMATION

Registered Entity: Florida Reliability Coordinating Council, Inc.

NERC Registry ID: NCR00026

JRO ID:

CFR ID:

Entity Contact Information: Richard Gilbert

REPORTING INFORMATION

Applicable Standard: IRO-008-1

Applicable Requirement: R2.

Applicable Sub Requirement(s):

Applicable Functions: RC

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: 12/13/2012

Beginning Date of Possible Violation: 8/8/2012

End or Expected End Date of Possible Violation: 8/9/2012

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

Possible Violation: As a result of the FRCC RC back-up EMS failure, the FRCC Reliability Coordinator was not able to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROs or is expected to exceed any IROs during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

Additional Details:
 Note: The FRCC has an agreement in place with Florida Power & Light (FPL) that designates FPL to act as an Agent of FRCC to perform the Reliability Coordinator (RC) function. The FRCC RC operators are located at FPL's System Control Center (SCC) in Miami, Florida.

The FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring Event on August 8-9, 2012 prompted a compliance review of associated NERC Reliability Standards. During the review it was discovered the FRCC Reliability Coordinator (RC) did not have a guidance procedure in place for the FRCC RC's to ensure Real-Time Assessments were performed during the loss of its SCADA/EMS and its Real Time Contingency Analysis (RTCA) application.

The FRCC RC's loss of monitoring tools (SCADA/EMS and RTCA) resulted in significant loss of monitoring capability of the FRCC Bulk Electric System (BES); however the FRCC RC operators did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then actual load to generation balancing deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate ACE deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the

duration of the event as requested by the FRCC RC.

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of this event.

Are Mitigating Activities in progress or completed?

If Yes, Provide description of Mitigating Activities:

An interim FRCC Reliability Coordinator procedure was implemented on December 10, 2012 to mitigate the effects of analysis tool outages and includes steps for the FRCC RC to follow in performing a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs.

A final FRCC Reliability Coordinator procedure will be implemented in early 2013.

Provide details to prevent recurrence:

An interim FRCC Reliability Coordinator procedure was implemented on December 10, 2012 to mitigate the effects of analysis tool outages and includes steps for the FRCC RC to follow in performing a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs.

A Mitigation Plan will be developed and submitted to SERC in January 2013.

A final FRCC Reliability Coordinator procedure is expected to be implemented by 02/28/2012.

Date Mitigating Activities are expected to be completed or were completed:

Potential Impact to the Bulk Power System:

Minimal

Provide detailed description of Potential Impact to Bulk Power System:

The FRCC RC's loss of monitoring tools (SCADA/EMS and RTCA) resulted in significant loss of monitoring capability of the FRCC Bulk Electric System (BES); however the FRCC RC operators did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including FPL's System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of FPL's generation sites. FPL's System Operator had direct telecommunication with personnel at FPL's generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with FPL's interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the FPL Balancing Authority (BA) within the FRCC were on schedule then actual load to generation balancing deviation between the Southeastern Reliability Corporation (SERC) region and the FRCC region would be attributed to and corrected by FPL. Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate ACE deviations identified by the SE RC to FPL's System Operators and instruct the FPL System Operators to adjust generation output. These manual adjustments to generation output continued for the duration of the event as requested by the FRCC RC.

Actual Impact to the Bulk Power System:

Minimal

Provide detailed description of Actual Impact to Bulk Power System:

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of this event.

Additional Comments:

The attached file is a summary of the IRO-008-1 R2 Self-Report.

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.)

A [previous version](#) of the this Mitigation Plan exists

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 1/16/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 1/16/2014

SECTION A: COMPLIANCE NOTICES & MITIGATION PLAN REQUIREMENTS

A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "[Attachment A - Compliance Notices & Mitigation Plan Requirements](#)" to this form.

[Yes] A.2 I have reviewed Attachment A and understand that this Mitigation Plan Submittal Form will not be accepted unless this box is checked.

SECTION B: REGISTERED ENTITY INFORMATION

B.1 Identify your organization

Company Name:

Company Address:

Compliance Registry ID:

B.2 Identify the individual in your organization who will be the Entity Contact regarding this Mitigation Plan.

Name:

SECTION C: IDENTIFICATION OF ALLEGED OR CONFIRMED VIOLATION(S) ASSOCIATED WITH THIS MITIGATION PLAN

C.1 This Mitigation Plan is associated with the following Alleged or Confirmed violation(s) of Reliability Standard listed below.

Standard:

Requirement	Regional ID	NERC Violation ID	Date Issue Reported
R2.	SERC2012-401651	SERC2012011651	12/21/2012

C.2 Identify the cause of the Alleged or Confirmed violation(s) identified above:

As a result of the FRCC RC back-up EMS failure, the FRCC Reliability Coordinator was not able to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs during the loss of its SCADA/EMS on August 8-9, 2012 from 22:19 to 01:09 hours.

[Attachments \(\)](#)

C.3 Provide any additional relevant information regarding the Alleged or Confirmed violations associated with this MitigationPlan:

The FRCC has an agreement in place with "Entity A" that designates "Entity A" to act as an Agent of FRCC to perform the Reliability Coordinator (RC) function. The FRCC RC operators are located at "Entity A's" System Control Center (SCC).

The FRCC Reliability Coordinator's Loss of SCADA/EMS Monitoring Event on August 8-9, 2012 prompted a compliance review of associated NERC Reliability Standards. During the review it was discovered the FRCC Reliability Coordinator (RC) did not have a procedure in place to mitigate the effects of both outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA).

Although, during the August 8-9, 2012 loss of monitoring tools (SCADA/EMS and RTCA) and not having a procedure in place to mitigate the effects of analysis tool outages, the FRCC RC did take steps to minimize the potential impact to reliability of the Bulk Electric System. The FRCC RC contacted FRCC entities' System Operators, including "Entity A's" System Operator, via the FRCC State Hotline to advise them of the SCADA/EMS issue and to request notification of unit or line outages, and requested that entities monitor available RTCA applications and report back to the FRCC RC with concerns or potential reliability issues.

During the SCADA/EMS outage, certain monitoring capabilities were available and used by the FRCC RC to maintain situational awareness. The FRCC RC monitored the system frequency through a parallel control room feed independent of the SCADA/EMS and output through a net megawatt (MW) display with real-time telemetry data from most of "Entity A's" generation sites. "Entity A's" System Operator had direct telecommunication with personnel at "Entity A's" generation sites which provided a method for monitoring changes to real and reactive output of the generators and voltages at the generator switchyards. Additionally, the FRCC RC had the ability to monitor changes in tie-line flows and voltages via telecommunications, including the FRCC State Hotline, with "Entity A's" interconnected entities.

During the time the SCADA/EMS or Emergency Backup System (EBS) could not be accessed, the FRCC RC requested that FRCC entities remain on schedule and notify the FRCC RC if they were off schedule, or developed significant Area Control Error (ACE). The FRCC RC operated with the assumption that, if entities other than the "Entity A" Balancing Authority (BA) within the FRCC were on schedule then deviation between the Southeastern Reliability Corporation (SE RC) region and the FRCC region would be attributed to and corrected by "Entity A". Therefore, the FRCC RC would periodically communicate any significant FRCC aggregate Area Control Error (ACE) deviations identified by the SE RC to "Entity A's" System Operators and instruct the "Entity A" System Operators to adjust generation output. These manual adjustments to

generation output continued for the duration of the event as requested by the FRCC RC.

There were no FRCC BES elements de-energized or reported exceedances of System Operating Limits (SOL) for the duration of the event.

[Attachments \(\)](#)

SECTION D: DETAILS OF PROPOSED MITIGATION PLAN

D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the Alleged or Confirmed violations identified above in Part C.1 of this form:

Completed Mitigation Activities-----

A. The FRCC RC upgraded its SCADA/EMS on November 10, 2012 which provides improvements over the previous system in both network and server resiliency. With the upgrade, there is now a fully redundant backup system with all new network and server hardware. Additionally, the upgrade provides a four system configuration (two at the main control center and two at the back-up control center) with a failover scheme and connectivity such that any set of servers can be online (ENABLED) at any time. As part of the normal operational posture, during a month, both the main control center and back-up control center systems are configured to run as ENABLED, thus assuring full functionality of all the systems. The main control center and back-up control center sites are connected via dedicated high speed links through which near real time data replication occurs to maintain all systems current with the ENABLED system.

In addition, the workstations at the local back-up control center (LBCC) and the remote backup control center (RBCC) were reconfigured to use the authentication servers at both the primary and the backup control center which remedied the log in configuration issue identified during the event.
Completed date: November 10, 2012

B. The FRCC Operating Reliability Subcommittee (ORS), during their November 13, 2012 meeting approved an interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs during the loss of its SCADA/EMS
Completed date: November 13, 2012

C. The ORS approved interim FRCC RC Conservative Operations Procedure was provided to the FRCC RCs on November 15, 2012 and implemented on the same date.
Completed date: November 15, 2012

D. FRCC Member Service Operating Committee (MS-OC) during their December 10, 2012 meeting approved the interim FRCC RC Conservative Operations Procedure that is used by the FRCC RC to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs during the loss of its SCADA/EMS.
Completed date: December 10, 2012

E. The FRCC Member Service Operating Committee (MS-OC) approved the final version of the FRCC RC Conservative Operations Procedure (FRCC-MS-RC-003) on January 11, 2013. The procedure was implemented the same day.
Completed date: January 11, 2013

[Attachments \(\)](#)

D.2 Provide the date by which full implementation of the Mitigation Plan will be, or has been, completed with respect to the Alleged or Confirmed violations identified above. State whether the Mitigation Plan has been fully implemented:

1/11/2013

D.3 Enter Milestone Activities, with due dates, that your organization is proposing, or has completed, for this Mitigation Plan:

No Milestones Defined

SECTION E: INTERIM AND FUTURE RELIABILITY RISK

E.1 Abatement of Interim BPS Reliability Risk: While your organization is implementing this Mitigation Plan the reliability of the Bulk Power Supply (BPS) may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take to mitigate this increased risk to the reliability of the BPS. (Additional detailed information may be provided as an attachment):

The Mitigation Plan for IRO-008-1 R2 was completed on 1/11/2013. There was minimal additional risk during implementation of this Mitigation Plan.

[Attachments \(\)](#)

E.2 Prevention of Future BPS Reliability Risk: Describe how successful completion of this Mitigation Plan will prevent or minimize the probability that your organization incurs further risk of Alleged violations of the same or similar reliability standards requirements in the future. (Additional detailed information may be provided as an attachment):

The completion of this Mitigation Plan establishes a FRCC RC specific procedure 'FRCC RC Conservative Operations Procedure (FRCC-MS-RC-003)'. This procedure introduces actions to be taken by the FRCC Reliability Coordinator to enable them to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs in the event of an unavailability of the RC's Real Time Contingency Analysis (RTCA) program or the loss of the RC's SCADA/EMS.

[Attachments \(\)](#)

SECTION F: AUTHORIZATION

An authorized individual must sign and date this Mitigation Plan Submittal Form. By doing so, this individual, on behalf of your organization:

- a) Submits this Mitigation Plan for acceptance by SERC and approval by NERC, and
- b) If applicable, certifies that this Mitigation Plan was completed on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and

• c) Acknowledges:

- I am Richard Gilbert of Florida Reliability Coordinating Council, Inc.
- I am qualified to sign this Mitigation Plan on behalf of Florida Reliability Coordinating Council, Inc.
- I understand Florida Reliability Coordinating Council, Inc.'s obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure, including Appendix 4 (Compliance Monitoring and Enforcement Program of the North American Electric Reliability Corporation (NERC CMEP))
- I have read and am familiar with the contents of this Mitigation Plan
- Florida Reliability Coordinating Council, Inc. agrees to comply with, this Mitigation Plan, including the timetable completion date, as accepted by SERC and approved by NERC

SECTION G: REGIONAL ENTITY CONTACT



SERC Single Point of Contact (SPOC)

This item was signed by Richard Gilbert (rgilbert@frcc.com) on 1/17/2014

This item was marked ready for signature by Carlos Maldonado (cmaldonado@frcc.com) on 1/17/2014

MEMBER MITIGATION PLAN CLOSURE

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SERC to verify completion of the Mitigation Plan. SERC may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6) Data or information submitted may become part of a public record upon final disposition of the possible violation, therefore any confidential information contained therein should be marked as such in accordance with the provisions of Section 1500 of the NERC Rules of Procedure.

Name of Registered Entity submitting certification:

Florida Reliability Coordinating Council, Inc.

Name of Standard of mitigation violation(s):

IRO-008-1

Requirement	Tracking Number	NERC Violation ID
R2.	SERC2012-401651	SERC2012011651

Date of completion of the Mitigation Plan:

1/11/2013

No Milestones Defined

Summary of all actions described in Part D of the relevant mitigation plan:

As a result of the IRO-008-1 R2 Self Report, the FRCC RC Agent upgraded its SCADA/EMS which provides improvements over the previous system in both network and server resiliency as described in Milestone A of this Mitigation Plan.

In addition to the EMS system upgrades, a new FRCC RC Conservative Operations Procedure was created. This procedure is to be used by the FRCC RC to mitigate the effects of outages of analysis tools, specifically the Real Time Contingency Analysis (RTCA) and to ensure SOL and IROL monitoring and derivations continue during the loss of the FRCC RC's SCADA/EMS.

An interim Conservative Operations Procedure was reviewed and approved by the FRCC Operating Reliability Subcommittee (ORS) and provided to the FRCC RCs on November 15, 2012. The final version of the procedure was reviewed, approved and implemented by the FRCC Member Services Operating Committee (MS-OC) on January 11, 2013.

Description of the information provided to SERC for their evaluation

Evidence was provided on original closure form submitted to SERC on 11/22/13. Below is the evidence for additional language in milestone step A which explains mitigation of the EBS log in issue.

Post-Event Analysis Report FRCC Reliability Coordinator Agent's Loss of SCADA/EMS Monitoring (August 8-9, 2012): FRCC RC Post-Event Analysis Report_August 8-9 2012 Event_102312_FINAL.pdf (Pages 6, 7 & 11)

I certify that the Mitigation Plan for the above-named violation has been completed on the date shown above. In doing so, I certify that all required Mitigation Plan actions described in Part D of the relevant Mitigation Plan have been completed, compliance has been restored, the above-named entity is currently compliant with all of the requirements of the referenced standard, and that all information submitted is complete, true and correct to the best of my knowledge.