NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

October 31, 2016

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 Peak Reliability, FERC Docket No. NP17-_-000

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty[1] regarding Peak Reliability (PEAK), NERC Registry ID# NCR10289,[2] with information and details regarding the nature and resolution of the violation[3] discussed in detail in the Settlement Agreement attached hereto (Attachment A), in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations, and orders, as well as NERC's Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).[4]

NERC is filing this Notice of Penalty with the Commission because Western Electricity Coordinating Council (WECC) and PEAK have entered into a Settlement Agreement to resolve all outstanding issues arising from WECC's determination and findings of the violation of IRO-002-2 R4.

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[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 (2016). *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] PEAK was included on the NERC Compliance Registry as a Reliability Coordinator (RC) on December 23, 2008.

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

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

According to the Settlement Agreement, PEAK does not contest the violation, but has agreed to the assessed penalty of eighty-six thousand dollars ($86,000), in addition to other remedies and actions to mitigate the instant violation and facilitate future compliance under the terms and conditions of the Settlement Agreement.

Statement of Findings Underlying the Violation

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement, by and between WECC and PEAK. 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 (2016), NERC provides the following summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement. Further information on the subject violation is set forth in the Settlement Agreement.

*SR = Self-Report / SC = Self-Certification / CA = Compliance Audit / SPC = Spot Check / CI = Compliance Investigation

NERC Violation ID	Standard	Req	VRF/ VSL	Applicable Function(s)	Discovery Method* Date	Violation Start-End Date	Risk	Penalty Amount
WECC2015015159	IRO-002-2	R4	High/ Lower	RC	SR 8/25/2015	8/18/2014-6/14/2016	Moderate	$86,000

WECC2015015159 IRO-002-2 R4 - OVERVIEW

WECC determined that PEAK did not have monitoring systems that provided easily understood and interpreted information for its operating personnel.

The root cause of this violation was a lack of compliance process and training to ensure that PEAK operators could correctly interpret the information that its Real Time Contingency Analysis (RTCA) tool presented, along with a lack of sufficient testing and verification of the tool itself. In August 2014, one of PEAK's Transmission Operators (TOPs) performed an analysis, calculated an incorrect System Operating Limit (SOL), and transmitted it to PEAK. Specifically, the TOP determined that the potential impact of an N-1 contingency (including a WECC Rated Path) would have resulted in thermal overloads

on a neighboring entity's system. In May of 2015, the TOP performed an analysis of its historic curtailments, discovered the error, and reported the mistake to PEAK.

Prior to the TOP's discovery of the error, while using the incorrect SOL value, the TOP experienced two post-contingency thermal exceedances of the SOL in question. During the exceedances, confusion over how RTCA identifies exceedances led PEAK's operating personnel to misinterpret the indications in RTCA and fail to mitigate the post-contingency exceedance. According to the TOP, the incorrect calculation was in effect for 10 hours, 7 minutes, and 12 seconds.

WECC determined that this violation posed a moderate and not serious or substantial risk to the reliability of the bulk power system (BPS). According to the TOP, the incorrect calculation was only in effect for 10 hours, 7 minutes, and 12 seconds. Nevertheless, PEAK did not have appropriate internal controls in place to timely self-identify the violation without the TOP's notification, causing the violation to go undetected and unmitigated for over 600 days.

To compensate for this violation, PEAK employs detective processes, including Operations Planning Analysis (OPA), real-time alarms and displays, RTCA, nightly outage calls, and Voltage Stability Analysis tools. For WECC Paths, PEAK has developed Path Operator Guides in collaboration with the affected entities. PEAK has built displays in association with these operating guides with indicators that alert the PEAK operators when there is a topology change that may indicate a change in the path SOL. For differences, changes, or alarms, PEAK operators investigate the cause and work with affected entities if necessary.

PEAK employs other compensating measures to ensure it accurately reviews contingency exceedances. For more granular monitoring, PEAK has divided its RC Area into three sub-areas, and has assigned a real-time PEAK operator and a study PEAK operator to each sub-area. The study PEAK operator is responsible for monitoring RTCA results for the sub-area and conducting necessary power flow studies. A PEAK operator lead is on shift continuously to oversee all functions in both control rooms and to act as another "set of eyes" to help ensure exceedances are not missed. PEAK also has a real-time operating engineer on shift who monitors RCTA, investigates issues, develops mitigation plans, helps ensure PEAK's state estimator accuracy, assists with tool issues, validates and sets Interconnection Reliability Operating Limits, works with entity engineers, conducts "look ahead" studies, and revises OPAs as needed.

For the duration of the incorrect calculation, PEAK operated actual facility flows within facility ratings. This level of post-contingency exceedance did not meet the threshold for potential cascading or unexpected tripping as described in PEAK's SOL methodology and PRC-023 loadability criteria;

therefore, the system was not at risk of cascading outages during the period when the RTCA was indicating post-contingency exceedances. Finally, there were no other overloads above 11% of its emergency rating, and the affected lines do not have a history of frequent trips.

PEAK submitted its Mitigation Plan designated WECCMIT011721 to address the referenced violation on August 25, 2015. Attachment A includes a description of the mitigation activities PEAK took to address this violation. A copy of the Mitigation Plan is included as Attachment C.

PEAK certified on June 15, 2016, that it had completed all mitigation activities as of June 14, 2016. WECC verified on October 18, 2016 that PEAK had completed its mitigation activities.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, WECC has assessed a penalty of eighty-six thousand dollars ($86,000) for the referenced violation. In reaching this determination, WECC considered the following factors:

1. the instant violation constituted PEAK's first occurrence of violation of the subject NERC Reliability Standards;
2. PEAK had an internal compliance program at the time of the violation which WECC considered a small mitigating factor, as discussed in Attachment A;
3. PEAK was cooperative throughout the compliance enforcement process;
4. there was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
5. PEAK failed to self-identify this violation without the TOP's notification, causing PEAK to be noncompliant for over 600 days, which WECC considered an aggravating factor;
6. the violation posed a moderate and not a serious or substantial risk to the reliability of the BPS; 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, WECC determined that, in this instance, the penalty amount of eighty-six thousand dollars ($86,000) is appropriate and bears a reasonable relation to the seriousness and duration of the violation.

Statement Describing the Assessed Penalty, Sanction or Enforcement Action Imposed[5]

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 supporting documentation on September 29, 2016 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 violation at issue.

For the foregoing reasons, the NERC BOTCC approved the Settlement Agreement and believes that the assessed penalty of eighty-six thousand dollars ($86,000) is appropriate for the violation 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 WECC and PEAK executed July 11, 2016, included as Attachment A;

b) PEAK's Self-Report for IRO-002-2 R4 dated August 25, 2015, included as Attachment B;

c) PEAK's Mitigation Plan designated as WECCMIT011721 for IRO-002-2 R4 submitted August 25, 2015, included as Attachment C;

d) PEAK's Certification of Mitigation Plan Completion submitted June 15, 2016, included as Attachment D;

e) WECC's Verification of Mitigation Plan Completion dated October 18, 2016, included as Attachment E.

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[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).

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

Jim Robb* Chief Executive Officer Western Electricity Coordinating Council 155 North 400 West, Suite 200 Salt Lake City, UT 84103 (801) 883-6853 (801) 883-6894 – facsimile jrobb@wecc.biz Steve Goodwill* Vice President and General Counsel, Corporate Secretary Western Electricity Coordinating Council 155 North 400 West, Suite 200 Salt Lake City, UT 84103 (801) 883-6857 (801) 883-6894 – facsimile sgoodwill@wecc.biz Ruben Arredondo* Senior Legal Counsel Western Electricity Coordinating Council 155 North 400 West, Suite 200 Salt Lake City, UT 84103 (801) 819-7674 (801) 883-6894 – facsimile rarredando@wecc.biz	Sonia C. Mendonça* Vice President of Enforcement and Deputy General Counsel 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 Edwin G. Kichline* Senior Counsel and Associate Director, Enforcement 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 Leigh Anne Faugust* Counsel, Enforcement North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile leigh.faugust@nerc.net

Heather Laws* Manager of Enforcement Western Electricity Coordinating Council 155 North 400 West, Suite 200 Salt Lake City, UT 84103 (801) 819-7642 (801) 883-6894 – facsimile hlaws@wecc.biz Matt Yates* Associate General Counsel Peak Reliability 7600 N.E. 41st Street, Suite 150 Vancouver, WA 98662 (360) 567-4070 myates@peakrc.com *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.	

Conclusion

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

Respectfully submitted,

/s/ Edwin G. Kichline
Sonia C. Mendonça
Vice President of Enforcement and Deputy General Counsel
Edwin G. Kichline
Senior Counsel and Associate Director, Enforcement
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cc: Peak Reliability
Western Electricity Coordinating Council

Attachments

Attachment A

Settlement Agreement by and between WECC and PEAK executed July 11, 2016.

Attachment 1

EXPEDITED SETTLEMENT AGREEMENT

OF

WESTERN ELECTRICITY COORDINATING COUNCIL

AND

PEAK RELIABILITY

Western Electricity Coordinating Council (WECC) and Peak Reliability (PEAK) (collectively the "Parties") agree to the following:

1. PEAK does not contest the violation of the NERC Reliability Standard listed below.

2. This Settlement Agreement is subject to approval or modification by the North American Electric Reliability Corporation (NERC) and the Federal Energy Regulatory Commission (FERC or Commission).

3. PEAK has agreed to enter into this Settlement Agreement with WECC 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. PEAK agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of bulk-power system reliability.

4. The violation addressed herein will be considered a Confirmed Violation as set forth in the NERC Rules of Procedure.

5. This Settlement Agreement represents a full and final disposition of the violation listed below, subject to approval or modification by NERC and FERC. PEAK waives its right to further hearings and appeal; unless and only to the extent that PEAK contends that any NERC or Commission action on this Settlement Agreement contains one or more material modifications to this Settlement Agreement.

6. In the event PEAK fails to comply with any of the terms set forth in this Settlement Agreement, WECC will initiate enforcement, penalty, or sanction actions against PEAK 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, PEAK shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.

7. 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.

8. 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.

9. WECC and PEAK stipulate to the following violation facts:

   a. PEAK is registered on the NERC Compliance Registry, NCR10289, as a Reliability Coordinator (RC).

   b. On August 25, 2015, PEAK submitted a Self-Report addressing possible noncompliance with this Standard. Specifically, PEAK stated that as a Reliability Coordinator, it had an issue of noncompliance with IRO-002-02 R4. PEAK self-reported that on August 18, 2014, a Transmission Operator (TOP) calculated an incorrect System Operating Limit (SOL) and transmitted it to PEAK via ICCP. The TOP discovered that it should have had a Remedial Action Scheme (RAS) which would drop generation during a contingency. The RAS was not armed due to an incorrect study by the TOP. On May 6, 2015, the TOP performed an analysis of its historic curtailments, discovered the error, and reported to PEAK that on August 18, 2014, it had not correctly armed one RAS, and had provided an incorrectly calculated SOL value to PEAK.

   c. On August 18, 2014, while using the incorrect SOL value, the TOP experienced two post-contingency thermal exceedances of the SOL in question. The exceedances were between 11:01–13:02 PST and again between 13:09-14:14 PST. During the exceedances, the PEAK System Operator did not fully understand how PEAK's Real Time Contingency Analysis (RTCA) tool identifies exceedances, misinterpreted the indications in RTCA, and did not mitigate the post-contingent exceedance. For that reason, WECC determined that PEAK had an issue of noncompliance with IRO-002-2 R4, for its failure to employ monitoring systems that provide information that can be easily understood and interpreted by PEAK's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems.

   d. The cause of this issue of noncompliance is a lack of compliance process and training to ensure that PEAK Operators can correctly interpret the information being presented by RTCA, and a lack of sufficient testing and verification of the RCWorkbook tool, itself. Confusion over how RTCA identifies exceedances led PEAK's operating personnel to misinterpret the indications in RTCA and fail to mitigate the post-contingent exceedance. No harm is known to have occurred.

e. This issue of noncompliance began on August 18, 2014, when the TOP transmitted the incorrectly calculated SOL to PEAK. According to the TOP, the incorrect calculation was only in effect for 10 hours, 7 minutes and 12 seconds. However, the duration of this issue of noncompliance for PEAK is ongoing until its mitigation plan is complete (over 600 days).

f. To mitigate this issue of noncompliance, PEAK will; (1) Create and deliver a job aid to clarify expectations to validate notes against all monitored elements in RCWorkbook; (2) Develop a detailed design specification for RCWorkbook enhancements to provide ability to attach notes to contingency ID and monitored element pair; (3) Complete development and testing of RCWorkbook enhancements to provide ability to attach notes to contingency and monitored element pair; and (4) Update procedures, conduct system operator training on, and implement RCWorkbook enhancements. PEAK proposed a completion date of June 15, 2016, for these mitigating activities. WECC determined PEAK must submit its Completed Mitigation Plan within 20 days of the date of this notice.

g. This violation posed a moderate risk and did not pose a serious or substantial risk to the reliability of the bulk power system. In this instance, the TOP transmitted an incorrect SOL, and PEAK's monitoring system did not provide information that could be easily understood and interpreted by the PEAK Operator. Specifically, the TOP in question performed an analysis and determined that the potential impact of the N-1 contingency, (including a WECC Rated Path) would have resulted in thermal overloads on a neighboring entity's system. There were no other overloads above 11% of their emergency rating, and the affected lines do not have a history of frequent trips. However, PEAK did not have appropriate internal controls in place to timely self-identify the violation on August 18, 2014, without the TOP's notification, causing the violation to go undetected and unmitigated for over 600 days.

h. To compensate for this issue of noncompliance, PEAK employs detective processes, including Operations Planning Analysis (OPA), real-time alarms and displays, RTCA, nightly outage calls, and Voltage Stability Analysis tools for certain cases. For WECC Paths, PEAK has developed Path Operator Guides in collaboration with the impacted entities. PEAK has built displays in association with these operating guides with indicators that alert the PEAK Operators when there is a topology change that may indicate a change in the path SOL. For differences, changes, or alarms, PEAK Operators investigate the cause and work with impacted entities if necessary.

i. PEAK employs other compensating measures to ensure that contingency exceedances are accurately reviewed. For more granular monitoring, PEAK has divided its RC Area into three sub-areas, and has assigned a real-time PEAK Operator and a study PEAK Operator to each sub-area. The study PEAK Operator is responsible for monitoring RTCA results for the sub-area and conducting necessary power flow studies. A PEAK Operator Lead is on shift 24/7 to oversee all functions in both control rooms and to act as another "set of eyes" to help ensure exceedances are not missed. PEAK also has a Real-time Operating Engineer on shift who monitors RCTA, investigate issues, develops mitigation plans, helps ensure

PEAK's state estimator accuracy, assists with tool issues, validates and sets IROLs, works with entity engineers, conducts "look ahead" studies, and revises OPAs as needed.

j. For the duration of this issue of noncompliance, actual facility flows were operated within facility ratings. This level of post contingency exceedance did not meet the threshold for potential cascading or unexpected tripping as described in PEAK's SOL methodology and PRC-023 loadability criteria; therefore the system was not at risk of cascading outages during the period of time where RTCA was indicating post-contingency exceedances.

10. Enforcement determined that the penalty of $86,000 is appropriate for the following reasons:

a. The VRF is "High" and the VSL is "Lower" for this violation.

b. This violation posed a Moderate risk to the BES.

c. The violation duration is as described above.

d. Enforcement applied mitigating factors in its penalty determination.

i. PEAK self-reported this violation.
ii. Upon undertaking the actions outlined in the mitigation plan, PEAK took voluntary corrective action to remediate this violation.
iii. WECC reviewed PEAK's Internal Compliance Program (ICP), and found it to have the elements of a strong program, as well as exemplary practices in two areas: (1) its procedures for identifying and updating NERC Reliability Standards and Requirements, and (2) its self-audit and internal self-assessment practices.
iv. PEAK was cooperative throughout the process.
v. PEAK did not fail to complete any applicable compliance directives.
vi. There was no evidence of any attempt by PEAK to conceal the violation.
vii. There was no evidence that PEAK's violation was intentional.
viii. WECC is not aware of any violations of this Reliability Standard by PEAK affiliates or any involvement in PEAK's activities such that this violation by PEAK should be treated as recurring conduct.
ix. Enforcement considered PEAK's compliance history and determined PEAK did not have any relevant negative compliance history.

e. Enforcement applied an aggravating factor in its penalty determination, because although PEAK self-reported this violation, it did not have the appropriate controls in place to timely self-identify the violation, without the TOP's notification. This delay caused PEAK to be noncompliant for over 600 days.

11. To settle this matter, PEAK hereby agrees to pay $86,000 to WECC via wire transfer or cashier's check. PEAK shall make the funds payable to a WECC account identified in a Notice of Payment Due that WECC will send to PEAK upon approval of this Agreement by NERC and FERC. PEAK

shall issue the payment to WECC no later than thirty days after receipt of the Notice of Payment Due. If this payment is not timely received, WECC shall assess, and PEAK agrees to pay, an interest charge calculated according to the method set forth at 18 CFR §35.19(a)(2)(iii) beginning on the 31st day following issuance of the Notice of Payment Due.

[Remainder of page intentionally left blank - signatures affixed to following page]

Agreed to and Accepted by:

WESTERN ELECTRICITY COORDINATING COUNCIL

7-11-16

Heather Laws
Manager of Enforcement

Date

PEAK RELIABILITY

7/8/16

Name: John Stout
Title: Interim President and CEO

Date

Attachment B

PEAK's Self-Report for IRO-002-2 R4 dated August 25, 2015.

Self Report

Entity Name: Peak Reliability (PEAK)

NERC ID: NCR10289

Standard: IRO-002-2

Requirement: IRO-002-2 R4.

Date Submitted: August 25, 2015

Has this violation previously been reported or discovered?: No

Entity Information:

Joint Registration Organization (JRO) ID:

Coordinated Functional Registration (CFR) ID:

Contact Name: Jared Shakespeare

Contact Phone: 9707765810

Contact Email: jshakespeare@peakrc.com

Violation:

Violation Start Date: August 18, 2014

End/Expected End Date: August 18, 2014

Region Initially Determined a Violation On:

Reliability Functions: Reliability Coordinator (RC)

Is Possible Violation still occurring?: No

Number of Instances: 1

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

Which Regions:

Date Reported to Regions:

Detailed Description and Cause of Possible Violation: Peak Reliability (Peak) is registered as a Reliability Coordinator (RC) and is required to comply with IRO-002-2 R4: "Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure." Peak is reporting a violation of the "...can be easily understood and interpreted..." section of this Requirement as discussed below.

On 8/18/2014, a Transmission Operator (TOP) calculated an incorrect System Operating Limit (SOL) and transmitted it to Peak via ICCP. Peak and the TOP appropriately operated the system to the SOL provided by the TOP, collaboratively addressing exceedances of that SOL that occurred on that day. After the fact analysis by the TOP indicated that a single Remedial Action Scheme (RAS) was not armed as was planned, leading to an incorrectly calculated SOL value by the TOP. Peak's Real-time tools, including Real-time Contingency Analysis (RTCA), had the correct real-time telemetry, network modeling, and RAS modeling data and did properly identify post-contingency

exceedances in RTCA. Howver, the RTCA results were incorrectly interpreted by a Peak Reliability Coordinator System Operator (RCSO), leading the RCSO to believe no action was needed to mitigate the RTCA identified SOL exceedance. Therefore, Peak did not have sufficient emphasis on alarm management and awareness systems to ensure information could be easily understood and interpreted by its operating personnel.

TOPs are required to calculate SOLs and communicate them to Peak. Peak and the TOPs then monitor for actual or potential SOL exceedances based on the SOLs that the TOP calculates. In this instance, the TOP provided the incorrect SOL to Peak, and Peak took appropriate actions based on the SOL it was provided. When there was an exceedance of the SOL that was provided, Peak appropriately contacted the TOP to confirm the SOL and coordinated mitigating actions to relieve the exceedance.

SOLs are calculated through studies by the TOP based on expected conditions, often several days in advance. Peak utilizes real-time tools to monitor for unacceptable system performance in real-time operations. The SOL in this instance is normally thermally-limited, contingency-based, therefore Peak uses RTCA to identify the same unacceptable system performance that the SOL is meant to prevent, but based on real-time topology, generation, and load from Peak's State Estimator. In this case, the Peak RCSO was presented with post-contingency thermal exceedances between 11:01 PST - 13:02 PST, and then again between 13:09 PST - 14:14 PST.

Confusion over how RTCA identifies these exceedances led the Peak RCSO to misinterpret the indications in RTCA, and as a result, efforts were not made to mitigate the post-contingent exceedance.

The root of the problem that caused the RCSO to misinterpret the information being presented by RTCA is incomplete tool design. Peak uses a tool called the RCWorkbook, which is the primary tool used for visualizing RTCA results. The RCWorkbook allows users to sort and filter, to attach a "note" to an RTCA exceedance. The note documents reasons and viable mitigation for the post-contingency exceedance. The benefit of using notes is to save valuable time when investigating exceedances. A previous RCSO might have already encountered the same issue and documented viable mitigation to utilize if the contingency ever were to happen. Instead of doing the same work again, an RCSO can leverage previous work captured in the note to validate viable mitigation.

RTCA works by studying each credible contingency (where each contingency is uniquely identified by a contingency ID) and identifying any SOL exceedances on other elements (monitored elements) caused by the occurrence of that contingency. A contingency may cause exceedances on multiple monitored elements, and the mitigation for those exceedances may be the same or may be different. In RCWorkbook, the notes are associated with a unique contingency ID, and not the contingency ID/monitored element pair. This means the same note appears every time its associated contingency exceedance appears even though the note may have been intended to address a different contingency ID/monitored element pair. Therefore, the potential exists for the RCSO to misinterpret a note.

In this instance, the RCSO first recognized the contingency exceedance as associated with a different monitored element, and validated that the note described appropriate mitigation for that monitored element. However, the RCSO did not recognize that the note did not describe appropriate mitigation for the post-contingent exceedance/monitored element pair identified by Peak's tool, RTCA. Therefore, Peak's tool was not "easily understood and interpreted" by the RCSO.

Peak asks for Find Fix Track (FFT) treatment of this violation for the following reasons:

Self Report

1) Risk impact to the BES was Minimal as described below. FERC's March 15, 2012 Order, paragraph 47, states that "the Commission will condition its acceptance of the FFT proposal on allowing only possible violations that pose a minimal risk to Bulk-Power System reliability to be eligible for FFT treatment."

2) All mitigation has either completed or will complete within 10 months. FERC's September 18, 2014 Order, paragraph 24, states: "Further, we accept NERC's proposal to extend the time frame for completion of mitigation activities from 90 days after NERC posts an FFT to one year after posting."

3) Peak voluntarily Self Reported. FERC's March 15, 2012 Order, paragraph 65, states that "the Commission recognizes the importance of self-reporting of violations by registered entities and encourages registered entities to self-report. Therefore, we believe that self-reporting of violations should be a factor that NERC considers in designating a possible violation as an FFT."

Mitigating Activities:

Description of Mitigating Activities and Preventative Measure:

Milestone #1: Create and deliver job aid to clarify expectations to validate notes against all monitored elements in RCWorkbook. Scheduled completion date: 11/2/2015.

Milestone #2: Develop a detailed design specification for RCWorkbook enhancements to provide ability to attach notes to contingency ID and monitored element pair. Today, the RCWorkbook only supports notes for a contingency (and not monitored element pair). Scheduled completion date: 1/15/2016.

Milestone #3: Complete development and testing of RCWorkbook enhancements (described in Milestone #2) to provide ability to attach notes to contingency and monitored element pair. Scheduled completion date: 4/4/2016.

Milestone #4: Update procedures, conduct system operator training on, and implement RCWorkbook enhancements. Scheduled completion date: 6/15/2016.

Have Mitigating Activities been Completed? No

Date Mitigating Activities Completed:

Impact and Risk Assessment:

Potential Impact to BPS: Minimal

Actual Impact to BPS: Minimal

Description of Potential and Actual Impact to BPS:

Potential Impact: Minimal because actual facility flows were always operated within facility ratings. The SOL exceedance and associated post-contingency flows following the simulated N-1 loss of a 230 kV transmission line reached as high as 114% of the highest available facility rating. This level of post-contingency exceedance does not meet the threshold for potential cascading or unexpected tripping as described in Peak's SOL methodology and PRC-023 loadability criteria, therefore the system was not at risk of cascading outages during the period of time where RTCA was indicating post-contingency exceedances.

Actual Impact: None because no system events occurred.

Self Report

Risk Assessment of Impact to BPS: Potential Impact: Minimal because actual facility flows were always operated within facility ratings. The SOL exceedance and associated post-contingency flows following the simulated N-1 loss of a 230 kV transmission line reached as high as 114% of the highest available facility rating. This level of post-contingency exceedance does not meet the threshold for potential cascading or unexpected tripping as described in Peak's SOL methodology and PRC-023 loadability criteria, therefore the system was not at risk of cascading outages during the period of time where RTCA was indicating post-contingency exceedances.

Actual Impact: None because no system events occurred.

Additional Entity Comments:

Additional Comments		
From	Comment	User Name
No Comments		

Additional Documents			
From	Document Name	Description	Size in Bytes
No Documents			

Attachment C

PEAK's Mitigation Plan designated as WECCMIT011721 for IRO-002-2 R4 submitted August 25, 2015.

Mitigation Plan

Mitigation Plan Summary

Registered Entity: Peak Reliability
Mitigation Plan Code: WECCMIT011721
Mitigation Plan Version: 1

NERC Violation ID	Requirement	Violation Validated On
WECC2015015159	IRO-002-2 R4.	01/27/2016

Mitigation Plan Submitted On: August 25, 2015
Mitigation Plan Accepted On: March 30, 2016
Mitigation Plan Proposed Completion Date: June 15, 2016
Actual Completion Date of Mitigation Plan:
Mitigation Plan Certified Complete by PEAK On:
Mitigation Plan Completion Verified by WECC On:
Mitigation Plan Completed? (Yes/No): No

Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

(1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
(2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
(3) The cause of the Alleged or Confirmed Violation(s).
(4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
(5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
(6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
(7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
(8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
(9) Any other information deemed necessary or appropriate.
(10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
(11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.

• The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.

• This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.

• If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.

• Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.

• Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.

• The user has read and accepts the conditions set forth in these Compliance Notices.

Entity Information

Identify your organization:

Entity Name: Peak Reliability

NERC Compliance Registry ID: NCR10289

Address: 7600 N.E. 41st Street, Suite 150
Vancouver WA 98662

Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan:

Name: Jared Shakespeare
Title: Director of Compliance
Email: jshakespeare@peakrc.com
Phone: 970-776-5810

Violation(s)

This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement
Requirement Description		
WECC2015015159	08/18/2014	IRO-002-2 R4.
Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.		

Brief summary including the cause of the violation(s) and mechanism in which it was identified:

How issue was discovered: The issue was discovered through coordination with Bonneville Power Authority (BPA).

Detailed Description and Cause of Possible Violation:
Peak Reliability (Peak) is registered as a Reliability Coordinator (RC) and is required to comply with IRO-002-2 R4: "Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure." Peak is reporting a violation of the "…can be easily understood and interpreted…" section of this Requirement as discussed below.

On 8/18/2014, a Transmission Operator (TOP) calculated an incorrect System Operating Limit (SOL) and transmitted it to Peak via ICCP. Peak and the TOP appropriately operated the system to the SOL provided by the TOP, collaboratively addressing exceedances of that SOL that occurred on that day. After the fact analysis by the TOP indicated that a single Remedial Action Scheme (RAS) was not armed as was planned, leading to an incorrectly calculated SOL value by the TOP. Peak's Real-time tools, including Real-time Contingency Analysis (RTCA), had the correct real-time telemetry, network modeling, and RAS modeling data and did properly identify post-contingency exceedances in RTCA. Howver, the RTCA results were incorrectly interpreted by a Peak Reliability Coordinator System Operator (RCSO), leading the RCSO to believe no action was needed to mitigate the RTCA identified SOL exceedance. Therefore, Peak did not have sufficient emphasis on alarm management and awareness systems to ensure information could be easily understood and interpreted by its operating personnel.

TOPs are required to calculate SOLs and communicate them to Peak. Peak and the TOPs then monitor for actual or potential SOL exceedances based on the SOLs that the TOP calculates. In this instance, the TOP provided the incorrect SOL to Peak, and Peak took appropriate actions based on the SOL it was provided. When there was an exceedance of the SOL that was provided, Peak appropriately contacted the TOP to confirm the SOL and coordinated mitigating actions to relieve the exceedance.

SOLs are calculated through studies by the TOP based on expected conditions, often several days in advance. Peak utilizes real-time tools to monitor for unacceptable system performance in real-time operations. The SOL in this instance is normally thermally-limited, contingency-based, therefore Peak uses RTCA to identify the same unacceptable system performance that the SOL is meant to prevent, but based on real-time topology, generation, and load from Peak's State Estimator. In this case, the Peak RCSO was presented with post-contingency thermal exceedances between 11:01 PST - 13:02 PST, and then again between 13:09 PST – 14:14 PST.

Confusion over how RTCA identifies these exceedances led the Peak RCSO to misinterpret the indications in RTCA, and as a result, efforts were not made to mitigate the post-contingent exceedance.

The root of the problem that caused the RCSO to misinterpret the information being presented by RTCA is incomplete tool design. Peak uses a tool called the RCWorkbook, which is the primary tool used for visualizing RTCA results. The RCWorkbook allows users to sort and filter, to attach a “note” to an RTCA exceedance. The note documents reasons and viable mitigation for the post-contingency exceedance. The benefit of using notes is to save valuable time when investigating exceedances. A previous RCSO might have already encountered the same issue and documented viable mitigation to utilize if the contingency ever were to happen. Instead of doing the same work again, an RCSO can leverage previous work captured in the note to validate viable mitigation.

RTCA works by studying each credible contingency (where each contingency is uniquely identified by a contingency ID) and identifying any SOL exceedances on other elements (monitored elements) caused by the occurrence of that contingency. A contingency may cause exceedances on multiple monitored elements, and the mitigation for those exceedances may be the same or may be different. In RCWorkbook, the notes are associated with a unique contingency ID, and not the contingency ID/monitored element pair. This means the same note appears every time its associated contingency exceedance appears even though the note may have been intended to address a different contingency ID/monitored element pair. Therefore, the potential exists for the RCSO to misinterpret a note.

In this instance, the RCSO first recognized the contingency exceedance as associated with a different monitored element, and validated that the note described appropriate mitigation for that monitored element. However, the RCSO did not recognize that the note did not describe appropriate mitigation for the post-contingent exceedance/monitored element pair identified by Peak’s tool, RTCA. Therefore, Peak’s tool was not “easily understood and interpreted” by the RCSO.

Peak asks for Find Fix Track (FFT) treatment of this violation for the following reasons:

1) Risk impact to the BES was Minimal as described below. FERC’s March 15, 2012 Order, paragraph 47, states that “the Commission will condition its acceptance of the FFT proposal on allowing only possible violations that pose a minimal risk to Bulk-Power System reliability to be eligible for FFT treatment.”

2) All mitigation has either completed or will complete within 10 months. FERC’s September 18, 2014 Order, paragraph 24, states: “Further, we accept NERC’s proposal to extend the time frame for completion of mitigation activities from 90 days after NERC posts an FFT to one year after posting.”

3) Peak voluntarily Self Reported. FERC’s March 15, 2012 Order, paragraph 65, states that “the Commission recognizes the importance of self-reporting of violations by registered entities and encourages registered entities to self-report. Therefore, we believe that self-reporting of violations should be a factor that NERC considers in designating a possible violation as an FFT.”

Relevant information regarding the identification of the violation(s):

See above.

Plan Details

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 violation(s) identified above in Section C.1 of this form:

Description of Mitigating Activities and Preventative Measures:
Milestone #1: Create and deliver job aid to clarify expectations to validate notes against all monitored elements in RCWorkbook. Scheduled completion date: 11/2/2015.

Milestone #2: Develop a detailed design specification for RCWorkbook enhancements to provide ability to attach notes to contingency ID and monitored element pair. Today, the RCWorkbook only supports notes for a contingency (and not monitored element pair). Scheduled completion date: 1/15/2016.

Milestone #3: Complete development and testing of RCWorkbook enhancements (described in Milestone #2) to provide ability to attach notes to contingency and monitored element pair. Scheduled completion date: 4/4/2016.

Milestone #4: Update procedures, conduct system operator training on, and implement RCWorkbook enhancements. Scheduled completion date: 6/15/2016.

Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: June 15, 2016

Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
Milestone #1: Create and deliver job aid	Milestone #1: Create and deliver job aid to clarify expectations to validate notes against all monitored elements in RCWorkbook. Scheduled completion date: 11/2/2015.	11/02/2015	10/27/2015		No
Milestone #2: Develop a detailed design specification	Milestone #2: Develop a detailed design specification for RCWorkbook enhancements to provide ability to attach notes to contingency ID and	01/15/2016	11/16/2015		No

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date	Entity Comment on Milestone Completion	Extension Request Pending
	monitored element pair. Today, the RCWorkbook only supports notes for a contingency (and not monitored element pair). Scheduled completion date: 1/15/2016.				
Milestone #3: Complete development and testing	Milestone #3: Complete development and testing of RCWorkbook enhancements (described in Milestone #2) to provide ability to attach notes to contingency and monitored element pair. Scheduled completion date: 4/4/2016.	04/04/2016			No
Milestone #4: Update procedures, conduct system operator training on, and implement RCWorkbook enhancements	Milestone #4: Update procedures, conduct system operator training on, and implement RCWorkbook enhancements. Scheduled completion date: 6/15/2016.	06/15/2016			No

Additional Relevant Information

Reliability Risk

Reliability Risk

While the Mitigation Plan is being implemented, the reliability of the bulk Power System may remain at higher Risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are known or anticipated : (i) Identify any such risks or impacts, and; (ii) discuss any actions planned or proposed to address these risks or impacts.

While the Mitigation Plan is being implemented, Peak has mitigated the risk by conducting RCWorkbook training in the Spring of 2015 and by clarifying expectations with RCSOs.

Prevention

Describe how successful completion of this plan will prevent or minimize the probability further violations of the same or similar reliability standards requirements will occur

Updating tools and training system operators will ensure Peak’s tools can be easily understood and interpreted its operating personnel.

Describe any action that may be taken or planned beyond that listed in the mitigation plan, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements

None.

Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

* Submits the Mitigation Plan, as presented, to the regional entity for acceptance and approval by NERC, and

* if applicable, certifies that the Mitigation Plan, as presented, was completed as specified.

Acknowledges:

1. I am qualified to sign this mitigation plan on behalf of my organization.

2. I have read and understand the obligations to comply with the mitigation plan requirements and ERO remedial action directives as well as ERO documents, including but not limited to, the NERC rules of procedure and the application NERC CMEP.

3. I have read and am familiar with the contents of the foregoing Mitigation Plan.

Peak Reliability Agrees to be bound by, and comply with, this Mitigation Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authority.

Authorized Individual Signature: _____

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Authorized Individual

Name: Jared Shakespeare

Title: Director of Compliance

Authorized On: August 25, 2015

Attachment D

PEAK's Certification of Mitigation Plan Completion submitted June 15, 2016.

Certification of Mitigation Plan Completion

Submittal of a Certification of Mitigation Plan Completion shall include data or information sufficient for the Regional Entity to verify completion of the Mitigation Plan. The Regional Entity may request 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)

Registered Entity Name: Peak Reliability
NERC Registry ID: NCR10289
NERC Violation ID(s): WECC2015015159
Mitigated Standard Requirement(s): IRO-002-2 R4.
Scheduled Completion as per Accepted Mitigation Plan: June 15, 2016
Date Mitigation Plan completed: June 14, 2016
WECC Notified of Completion on Date: June 15, 2016
Entity Comment:

Additional Documents			
From	Document Name	Description	Size in Bytes
Entity	RTCA Exceedance Job Aid v2.0.pdf		570,396
Entity	Job Aid Notification.pdf		105,852
Entity	RTCA Exceedance Job Aid v3.0.pdf		1,057,477
Entity	2016 RCWorkbook Enhancements Training Completion.pdf		60,663
Entity	RCSO List 060816.pdf		29,745
Entity	RCW -Screenshot 1.PNG		120,034
Entity	RCW - Screenshot 2.PNG		133,120

I certify that the Mitigation Plan for the above named violation(s) has been completed on the date shown above and that all submitted information is complete and correct to the best of my knowledge.

Name: Matthew Yates
Title: Interim Compliance Director
Email: myates@peakrc.com
Phone: 1 (360) 567-4070

Authorized Signature _____ Date _____

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Attachment E

WECC's Verification of Mitigation Plan Completion dated October 18, 2016.

From: noreply@oati.net
Sent: 10/18/2016 10:22:28
To: cliang@peakrc.com;myates@peakrc.com
Subject: WECC Notice - Completed Mitigation Plan Acceptance - IRO-002-2 R4. - Peak Reliability

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Please do not REPLY to this message. It was sent from an unattended mailbox and replies are not monitored. If you have a question, send a new message to the OATI Help Desk at support@oati.net.

NERC Registration ID: NCR10289
NERC Violation ID: WECC2015015159
Standard/Requirement: IRO-002-2 R4.
Subject: Completed Mitigation Plan Acceptance

The Western Electricity Coordinating Council (WECC) received the Certification of Mitigation Plan Completion submitted by Peak Reliability on 06/15/2016 for the violation of IRO-002-2 R4.. After a thorough review, WECC has accepted the Certification of Mitigation Plan Completion.

Note: Effective 04/01/2013, WECC will formally notify registered entities of completed Mitigation Plan acceptances via this email notice. WECC will no longer notify entities by uploading a Notice of Completed Mitigation Plan Acceptance letter to the Enhanced File Transfer (EFT) Server.

Thank you, OATI

[redacted]

[OATI Information - Email Template: MitPlan_Completed]