NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

September 30, 2021

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 Public Service Company of New Mexico, FERC Docket No. NP21_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty[1] regarding Public Service Company of New Mexico (PNM), and referred to herein as the Entity, NERC Registry ID# NCR05333,[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]

NERC is filing this Notice of Penalty, with information and details regarding the nature and resolution of the violations,[4] with the Commission because the Western Electricity Coordinating Council (WECC) and the Entity have entered into a Settlement Agreement to resolve all outstanding issues arising from WECC's determination and findings of the violations of the Reliability Standards listed below.

According to the Settlement Agreement, the Entity admits to the violation, and has agreed to the assessed penalty of two hundred sixty-five thousand dollars ($265,000).

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

[2] The Entity was included on the NERC Compliance Registry as a Balancing Authority (BA), Distribution Provider (DP), Generator Owner (GO), Generator Operator (GOP), Planning Authority/Planning Coordinator (PA/PC), Resource Planner (RP), Transmission Owner (TO), Transmission Operator (TOP), Transmission Planner (TP), and Transmission Service Provider (TSP), on June 17, 2007.

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

[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.

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 the Entity. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein.

In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2021), 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 and herein.

Violation(s) Determined and Discovery Method
*SR = Self-Report / SC = Self-Certification / CA = Compliance Audit / SPC = Spot Check / CI = Compliance Investigation

NERC Violation ID	Standard	Req.	VRF/VSL	Applicable Function(s)	Discovery Method* & Date	Violation Start-End Date	Risk	Penalty Amount
WECC2017017556	FAC-008-3	R6	Medium/ Severe	TO	SR/CA 5/9/17	1/13/13 – 2/18/22	Serious	$265k

Information About the Entity

The Entity is based in Albuquerque, New Mexico, and generates, transmits, and distributes electric service throughout New Mexico. The Entity is the state's largest energy provider, with more than 525,000 residential and business customers across New Mexico. During the period of this violation, PNM's transmission system consisted of its ownership and operations of 2,324 miles of transmission, which included 969 miles of 345 kV transmission, 180 miles of 230 kV transmission, and 1175 miles of 115 kV transmission.

FAC-008-3 R6

WECC determined that there were multiple occurrences when the Entity did not have Facility Ratings for its solely and jointly owned Facilities that were consistent with the associated Facility Ratings methodology. The Entity did not (1) use the same Facility Ratings as neighboring entities for six facilities, including five 115 kV transmission lines and one 230 kV transmission line; (2) maintain consistency in its Facility Ratings spreadsheet for the same equipment; (3) document assumptions used in calculations for conductor-rating software; and (4) adequately maintain source documentation at 56 Facilities, including

15 345 kV transmission Facilities, 4 230 kV transmission Facilities, and 37 115 kV transmission Facilities. Attachment 1 includes additional facts regarding the violation.

The cause of this violation was a lack of management clarity for PNM's change management procedures for documenting its Facility Ratings. PNM lacked clear internal guidance to reconcile the Facility Ratings for its Facilities, which resulted in failure to adequately document assumptions about Facility Ratings and changes made in the past or present.

WECC determined that this violation posed a serious and substantial risk to the reliability of the bulk power system (BPS). Attachment 1 includes the facts regarding the violation that WECC considered in its risk assessment.

The Entity submitted its Mitigation Plan to address the referenced violation. Attachment 1 includes a description of the mitigation activities the Entity took to address this violation. A copy of the Mitigation Plan is included as Attachment 3.

The Entity has not yet certified that it completed all mitigation activities, as the mitigation activities will be completed by March 3, 2022. WECC will then verify completion of the mitigation activities.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, WECC has assessed a penalty of two hundred sixty-five thousand dollars ($265,000) for the referenced violation. In reaching this determination, WECC considered the following factors:

1. The violation of FAC-008-3 R6 posed a serious and substantial risk to the reliability of the BPS, as discussed in Attachment 1;
2. The Entity was cooperative throughout the compliance enforcement process;
3. The Entity accepted responsibility and admitted to the violation;
4. The Entity agreed to settle this violation and penalty; and
5. The Entity's relevant compliance history was an aggravating factor in the penalty determination.

After consideration of the above factors, WECC determined that, in this instance, the penalty amount of two hundred sixty-five thousand dollars ($265,000) 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] NERC Enforcement staff reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violation at issue, and considered the factors listed above.

For the foregoing reasons, NERC Enforcement staff approved the resolution between WECC and the Entity and believes that the assessed penalty of two hundred sixty-five thousand dollars ($265,000) 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:

1. Settlement Agreement by and between WECC and the Entity executed July 13, 2021, included as Attachment 1;
2. The Entity's Self-Report[7] dated May 9, 2017, included as Attachment 2;
3. The Entity's Mitigation Plan designated as WECCMIT012994-2 for FAC-008-3 R6 submitted March 16, 2021 included as Attachment 3.

[5] *See* 18 C.F.R. § 39.7(d)(4).

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

[7] As noted in the Settlement Agreement, WECC identified additional instances of noncompliance found during subsequent Compliance Audits. These additional instances were considered expansions of scope to the Self-Report; therefore, WECC does not have a separate discovery document detailing these additional instances.

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

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. Melanie Frye President and Chief Executive Officer Western Electricity Coordinating Council 155 North 400 West, Suite 200 Salt Lake City, UT 84103 (801) 883-6882 (801) 883-6894 – facsimile mfrye@wecc.org Heather Laws* Director 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.org	Teresina Stasko* Assistant General Counsel and Director of Enforcement North American Electric Reliability Corporation 1325 G Street NW, Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile teresina.stasko@nerc.net James McGrane* Senior Counsel North American Electric Reliability Corporation 1325 G Street NW, Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile james.mcgrane@nerc.net Caelyn Palmer* Associate Counsel North American Electric Reliability Corporation 1325 G Street NW, Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile caelyn.palmer@nerc.net

Mike Mertz* VP and CIO Public Service Company of New Mexico 414 Silver Avenue SW, Mailstop 1205 Albuquerque, NM 87102 (505) 241-0676 michael.mertz@pnmresources.com Lynn Goldstein* Director, NERC Compliance Public Service Company of New Mexico 2401 Aztec Rd. NE, MS-Z310 Albuquerque, NM 87107 (505) 241-0677 lynn.goldstein@pnmresources.com	

Conclusion

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

Respectfully submitted,

/s/ Caelyn Palmer

Teresina Stasko
Assistant General Counsel and Director of Enforcement
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cc: Public Service Company of New Mexico
The Western Electricity Coordinating Council

Attachments

Attachment 1
Settlement Agreement by and between WECC and PNM
executed July 13, 2021

WECC
Electric Reliability and Security for the West

CONFIDENTIAL

Heather M. Laws
Director, Enforcement
hlaws@wecc.org · 801-819-7642

Via webCDMS Document Repository

June 21, 2021

Mike Mertz
VP and CIO
Public Service Company of New Mexico

Subject: Notice of Expedited Settlement Agreement

Mike Mertz,

I. Introduction

The Western Electricity Coordinating Council (WECC) hereby notifies Public Service Company of New Mexico (PNM) NCR05333 that WECC identified Possible Violations of North American Electric Reliability Corporation (NERC) Reliability Standards (Reliability Standards) in the Preliminary Screen process and that based on an assessment of the facts and circumstances of the Possible Violations addressed herein, evidence exists that PNM has Alleged Violations of the Reliability Standards.

WECC reviewed the Alleged Violations referenced below and determined that these violations are appropriate violations for disposition through the Expedited Settlement process. In determining whether to exercise its discretion to use the Expedited Settlement process, WECC considered all facts and circumstances related to the violations.

This Notice of Expedited Settlement Agreement (Notice) notifies PNM of the proposed penalty and/or sanctions for such violations. By this Notice, WECC reminds PNM to retain and preserve all data and records relating to the Alleged Violations.

II. Alleged Violations

Standard Requirement	NERC Violation ID
FAC-008-3 R6	WECC2017017556

The attached Expedited Settlement Agreement includes a summary of the facts and evidence supporting each Alleged Violation, as well as the basis on which the penalty and/or sanctions were determined.

III. Proposed Penalty or Sanction

Pursuant to the Federal Energy Regulatory Commission's (FERC or Commission) regulations and orders, NERC Rules of Procedure, and the NERC Sanction Guidelines, WECC may assess a penalty and/or nonmonetary sanction for the Alleged Violations of the Reliability Standards, as referenced in the attached Settlement Agreement.

In determining a penalty and/or nonmonetary sanction, WECC considers various factors that may include, but are not limited to: (1) Violation Risk Factor; (2) Violation Severity Level; (3) risk to the reliability of the Bulk Electric System (BES)[1], including the seriousness of the violation; (4) Violation Time Horizon and timeliness of remediation; (5) the violation's duration; (6) the Registered Entity's compliance history; (7) the timeliness of the Registered Entity's self-report; (8) the degree and quality of cooperation by the Registered Entity in the audit or investigation process, and in any remedial action; (9) the quality of the Registered Entity's Internal Compliance Program; (10) any attempt by the Registered Entity to conceal the violation or any related information; (11) whether the violation was intentional; (12) any other relevant information or extenuating circumstances; (13) whether the Registered Entity admits to and takes responsibility for the violation; (14) "above and beyond" actions and investments made by the Registered Entity in an effort to prevent recurrence of this issue and/or proactively address and reduce reliability risk due to similar issues; and (15) the Registered Entity's ability to pay a penalty, as applicable.

WECC's determination of penalties is guided by the statutory requirement codified at 16 U.S.C. § 824o(e)(6) that any penalty imposed "shall bear a reasonable relation to the seriousness of the violation and shall take into consideration the efforts of [the Registered Entity] to remedy the violation in a timely manner." In addition, WECC considers all other applicable guidance from NERC and FERC.

IV. Procedures for Registered Entity's Response

[1] "The Commission, the ERO, and the Regional Entities will continue to enforce Reliability Standards for facilities that are included in the Bulk Electric System." (*Revision to Electric Reliability Organization Definition of Bulk Electric System*, 113 FERC ¶ 61,150 at P 100 (Nov. 18, 2010))

If PNM accepts WECC's proposal that the violations listed in the Settlement Agreement be processed through the Expedited Settlement process, PNM must sign the attached Settlement Agreement and submit it to WECC **within 15 calendar days from the date of this Notice**.

If PNM does not accept WECC's proposal, PNM must submit a written rejection **within 15 calendar days from the date of this Notice**, informing WECC of the decision not to accept WECC's proposal.

If PNM rejects this proposal or does not respond **within 15 calendar days,** WECC will issue a Notice of Alleged Violation and Proposed Penalty or Sanction.

V. Conclusion

In all correspondence, please provide the name and contact information of a representative from PNM who is authorized to address the above-listed Alleged Violations and who is responsible for providing the required Mitigation Plans. Please also list the relevant NERC Violation Identification Numbers in any correspondence.

Responses or questions regarding the Settlement Agreement should be directed to Katherine Bennett, Enforcement and Mitigation Analyst, at 801-883-6850 or kbennett@wecc.org.

Sincerely,

Heather M. Laws
Director, Enforcement and Mitigation

cc: NERC Enforcement

Attachment

EXPEDITED SETTLEMENT AGREEMENT

OF

WESTERN ELECTRICITY COORDINATING COUNCIL

AND

PUBLIC SERVICE COMPANY OF NEW MEXICO

Western Electricity Coordinating Council (WECC) and Public Service Company of New Mexico (PNM) (individually a "Party" or collectively the "Parties") agree to the following:

1. PNM admits to the violations of the NERC Reliability Standards listed below.

2. The violations addressed herein will be considered Confirmed Violations as set forth in the NERC Rules of Procedure.

3. The terms of this Settlement Agreement, including the agreed upon payment, are subject to review and possible revision by NERC and FERC. Upon NERC approval of the Settlement Agreement, NERC will file a Notice of Penalty with FERC and will post the Settlement Agreement publicly. If either NERC or FERC rejects the Settlement Agreement, then WECC will attempt to negotiate a revised Settlement Agreement with PNM that includes any changes to the Settlement Agreement specified by NERC or FERC. If the Parties cannot reach a Settlement Agreement, the CMEP governs the enforcement process.

4. The Parties have agreed to enter into this Settlement Agreement 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. The Parties agree that this Settlement Agreement is in the best interest of each Party and in the best interest of Bulk Power System (BPS) reliability.

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

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

7. This Settlement Agreement shall be governed by and construed under federal law.

8. This Settlement Agreement contains the full and complete understanding of the Parties regarding all matters set forth herein. The Parties agree that this Settlement Agreement reflects all terms and conditions regarding all matters described herein and no other promises, oral or written, have been made that are not reflected in this Settlement Agreement.

9. Each of the undersigned warrants that he or she is an authorized representative of the Party identified, is authorized to bind such Party and accepts the Settlement Agreement on that Party's behalf.

10. The undersigned representative of each Party affirms that he or she has read the Settlement Agreement, that all representations 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 each Party in express reliance on those representations.

11. To settle these matters, PNM hereby agrees to pay $265,000 to WECC via wire transfer or cashier's check. PNM shall make the funds payable to a WECC account identified in a Notice of Payment Due that WECC will send to PNM upon approval of this Settlement Agreement by NERC and FERC. PNM 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 PNM 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.

12. In addition, PNM must submit Mitigation Plans within 30 calendar days from the date of this Settlement Agreement, if it has not already done so previously.

13. NOW, THEREFORE, in consideration of the terms set forth herein the Parties stipulate to the following:

A. NERC RELIABILITY STANDARD FAC-008-3 REQUIREMENT 6

NERC VIOLATION ID: WECC2017017556

RELIABILITY STANDARD

1. NERC Reliability Standard FAC-008-3 Requirement 6 states:

   R6. *Each Transmission Owner and Generator Owner shall have Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings methodology or documentation for determining its Facility Ratings.*

VIOLATION FACTS

2. On May 9, 2017, PNM submitted a Self-Report during the WECC Compliance Audit conducted from May 8, 2017 through May 19, 2017 stating that, as a Transmission Owner (TO), it was in potential noncompliance with FAC-008-3 R6.

3. Specifically, PNM discovered that it used Facility Ratings different than its neighboring entities for six jointly owned Facilities including five 115 kV transmission lines and one 230 kV transmission line. Also, PNM had three discrepancies in its Facility Ratings spreadsheet between the conductor MVA or amp ratings that were inconsistent with the Facility Ratings for the same equipment within the Facility Ratings spreadsheet. In addition, PNM's assumptions for calculations for conductor MVA or amp ratings for three Facility Ratings and its assumptions used in the calculations for the conductor-rating software were not documented, even though PNM's FRM required assumptions to be documented. Finally, there were multiple instances where the Facility Rating source documentation, such as nameplate ratings or vendor documentation, could not be located to support certain Facility Ratings despite PNM's FRM requirement to have source documentation. This extent of the condition reported included 56 Facilities: specifically, 15 345 kV transmission Facilities, four 230 kV transmission Facilities and 37 115kV transmission Facilities.

4. During the WECC Compliance Audit from May 8, 2017 through May 19, 2017 WECC Auditors reviewed PNM's Self-Report for FAC-008-3 R6 and found two additional Facilities that were missing source documentation. WECC Auditors confirmed that three Facilities had conductor rating discrepancies (two of which were included in the 56 Facilities missing source documentation in PNM's Self-Report) and six jointly owned Facilities had different Facility Ratings than its neighboring entities (two of which were included already in the total number of affected Facilities). Thus, the total affected Facilities after the Audit was sixty-three.

5. During mitigation, PNM discovered that in-line switches were not adequately represented in its Facility Ratings, which led PNM to uncover additional instances of incomplete source documentation that had not been identified in its 2017 Self-Report or at the WECC Compliance Audit. Specifically, PNM did not have appropriate source documentation for all equipment ratings for all its 115 kV transmission Facilities (72); four of its seven 230 kV transmission Facilities, and 15 of its 34 345 kV transmission Facilities. In total, PNM discovered that it was missing source documentation for 206 elements on 91 Facilities. Thus, the extent of condition, at this time, added an additional 29 Facilities, bringing the total to 92 Facilities that had Facility Ratings that were inconsistent with PNM's Facility Ratings Methodology (FRM). As a result of these inconsistencies and lack of documentation, PNM changed 15 Facility Ratings; five 115 kV transmission Facility Ratings were increased, nine 115 kV transmission Facility Ratings and one 345 kV transmission Facility Rating were de-rated, however the actual loading on the de-rated Facilities did not exceed the de-rated maximum loading.

6. WECC Auditors then reviewed PNM's Mitigation Completion Certification evidence during a Compliance Audit conducted from May 4, 2020 to May 15, 2020. WECC Auditors determined that certain issues, as described above, had been properly addressed, but found additional extent of condition that would require additional mitigation steps. Specifically, the additional extent of condition included one 115 kV transmission line from the sampling that had an established winter rating for the conductor, which exceeded the allowable rating. In addition, PNM did not establish source documentation for series-connected jumpers associated with sampled 115 kV, 230 kV, 345 kV transmission lines. Thus, all 102 transmission Facilities were included in the final extent of condition. PNM has included these additional issues in its revised Mitigation Plan.

7. The root cause of the violation was attributed to a lack of management clarity for PNM's change management procedures for documenting its Facility Ratings. PNM did not have clear internal guidance to reconcile the Facility Ratings for its Facilities, thus assumptions about the Facility Ratings and any changes that had been made in the past or present were not well documented.

8. This violation began on January 1, 2013, when the Standard became mandatory and enforceable, and is ongoing. PNM is revising its mitigation efforts to address additional instances. The expected completion date of remediation and mitigation is February 18, 2022, for a total of 3,336 days.

RELIABILITY RISK ASSESSMENT

20. WECC determined this violation posed a serious and substantial risk to the reliability of the Bulk Power System (BPS). In this instance, PNM failed to have sufficient Facility Ratings for all of its 102 solely and jointly owned Transmission Facilities that were consistent with the associated FRM

or documentation for all its Facilities, as a TO, for determining its Facility Ratings, as required by FAC-008-3 R6, as described herein. Given that the extent of the condition is all of PNM's solely and jointly owned Facilities it is considered a systemic issue. During the period of this violation, PNM's transmission system consisted of its ownership and operations of 2,324 miles of transmission which included: 969 miles of 345 kV transmission, 180 miles of 230 kV transmission, and 1175 miles of 115 kV transmission. PNM had 43 BES ties with eight other Registered Entities.

21. Failure to assess accurate Facility Ratings could have resulted in inaccurate System Operating Limits (SOLs), which could have led to a Facility being operated beyond safe and reliable limits for an extended period, resulting in an unintended loss of the Facility. Regarding the ten Facility Ratings that were de-rated, the greatest reductions were to the winter ratings, and most of the reduced summer ratings were reduced by only a small amount. Reductions in Facility Ratings ranged from 0.8% to 28%, with six Facilities having a Facility Rating reduced by 10% or more. PNM is a summer-peaking entity with lower transmission loading during the winter and has higher winter Facility Ratings for many of the affected Facilities. However, as compensation, five of the Facility Ratings were increased, reducing the risk to the BPS during the violation duration.

REMEDIATION AND MITIGATION

22. On May 12, 2017, PNM submitted the first version of its Mitigation Plan on March 16, 2021 to address its violation and on March 31, 2021, WECC accepted PNM's Mitigation Plan.

23. To remediate and mitigate this violation, PNM has:
    a. validated that all conductors are rated in accordance with PNM's Facility Ratings methodology and to the extent there are valid supporting reasons for conductor ratings differences, those were clearly identified in the FAC-008-3 Facilities Ratings documentation;
    b. identified an authoritative source for the existing ratings on identified legacy devices by matching the devices to like devices with known source documentation on the system; worked with vendors to identify equipment using serial numbers and/or other identifying information; identified ways to read nameplates in areas that are not accessible without obtaining a planned outage for the Facility;
    c. worked with the neighboring entities to resolve the instances where the Facility Ratings for the identified Facilities differ from those identified by the neighboring entity;
    d. implemented a new software application called Most Limiting Element Database application which will serve as an additional control and will replace the current FAC-008-3 Most Limiting System Element (MLSE) 115 kV, 230 kV, and 345 kV transmission line spreadsheets. This application will help reduce the potential for error and will serve

as a technical internal control to ensure that differing conductor ratings for the same conductor type and configuration do not deviate from the standards identified in PNM's FRM without specific justification;

e. instituted a formal governing change management process, for the establishment and documentation of Facilities Ratings, as an internal control;
f. revised its Transmission Facilities Ratings guidance to include seasonal switch ratings;
g. updated applicable documents related to transmission line and substation construction to include jumper installation that will ensure jumpers are not the MSLE;
h. added jumpers as an equipment type to Commissioning Process Equipment Template and create new jumper data collection form; and
i. added jumpers as an equipment type to PNM asset management database.

24. To remediate and mitigate this violation, PNM will by February 18, 2022:
    j. evaluate ratings in the MLSE spreadsheets using the seasonal switch rating to ensure all applicable switch ratings have been accurately updated and identified;
    k. review 230 kV and 345 kV stations drawings to capture documented jumper sizes and enter into Cascade and MLSE file;
    l. review 33% of 115 kV stations and lines drawings to capture documented jumper sizes and enter into Cascade and update 115 kV transmission line MLSE spreadsheet with 33% of system jumpers known from drawing inspections included in MLSE identification;
    m. review 67% of 115 kV stations and lines drawings to capture documented jumper sizes and enter into Cascade and update 115 kV transmission line MLSE spreadsheet with 67% of system jumpers known from drawing inspections included in MLSE identification; and
    n. review 100% of 115 kV stations and lines drawings to capture documented jumper sizes and enter into Cascade and update 115 kV transmission line MLSE spreadsheet with 100% of system jumpers known from drawing inspections included in MLSE identification.

PROPOSED PENALTY AND/OR NON-MONETARY SANCTION

25. WECC determined that the proposed penalty of $265,000 is appropriate for the following reasons:
    a. Base penalty factors:
        i. The Violation Risk Factor (VRF), Violation Severity Level (VSL) and risk to the reliability of the BPS for these violations are listed in the table below:

Standard & Requirement	NERC Violation ID	VRF	VSL	Risk to the Reliability of the BPS
FAC-008-3 R6	WECC2017017556	Medium	Severe	Serious

ii. The duration of these violations, as described above are reflected in the table below:

Standard and Requirement	NERC Violation ID	Start Date	Proposed End Date	Violation Duration
FAC-008-3 R6	WECC2017017556	1/1/2013	2/18/2022	3336 days

iii. The violation time horizon (VTH) expectation for remediation of the Requirement to preserve the reliability of the BPS is discussed in the table below. By the time PNM remediates the violation, it will have taken considerably longer than the VTH expectation.

Standard and Requirement	NERC Violation ID	VTH	Remediation
FAC-008-3 R6	WECC2017017556	Operations Planning	from day-ahead up to and including seasonal (24 hours to 90 days)

b. WECC applied a mitigating credit for the following reasons:
   i. PNM was cooperative throughout the process.
   ii. PNM accepted responsibility and admitted to the violation.
   iii. PNM agreed to settle these violations and penalty.

c. WECC considered the following as an aggravating factor:
   i. PNM's relevant compliance history regarding FAC-008-3 R6 of two prior noncompliance viewed in conjunction with this violation, the significant violation duration, and difficulty in remediating and mitigating, is considered a systemic issue.

d. Other Considerations:
   i. While PNM Self-Reported the FAC-008-3 R6 violation, it did not receive mitigating credit because the Self-Report was submitted after receiving notice of an upcoming Compliance Audit.
   ii. Though PNM has a documented Internal Compliance Program (ICP) which demonstrates a strong culture of compliance with a focus on improving the reliability and security of the BPS, however it was not effective in preventing or detecting the violation herein.
   iii. PNM did not fail to complete any applicable compliance directives. There was no evidence of any attempt by PNM to conceal the violation. There was no evidence

that violation was intentional. PNM submitted all requested documentation and/or mitigation plans timely.

iv. WECC determined there were no other aggravating factors warranting a penalty higher than the proposed penalty.

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

Agreed to and Accepted by:

WESTERN ELECTRICITY COORDINATING COUNCIL

Heather Laws (Jul 13, 2021 15:01 MDT)

Jul 13, 2021

Heather M. Laws
Director, Enforcement and Mitigation

Date

PUBLIC SERVICE COMPANY OF NEW MEXICO

Name: Michael Mertz
Title: Vice President, CIO

July 12th 2021

Date

PNM ESA 2021 Signed

Final Audit Report 2021-07-13

Created:	2021-07-13
By:	Mailee Cook (mcook@wecc.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAmlU4-Eb1EcQX0XTRCJgT_AtozcmRss70

"PNM ESA 2021 Signed" History

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2021-07-13 - 9:01:17 PM GMT- IP address: 104.47.66.126

Document e-signed by Heather Laws (hlaws@wecc.org)
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Agreement completed.
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Attachment 2
PNM's Self-Report dated May 9, 2017

Self Report

Entity Name: Public Service Company of New Mexico (PNM)

NERC ID: NCR05333

Standard: FAC-008-3

Requirement: FAC-008-3 R6.

Date Submitted: May 09, 2017

Has this violation previously been reported or discovered?: No

Entity Information:

Joint Registration Organization (JRO) ID:

Coordinated Functional Registration (CFR) ID:

Contact Name: Laurie Williams

Contact Phone: 5052410641

Contact Email: laurie.williams@pnmresources.com

Violation:

Violation Start Date: January 01, 2013

End/Expected End Date: October 02, 2017

Reliability Functions: Transmission Owner (TO)

Is Possible Violation still occurring?: Yes

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: Contrary to FAC-008-3 R6, which requires each TOs/GOs to have Facility Ratings for solely and jointly owned Facilities that are consistent with the associated Facility Ratings methodology or documentation for determining its Facility Ratings, PNM as a TO may have established ratings that are inconsistent with its methodology.
Specifically, PNM is using ratings that differ slightly from those being used by a neighboring entities for the same facility for 6 BES facilities including five (5) 115 kV lines and one (1) 230 kV line. The cause of these discrepancies is lack of a formal process at PNM to reconcile the facility ratings of common facilities.

Additionally, there are instances in PNM's TO facilities ratings where the conductor MVA or amp ratings differ from one another within the FAC-008-3 spreadsheet. While these may not be incorrect, the assumptions that underpin those differing ratings are not well documented. As such, they warrant further review and reconciliation to ensure they comport with PNM's Facilities Ratings Methodology. In addition, there are three (3) facility ratings where the conductor MVA or amp ratings are higher than base rating calculated using the EPRI DynAmp software. The cause of this issue is related to the fact that PNM did not historically include the details of the conductor DynAmp calculations in the FAC-008 spreadsheet. Additionally, the SME who performed all of the DynAmp conductor ratings calculations did not have a process that required detailed documentation regarding the assumptions used to create the ratings that differed from those specified as the standard in the PNM Facilities Ratings Methodology and/or the weather studies that served as the source for the different ratings assumptions. As such, PNM's conductor ratings that had been

Self Report

changed based upon various weather studies were not properly documented within the FAC-008-3 MLSE spreadsheets.

Finally, there are instances where authoritative source documentation for legacy equipment that supports the rating being used in PNM's Facilities Ratings, including nameplate ratings or vendor documentation, could not be located. While these may not be incorrect, it is difficult to verify the validity of some of the elemental ratings within PNM's FAC-008-3 spreadsheets. This issue has been identified on one or more devices within fifteen (15) 345 kV, four (4) 230 kV, and thirty sever (37) 115 kV BES Facilities. The cause of this possible violation is that most of the equipment for which nameplate and/or vendor documentation is not available due to age of the equipment and pre-dates the FAC-008 standard. As such it was either not maintained in a centralized location or was not included on the device itself.

Mitigating Activities:

Description of Mitigating Activities and Preventative Measure:

PNM's mitigation activities to address the root cause include:
To address concern raised by WECC during the 2014 audit, PNM has systematically inventoried its BES facilities on a risk-prioritized basis and collected and compared ratings used in the Facilities Ratings against those identified by an authoritative source such as nameplate, drawing, vendor information, etc. The process to validate ratings against authoritative source documentation largely yielded in no changes to the overall facility ratings and in many cases demonstrated PNM was often conservative in its approach to facilities ratings.
To remediate and mitigate the remaining items that encompassed as a part of this self-report and fall into one or more of the three types of issues identified herein, PNM will:
1. Validate that all 'like' conductors are rated in accordance with PNM's methodology and to the extent there are valid supporting reasons for conductor ratings differences, those will be more clearly identified in the FAC-008-3 Facilities Ratings documentation;
2. Identify an authoritative source for the existing ratings on identified legacy devices by matching the devices to like devices with known source documentation on the system, working with vendors to identify equipment using serial numbers and/or other identifying information other, identifying ways to read nameplates in areas that are not accessible without obtaining a planned outage for the facility, and;
3. Work with the neighboring entities to resolve the instances where the FAC-008-3 ratings for the identified common facilities differ from those identified by the neighboring entity.

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:

The potential; impact is minimal as this possible non-compliance is primarily administrative in nature and that would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. During the nearly two year long process to validate elemental ratings against authoritative source documentation, there were no instances identified wherein the elemental rating exceeded the rating codified in the authoritative source documentation.

There has been no actual impact to the BPS as there has been no instances wherein equipment was operated above its physical capability resulting in

Self Report

damage as the result of any of the devices identified in this self-report.

Risk Assessment of Impact to BPS: The risk that the ratings for the elements that comprise a BES Facility are incorrect could result in ratings that exceed the physical capability of the Facility. In this case, that risk associated with this possible non-compliance is low as during the nearly two years long process to validate elemental ratings, PNM did not identify any situations where the source documentation exceeded the identified rating. PNM has maintained Facilities Ratings long-term, since well before the FAC-008 was established, and the risk that the administrative issues identified herein could negatively impact Facilities in real-time is low. Historical safe operations of these facilities under varying conditions demonstrate that these ratings are likely well within the physical capability of the facilities.
PNM's base ratings assumptions are for more extreme weather conditions, ones which only occur during the very peak periods of the year. For example, most of state is afforded a 2 ft/sec wind speed assumption, when in reality weather data reveals that wind speeds on average exceed PNM's FAC-008 assumptions. The assumptions are conservative for most of the areas as the assumptions were made for the most limiting conditions identified in the state, and were applied across the board. Therefore, ratings assumptions such as wind speeds may be under-represented in the conductor ratings calculations as New Mexico has one of the highest sustained wind speeds in the country. This fact was not contemplated in the ratings themselves when they were developed previously.
Finally, multiple entities identify 120¢ªC as the temperature basis for rating conductor whereas PNM uses 100¢ªC. As a result, PNM is often more conservative than most in established conductor ratings.

Additional Entity Comments: PNM is in the process of developing a database software application that will replace the spreadsheets for actual ratings. The database software application has an algorithm developed to calculate the Facility Ratings of any transmission line after the user enters all the equipment data. The software application will be on pilot phase in Q2 2017 and is expected to be fully functional in Q3/Q4 2017.

Additional Comments		
From	Comment	User Name
No Comments		

Additional Documents			
From	Document Name	Description	Size in Bytes
Entity	FAC-008-3 List of Facilities for Self-Report.xlsx	This document defines the scope of the self-report.	45,352

Attachment 3
PNM's Mitigation Plan designated WECCMIT012994-2
submitted March 16, 2021

Mitigation Plan

Mitigation Plan Summary

Registered Entity: Public Service Company of New Mexico

Mitigation Plan Code: WECCMIT012994-2

Mitigation Plan Version: 3

NERC Violation ID	Requirement	Violation Validated On
WECC2017017556	FAC-008-3 R6.	06/12/2017

Mitigation Plan Submitted On: March 16, 2021

Mitigation Plan Accepted On:

Mitigation Plan Proposed Completion Date: March 03, 2022

Actual Completion Date of Mitigation Plan:

Mitigation Plan Certified Complete by PNM 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: Public Service Company of New Mexico

NERC Compliance Registry ID: NCR05333

Address: 414 Silver SW
Albuquerque NM 87102

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: Rahn Petersen
Title: Senior Project Manager, NERC Compliance
Email: rahn.petersen@pnm.com
Phone: 505-241-3304

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		
WECC2017017556	01/01/2013	FAC-008-3 R6.
Each Transmission Owner and Generator Owner shall have Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings methodology or documentation for determining its Facility Ratings.		

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

Contrary to FAC-008-3 R6, which requires each TOs/GOs to have Facility Ratings for solely and jointly owned Facilities that are consistent with the associated Facility Ratings methodology or documentation for determining its Facility Ratings, PNM as a TO may have established ratings that are inconsistent with its methodology. Specifically, PNM is using ratings that differ slightly from those being used by a neighboring entities for the same facility for 6 BES facilities including five (5) 115 kV lines and one (1) 230 kV line. The cause of these discrepancies is lack of a formal process at PNM to reconcile the facility ratings of common facilities.
Additionally, there are instances in PNM's TO facilities ratings where the conductor MVA or amp ratings differ from one another within the FAC-008-3 spreadsheet. While these may not be incorrect, the assumptions that underpin those differing ratings are not well documented. As such, they warrant further review and reconciliation to ensure they comport with PNM's Facilities Ratings Methodology. In addition, there are three (3) facility ratings where the conductor MVA or amp ratings are higher than base rating calculated using the EPRI DynAmp software. The cause of this issue is related to the fact that PNM did not historically include the details of the conductor DynAmp calculations in the FAC-008 spreadsheet. Additionally, the SME who performed all of the DynAmp conductor ratings calculations did not have a process that required detailed documentation regarding the assumptions used to create the ratings that differed from those specified as the standard in the PNM Facilities Ratings Methodology and/or the weather studies that served as the source for the different ratings assumptions. As such, PNM's conductor ratings that had been changed based upon various weather studies were not properly documented within the FAC-008-3 MLSE spreadsheets.
Finally, there are multiple instances where authoritative source documentation that supports the rating being used in PNM's Facilities Ratings, including nameplate ratings or vendor documentation, could not be located. While these may not be incorrect, it is difficult to verify the validity of some of the elemental ratings within PNM's FAC-008-3 spreadsheets. This issue has been identified on one or more devices within fifteen (15) 345 kV, four (4) 230 kV, and thirty sever (37) 115 kV BES Facilities. The cause of this possible violation is that most of the equipment for which nameplate and/or vendor documentation is not available due to age of the equipment and pre-dates the FAC-008 standard. As such it was either not maintained in a centralized location or was not included on the device itself.
The complete list of Facilities included in the scope of this self-report are provided in the evidence document entitled, "FAC-008-3 List of Facilities for Self-Report.xlsx."
PNM's TO Facilities Ratings are encompassed in the following three (3) evidence documents: "NERC FAC-008-3 R6 (I) 115 MLSE.xlsx", "NERC FAC-008-3 R6 (I) 230 MLSE.xlsx", "NERC FAC-008-3 R6 (I) 345 MLSE.xlsx". PNM's Facilities Ratings Methodology is provided as "NERC FAC-008-3 R6 [I] TO Facility Rating Methodology for Transmission Facilities.xlsx."
The possible violation was identified following completion of a nearly 2-year effort to address an area of concern identified during the 2014 Audit. The process included a systematic inventory of PNM's BES facilities on a risk-prioritized basis by collecting and comparing ratings used in the Facilities Ratings against those identified by an authoritative source such as nameplate, drawing, vendor information, etc. The process to validate ratings against authoritative source documentation largely yielded in no changes to the overall facility ratings and in many cases demonstrated PNM was often conservative in its approach to facilities ratings. However, the items identified herein were determined to represent possible non-compliance with FAC-008-3 R6.

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

The possible violation was identified following completion of a nearly 2-year effort to address an area of concern identified during the 2014 Audit. The process included a systematic inventory of PNM's BES facilities on a risk-prioritized basis by collecting and comparing ratings used in the Facilities Ratings against those identified by an authoritative source such as nameplate, drawing, vendor information, etc. The process to validate ratings against authoritative source documentation largely yielded in no changes to the overall facility ratings and in many cases demonstrated PNM was often conservative in its approach to facilities ratings. However, the items identified herein were determined to represent possible non-compliance with FAC-008-3 R6.

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:

PNM plans to remediate the possible non-compliance and address the root causes of the possible violation to reduce the risk of future non-compliance by taking the following actions by May 10, 2018:

1. Validate that all 'like' conductors are rated in accordance with PNM's methodology and to the extent there are valid supporting reasons for conductor ratings differences, those will be more clearly identified in the FAC-008-3 Facilities Ratings documentation;
2. Identify an authoritative source for the existing ratings on identified legacy devices by matching the devices to like devices with known source documentation on the system, working with vendors to identify equipment using serial numbers and/or other identifying information other, identifying ways to read nameplates in areas that are not accessible without obtaining a planned outage for the facility;
3. Work with the neighboring entities to resolve the instances where the FAC-008-3 ratings for the identified common facilities differ from those identified by the neighboring entity, and;
4. Institute a formal process governing establishment and documentation of Facilities Ratings as an internal control to address the identified root causes and reduce the risk of future recurrence.

The following milestones were certified complete by PNM in 2019. The mitigation plan is being expanded due to recommendations made during the May 2020 audit.
M1: M1-Remediate Conductor Ratings Discrepancies
Description
PNM will remediate discrepancies for conductor types identified as part of the FAC-008-3 self-report by either adjusting the conductor rating to the standard identified in the Facilities Ratings Methodology or by identifying the relevant associated weather study or other information that supports the revised rating in accordance with PNM's Facilities Ratings Methodology, for each of the items identified on the 'Conductor' tab in the'FAC-008-3 List of Facilities for Self-Report" document. To the extent that conductor rating is determined to be lower than is identified by PNM for the facility today, PNM will develop and implement any necessary operational adjustments to ensure it is operated within the revised rating. Any revisions will also be communicated to the Peak RC and other neighboring entities with a reliability-related need.
PNM remediated discrepancies for conductor types identified as part of the FAC-008-3 self-report by either adjusting the conductor rating to the standard identified in the Facilities Ratings Methodology or by identifying the relevant associated weather study or other information that supports the revised rating in accordance with PNM's Facilities Ratings Methodology, for each of the items identified on the 'Conductor' tab in the'FAC-008-3 List of Facilities for Self-Report" document. These revised ratings include three 115 kV lines (ANZ Zia, NS, and MB) that were part of the original FAC-008-3 self-report. The ANZ Zia, NS facilities' conductor capability was determined to be lower than identified ratings for each facility. As such, PNM obtained consent for revised ratings from the appropriate internal parties and developed and implemented necessary operational adjustments to ensure facilities are operated within the revised rating going forward. MB conductor rating was determined to be higher than the identified rating. Revisions to conductor ratings were also communicated internally and to the Peak RC and other neighboring entities.

Entity Comment on Milestone Completion: completed 8/03/2017
Evidence document "NERC FAC-008-3 R6 (I) 115 MLSE 8-03-2017.xlsm" is the updated MLSE with revised ratings for the 3 self-reported facilities. The "Conductor Ratings" tab of the FAC-008-3 List of Facilities for Self-Report spreadsheet has been updated with a mitigation narrative for each line, and is provided as "FAC-008-3 List of Facilities for Self-Report_Updated_080817.xlsx".

Evidence documents "External Email Communication PNM NERC FAC-008-3 R6 Line rating changes.msg" is the communication regarding the revised facilities ratings to appropriate external parties including Peak RC, and neighboring entities. Evidence document "Internal Email Communication on Rating Changes.msg" is the internal communication to all relevant company departments.

Within the 'MB 115 kV' folder are the following evidence files demonstrating acknowledgement and consent by internal departments for the increased ratings and technical evidence of appropriate ratings from the OHLoad program, and supporting study to support the conductor rating:

MB Revised Conductor Rating.msg - PNM Transmission Planning consent for revised rating
OHLoad MB Rating Calculation.pdf - OHLoad output for revised conductor rating
Wind Farm Study Evidence for MB wind speed.pdf -study to support wind speed utilized for conductor rating.

Within the 'ANZ Zia_NS 115 kV' folder are the following evidence files demonstrating acknowledgement and consent by internal departments for the lowered ratings of both the ANZ Zia and NS lines and technical evidence of appropriate ratings from the OHLoad program:
ANZ Zia NS Revised Ratings.msg - PNM Transmission Planning consent for revised rating
OHLoad ANZ Zia_NS Rating Calculations.pdf - OHLoad output for revised conductor rating

M2: M2-Remediate Common Facilities Discrepancies
Description
PNM will remediate discrepancies for the common facilities identified as part of the FAC-008-3 self-report by working with the three neighboring entities to identify and agree upon a mutually agreeable rating. To the extent that agreed upon rating is determined to be lower than is identified by PNM for the facility today, PNM will develop and implement any necessary operational adjustments to ensure it is operated within the revised rating. Any revisions will also be communicated to the Peak RC and other neighboring entities with a reliability-related need.

Entity Comment on Milestone Completion: completed 11/05/17
PNM remediated discrepancies for the common facilities identified as part of the FAC-008-3 self-report by working with the three neighboring entities - TSGT, LANL, and APS to identify and agree upon a mutually agreeable rating as evidenced in the spreadsheet titled "M2 FAC-008-3 List of Facilities for Self-Report_11032017.xlsx". Columns K and L highlight the Common Summer Max MVA and Common Summer Limiting Equipment respectively. Columns M and N highlight the Common Winter Max MVA and Common Winter Limiting Equipment respectively. Column O titled "Narrative" details out the efforts involved and agreement with each entity for a common summer and winter MVA and limiting equipment.

The updated FAC-008-3 MLSE spreadsheets for both 115 kV and 230 kV are provided as evidence titled "NERC FAC-008-3 R6 (I) 115 MLSE 11-02-2017.xlsm" and "NERC FAC-008-3 R6 (I) 230 MLSE11-03-2017.xlsm".

Agreement with the three entities TSGT, LANL, and APS are provided in emails as evidenced in "M2 Facility Rating Agreement with TSGT on MB_VS_WL_TW.pdf", "M2 Facility Rating Agreement with LANL for NL Line.pdf", and "M2 Facility Rating Agreement with APS for AF Line.pdf" respectively.

Internal communications demonstrating that changes were communicated to all required parties are evidenced in "M2 Internal Notification Email on Changes in 115 kV line ratings.pdf" and "M2 Internal Notification Email on Changes in 230 kV line ratings.pdf".

PNM communicated the changes to PeakRC as evidenced in the email titled "M2 Notification to PeakRC on PNM Line Ratings MLSE update.pdf".

M3: M3- Institute a formal Facilities Ratings Process
Description
PNM will institute a formal process governing establishment and documentation of Facilities Ratings as an internal control to address the identified root causes and reduce the risk of future reoccurrence.

Entity Comment on Milestone Completion: completed 11/08/17
PNM instituted a formal Facilities Ratings Process as a Preventive Control to address the identified root causes - conductor ratings discrepancies and common facilities discrepancies as evidenced in "M3 Facilities Ratings Process V1.0.pdf". It was a cross-functional effort which involved multiple departments - Transmission Engineering, Project Management, Protection & Controls Engineering, Technical Maintenance and Management, and NERC Compliance. The training on the Facilities Ratings process was held on 11/8/2017 and was provided by the SME of FAC-008-3 Paul Morgan to all applicable resources from the aforementioned departments. Evidence of the training is provided in the form of a sign-in sheet titled "M3 Facilities Ratings Process Training Sign-in Sheet.pdf".

M4: M4-Remediate Lack of Source Documentation for first 50% identified Equipment

Description
PNM will remediate lack of authoritative source documentation for existing Facilities Ratings for the first 50% of identified equipment. Specifically, PNM will Identify an authoritative source for the existing ratings on identified legacy devices by matching the devices to like devices with known source documentation on the system, working with vendors to identify equipment using serial numbers and/or other identifying information, identifying ways to read nameplates in areas that are not accessible without obtaining a planned outage for the facility, etc. until all items included in the scope of this self-report have an authoritative source identified in the FAC-008-3 documentation.

To the extent that the source documentation yields a rating lower than is identified by PNM for the facility today, PNM will develop and implement any necessary operational adjustments to ensure it is operated within the revised rating. Any revisions will also be communicated to the Peak RC and other neighboring entities with a reliability-related need.

Entity Comment on Milestone Completion: completed 02/07/18
PNM has remediated lack of authoritative source documentation for 64% of its self-reported Facilities (>50% target for Milestone 4) as outlined in the spreadsheet titled "M4 FAC-008-3 List of Facilities for Self-Report.xlsx" - please see the 'Milestone 4-Status of Facilities and Equipment with Missing Source Documentation' table (rows 9-15) on the 'Summary' tab - table title is highlighted orange. Of the 58 Facilities self-reported as lacking source documentation for one or more components, PNM has located all of the missing authoritative source documentation for 37 Facilities (64% completion). Columns D, G, J (row 20 and down) of "M4 FAC-008-3 List of Facilities for Self-Report.xlsx" provide the status for all of the self-reported Facilities by voltage class (115 kV, 230 kV, and 345 kV). Facilities reported as "in-progress" represent those for which source documentation identification is still ongoing. Please note that 2 additional Facilities ER (Embudo-Reeves) and HR (Hidalgo-Reeves) which were part of the original list of self-reported Facilities but not included in the totals have now been added, which makes the total count for 115 kV Facilities 39 rather than 37.)

The tables on the '115 kV' tab (rows 23-52), '230 kV' tab (rows 10-12), and '345 kV' tab (rows 13-24) of "M4 FAC-008-3 List of Facilities for Self-Report.xlsx" provides additional details regarding the source documentation for the self-reported facilities in each voltage class. Column D - Status provides the status of the Facility - "completed" indicates all equipment missing source documentation for that Facility now has available source documentation in the form of nameplate photographs, drawings, work orders, etc. Column E - Notes lists out if ratings of equipment changed as a result of source documentation. Column F - Evidence of Source Documentation lists out the evidence file name for equipment for which source documentation is available.

The evidence files with the ratings source documentation are provided in the folder titled FAC-008-3 M4 Mitigation Evidence under 115 kV, 230 kV, and 345 kV sub-folders. The naming convention of the evidence file is as follows - Mitigation Plan Number, Facility Name, Terminal, Equipment Type, Equipment ID, and Rating. Certain files have a "D" at the end of the file name which indicates that the rating based on source documentation is different than the original values in the FAC-008-3 spreadsheets. For example, M4 AW ALGODONES Bkr HOD 36361 600AMPS - D.jpg refers to Breaker HOD with ID 36361 at the Algodones terminal of AW Facility and the "D" indicates that the rating of 600 A based on source documentation is different than the 1200 A value originally in the spreadsheet (which is indicated in Column E - Notes too).

Changes in the ratings of certain Facility components lead to the possibility that the overall Facility rating could change. Column G - 'Did Facility Rating Change' identifies whether or not the Facility rating changed upon location of rating source documentation. Column H - 'FAC-008-3 Spreadsheet Reference' refers to the "Notes" tab of the updated 115 kV and 345 kV FAC-008-3 MLSE spreadsheets evidenced as "NERC FAC-008-3 R6 (I) 115 MLSE 02-06-2018.xlsm" and "NERC FAC-008-3 R6 (I) 345 MLSE 02-02-2018.xlsm" indicating whether the rating changes altered the overall Facility rating.

As can be determined from Column G - for 115 kV there are two (2) Facilities whose overall Facility Ratings (normal/contingency, summer/winter) have changed as a result of revised equipment ratings - ANZ-Algodones Tap 115kV and HR-Hidalgo-Turquoise 115 kV. There were no changes to the Facility Ratings for any of the self-reported 230 kV and 345 kV Facilities.

Four (4) 115 kV Facilities (row items 49-52 in 115 kV tab highlighted in Yellow) and one (1) 345 kV Facility (row item 24 in 345 kV tab highlighted in Yellow) for which the source documentation identification is still

in progress have had interim changes to their overall ratings as a result of one or more equipment rating change (where rating based on source documentation is different than the original values in the FAC-008-3 spreadsheets). The facilities include: PYR1-Hidalgo-Pyramid #1 115 kV, PYR2-Hidalgo-Pyramid #2 115 kV, RN-Reeves-North 115 kV, and RS-BA-Zia 115 kV, San Juan 345 kV Bus to SR Breaker. For PYR1-Hidalgo-Pyramid #1 115 kV, PYR2-Hidalgo-Pyramid #2 115 kV, the line is still limited by other utility's rating.

Communications demonstrating the Facility Ratings changes were communicated internally as evidenced in "M4 Internal Notification Email on Changes Facility Ratings.pdf". PNM also communicated the changes to Peak RC, as evidenced in the email titled, "M4 Notification to PeakRC on PNM Line Ratings MLSE update.pdf". Communications from Peak RC acknowledging the changes is provided as evidence titled, "M4 Acknowledgment from PeakRC on PNM Line Ratings.pdf".

M5: M5-Remediate Lack of Source Documentation for the last 50% of identified Equipment
Description
PNM will remediate lack of authoritative source documentation for existing Facilities Ratings for the last 50% of identified equipment. Specifically, PNM will Identify an authoritative source for the existing ratings on identified legacy devices by matching the devices to like devices with known source documentation on the system, working with vendors to identify equipment using serial numbers and/or other identifying information, identifying ways to read nameplates in areas that are not accessible without obtaining a planned outage for the facility, etc. until all items included in the scope of this self-report have an authoritative source identified in the FAC-008-3 documentation.

To the extent that the source documentation yields a rating lower than is identified by PNM for the facility today, PNM will develop and implement any necessary operational adjustments to ensure it is operated within the revised rating. Any revisions will also be communicated to the Peak RC and other neighboring entities with a reliability-related need.

Entity Comment on Milestone Completion: completed 08/20/18
PNM has remediated lack of authoritative source documentation for the remaining 36% of its self-reported Facilities (64% of its self-reported Facilities had remediated lack of authoritative source documentation as part of M4 mitigation plan) as outlined in the spreadsheet titled "M5 FAC-008-3 List of Facilities for Self-Report.xlsx", thus, remediating 100% lack of authoritative source documentation of its self-reported Facilities. Refer to the 'Milestone 5-Status of Facilities and Equipment with Missing Source Documentation' table (rows 9-15) on the 'Summary' tab - table title is highlighted orange. Of the 21 remaining Facilities self-reported as lacking source documentation for one or more components as part of M5 mitigation plan, PNM has located all of the missing authoritative source documentation for all the Facilities (100% completion). Columns D, G, J (row 20 and down) of "M5 FAC-008-3 List of Facilities for Self-Report.xlsx" provide the status for all of the self-reported Facilities by voltage class (115 kV, 230 kV, and 345 kV). Facilities part of the M5 submittal is highlighted with BLUE text. As can be seen, all Facilities show "Completed" status.

The tables on the '115 kV' tab (rows 49-62), '230 kV' tab (rows 13-14), and '345 kV' tab (rows 24-28) of "M5 FAC-008-3 List of Facilities for Self-Report.xlsx" provide additional details regarding the source documentation for the self-reported facilities in each voltage class. Column D - Status provides the status of the Facility - "completed" indicates all equipment missing source documentation for that Facility now has available source documentation in the form of nameplate photographs, drawings, work orders, etc. Column E - Notes lists out if ratings of equipment changed as a result of source documentation. Column F - Evidence of Source Documentation lists out the evidence file name for equipment for which source documentation is available.

The evidence files with the ratings source documentation are provided in the folder titled M5 under 115 kV, 230 kV, and 345 kV sub-folders. The naming convention of the evidence file is as follows - Mitigation Plan Number, Facility Name, Terminal, Equipment Type, Equipment ID, and Rating. Certain files have a "D" at the end of the file name which indicates that the rating based on source documentation is different than the original values in the FAC-008-3 spreadsheets. For example, M5 AW ALGODONES Bkr HOD 36361 600AMPS - D.jpg refers to Breaker HOD with ID 36361 at the Algodones terminal of AW Facility and the "D" indicates that the rating of 600 A based on source documentation is different than the 1200 A value originally in the spreadsheet (which is indicated in Column E - Notes too).

Changes in the ratings of certain Facility components lead to the possibility that the overall Facility rating could change. Column G - 'Did Facility Rating Change' identifies whether or not the Facility rating changed upon location of rating source documentation. Column H - 'FAC-008-3 Spreadsheet Reference' refers to the "Notes" tab of the updated 115 kV and 230 kV FAC-008-3 MLSE spreadsheets evidenced as "NERC FAC-008-3 R6 (I) 115 MLSE 08-20-2018.xlsm" and "NERC FAC-008-3 R6 (I) 230 MLSE 08-20-2018.xlsm" indicating whether the rating changes altered the overall Facility rating. There was no rating change for 345 kV Facilities.

As can be determined from Column G - for 115 kV there are five (5) Facilities whose overall Facility Ratings (normal/contingency, summer/winter) have changed as a result of revised equipment ratings -There were no changes to the Facility Ratings for any of the self-reported 230 kV and 345 kV Facilities.

Four (4) 115 kV Facilities (row items 54-57 in 115 kV tab highlighted in Yellow) - PYR1-Hidalgo-Pyramid #1 115 kV, PYR2-Hidalgo-Pyramid #2 115 kV, RN-Reeves-North 115 kV, and RS-BA-Zia 115 kV were reported for change in their Facility Ratings in February 2018 as part of the M4 Completion of Mitigation Plan. Communications demonstrating the Facility Ratings changes were communicated internally as evidenced in "M4 Internal Notification Email on Changes Facility Ratings.pdf". PNM also communicated the changes to Peak RC, as evidenced in the email titled, "M4 Notification to PeakRC on PNM Line Ratings MLSE update.pdf". Communications from Peak RC acknowledging the changes is provided as evidence titled, "M4 Acknowledgment from PeakRC on PNM Line Ratings.pdf".

One (1) 115 kV Facility MN - Mission-North (row item 52 in 115 kV tab highlighted in Yellow) has been reported for change in its Facility ratings as part of the M5 Completion of Mitigation Plan. Communications demonstrating the Facility Ratings changes were communicated internally as evidenced in "M5 Internal Notification Email on Changes Facility Rating.pdf". PNM also communicated the changes to Peak RC, as evidenced in the email titled, "M5 Notification to PeakRC on PNM Line Rating MLSE update.msg".

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: March 03, 2022

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
Add “jumpers” equipment type to Commissioning Process Equipment Template and create new jumper data collection form	M3. In order to capture jumper data to be included in the MLSE identification for transmission facilities, the PNM Commissioning Process has been modified to collect jumper data and establish jumper ratings for new facilities or existing jumpers that are	02/19/2021	02/19/2021	The Commissioning Process Equipment Template has been revised to include jumper data and a form for specific jumper data to be entered into the PNM equipment asset database has been created.	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
	replaced or upgraded on maintenance or other work projects.				
Revise Standards to incorporate specification of jumpers	M2. Update applicable PNM standards documents related to transmission line and substation construction to include jumper installation that will ensure jumpers are not the FAC-008 Most Limiting Series Element.	02/19/2021	02/19/2021	PNM Standards documents have been revised to include language addressing jumper specification and installation. The last paragraph in Section 2.1 on Page 2 of the Station Equipment Construction Standard, SSS-405, references jumper requirements. The last paragraph in section 2.4 on Page 3 of the Station Strain, Jumper Buses, and Overhead Ground Wire Standard, SSS-406, references jumper requirements. The first paragraph in section 2.6 on Page 6 of the Electrical Connections Construction Standard, SSS-407, references jumper requirements.	No
Revise Transmission Facilities Methodology to include seasonal switch ratings	M1. Revise Transmission Facilities Methodology document to identify application of seasonal air-break switch rating factor calculated as specified by IEEE Standard C37.30-1997. Obtain review and approval for Methodology revisions of applicable departments.	02/19/2021	02/19/2021	Section 2.9 on Page 5 of the PNM Facilities Ratings Methodology for Transmission Facilities document was revised to describe the implementation of seasonal switch ratings. Revision 9 on the Revision Log page of the document indicates approval date. To address the PNM, MA 115kV line winter ratings as submitted to WECC during the May 2020 audit, PNM is applying this new methodology to all applicable switches and re-evaluating all existing	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
				facilities to identify the correct MLSE (see Milestone 5).	
Add “jumpers” equipment type to PNM asset management database	M4. Create jumpers equipment type and associated data fields in Cascade. This data will be used to determine jumper ratings and those ratings subsequently used in the identification of the facilities most limiting series element.	02/26/2021	02/26/2021	File named "JumperEquipmentType_PNM-AssetManagementDatabase.pdf" submitted as evidence the jumper equipment type has been created in Cascade, the PNM asset management database. The file contains only one screen shot but the equipment type is a database element that when entered for one substation, is the same for all substations.	No
Evaluate ratings in the MLSE spreadsheets using the seasonal switch rating to identify the correct MLSE.	M5. Evaluate MLSE spreadsheet to ensure all applicable switch ratings have been accurately updated. Re-evaluate MLSE spreadsheet to ensure new seasonal switch ratings have been accounted for correctly and the MLSE has been accurately identified.	03/31/2021	03/31/2021	PNM is submitting the MLSE spreadsheets for all BES voltage classes - 115 kV, 230 kV, 345 kV as evidence of completion of Milestone No. 5 titled - Evaluate all line and station ratings. PNM re-evaluated the MLSE spreadsheets to ensure all applicable switch ratings have been accurately updated. New seasonal ratings (Winter ratings) have been added for Breaker HOD and Line Switch and the MLSE has been accurately identified.	No
Review 230 kV and 345 kV stations drawings to capture documented jumper sizes and enter into Cascade and MLSE file.	M6. Review station drawings and Bill of Material documents to update asset management database with jumper data for 230 kV and 345 kV facilities. Update MLSE spreadsheets with	05/27/2021			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
	system jumper data to be included in MLSE identification for known jumper ratings identified by information from drawing review.				
Review 33% of 115 kV stations drawings to capture documented jumper sizes and enter into Cascade	M7. Review station drawings and Bill of Material documents to update Cascade database with jumper equipment type that includes ratings. Update 115 kV MLSE spreadsheet with 33% of system jumpers known from drawing inspections included in MLSE identification.	08/24/2021			No
Review 67% of 115 kV stations and lines drawings to capture documented jumper sizes and enter into Cascade	M8. Review station drawings and Bill of Material documents to update Cascade database with jumper equipment type that includes ratings. Update 115 kV MLSE spreadsheet with 67% of system jumpers known from drawing inspections included in MLSE identification.	11/23/2021			No
Review 100% of 115 kV stations and lines drawings to capture documented jumper sizes and enter into Cascade	M9. Review station drawings and Bill of Material documents to update Cascade database with jumper equipment type that includes ratings. Update 115 kV MLSE spreadsheet with 100% of system jumpers known from	02/18/2022			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
	drawing inspections included in MLSE identification.				

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.

The risk that the ratings for the elements that comprise a BES Facility are incorrect could result in ratings that exceed the physical capability of the Facility. However, in this case risk to the system associated with the Facilities in scope for this possible non-compliance is low for the following reasons:

• PNM's base conductor ratings assumptions are based on peak conditions which may never actually be realized on the system. For example, the base conductor temperature is 100˚C which is unlikely to occur during the operating year and if it does occur, it would typically be for a very short period of time. PNM's base conductor ratings, for most of state, is based on a 2 ft/sec wind speed assumption, when in reality weather data reveals that wind speeds on average exceed PNM's FAC-008 assumptions. The assumptions are conservative for most of the areas as the assumptions were made for the most limiting conditions identified in the state, and were applied across the board.
• PNM's base conductor ratings assumptions are conservative when compared to peers. For example, PNM utilizes a conductor temperature assumption of 100˚C which is far lower when compared to peer entities that use 120˚C as the temperature basis for rating conductor ratings. As a result, PNM is often more conservative than most in established conductor ratings.
• In the case of the legacy equipment, for which authoritative source documentation is not available, these devices pre-date, and in some cases significantly pre-date, the FAC-008 standard but have operated under a wide variety of conditions without negatively affecting BES reliability or displaying overload characteristics for a decade or more in most cases.
• During the nearly two year long process to validate elemental ratings, PNM did not identify any situations where the identified rating exceeded the source documentation. PNM has maintained Facilities Ratings long-term, since well before the FAC-008 was established, and the risk that the administrative issues identified in the self-report negatively impacting Facilities in real-time is low. Historical safe operations of these facilities under varying conditions demonstrate that these ratings are likely well within the physical capability of the facilities.

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

Completion of this plan will not only remediate the possible non-compliance but will also result in a comprehensive new preventive control that addresses the identified root causes of the possible non-compliance, which should reduce the likelihood of recurrence in the future.

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

The following are above and beyond actions PNM is performing to further strengthen its Facilities Ratings going forward:
To improve the overall FAC-008-3 program, PNM is currently in the process of implementing a new software application called Most Limiting Element Database application. This software tool will serve as an additional control and will replace the current FAC-008-3 Most-Limiting-System-Element or MLSE 115 kV, 230 kV, and 345 kV spreadsheets. This application will help reduce the potential for error and can serve as a technical control to ensure that differing conductor ratings for the same conductor type and configuration do not deviate from the standards identified in PNM's Facilities Ratings Methodology

without specific justification. These improvements will help further error-proof PNM's program and in turn, reduce overall reliability risk.
PNM has invested approximately $129,000 to purchase the software application and work to implement the software is currently on-going. This work is expected to be complete by the end of Q4 2017.

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.

Public Service Company of New Mexico 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: Laurie Williams

Title: Senior Project Manager, NERC Compliance

Authorized On: May 12, 2017