175 FERC ¶ 61,039
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;
Neil Chatterjee, Allison Clements,
and Mark C. Christie.

PacifiCorp Docket No. IN21-6-000

ORDER TO SHOW CAUSE AND NOTICE OF PROPOSED PENALTY

(Issued April 15, 2021)

1. Pursuant to Rule 209(a)(2) of the Commission's Rules of Practice and Procedure,[1] the Commission's Revised Policy Statement on Enforcement,[2] and the Commission's Statement of Administrative Policy Regarding the Process for Assessing Civil Penalties,[3] the Commission directs the above-captioned respondent, PacifiCorp, to show cause why it should not be found to have violated Federal Power Act (FPA) section 215(b)(1)[4] and section 39.2(b) of the Commission's regulations[5] by failing to comply with Reliability Standard Facilities Design, Connections and Maintenance (FAC) 009-1, Requirement R1, and the successor Reliability Standard FAC-008-3, Requirement R6 (collectively referred to as FAC-009-1 R1). FAC-009-1 R1 requires a transmission owner such as PacifiCorp to establish and have facility ratings that are consistent with its Facility Ratings

[1] 18 C.F.R. § 385.209(a)(2) (2020).

[2] *Enforcement of Statutes, Regulations and Orders*, 123 FERC ¶ 61,156, at PP 35-36 (2008).

[3] *Process for Assessing Civil Penalties*, 117 FERC ¶ 61,317, at P 5 (2006).

[4] 16 U.S.C. § 824o(b)(1) (2018) ("All users, owners and operators of the bulk-power system shall comply with reliability standards . . . .").

[5] 18 C.F.R. § 39.2(b) (2020) (all users, owners, and operators of the bulk-power system "shall comply with applicable Reliability Standards . . . made effective under this part").

Methodology (FRM).[6] The Commission further directs PacifiCorp to show cause why it should not be assessed a civil penalty of $42 million. PacifiCorp may also seek a modification of this penalty consistent with section 31(d)(4) of the FPA.[7] Pursuant to Rule 213(a) of the Commission's Rules of Practice and Procedure,[8] the Commission directs PacifiCorp to file an answer with the Commission within 30 days of the date of this order. Office of Enforcement Staff (Enforcement Staff) may reply to PacifiCorp's answer within 30 days of the filing of the answer. The Commission will consider these pleadings as part of its review of this proceeding.

2. This case presents allegations by Enforcement Staff that PacifiCorp violated the FPA and Commission regulations by failing to comply with a Commission-approved Reliability Standard, specifically, FAC-009-1 R1, which was developed by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization. These allegations arise out of an investigation conducted by Enforcement Staff and are described in the attached Enforcement Staff Report and Recommendation submitted to the Commission (Enforcement Staff Report).[9] Issuance of this order does not indicate Commission adoption or endorsement of the Enforcement Staff Report.

3. The Enforcement Staff Report alleges that PacifiCorp violated Reliability Standard FAC-009-1 R1 and, as a result, the FPA and Commission regulations, by establishing and having facility ratings that were inconsistent with its FRM.[10]

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[6] FAC-009-1 R1 (effective through December 31, 2012) (requiring a transmission owner to "establish Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings Methodology"); FAC-008-3 R6 (effective January 1, 2013, succeeding FAC-009-1 R1) (requiring a transmission owner to "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").

[7] We note that under section 31(d)(4) of the FPA, 16 U.S.C. § 823b(d)(4), the Commission may "compromise, modify, or remit, with or without conditions, any civil penalty which may be imposed . . . at any time prior to a final decision by the court of appeals . . . or by the district court."

[8] 18 C.F.R. § 385.213(a) (2020).

[9] The Enforcement Staff Report is attached to this order as Appendix A. The Enforcement Staff Report describes the background of Enforcement Staff's investigation, findings and analysis, and recommended sanctions.

[10] A facility rating is "[t]he maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate

Specifically, PacifiCorp adopted an FRM that required the consideration of clearance measurements consistent with the National Electric Safety Code (NESC). In its investigation, Enforcement Staff found that clearance measurements on a majority of PacifiCorp's bulk electric system transmission lines were incorrect under the NESC. These clearance measurements were used to calculate PacifiCorp's facility ratings, thus making PacifiCorp's facility ratings inconsistent with its FRM. Moreover, Enforcement Staff alleges that PacifiCorp was aware of incorrect clearances on its bulk electric system since at least 2007 when FAC-009-1 R1 became mandatory, but failed to identify and remedy them in a timely manner. Enforcement Staff alleges that PacifiCorp's violations began on August 31, 2009, when it implemented its FRM policy, and that at least some of the violations continued until August 2017 when PacifiCorp completed remediation of all of its incorrect clearances to make them consistent with its FRM.

4. In light of the allegations contained in the Enforcement Staff Report, the Commission directs PacifiCorp to respond to this order as set forth above.[11] This order also is the notice of proposed penalty required pursuant to section 31 of the FPA.[12] PacifiCorp has the option to choose between either (a) an administrative hearing before an Administrative Law Judge at the Commission prior to the assessment of a penalty under section 31(d)(2)(A), or (b) a prompt penalty assessment by the Commission under section 31(d)(3)(A). If PacifiCorp elects an administrative hearing before an ALJ (or declines to timely elect procedures under 31(d)(3)(A)), the Commission will issue a hearing order unless it is determined that the matter can be resolved through summary disposition. If PacifiCorp elects a prompt penalty assessment, and if, after a review of the full record to be developed in this proceeding, the Commission finds a violation, the Commission will issue an order assessing a penalty. If such penalty is not paid within 60 days of assessment,

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the applicable equipment rating of any equipment comprising the facility." http://www.nerc.com/files/glossary_of_Terms.pdf (last visited March 5, 2021).

[11] Under 18 C.F.R. § 385.213(c), PacifiCorp must file an answer that provides a clear and concise statement regarding any disputed factual issues and any law upon which it relies. PacifiCorp must also, to the extent practicable, admit or deny, specifically and in detail, each material allegation contained in the Enforcement Staff Report and set forth every defense relied upon. Failure to answer an order to show cause will be treated as a general denial and may be a basis for summary disposition under Rule 217. 18 C.F.R. § 385.213(e)(2) (2020).

[12] 16 U.S.C. § 823b(d) (2018).

the Commission will commence an action in a United States district court for an order affirming the penalty.[13]

5. The Commission authorizes Enforcement Staff to disclose information obtained during the course of the investigation as necessary to advance this matter.

The Commission orders:

(A) Within 30 days of the date of this order, PacifiCorp must file an answer in accordance with Rule 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213, showing cause why it should not be found to have violated FPA section 215(b)(1) and section 39.2(b) of the Commission's regulations by failing to comply with Reliability Standard FAC-009-1 R1.

(B) Within 30 days of the date of this order, PacifiCorp must file an answer in accordance with Rule 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213, showing cause why its alleged violations should not warrant an order requiring PacifiCorp to be assessed a civil penalty in the amount described in Paragraph 1 of this order, or a modification of that amount consistent with section 31(d)(4) of the FPA.

(C) In any answer, PacifiCorp should address any legal, factual or procedural issue that it would urge in the Commission's consideration of this matter. To the extent that PacifiCorp cites any material not cited in the Enforcement Staff Report, PacifiCorp is directed to file non-publicly one copy of such material on CD-ROM or DVD in the captioned docket and to serve a copy of same on Enforcement Staff.

(D) Pursuant to section 31(d)(1) of the FPA, within 30 days of the date of this order, PacifiCorp may also make an election to have the procedures set forth in section 31(d)(3) of the FPA apply to this proceeding. Under that provision, if the Commission finds a violation, the Commission will issue a penalty assessment and, if not paid within 60 days of the order assessing penalties, the Commission will institute an action in the appropriate United States district court. Should PacifiCorp fail to make a timely election under section 31(d)(1), the procedures of section 31(d)(2) will apply.

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[13] 16 U.S.C. § 823b(d)(3)(B) (2018). *See also Process for Assessing Civil Penalties*, *supra* note 3.

(E) Within 30 days of the filing of the answer by PacifiCorp, Enforcement Staff may file a reply with the Commission.

By the Commission. Commissioner Chatterjee is concurring with a separate statement attached.
Commissioner Danly is not participating.

(S E A L)

Kimberly D. Bose,
Secretary.

APPENDIX A

FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp

Docket No. IN21-6-000

Enforcement Report and Recommendation

Office of Enforcement

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I. Executive Summary

Office of Enforcement Staff (Staff) submits this report and recommendation to the Federal Energy Regulatory Commission (FERC or Commission) setting forth its findings of fact and conclusions of law regarding its investigation of PacifiCorp. Staff concludes that PacifiCorp violated Federal Power Act (FPA) section 215(b)(1) and section 39.2(b) of the Commission's regulations[1] between August 31, 2009 and August 2017 by failing to comply with the Commission-approved Reliability Standard pertaining to Facilities Design, Connections and Maintenance **(**FAC), in particular FAC-009-1, Requirement R1, and the successor Reliability Standard FAC-008-3, Requirement R6 (collectively, FAC-009-1 R1).

FAC-009-1 R1, developed by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO), and approved by the Commission, requires a transmission owner such as PacifiCorp to establish and have facility ratings that are consistent with the entity's Facility Ratings Methodology (FRM).[2] The term "Facility Rating" is defined as "[t]he maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility."[3] In simplified terms, a facility rating dictates how much power can flow across a line. As more power flows, the line becomes hotter, and it will visibly sag in the middle. If there is a tree or physical structure under the line, electricity can arc (or jump) to that tree or structure. Or, the line may touch that tree or structure. In either circumstance, a spark can result which can result in a line outage (loss of power) or fire.

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[1] 16 U.S.C. § 824o(b)(1) (2018) ("All users, owners and operators of the bulk-power system shall comply with reliability standards . . . ."); 18 C.F.R. § 39.2(b) (2020) (all users, owners, and operators of the bulk-power system "shall comply with applicable Reliability Standards . . . made effective under this part").

[2] *See* Reliability Standard FAC-009-1 R1 (effective through December 31, 2012) (requiring a transmission owner to "establish Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings Methodology"); FAC-008-3 R6 (effective January 1, 2013) (requiring a transmission owner to "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").

[3] *See* NERC Glossary of Terms Used in Reliability Standards (NERC Glossary). This definition has not changed between August 31, 2009 and August 2017 when the violations occurred.

Since August 31, 2009, PacifiCorp's FRM has required the consideration of clearance measurements consistent with the National Electric Safety Code (NESC).[4] Staff finds that PacifiCorp knew the clearances on a majority of its Bulk Electric System (BES) transmission lines were incorrect under NESC clearance requirements. These clearances were used to calculate its facility ratings, thus making PacifiCorp's facility ratings inconsistent with the company's FRM. PacifiCorp was aware of incorrect clearances on its BES since at least 2007. Staff finds that the actionable period of PacifiCorp's violations began on August 31, 2009, when it implemented its FRM policy and that at least some of the violations continued until August 2017 when PacifiCorp completed remediation of all of its incorrect clearances to make them consistent with its FRM.[5]

Staff's investigation of PacifiCorp (which includes its Utah business arm, Rocky Mountain Power (RMP)) began in 2012 after Staff learned of the Wood Hollow wildfire that lasted from June 23 to July 1, 2012 in Sanpete County, Utah (the Wood Hollow fire or the fire). The Wood Hollow fire caused the death of James Martin,[6] as well as wildlife and livestock; burned over 47,000 acres of land; and destroyed more than 50 residences or cabins and more than 100 outbuildings.[7] The Utah Department of Public Safety investigated and concluded in its report (Utah Report) that the fire was caused by inadequate clearance between two RMP transmission facilities (a 345 kV conductor on the Huntington-Mona transmission line and a 138 kV pole on the Nebo-Jerusalem

[4] *See infra* Section II.C (discussing PacifiCorp's FRM and the requirement to consider the NESC). The NESC, among other things, sets forth the proper clearances (*i.e.*, minimum distances) between transmission lines and other transmission lines or other structures and equipment (including conductors).

[5] FAC-009-1 R1 became enforceable on June 18, 2007, but PacifiCorp did not publish its FRM until August 31, 2009. Staff is pursuing civil penalties for violations of FAC-009-1 R1 since 2009.

[6] DeseretNews, http://www.deseretnews.com/article/865558704/Man-who-died-in-Wood-Hollow-Fire-had-little-time-to-react-friend-says.html?pg=all; http://www.legacy.com/obituaries/deseretnews/obituary.aspx?pid=158537072#fbLoggedOut (last visited March 5, 2021).

[7] *See, e.g.,* Fox13-Salt Lake City, 47,387-acre Wood Hollow Fire 100 percent contained, http://Fox13now.com/2012/06/23/crews-fighting-sanpete-county-wildfire/; http://www.heraldextra.com/news/local/wood-hollow-fire-percent-contained/article_544beca7-dd56-58c8-926d-0ee0cb2ac903.html (last visited March 5, 2021).

transmission line).[8] The Utah Report found that gusty winds on June 23, 2012 led to conductor movement that created an arc between the 345 kV conductor and the 138 kV pole.[9] The Utah Department of Natural Resources estimated the state of Utah's out-of-pocket fire response cost to be $5.3 million.[10] As discussed below in Section V with respect to PacifiCorp's defenses, Utah later settled its claim for response costs in a Settlement Agreement with the United States Department of Justice (referred to herein as the DOJ Settlement).

Staff discovered during its investigation that the inadequate clearance involved in the fire was just one example of clearance violations prevalent on PacifiCorp's BES transmission lines. Staff found that there were clearance violations on at least 58 percent of the company's BES transmission lines.[11] Moreover, the clearance violations on at least 45 percent of PacifiCorp's BES lines were so severe that, under PacifiCorp's FRM,

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[8] Scribd, *Utah Wood Hollow Fire Investigation Report,*https://www.scribd.com/document/99820507/Utah-Wood-Hollow-Fire-investigation-report (last visited March 5, 2021).

[9] DeseretNews, *Fire marshal releases Wood Hollow findings*, https://www.deseret.com/2012/7/11/20504332/fire-marshal-releases-wood-hollow-findings#the-point-of-origin-for-the-wood-hollow-fire-near-rocky-mountain-power-poles-tuesday-july-10-2012 (last visited March 5, 2021).

[10] Department of Natural Resources , *2012 Fire Suppression and Restoration Costs*, http://le.utah.gov/interim/2012/pdf/00001083.pdf (last visited March 5, 2021).

[11] *See* PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 7 (identifying clearance issues on 215 out of 367 BES transmission lines). PacifiCorp began to identify and remediate all clearance issues in response to an October 2010 NERC Alert regarding potential discrepancies between the design and actual field conditions of transmission facilities (NERC Alert). *See* NERC Recommendation to Industry, Consideration of Actual Field Conditions in Determination of Facility Ratings, Oct. 7, 2010, Updated on Nov. 30, 2010, http://www.nerc.com/pa/rrm/bpsa/Alerts%20DL/2010%20Alerts/Ratings%20Recommendation%20to%20Industry%20FINAL-REVISED.pdf (NERC Alert); *see also* Section II.D *infra*. Starting in January 2012, PacifiCorp submitted semi-annual reports to WECC in response to the NERC Alert, in which it identified the clearance issues and updated WECC on its efforts and progress in identifying and remediating all clearance issues. *See* PacifiCorp's Response to Data Request No. 47, July 12, 2016 (identifying clearance issues and attaching semi-annual reports to WECC in response to the NERC Alert). Not until its January 2018 semi-annual report to WECC did PacifiCorp confirm that the last of its NERC Alert clearance issues were mitigated in August 2017.

the transmission lines should have been rated at zero-amperes (or 0 mega volt amps, MVA).[12] This is a rating at which a PacifiCorp engineer conceded would not allow the lines to be safely energized.[13] Although PacifiCorp management and employees knew of clearance issues on these lines since at least 2009, PacifiCorp continued to energize the vast majority of the lines at their published incorrect ratings[14]—including, notably, the Huntington-Mona 345 kV line involved in the Wood Hollow fire. That line had spans between transmission towers with clearance problems so severe that, under PacifiCorp's FRM, it should have received a zero-ampere rating.[15] Moreover, although the standards did not require PacifiCorp to do so, it could have informed or consulted with NERC concerning the severity of its clearance issues or the resulting inaccurate ratings in an effort to mitigate the impact of the issues.[16] Although PacifiCorp's Engineering

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[12] *See* PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 6 and Spreadsheet E (identifying clearance issues with a zero-ampere rating on 169 out of 367 BES transmission lines).

[13] Greg Linden Testimony at 157:22-158:1; 158:3-8 (a zero-ampere rated line should not be used for carrying load and "you can't put any current through it. . . ."). *See also* November 2010 Singh, Elder, Allsup Draft "Analysis of Transmission Line Rating Methods," P-20160108-0000001- 0000016 (recommending the lines be de-rated but Planning refusing to do so because they "could not accept the limitation of de-rating the lines").

[14] PacifiCorp provided its facility ratings to its Reliability Coordinator (RC) for use in system studies and analyses. Until February 2014, Western Electricity Coordinating Council (WECC) served as both the Regional Entity (RE), the entity at the regional level in charge of enforcing the Reliability Standards, and the RC, the entity with a wide area view of the region, tasked with ensuring reliable operation of the BES. WECC was bifurcated in February 2014. WECC remains the RE. Peak Reliability became the RC, however, on November 1, 2019 RC West became the current RC.

[15] As early as 2000, PacifiCorp was alerted to a clearance issue between the Huntington-Mona and Nebo-Jerusalem lines that was later "cleared" from PacifiCorp's record keeping system without being remedied. *See infra* Section III.E.

[16] Although not required, depending on the issue, PacifiCorp could have consulted with NERC, the RC, or the RE, or could have consulted with FERC staff, but failed to consult any of these entities. In this report, staff generally refers to consultation with NERC but recognizes that it may have been appropriate for PacifiCorp to consult with one of the other entities in some circumstances. While PacifiCorp's semi-annual reports to WECC in response to the NERC Alert identified clearance discrepancies, it did not reveal the full severity of the discrepancies by identifying the resulting zero-ampere ratings. *See* PacifiCorp's Response to Data Request No. 47, July 12, 2016 (identifying

department (Engineering)[17] at times expressed concern about clearance issues and inaccurate transmission line facility ratings and advised senior management at the company about these issues as early as 2009, the evidence indicates that PacifiCorp's management did not act on the concern. For example:

- Beginning in 2007, PacifiCorp did not implement Engineering's recommendations to verify clearance calculations with LiDAR studies of PacifiCorp's entire BES or even a 2,400-mile subset of the lines, instead opting to conduct a LiDAR study on only 1,200 miles (12 percent) of its BES;[18]

- PacifiCorp failed to take sufficient steps to identify and remediate clearances across its entire BES from 2009 until the October 2010 issuance of the NERC Alert (described below in Section II.D);

- Despite the fact that Engineering's analyses of PacifiCorp's existing plans and profiles (P&P) began demonstrating clearance issues on PacifiCorp's BES lines in 2007, PacifiCorp delayed funding of its 1,200-mile LiDAR study until 2009, at which time the results demonstrated that Engineering's calculations

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clearance discrepancies and attaching semi-annual reports to WECC in response to the NERC Alert). PacifiCorp's failure to obtain guidance from these entities was taken into account by Staff in: 1) evaluating PacifiCorp's efforts to mitigate its violations; 2) evaluating PacifiCorp's argument that it did not know whether it should de-rate or take certain other actions and risk "turning the lights off," and 3) determining an appropriate civil penalty amount.

[17] PacifiCorp often refers to its groups by function, not by department name, for example referring simply to Engineering or Planning. Staff here adopts this naming convention.

[18] Light Detection and Ranging (LiDAR) is a remote measuring method using an airborne laser to measure distance between objects or between objects and the ground. It is a much faster and more efficient technology than conventional surveying methods when used to measure these distances. LiDAR data is taken for a specific point in time, at which other parameters such as ambient weather and line loading are known. This data is then used to populate a computer model that calculates the sag of the line and clearance under arbitrary conditions. Although the Reliability Standards do not require the use of LiDAR, accepting Engineering's recommendation to use LiDAR to a greater extent could have allowed PacifiCorp to more accurately determine the extent of its clearance problems. In addition, the use of LiDAR was an option PacifiCorp could have used to more quickly identify all of its clearance problems for remediation.

underestimated the scope of the clearance problems on PacifiCorp's BES lines;[19]

- PacifiCorp filed a self-report of potential FAC-009-1 R1 violations with WECC related to the October 2010 NERC Alert. It was authored by the Vice President and General Counsel of Pacific Power, a PacifiCorp business unit, who was also the head of the PacifiCorp Corporate Compliance office and a member of the PacifiCorp Board of Directors. The report did not disclose the extent of the company's knowledge of its clearance issues such as zero-ampere ratings, gained from the P&P analyses and the 2009 LiDAR study, but instead made reference only to "potential clearance discrepancies" related to its NERC Alert work;

- PacifiCorp continued to provide incorrect facility ratings to its RC, Planning Authority, Transmission Planner, and Transmission Operator,[20] and to operate lines with clearance violations that should have resulted in a zero-ampere rating under PacifiCorp's FRM without informing NERC of these ratings and jointly developing a plan to remediate the clearance problems.

In its January 2018 semi-annual report to WECC, PacifiCorp confirmed that the last of its NERC Alert clearance issues were remediated in August 2017. Only when these clearance issues were remediated was PacifiCorp finally establishing and using facility ratings consistent with its FRM.

In light of the nature and scope of PacifiCorp's clearance violations and the resulting inaccurate ratings for a majority of its BES transmission lines, Staff finds that PacifiCorp's Reliability Standard violations posed a moderate risk of extreme harm to the

[19] P&Ps are comparable to a blueprint for a transmission facility. They provide a plan (vertical) view showing the overall route of the line to be constructed and a profile (horizontal) view showing the vertical heights of the proposed structures and conductors.

[20] The Planning Authority is "[t]he responsible entity that coordinates and integrates transmission Facilities and service plans, resource plans, and Protection Systems." NERC Glossary of Terms. The Transmission Planner is "[t]he entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority area." *Id*. The Transmission Operator is "[t]he entity responsible for the reliability of its 'local' transmission system, and that operates or directs the operations of the transmission Facilities." *Id*. These definitions have not changed between August 31, 2009 and August 2017 when the violations occurred.

BES. As discussed in Section VI, this risk level and various other culpability factors in the Commission's Penalty Guidelines result in a civil penalty range of $21 to $42 million,[21] and Staff recommends assessing a penalty of $42 million in light of the serious nature and scope of PacifiCorp's violations, as well as their harmful impacts, including the Wood Hollow fire.

Accordingly, Staff recommends that the Commission issue an Order to Show Cause and Notice of Proposed Penalty to PacifiCorp requiring it to show cause why it (1) did not violate Reliability Standard FAC-009-1 R1; and (2) should not pay a civil penalty in the amount of $42,000,000.

II. Background

A. The Company

PacifiCorp was formed in 1984 and is headquartered in Portland, Oregon. It serves approximately 1.9 million customers in six Western states.[22] PacifiCorp is a subsidiary of Berkshire Hathaway Energy and consists of two business units (1) Pacific Power, which is headquartered in Portland, Oregon and delivers electricity to consumers in Oregon, Washington, and California; and (2) RMP (formerly, Utah Power & Light), which is headquartered in Salt Lake City, Utah, and delivers electricity to consumers in Utah, Wyoming, and Idaho.[23] PacifiCorp has 367 BES lines that traverse approximately 10,500 miles. The clearance violations uncovered in this investigation existed throughout PacifiCorp's BES transmission system and were widely present in both the Pacific Power and RMP footprints.

B. The Commission's Reliability Authority and the Relevant Reliability Standards

Pursuant to FPA section 215, 16 U.S.C. § 824o, Reliability Standards developed by the Commission-certified ERO and approved by the Commission, such as FAC-009-1 R1, are mandatory and enforceable by the ERO subject to Commission review, or, as in

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[21] *Enforcement of Statutes, Orders, Rules, and Regulations*, 132 FERC ¶ 61,216 (2010) (Revised Policy Statement on Penalty Guidelines attaching FERC Penalty Guidelines).

[22] *See* PACIFICORP*, Innovating to a power better future*, https://www.pacificorp.com/about.html; PACIFICORP, *PacifiCorp Facts* https://www.nrc.gov/docs/ML1018/ML101810206.pdf; PacifiCorp, https://en.wikipedia.org/wiki/PacifiCorp (last visited March 5, 2021).

[23] *See id*.

this instance, independently by the Commission.[24] In 2006, the Commission certified NERC as the ERO.

This matter involves the FAC Reliability Standards, which address topics including facility interconnection requirements and facility ratings.[25] The Commission approved the FAC standards in Order No. 693 in 2007.[26] FAC-008-1 and FAC-009-1 are the FAC standards relevant to this matter. Under FAC-008-1 R1, transmission owners like PacifiCorp are required to document their FRM in writing.[27] FAC-008-1 R1 sets forth a minimum number of items that each transmission owner is required to include in its written FRM. Of importance here, the version of FAC-008-1 in effect for a majority of the relevant time period (2009 to 2017) required that PacifiCorp's FRM include:

> R1.1 A statement that a Facility Rating shall equal the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility. . . .
>
> R1.3. Consideration of the following: . . . .
>
> R1.3.2. Design Criteria (e.g. including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards). . . .[28]

Once a transmission owner like PacifiCorp has established its written FRM under FAC-008-1 R1, it is then required under FAC-009-1 R1 to "establish Facility Ratings for

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[24] 16 U.S.C. § 824o(e)(2) (all ERO and RE penalties are subject to Commission review); 16 U.S.C. § 824o(e)(3) (the Commission may order compliance with a Reliability Standard and impose a penalty for the violation of a Reliability Standard).

[25] *See Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 118 FERC ¶ 61,218, at P 677, *order on reh'g*, Order No. 693-A 120 FERC ¶ 61,053 (2007).

[26] *Id.* PP 677-794.

[27] *See* Reliability Standards at FAC-008-1 Requirement R1 (effective until December 31, 2012); FAC-008-3 Requirement R3 (effective January 1, 2013) (collectively FAC-008-1 R1).

[28] FAC-008-1 R1. The 2013 revised version of FAC-008-1, FAC-008-3, contains largely similar requirements.

its solely and jointly owned Facilities that are consistent with the associated Facility Ratings Methodology."[29]

FAC-008-1 R1 and FAC-009-1 R1 collectively require that an FRM include a statement that a facility rating will not exceed the most limiting equipment rating on that facility, as well as consideration of design criteria. Design criteria under these Reliability Standards encompasses references to industry rating practices such as IEEE[30] standards, including the NESC, which includes standards for clearances.[31] These Reliability Standards also require that once an FRM is developed, it must be used to calculate facility ratings, including for transmission lines.

C. PacifiCorp's FRM Requires Consideration of NESC Clearance Standards

As described above, FAC-009-1 R1 requires PacifiCorp to establish and have facility ratings that are consistent with its FRM.[32] Therefore, this case centers on the specific requirements in PacifiCorp's FRM. PacifiCorp's FRM is set forth in its Policy No. 199, which took effect on August 31, 2009, and has been revised four times since then.[33] Policy No. 199 has a "Scope" section that applies generally to all types of PacifiCorp's facilities, as well as a section that applies specifically to each type of facility, including transmission line conductors at issue in this matter. As described below, both sections require PacifiCorp to consider NESC clearance standards when rating its transmission line conductors.

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[29] FAC-009-1 R1 (effective through December 31, 2012); FAC-008-3 R6 (effective January 1, 2013) (requiring Transmission and Generator Owners to each "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").

[30] IEEE, the Institute of Electrical and Electronics Engineers, is a group that supports technological innovation and excellence. *See* http://www.ieee.org/about/vision-mission.html (last visited March 5, 2021).

[31] Specifically, IEEE publishes the NESC. The NESC includes, for example, "rules for overhead lines for clearances and strength and loading." IEEE SA, Tz(NESC), https://standards.ieee.org/products-services/nesc/program.html (last visited March 5, 2021).

[32] FAC-009-1 R1; *see also supra* Section II.B.

[33] *See* PacifiCorp Response to Data Request No. 29, Sept. 25, 2013, at 2-3.

1. The Scope Section of PacifiCorp's FRM Requires Consideration of NESC Clearance Standards

The Scope section of PacifiCorp's FRM has always stated that PacifiCorp's various transmission line facility rating methodologies will consider either "IEEE . . . standards," or "design criteria." Specifically:

- From August 31, 2009 through September 28, 2011, the Scope section stated, "Per R1.3 of FAC-008-1, each of the facility rating methodologies discussed below considers the ratings provided by equipment manufacturers, *IEEE and ANSI standards,* ambient conditions for solar input, temperature and wind speed, operating limitations, and other assumptions such as elevation and line tension, as appropriate."[34]

- Since September 29, 2011, the Scope section states, "Per R1.3 of FAC-008-1, each of the facility rating methodologies discussed below considers the ratings provided by equipment manufacturers, *design criteria,* ambient conditions, operating limitations, and other assumptions such as elevation and line tension, as appropriate."[35]

As explained above in Section II.B., the IEEE standards include the NESC standards which, in turn, set forth clearance requirements for transmission lines and structures. Thus, the reference to IEEE in the first versions of the Scope section required PacifiCorp to consider the NESC clearance standards when rating its facilities. PacifiCorp witnesses understood this connection between IEEE and the NESC clearance standards. For example, Ken Shortt, who had responsibility for the company's compliance with FAC-008-1 and FAC-009-1 between 2010 and 2012, acknowledged that IEEE is the publisher of the NESC, which provides standards for clearances, including

[34] PacifiCorp Facility Rating Methodology, Power Delivery Policy 199, Rev. 0 at 1.3 (Aug. 31, 2009) (P-20131125-0990866-0870) (emphasis added); PacifiCorp Facility Rating Methodology, Policy No. 199, Rev. 2 at 1.3 (Dec. 29, 2010) (P-20131125-0271771-1776) (emphasis added).

[35] PacifiCorp's Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 3 at 1.4 (Sept. 29, 2011) (P-20131125-0036801-6806) (emphasis added); PacifiCorp's Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 4 at 1.4 (Nov. 1, 2012) (P-20131125-0035788-5793) (emphasis added).

ground and conductor-to-conductor clearances.[36] Similarly, Greg Linden, a senior engineer in PacifiCorp's Reliability Standards group, testified that the NESC is the industry standard for calculating clearance standards.[37]

Although the later versions of the Scope section eliminated the IEEE reference and inserted "design criteria," PacifiCorp witnesses understood that this change still required consideration of clearances.[38] Linden testified that the NESC code is specifically included within the term "design criteria,"[39] and Shortt also acknowledged that the reference to "design criteria" includes the NESC code which, among other things, includes the NESC standards for clearances.[40]

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[36] Ken Shortt Testimony at 445:16-24 ("Q. And I think we discussed in your November testimony, but I'm not sure, do you know what IEEE is? A. Yes. Q. And what is it? A. Institute of Electronic and Electrical Engineers or maybe it's Electrical and Electronic Engineers. Q. Okay. And do you understand that they are the publishers of the NESC standards? A. Yes."); 450:25-451:13 ("Q. Is it your opinion that "design criteria" is inclusive of NESC code, IEEE, and ANSI standards? A. It should be. Q. And the NESC code provides for many, many things. A. Correct. Q. But among some of the things it provides standards for is clearances; correct? A. Correct. Q. And ground clearances also? We're talking about clearances generally, but among the clearances, ground clearances or conductor-to-conductor clearances, all of those things are covered by NESC standards? A. Yes.").

[37] Linden Testimony at 87:11-16 ("Q. And NESC also includes clearance standards for transmission lines and conductors? A. That's correct. Q. And I believe you said earlier it's the industry standard for calculating clearances? A. That's correct.").

[38] *See, e.g.*, Linden Testimony at 95:10-12 ("Q. Was it your understanding that Policy 199 still considered clearances even with this change? A. Yes."). *See also* Linden Testimony at 88:16-20, 95:1-12; *supra* note 47.

[39] Linden Testimony at 88:11-20. ("Q. I'm asking you whether IEEE standards are included in the definition of the design criteria in FAC-008?" "A. The NESC code and other references are allowed under the design criteria. Q. They are specifically included in the design criteria; correct? A. That's correct.").

[40] Shortt Testimony at 450:25-451:8.

2. PacifiCorp's FRMs Include Specific Rating Methodologies for Transmission Lines, Which Require Consideration of NESC Clearance Standards

In addition to the Scope section, Policy No. 199 references specific rating methodologies for transmission line ratings based on the year a line was built and the PacifiCorp business unit that owns the line, and each of these methodologies includes consideration of clearance standards as a factor in rating transmission lines. By referencing these specific rating methodologies, and directing PacifiCorp to use them to rate its transmission lines, they comprise part of PacifiCorp's FRM. Specifically:

- Policy No. 199 directs PacifiCorp to use its TD101 document, titled, "Transmission Line Rating Standard," to rate BES lines built by PacifiCorp from 1997 to the present.[41] TD101, in turn, states that "[t]he National Electrical Safety Code specifies minimum clearances from any obstacle to conductors which must be maintained under the 'maximum conductor temperature for which the line is designed to operate.'"[42]

- Policy No. 199 directs PacifiCorp to use its 1977/1990 Utah Power Conductor Rating Methodology (Utah Policy) to rate BES lines built by Utah Power & Light Company (Utah Power) prior to 1997.[43] The Utah Policy, in turn, instructs, "[a]ll future lines will be designed for conductor temperatures of at least 194°F. However, older lines are still in service that have not been designed for these higher temperatures. Careful monitoring of these older lines will be necessary to insure (sic) that proper ground clearances are maintained.

[41] PacifiCorp Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 3 at 2.2a (Sept. 29, 2011) (P-20131125-0036801-6806).

[42] PacifiCorp TD101, Transmission Line Rating Standard, Nov. 30, 2009, at Section H (quoting IEEE, National Electrical Safety Code C2–1997, August 1996, Rule 232A2 p. 72). This NESC reference is included in all versions of PacifiCorp's TD101. *See* PacifiCorp TD101, Transmission Line Rating Standard, Dec. 3, 2010, at Section G; PacifiCorp's TD101, Transmission Line Rating Standard, Apr. 8, 2013, at Section G.

[43] PacifiCorp Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 3 at 2.2b (Sept. 29, 2011) (P-20131125-0036801-6806). PacifiCorp defines the Utah Power service territory as the transmission system owned by Utah Power prior to the 1988 merger with PacifiCorp. *Id.*

When a line is found to have insufficient ground clearance, it should be re-sagged, or rebuilt if necessary, to maintain proper ground clearance."[44]

- Policy No. 199 directs PacifiCorp to use the 1988 *Thermal Guideline Ratings of Conductors for Planning Studies* (a.k.a "Waters' Report") and the 1989 *High Temperature Operation of Conductors Report* (a.k.a. "The Fishback Report") for Pacific Power lines built prior to 1997.[45] The Fishback Report, in turn, states, "[o]f far greater concern is the reduction of ground clearance due to the sag increase which can result from the creep of the conductor when operated for long time periods at high temperatures. An infinite number of time, temperature and tension scenarios can be considered. It will probably be necessary to review each line and develop a realistic operating scenario."[46]

- Policy No. 199 also contains a "catch-all" type of provision that states that "BES transmission line ratings may be modified from the above reports or standards [i.e., TD101 and the Utah Policy] by implementing a study to determine the rating of a specific line," and identifies various factors that such a study may consider, including "specific conductor clearances" and "field condition verification."[47]

All of these methodologies, which comprise part of PacifiCorp's FRM,[48] require PacifiCorp to consider NESC clearance standards when rating transmission lines. For example, TD101 explicitly refers to the NESC standards for maintaining minimum clearances. Although the other specific methodologies do not explicitly reference the

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[44] Utah Power Conductor Rating Methodology (Utah Policy) at Section 9.5 (P-20131125-0402102) (footnote omitted).

[45] PacifiCorp Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 3 at 2.2a (Sept. 29, 2011) (P-20131125-0036801-6806). PacifiCorp defines the Pacific Power service territory as the transmission system owned by PacifiCorp prior to the 1988 merger with Utah Power.

[46] Carl V. Fishback, *High Temperature Operation of Conductors*, Feb. 22, 1989, at 1 (P-20131125-0402069-2089).

[47] PacifiCorp Facility Rating Methodology/Engineering & Asset Management Policy No. 199, Rev. 3 at 2.2c (Sept. 29, 2011) (P-20131125-0036801-6806).

[48] In a January 2011 Compliance Questionnaire and Reliability Standard Audit Worksheet submitted to NERC, PacifiCorp acknowledged that its TD101, Utah Policy, and Waters' Report are referenced in its FRM and relied on by PacifiCorp. *See* P-20131125-0402010 at 5.

NESC, they require PacifiCorp to consider and monitor clearances, and PacifiCorp understands that its consideration and monitoring is done pursuant to the NESC standards. For example, Shortt summarized the Utah Policy—applicable to Utah Power lines constructed prior to 1997 like the Huntington-Mona line—as requiring PacifiCorp "to maintain a ground clearance based on whatever the code was in effect at the time for whatever voltage it is, regardless of the temperature of the line. The worst temperature that it can get to, we need to have adequate ground clearance."[49] Other PacifiCorp documents also make clear that PacifiCorp understands that its consideration of clearances is accomplished by using the NESC standards.[50]

Therefore, in keeping with FAC-008-1 R1, PacifiCorp's FRM required it to use NESC clearance standards. As set forth in greater detail below, PacifiCorp violated FAC-009-1 R1 by utilizing facility ratings on its BES transmission lines that were not established consistent with its FRM, because PacifiCorp's transmission line clearances did not meet the minimum clearance requirement of the NESC, as required by its FRM.

D. The NERC Alert

The October 2010 NERC Alert specifically addressed clearance issues on transmission lines.[51] The NERC Alert recommended that transmission owners like

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[49] Shortt Testimony at 440:10-15. *See also* Hausler Testimony at 141:21-24 (interpreting the Utah Policy to "mean that the ratings on the line should have – with this we should have adequate ground clearance if the design is going to meet the 194 F conductor temperature").

[50] *See, e.g.*, Email from Cody Nunley to Shortt and others, Sept. 19, 2011 at P-20131125- 0081457 to P-20131125-0081461 ("Due to NESC clearance issues that we are discovering as part of this compliance project (typically wire to ground clearances but sometimes wire to wire or wire to structures clearances) we are proposing a new line rating associated with the temperature at which the conductor reaches its' maximum allowed sag per the NESC. This is the maximum rating at which the line can be operated at without violating NESC clearances."); P-20131125-0175238-39 (internal PacifiCorp document describing remediation activities and noting that "[t]he [LiDAR] analysis identified structure additions, modifications and replacements that are required to bring the lines into compliance with NESC requirements and PacifiCorp's Standard TD101").

[51] As part of its normal course of business, NERC utilizes email-based "alerts" designed to provide concise, actionable information to the electricity industry. NERC has three levels of alerts indicating increasing levels of significance: industry advisory, recommendation to industry, and essential action. A "recommendation to industry" recommends specific action be taken by registered entities and requires a response from recipients. NERC Rules of Procedure § 810.3. While a NERC Alert may pertain to

PacifiCorp review their FRMs "to verify that the methodology used to determine facility ratings is based on actual field conditions."[52] The NERC Alert explained:

> Transmission Owners . . . should determine if their [FRM] will produce appropriate ratings, even when considering differences between design and actual field conditions. Transmission Owners . . . should review their transmission facility ratings to confirm that any differences observed between design and actual field conditions are within the design tolerances as defined by the Registered Entity's [FRM].[53]

Under the NERC Alert, transmission owners that had not previously verified that their facility design, installation, and field conditions were within design tolerance when their facilities were loaded at their rating were requested to describe their plans to complete an assessment "to verify whether the actual field conditions conform to the entity's design tolerances in accordance with its [FRM]."[54]

The NERC Alert also requested that transmission owners complete their reviews in three tranches (high, medium, and low) based on their estimated impact on BES reliability, and that they report the results of each tranche's assessment to their RE by December 31, 2011 for high impact estimates, December 31, 2012 for medium impact estimates, and December 31, 2013 for low impact estimates. The NERC Alert stated that remediation of identified discrepancies should be completed one year after each respective tranche's assessment report was presented to the RE.[55] Under the NERC Alert, transmission owners were requested to make semi-annual reports to their RE by filling out a spreadsheet with information related to certain of their NERC Alert activities.

Various NERC publications about the NERC Alert noted that NERC and the REs would exercise enforcement discretion concerning possible Reliability Standard violations until the NERC Alert assessments were completed and that certain activities

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compliance with a Reliability Standard, compliance with a NERC alert is not mandatory and, therefore, not enforceable.

[52] NERC Alert at 2 (emphasis in original).

[53] NERC Alert at 2.

[54] NERC Alert at 2.

[55] Clearance issues can be permanently remediated through field work (re-sagging transmission lines, installing phase-raisers, or the like) or through permanently de-rating a transmission line to the level required by the existing clearances.

during the NERC Alert process would constitute mitigating factors when considering possible violations. And, as a "Recommendation," the NERC Alert was not a Reliability Standard and would "not constitute the sole basis for an enforcement action."[56] However, as relevant here, the NERC Alert also made clear that it did "not lower or otherwise alter the requirements of any approved Reliability Standard, or excuse the prior failure to follow the practices discussed in the Recommendation if such failure constitutes a violation of a Reliability Standard."[57] Notably, this investigation is based on violations of Reliability Standard FAC-009-1 R1, which pre-dated the NERC Alert by several years.

Moreover, the President and CEO of NERC made clear:

> In the unlikely circumstance an actual event occurs in which NERC or the [RE] determines a discrepancy between actual field conditions and design specifications was a cause or contributing factor, then NERC or the RE would proceed to investigate that case directly without delay.[58]

Here, Staff determined that PacifiCorp's clearance problems on the Huntington-Mona line and the resulting Wood Hollow fire are such a circumstance. Specifically, the Wood Hollow fire resulted from PacifiCorp operating the Huntington-Mona line with a discrepancy between actual field conditions and design criteria in a manner that was not consistent with PacifiCorp's FRM. The line was designed and sagged to operate at a maximum conductor temperature of 120 degrees Fahrenheit, but it was operated well in excess of that temperature, 194 degrees Fahrenheit, thereby causing the line to sag more than anticipated at design and consequently reducing the actual field clearance to the point that the fire occurred from a flashover to the 138 kV Nebo-Jerusalem line.[59] In

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[56] NERC Alert at 1.

[57] *Id.*

[58] November 30, 2010 Letter from Gerald Cauley, President and CEO of NERC, to Industry CEOs at 3. *See* North American Electric Reliability Corporation (NERC), *Cauley-Facility Ratings CEO Letter 113010,* **Error! Hyperlink reference not valid.** http://www.nerc.com/pa/rrm/bpsa/Facility%20Ratings%20Alert%20DL/Cauley-Facility-Ratings-CEO-Letter-113010.pdf (last visited March 5, 2021).

[59] As described *supra* in Section II.C., PacifiCorp's FRM required it to carefully monitor older lines that were not designed for operation at higher temperatures, like the Huntington-Mona line, to ensure maintenance of proper ground clearances. The FRM states further that "[w]hen a line is found to have insufficient ground clearance, it should be re-sagged, or rebuilt if necessary, to maintain proper ground clearance." Utah Policy at Section 9.5 (P-20131125-0402102). This was not an unknown discrepancy. Rather,

addition, PacifiCorp had thousands of additional clearance violations that, while not resulting in fires or other events, presented serious risk to BES reliability.

E. Staff's Investigation

Following news reports that Utah fire investigation authorities concluded that the Wood Hollow fire was caused by inadequate clearances, Staff in late 2012 began an informal inquiry and contacted WECC and PacifiCorp to obtain information about the fire. After reviewing PacifiCorp's responsive materials and considering the matter, Staff, in consultation with the Commission's Office of Electric Reliability, began an investigation in March 2013. Staff sought information and documents through data requests to PacifiCorp, NERC, and WECC. In addition, Staff took nine days of sworn testimony from six current and former employees of PacifiCorp, including those listed below, whose testimony was critical to Staff's investigation.

- Florence Hausler was a key individual involved in the P&P analyses, and the Director of Engineering from approximately 2003 to 2008 and the Director of External Engineering from 2008 to April 2012. She then became the Director of Reliability Standards, responsible for compliance with approximately ten Reliability Standards including FAC-008-1, FAC-009-1, and FAC-008-3, and also was involved in PacifiCorp's response to the NERC Alert.

- Greg Linden was a Senior Engineer in the Reliability Standards Department of PacifiCorp Transmission, working under Hausler. He was the only person in charge of verifying and entering facility ratings into the PacifiCorp system.[60]

- Ken Shortt was the Director of Compliance Performance Reporting for RMP from approximately 2010 to early 2012, had responsibility for the company's compliance with FAC-008-1 and FAC-009-1, and was in charge of PacifiCorp's response to the NERC Alert from its outset until 2012.

Staff delivered oral preliminary findings to PacifiCorp on August 9, 2016. On September 13, 2016, PacifiCorp provided a written response (PF Response). PacifiCorp also met with Staff to discuss its PF Response on September 15, 2016. After carefully considering the PF Response and other communications from PacifiCorp, Staff sought

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PacifiCorp chose to operate the line above design temperatures, thus causing the reduced clearance.

[60] Linden Testimony at 119:9-15 ("Q - First of all, why is Kent Jaffa asking you whether you agree with Bill Bruening's revised ratings? A – Because if I don't agree with him, they are not going to get published. Q – Because you had responsibility over the ratings that were ultimately published? A – That's correct.").

authority to enter into settlement negotiations with PacifiCorp. Staff met with PacifiCorp on August 29 and October 17, 2018 to discuss the possibility of settlement, and had several other informal discussions regarding settlement. On February 22, 2019, Staff provided notice to PacifiCorp under section 1b.19 of the Commission's regulations of its intent to recommend the initiation of a public proceeding against PacifiCorp.[61] On May 24, 2019, PacifiCorp provided a written response to Staff's section 1b.19 letter (1b.19 Response). Staff also met with PacifiCorp to discuss its 1b.19 Response on June 20, 2019. On June 28, 2019, PacifiCorp gave written notice that it was terminating a September 8, 2014 tolling agreement between Staff and PacifiCorp.[62]

III. Staff's Factual Findings

This section details Staff's factual findings related to PacifiCorp's failure to consider NESC clearance standards, as required by its FRM, when establishing its facility ratings. Specifically, this section highlights PacifiCorp's (1) knowledge of significant clearance issues from its P&P analyses and LiDAR studies on 1,200 miles of transmission lines (sections III.A, B, and C); (2) failure to take appropriate action in response to this knowledge—including its failure to conduct further investigation or elect to notify and consult with NERC (sections III.D); and (3) reliance on P&Ps despite knowledge of their inaccuracy (section III.D). Section III.E provides a description of PacifiCorp's knowledge and treatment of clearance issues on the Huntington-Mona line to provide an example of its non-compliance.

These facts show that between 2009 and 2017, PacifiCorp did not appropriately consider NESC clearances, as required by its FRM, when it knew the documentation underlying the clearance measurements was either unreliable or incorrect.

A. PacifiCorp's Pre-NERC Alert Knowledge of Clearance Problems and Its Publication of Unsupported and Incorrect Facility Ratings

When PacifiCorp became aware of the upcoming promulgation of the FAC-008-1 R1 and FAC-009-1 R1 Reliability Standards in 2007, it began to develop a documented FRM as required by FAC-008-1 R1. At that time, PacifiCorp relied on its transmission line P&Ps to verify facility ratings in preparation for (1) the 2007 effective date of these Reliability Standards; and (2) a WECC audit related to the Reliability Standards. Engineering was tasked with performing P&P analyses on approximately 7,255 miles of

[61] 18 C.F.R. § 1b.19 (2020).

[62] By the terms of the agreement, tolling continues until 180 days after PacifiCorp gives written notice of termination.

PacifiCorp's approximately 10,500 miles of BES transmission lines. In doing so, its analyses indicated numerous transmission line clearance issues.

Based on these discoveries, Engineering conveyed numerous re-ratings (to reduce the ratings in effect) of lines with clearance problems to PacifiCorp's Planning department (Planning), many of which Planning did not implement. Hausler, who played a leadership role in Engineering's P&P ratings efforts,[63] testified that when she performed the P&P work she concluded that the P&Ps were unreliable for purposes of calculating facility ratings.[64] Several 2010 Hausler emails demonstrate that the source of PacifiCorp's general ratings problem was clearance issues that stemmed from the time the lines were designed and built, and that the company knew about the ratings/clearance problems as early as 2007.[65]

PacifiCorp management not only knew that the clearance issues existed but also that PacifiCorp's published ratings based on those clearances were unsubstantiated. In a 2010 email sent to the Director of Asset Management, Hausler stated that Planning refused to implement Engineering's lower ratings and continued to use the unsupported higher published ratings because Planning could not "live with" lower ratings due to, among other things, contract needs.[66] Hausler told the Director of Asset Management that Engineering provided line path ratings to Planning and:

> Planning prioritized the line paths that would require modifications in order for these lines to meet the higher ratings but <u>in the interim while the design/construction was being implemented, [P]lanning published the</u>

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[63] Hausler Testimony at 40:7-12; 45:3-11; 49:9-16.

[64] Hausler Testimony at 203:9-12; 212:17-20; 214:23-215:1; 258:18-259:2.

[65] *See, e.g.*, Email from Hausler to Grammer, August 5, 2010, P-20141002-0001762-1766 at -1765 ("This problem [the clearance issues] was discovered in 2007 I believe and was communicated at that time."); email from Grammer to Steven Elder and Hausler, August 10, 2010, *id.* at -1763 ("In 2007, a review of transmission system plans and profiles indicated that there were existing clearance issues and that the standards that were in place when the lines were designed and constructed were either not followed in the design process or the lines were not constructed to the design."). While there may be issues relating to PacifiCorp's facilities not being constructed as designed, staff has only focused on PacifiCorp's operation of those facilities in a manner that did not account for actual clearances.

[66] The document was described as outlining the Weak Link Analysis Process. *See* January 12, 2010 email from Hausler to Richard Vail, P-20131204-0029886-9887.

ratings based on historical ratings not the ratings that were determined during the engineering analysis.[67]

In addition, a November 2010 memorandum was reviewed by senior management and provides additional support that management understood both that clearance problems existed on BES transmission lines and that Planning continued to knowingly publish incorrect ratings without timely efforts to identify and remediate clearance issues and without accepting Engineering's recommendations for remediation of problems already discovered (November 2010 Memo).[68]

B. PacifiCorp's Aerial Survey Project Found Clearance Problems More Severe than the P&P Analyses Showed

Based on analysis begun in approximately 2007, Engineering found the P&Ps to be unreliable and recommended that all of the approximately 10,500 miles of PacifiCorp's BES transmission lines be subject to LiDAR analyses in order both to verify

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[67] January 12, 2010 email from Hausler to Richard Vail, P-20131204-0029886-9887 (emphasis added). Hausler understood the impropriety of Planning's decision to continue to use incorrect ratings. In her email, Hausler highlighted statements in her memo concerning Planning's continued use of higher ratings when they had "no basis" for those ratings and cautioned the Director of Asset Management to remember this when sending the memo to others. *Id*. at 0029886 ("I documented the process we followed. Please review and let me know if you want any changes. Depending on who you send this to, it states that Planning did not go with engineering's numbers for the ratings in all cases because they could not live with the lower ratings. The current published numbers in some cases are what Planning had historically used even though they have no basis for those numbers or those numbers matched the standards that were in place at the time but could not be confirmed through an analysis of the plans and profiles.").

[68] November 2010 Singh, Elder, Allsup Draft "Analysis of Transmission Line Rating Methods," P-20160810-0000001-0000016 at -0000005 ("Based on the [ground survey] results [conducted on a subsection of lines after the P&P analysis], it was found that these lines still have (2 out of 13 spans (15%)) clearance issues when loaded to published ratings of 100 deg[rees]-C[elsius]. It was also determined that there is opportunity for potential error when creating plan and profiles using scanning approach. The field conditions did not exactly match the plans and profiles. However, it provided us the preliminary information which verified that the Transmission lines have issues with the line clearances when loaded at the published ratings. . . . Transmission engineering presented the options to Planning including de-rate the lines or to upgrade the lines in the field to meet 100 deg[ree]-C[elsius] clearance requirements. Grid Planning could not accept the limitation of de-rating the lines. . . ."). The November 2010 Memo was prepared by Pete Singh and Steven Elder, and was reviewed by Brett Allsup, on November 3, 2010.

Engineering's P&P calculations and to better understand the magnitude of the transmission system's clearance problems. In approximately 2007/2008, Engineering recommended that approximately 2,400 miles of transmission lines be measured by LiDAR. For reasons staff has not determined, management approved LiDAR of 1,200 miles of lines to be conducted in 2009 and they were not the lines Engineering would have selected.[69] The 1,200 management-selected miles failed to include a single 345 kV line despite the fact that Engineering proposed performing LiDAR measurements on seven such[70] lines because they were heavily loaded. The 1,200 management-selected miles also included only two of the five 230 kV lines proposed by Engineering. Management instead selected the majority of the smaller 161 kV, 138 kV, and 115 kV lines proposed by Engineering.[71]

In 2009, PacifiCorp received its LiDAR measurements of the approximately 1,200 miles of lines (the Aerial Survey Project).[72] Although included in Engineering's 2,400-mile LiDAR measurement request, the Huntington-Mona 345 kV line was not included in the Aerial Survey Project. The results of the Aerial Survey Project demonstrated that the

[69] Comment by Hausler to August 5, 2010 Draft Aerial Survey Process Lesson Learned Proposal, P-20131227-0088775-777 at 776; Hausler Testimony at 286:1-287:9 (describing the history of the decision to LiDAR a subset of PacifiCorp's lines).

[70] Email from Hausler to Grammer, August 5, 2010, at P-20141002-0001762-770.

[71] Email string beginning January 2, 2009 from Florence Hausler to Steven Elder copying Shelby Bell titled "2008-2009 Aerial Mapping Project (2).xl, at P-20131227-0066200-203.

[72] In an email, Hausler commented that the 2009 LiDAR measurements were not done earlier because no one at PacifiCorp would fund the project. Email from Hausler to Jan Grammer, August 5, 2010 (email chain P-20131227-0088775 at 8775) (". . . I feel [the Aerial Survey] Lidar project was fast tracked [after the Aerial Survey Project was ultimately begun] because the team could not get anyone to address (fund) it earlier when it was originally discovered that the plans and profiles showed significant clearance issues and that the standards that were in place when the lines were designed/constructed either were not followed in design or were not constructed to the design. This problem was discovered in 2007 I believe and was communicated at that time."). PacifiCorp later conducted a second, larger set of LiDAR studies related to its response to the NERC Alert.

clearance problems were more serious and widespread than the P&P analyses suggested.[73]

A chart circulated to senior management and others for purposes of a February 18, 2010 meeting to develop a plan to address clearance issues uncovered during the Aerial Survey Project shows there were 1,290 clearance issues identified on RMP lines alone (or approximately one clearance issue per RMP line mile studied), including 288 discrepancies resulting in ratings of zero-amperes, indicating that the lines should not have been in service.[74] Moreover, the November 2010 Memo specifically noted:

> Eleven times as many clearance issues are found by LiDAR comparing to paper review approach. The 2009 aerial survey also picked up 49 clearance issues at 0 deg[ree]-C[elsius] which were not picked up by the preliminary paper analysis. These issues are safety concerns that if left unaddressed, expose the company to bigger risk.[75]

In addition, a September 2011 memo by Shortt providing options for approaching the NERC Alert noted that (1) the Aerial Survey Project had uncovered from .05 to 2.98 clearance issues per mile of line surveyed; and (2) most spans on lines converted from 230 kV to 345 kV would need to be mitigated and between 5 and 10 percent of the spans on the 161 kV, 138 kV, and all 115 kV lines would require mitigation.[76]

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[73] August 6, 2010 email from Hausler to Grammer and Elder, P-20141002-0001762 at 1764-1766 ("For the lines that were flown where we had plans and profiles, the Li[DAR] showed more clearance issues than the paper exercise showed.").

[74] P-20131204-0023887-3889 at 3889. The Vice President of Engineering and Asset Management, Pacific Power, called this February 18, 2010 meeting to discuss the RMP clearance discrepancies and attached the chart. Other PacifiCorp management invited to the meeting and receiving this chart included: the Vice President of Network Reliability and Investment, RMP; the Vice President of Operations, RMP; the Director of Compliance Performance Reporting, RMP; the Director of Asset Management, Pacific Power; the Director of Engineering, PacifiCorp; and the Manager in Transmission Engineering. *Id.*; Hausler Testimony at 210:19-22; Linden Testimony at 116:6-117:13.

[75] November 2010 Memo, P-20160108-0000001-0000016 at -0014. Clearance issues rated at below 0° Celsius up to 50° Celsius are associated with a zero-ampere rating. PacifiCorp Response to Data Request No. 43, July 25, 2016.

[76] September 22, 2011 email from Ken Shortt to Vance Witbeck and Howard Ferris, P-20131227-0157561 attaching P-20131227-0157562 (NERC Alert Options document).

PacifiCorp took at least two years to react to the P&P calculations begun by Engineering in 2007 that indicated the company had serious clearance issues on its BES and raised serious concerns about the adequacy of its facility ratings. Even when the company did react and chose to use LiDAR, it surveyed only a small subset of the transmission lines recommended for LiDAR by Engineering, and it did not survey many of the heavily loaded lines—including the Huntington-Mona line—that Engineering thought should be surveyed. Moreover, as set forth more fully below, Staff found no evidence that PacifiCorp made any plans to identify the severity of the clearance issues or identify and remediate the clearance problems on the rest of its BES until it responded to the NERC Alert.[77]

C. Clearance Problems Existed on the Majority of PacifiCorp's BES Transmission Lines with Almost Half the BES Lines Incapable of Being Safely Energized

PacifiCorp made no effort in 2009 to identify the scope and severity of the clearance issues on the remaining approximately 9,000 miles (or 88 percent) of its BES transmission system.[78] In fact, at the time of the NERC Alert, PacifiCorp had corrected only 67 percent of the Aerial Survey Project's identified clearance problems on the approximately 1,200 miles of lower voltage lines. But the post-NERC Alert review of the remaining 9,000 miles of its BES transmission lines that occurred between 2011-2017 showed the clearance problems were widespread. As of May 19, 2017, PacifiCorp identified having had clearance issues on 215 of its 367 BES lines—or over 58 percent of them, including higher-voltage lines.[79] As of May 19, 2017, of the 3,694 clearance issues PacifiCorp remediated as part of the NERC Alert work, 912 involved a proposed summer

[77] Although not required, had PacifiCorp moved to more timely identify and remediate the clearance issues, upon discovery of the discrepancies between the LiDAR clearances and clearances required by its FRM, PacifiCorp could have remedied its clearance issues sooner, including by: 1) determining how to mitigate the discrepancies in order to allow the lines to continue safely operating at the facility ratings calculated by the LiDAR clearances or 2) adjusting the facility ratings based on the LiDAR clearances. *See supra* note 18.

[78] Shortt could not explain PacifiCorp's inaction. When asked why nothing was done to examine the rest of the PacifiCorp lines between early 2010 (when Shortt knew the Aerial Survey Project results for RMP lines) and early 2011 (when Shortt held PacifiCorp's NERC Alert kickoff meeting), Shortt testified: "I do not know." Shortt Testimony at 322:21-323:3.

[79] PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 7.

and/or winter re-rating equal to zero-amperes.[80] The zero-ampere re-ratings existed on 167 of PacifiCorp's 367 BES lines, meaning that over 45 percent of PacifiCorp's BES transmission lines were unsafe to energize.[81] To have been compliant with the requirements in its FRM, as mandated by the new mandatory Reliability Standards, PacifiCorp should have addressed the problem with the ratings no later than 2009 when it established its FRM.

D. PacifiCorp Failed to Take Timely Action Concerning Its Ratings

PacifiCorp failed to take timely action concerning its facility ratings including its failure to take timely steps to address the zero-ampere re-ratings. PacifiCorp's Engineering employees were keenly aware of the implications of a zero-ampere rating. Linden, Shortt, and Hausler each testified that a zero-ampere rating is serious or limiting.[82] Linden—the sole PacifiCorp employee responsible for publishing transmission line facility ratings[83]—testified that a zero-ampere rated line should not be used for carrying load: "you can't put any current through it. . . ."[84] He testified that it is inappropriate to use an old, published facility rating for a line that should be rated at zero-amperes due to a clearance issue.[85] He also testified that he had never seen a line with a zero rating and if such a facility rating came across his desk, he "would recommend to turn it off."[86] Importantly, Linden testified that he was never told about the zero-ampere re-rated lines resulting from clearance issues and he maintained that he should have been told.[87] Moreover, PacifiCorp did not elect to consult the RC about the clearance issues on its lines—even those with summer and/or winter proposed zero-ampere ratings until it

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[80] *Id.* at 5. When PacifiCorp's Aerial Survey Project clearance issues are combined with the NERC Alert clearance issues, the total increases to 4,725 clearance issues of which 1,200 had a zero-ampere rating.

[81] PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 6 and Spreadsheet E.

[82] Linden Testimony at 158:3-8; Hausler Testimony at 358-364, 361:11-18, 363:5-18; Shortt Testimony at 83:8-1.

[83] Linden Testimony at 119:9-15 ("If I don't agree. . . [the ratings] are not going to get published.").

[84] Linden Testimony at 157:22-158:1; 158:3-8.

[85] Linden Testimony at 157:5-11, 22-25; 158:1; 162:15-25.

[86] Linden Testimony at 170:2-25; 172:15-25; 173:8-16; 173:21-176:1.

[87] Linden Testimony at 172:15-25; 173:8-16.

began addressing remediation of clearance problems in response to the NERC Alert. This was despite direction in the NERC Alert to consult the RC.[88]

At least as early as mid-2011 PacifiCorp senior management, as well as the individual leading the company's NERC Alert response, were aware that NERC stated in its NERC Alert Questions and Answers (Q&As) that entities whose line ratings may become zero should contact their RE for assistance.[89] Specifically, in mid-2011, Shortt forwarded the Q&As—highlighted to indicate his concerns—to the Vice President of PacifiCorp Compliance and General Counsel and the Director of Asset Management.[90] Among the Q&As Shortt highlighted was:

> Q. How do you handle a line that has discrepancies and the rating becomes zero? De-energization is not an option because the "lights" will go out.

[88] NERC Alert at 3 ("During conduct of the assessment, if the Transmission Owners and Generation Owners determine that the actual conductor clearances are not within the entity's design tolerances under existing or design conditions and as a result, facility ratings are in error, the Transmission Owners and Generation Owners should coordinate their findings of the assessment with their respective Reliability Coordinator, Transmission Operator, and Generation Operators."). In addition, Linden testified that PacifiCorp should have made these notifications. Linden Testimony at 181:10-19; 183:8-184:4.

[89] As described above, starting in January 2012, PacifiCorp submitted semi-annual reports to WECC identifying clearance issues, but it did not reveal the full severity of such issues, such as by identifying the resulting zero-ampere ratings. *See* PacifiCorp's Response to Data Request No. 47, July 12, 2016 (identifying clearance issues and attaching semi-annual reports to WECC in response to the NERC Alert). Similarly, PacifiCorp's self-reports to WECC about clearance issues, discussed *infra* in Section V.A, "did not specifically identify any specific degree rated lines," but rather "reported a general violation." Shortt Testimony at 337:14-16.

[90] Shortt Testimony at 512:25-513:1-3 ("Q: And is it your testimony that you had concerns about the questions and answers that are highlighted on this exhibit Number 32? A: Yes."). *See also* Shortt Testimony at 514:1-12; P-20160201-0000287-0292; P-20160201-0000038-0043. Those materials were later forwarded to the Vice President, Systems Operations.

A. The scenario you describe sounds too extreme. Please contact your Regional Entity for assistance with any further questions on this.[91]

PacifiCorp did not contact NERC to seek assistance regarding the zero-ampere re-rated lines.[92] PacifiCorp Relied on P&Ps Despite Their Being Inaccurate and Unreliable.

While knowledgeable PacifiCorp employees were aware of and openly discussed concerns with relying on the company's then-current P&Ps,[93] others—including those in management positions—continued to be proponents of their use. For example, Shortt, then the Director of Compliance Performance Reporting for RMP and the person in charge of responding to the NERC Alert from its outset until 2012, was in favor of using PacifiCorp's P&Ps for its response to the NERC Alert.[94] Even after PacifiCorp decided to LiDAR its entire system for its NERC Alert work instead of its P&Ps, Shortt still advocated the initial use of them to calculate ratings in 2011.[95] In one email, Shortt,

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[91] FAC Assessment Plan Review Participant Questionnaire May 2011, P-20130925-0003285-3289 (emphasis added), showing that Shortt's highlights were made on June 16, 2011 at 1:22:07 p.m.

[92] Staff confirmed that neither WECC nor NERC has any record of having been contacted by PacifiCorp about this issue.

[93] *See, e.g.,* August 6, 2010 email from Hausler to Grammer and Elder, P-20141002-0001762-0770 at 1764-1765; February 1, 2011 email from Hausler to Elder, P-20131227-0388150; June 8, 2011 email from Watanabe, P-20131227-0451509-0451513 at 1509, ("You are asking engineering to provide a line rating based on thirty year old P&Ps. I am having difficulty with this request because of past experience showing that in some cases (last years LiDAR work) the P&Ps are not adequate for this evaluation."); May 31, 2012 email from Hausler to Daniel Watanabe, Manager Transmission Engineering, (and others), P-20131204-0025304-306 at 304.

[94] November 2010 Memo, P-20160108-0000001-00016 at -0007 ("After reviewing the NERC [A]lert and based on the conditions of the existing [P&Ps], Transmission engineering recommended that PacifiCorp should conduct additional LIDAR surveys to verify field conditions. Ken Shortt, from Compliance, recommends that LIDAR may not be required, and that Transmission Engineering should verify the facility ratings based on conducting the paper analysis using existing [P&Ps].").

[95] June 14, 2011 email from Shortt to Watanabe (copying others including Jaffa, Vranish, and Linden), P-20131125-0993954-960 at 3954-3955 ("Engineering should be able to identify ratings from existing plan and profiles without requiring a full LiDAR study. How would engineering develop a rating 20 years ago?"). *But see* Pete Singh Testimony at 129:6-130:1 (explaining that Shortt's statement in P20131125-0993961 to -

when questioned about the continued use of the company's P&Ps, responded by saying that not only are its P&Ps sufficient but that "[t]he Facility Rating project [which utilized LiDAR to analyze the lines] *never* would have taken place if it was not required by NERC."[96] In addition, PacifiCorp's Director of Asset and Risk Strategy recommended the use of P&Ps for a particular transmission line facility rating in a 2012 email exchange.[97]

E. The Huntington-Mona Clearance Issue and the Wood Hollow Fire

While Staff initiated its investigation of PacifiCorp after learning of the Wood Hollow fire, it learned that the fire was part of a systemic problem at PacifiCorp involving widespread clearance issues. Because PacifiCorp did not take into account clearance measurements consistent with its FRM, PacifiCorp violated FAC-009-1 R1. A fire, including one like the Wood Hollow fire, is not an unexpected result given the scope and severity of clearance problems on PacifiCorp's BES. Staff describes below certain evidence related to clearance problems on the Huntington-Mona line to provide an example of how clearance problems on PacifiCorp's BES lines were permitted to persist and to demonstrate the risk associated with such problems.

1. The Utah Policy warned of lines like Huntington-Mona.

As a heavily loaded line that went into service in March 1978 and was sagged to 120° Fahrenheit (or 50° Celsius), Huntington-Mona was one of the lines covered by the Utah Policy warning for careful monitoring to ensure proper clearances.[98] PacifiCorp senior management understood this. The November 2010 Memo recognized that ground clearances for lines built before 1989 were 4 to 5 feet less than anticipated when the lines were put to more modern use at 212° Fahrenheit (or 100° Celsius). As a PacifiCorp engineer explained about old lines, "Planning pushed the operating temperatures to 80 to 90[°] C[elsius] continuous and 100[°] C[elsius] emergency (4 hour duration). This

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67 resulted from a misunderstanding about why the P&Ps could not be used and that Shortt agreed to LiDAR after he learned more).

[96] June 14, 2011 email from Shortt to Watanabe, at P-20131125-0993961 to 0993967 (emphasis added).

[97] June 1, 2012 email from Vranish to Hausler, P-20131204-0025304-5306 at -5304.

[98] Utah Policy at Section 9.5 (P-20131125-0402090-0402109 at 2102) (footnote omitted); *see also supra* Section II.C.

caused old lines to go beyond their design parameters for ground clearance."[99]

2. A higher priority clearance issue went unresolved in 2000.

PacifiCorp was aware of clearance problems on Huntington-Mona for more than a decade but did not remedy the situation. An inspector reported a potential "Priority A"[100] clearance issue between the Huntington-Mona and Nebo-Jerusalem lines, the site where the Wood Hollow fire started, on May 5, 2000, but the entry was removed from the internal reporting system on May 15, 2005 as "checked and cleared."[101] PacifiCorp provided no evidence that this clearance issue was addressed and the Vice President of Transmission and Distribution Operations, RMP, testified in a deposition taken in one of the civil lawsuits that he located no changes, modifications, alterations, or fixes on those lines at that location. In fact, in the 12 years following the report of the clearance issue to the fire, the Vice President testified: "I'm unaware of any physical change made to the structures or wires there."[102] He also testified that upon viewing the lines with RMP's President and CEO a week after the fire: "I'd say very quickly it looked like it did not meet NESC clearance to me."[103] One PacifiCorp employee, when asked about the clearance issues on the lines, stated "the issues that were this bad should have been caught many, many years in the past . . . ."[104] A post-fire risk management report conducted by MEHC stated that, "[t]he company was aware of both the line clearance and the missing ground wire,[105] but had not yet addressed them; corrective actions were

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[99] August 10, 2010 email from Elder to Hausler and Grammer, P-20141002-0001762-0770 at -1762.

[100] Radakovich Testimony (in civil lawsuit arising from Wood Hollow fire) at 55:8-12 ("I think the company sees a clearance violation as somewhat subjective in that there's -- I mean, if it looks like an eminent failure, a safety issue, it can be an A condition. Other clearance conditions can be B conditions.").

[101] Radakovich Testimony Exhibit 19 described as "Excel Spreadsheet of 2011, 2012 FPI Conditions" containing undated document listing the status of several Priority A and B clearance issues at, P-20160712-0000135.

[102] Radakovich Testimony at 150:6-8, 153:21-154:18.

[103] Radakovich Testimony at 155:21-156:6.

[104] *See infra* section III.G.1.b.; Linden Testimony at 172:19-20; *see id.* at 173:8-16.

[105] The missing ground wire was a factor in the initiation of the fire, but is not covered by the Reliability Standards.

in the operational plans."[106] Moreover, Huntington-Mona was part of the 2,400 miles Engineering originally proposed for the 2009 Aerial Survey Project because it was heavily loaded, but it was removed from the project by PacifiCorp's management.[107]

3. PacifiCorp senior management knew the clearance inspection program was flawed but the company told NERC otherwise.

PacifiCorp's procedures required 12 annual inspections of Huntington-Mona between the 2000 field inspector's clearance report and the 2012 fire.[108] However, PacifiCorp's senior management had notice of concerns with PacifiCorp's field inspection program:

> Some have said that Line Patrolmen should have picked up all the clearance issues on the lines. Until recently, patrolmen have not been given accurate tools to measure lines and it would take an intensive walking patrol to find all the potential clearance issues. . . . Some locations cannot be reached by foot and thus cannot be measured. Training of patrolmen would be an issue, as well, because the Patrolman changes regularly in many districts.[109]

This field inspection program, internally recognized as problematic in the draft November 2010 Memo, was described as "robust" two months later in PacifiCorp's first formal response to the NERC Alert. The January 2011 response, of which Shortt was the lead author, was reviewed by the company's "executive committee," including the President of RMP; President of Pacific Power; Vice President of PacifiCorp Compliance and General Counsel; Vice President of Asset Management Pacific Power; and Vice President of Network Reliability and Investment, RMP.[110]

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[106] MidAmerican Energy Holdings Company 2013 Insurance Meetings dated 4/11/2013, at, P-20131125-0878046 to 0878105 at 0878066.

[107] Undated Excel document titled "PacifiCorp 2008-2009 Aerial Mapping Project List of Lines to be Flown" at , P-20131227-0066203; Hausler Testimony at 306:21-308:6; *see also* August 5, 2010 email from Hausler to Grammer, P-20131227-0088775-777 at -776.

[108] Radakovich Testimony at 155:7-20.

[109] November 2010 Memo, P-20160810-0000001-00000016 at -0014. As noted above, this Memo, obtained by Staff only in draft form, was reviewed by the Vice President, Engineering and Asset Management, Pacific Power.

[110] Facility Ratings Recommendation Questionnaire, P-20131125-0162925-2927 at -2926. This document was attached to an email sent to 23 PacifiCorp employees, among them senior management. P-20131125-0162922; Shortt Testimony at 59:4-60:24.

4. The Huntington-Mona line was not re-sagged to operate at higher temperatures.

Staff discovered that while the Huntington-Mona line was re-sagged at the Nebo-Jerusalem crossing in 1980 when the Nebo-Jerusalem line was built, there was no evidence that it was later re-sagged to operate at greater than its original 120° Fahrenheit temperature.[111] PacifiCorp claims that P&Ps for the Huntington-Mona line indicate they "were redrawn for a 200° Fahrenheit sag,"[112] but Staff found that the P&Ps continue to note that the line is designed for 120° Fahrenheit.[113] PacifiCorp has produced no contrary evidence.

5. Utah fire official concludes that a clearance issue caused the Wood Hollow fire.

The Utah Deputy Fire Marshal concluded that a clearance issue between the Huntington-Mona line and the Nebo-Jerusalem structure caused the Wood Hollow fire.[114] A Supplemental Report of Investigation indicated that a physical examination of the conductor showed electrical current had transferred between the Huntington-Mona and Nebo-Jerusalem lines "on more occasions than" when the fire occurred.[115]

6. Contemporaneous documents show PacifiCorp employees and senior management believed clearance problems caused the fire.

Although certain PacifiCorp employees testified they had no knowledge of the fire's cause, earlier email communications among employees as well as statements made by senior management suggest that PacifiCorp and its employees understood that a clearance issue caused the Wood Hollow fire.[116] For example, while Hausler testified in

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[111] *See* P-20130925-0005484 (1980 construction schematic indicating the conductor temperature remained at 120° Fahrenheit).

[112] PacifiCorp Response to Data Request No. 23(h), September 25, 2013.

[113] *See* 1980 construction schematic indicating the conductor temperature remained at 120° Fahrenheit at P-20130925-0005484.

[114] MidAmerican Energy Holdings Company 2013 Insurance Meetings dated Draft 4/11/2013, Report at, P-20131125-0203215-3222.

[115] Supplemental Report of Investigation by Troy D. Mills, P-20130925-0001051-1063.

[116] Shortt testified, "I understand we did damage to property. I understand a life was lost and I don't remember—I assume a few cabins or residences were lost." When

2015 that she personally had "no understanding" of what caused the fire,[117] previous emails she wrote reflect that she set up a system "prioritizing" NERC Alert clearance mitigation to address severe clearance issues first because of the fire.[118] In speaking about this system, a PacifiCorp employee explained that this was a "new directive that started after the Big Hollow fire caused by a line clearance issue that could have been prevented if it was given priority."[119] In a PacifiCorp PowerPoint presentation about wildland fires from June to July 2012, the presenter included notes that said "Wood Hollow fire was caused by own facilities."[120] It appears this presentation was also shared with PacifiCorp's Board of Directors.[121]

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asked about the types of losses, however, he testified that he used the word "we" inadvertently. Shortt Testimony at 215:10-216:10.

[117] Hausler Testimony at 167:17-19.

[118] January 24, 2013 email from Hausler to Michael Shepherd, copying Director Regional Investment Delivery, RMP and Director Asset Risk and Strategy, PacifiCorp, P-20131125-0036542-6545 at 6542-6543 ("[t]he severe issue process was established due to the fire in Utah. . . .When the fire happened, the LIDAR project team determined a methodology and process to follow to address the severe clearance issues in an expedited manner. . . ."). *See also* July 19, 2012 email from Hausler to Director Asset Management, RMP, Richard Vail, P-20131125-0032528-2531 at -2528 (emphasis added) ("In light of the fire in Utah, I think more pressure needs to be put on Powder River to get this done quickly. These clearances are pretty severe just like the one in Utah and we are at risk… This is the Carr Draw-Buffalo 230kV line and one of the clearances is 0.3 feet (3.6 inches) at 100 degree C[elsius] conditions."). Hausler did not admit in testimony to a connection between the new process and the fire, but said she may have speculated that clearance issues caused the fire. Hausler Testimony at 386:20-388:17.

[119] Email string beginning January 23, 2013 from Michael Shepherd to Russell Updike copying Vance Witbeck, Pattie Peterson, and Lisa Ciriako titled "Interim Approval – NERC Line Rating Medium's at P-20131125-0036526. The housing development in the area where the fire started is called Big Hollow.

[120] Rocky Mountain Power Presentation titled "Wildland Fires Utah, Idaho and Wyoming June-July 2012 at P20131125-0117648. A presenter can include notes in a section of a PowerPoint that is visible to the presenter but not to the audience.

[121] Email string beginning November 6, 2012 from Patti Robinson to numerous recipients titled "2012 MidAmerican Risk Forum Agenda and Presentations at P-20131125-0117647 ("Do you have the PPT file for the fires? We want to reuse some of the slides for a board presentation.").

In his 2012 year-end message to employees, the Chairman and CEO of PacifiCorp and Chairman, CEO and President of MEHC, Greg Abel, identified the Wood Hollow fire as one of 10 corporate disappointments and drew a connection between the fire and PacifiCorp's clearance issues:

> PacifiCorp did not actively address existing clearance issues and did not move aggressively enough to manage vegetation programs, which introduced risk into the business. Corrections identified were not acted on and completed in a timely manner. As a result, a significant fire occurred in an area where mitigation plans had not been executed.[122]

Consistent with the finding of the Utah Deputy Fire Marshall, the highest ranking official in PacifiCorp's corporate structure left no doubt as to his understanding that "existing clearance issues" caused the Wood Hollow fire.

IV. PacifiCorp Violated the FPA and Commission Regulations by Failing to Comply with Reliability Standard FAC-009-1 R1

PacifiCorp violated FPA section 215(b)(1) and section 39.2(b) of the Commission's regulations[123] by failing between 2009 and 2017 to comply with FAC-009-1 R1, a Commission-approved Reliability Standard requiring a transmission owner like PacifiCorp to establish and have facility ratings that are consistent with its FRM. An FRM is documentation of a methodology used for developing facility ratings. FAC-008-1 R1 sets forth the elements a transmission owner like PacifiCorp is required to include in its FRM. It provides the list of the minimum standards that must be met when writing an FRM.

Among the FRM elements required under FAC-008-1 R1 are:

> R1.1 A statement that a Facility Rating shall equal the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility. . . .
>
> R1.3. Consideration of the following: . . .

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[122] December 31, 2012 email from Greg Abel to "Employees," at P-20131125-0030004-0008. Shortt testified that he understands this refers to the Wood Hollow fire. Shortt Testimony at 600:16-601:9.

[123] 16 U.S.C. § 824o(b)(1) ("All users, owners and operators of the bulk-power system shall comply with reliability standards . . . ."); 18 C.F.R. § 39.2(b) (all users, owners, and operators of the bulk-power system "shall comply with applicable Reliability Standards . . . made effective under this part").

R1.3.2. Design Criteria (e.g. including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards). . . .[124]

As explained above, the IEEE standards referred to in FAC-008-1 R1 include the NESC standards, which, in turn, set forth clearance requirements for transmission lines and structures.[125]

FAC-009-1 R1, in turn, requires that PacifiCorp "establish Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated [FRM]. . . ." FAC-009-1 R1 requires that the written FRM PacifiCorp established for itself under FAC-008-1 R1 be used by PacifiCorp to establish its facility ratings. As set forth *supra* in Section II.C., PacifiCorp's FRM requires PacifiCorp to consider NESC clearance standards when establishing facility ratings for its transmission line conductors. The FRM requires consideration of NESC clearance criteria in both the "Scope" section of Policy No. 199, as well as sections outlining the specific rating methodologies for transmission line ratings.[126] PacifiCorp witnesses understood and acknowledged that its FRM requires such consideration.[127]

Thus, PacifiCorp violated FAC-009-1 R1 because its FRM required it to consider clearance measurements consistent with the NESC, but clearances on a majority of its BES were incorrect (as demonstrated first by the P&P analyses, and later confirmed to be even less accurate by the Aerial Survey Project results). PacifiCorp continued to rely on those clearances to support its facility ratings even though it knew them to be incorrect. This did not fulfill PacifiCorp's obligation under its FRM to consider clearances. As a result, PacifiCorp violated FAC-009-1 R1 by failing to establish its facility ratings "consistent with" its FRM.

V. PacifiCorp's Defenses Do Not Overcome Staff's Finding of Reliability Standard Violations or Its Proposed Penalty

PacifiCorp provided its legal and factual defenses in a 33-page response to Staff's PF letter (PF Response) and a 67-page response to Staff's 1b.19 letter (1b.19

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[124] Reliability Standards at FAC-008-1 Requirement R1 (effective until December 31, 2012); FAC-008-3 Requirement R3 (effective January 1, 2013) (collectively FAC-008-1 R1).

[125] *See supra* Sections II.B-C.

[126] *See supra* Section II.C.1-2 (describing various sections of PacifiCorp's FRM applicable to transmission line facility ratings).

[127] *See supra* note 49.

Response).[128] These defenses fall into three main categories (1) PacifiCorp did not violate FAC-009-1 R1; (2) the alleged violations did not pose a risk of extreme harm; and (3) Staff's proposed penalty is inconsistent with the FPA and the Commission's Penalty Guidelines, and inappropriately considers the Wood Hollow fire. Staff carefully considered all of PacifiCorp's arguments and continues to find that PacifiCorp violated the FPA and Commission regulations by failing to comply with the Reliability Standards, and that our proposed penalty is appropriate.

A. PacifiCorp Fails to Show that It Did Not Violate Reliability Standard FAC-009-1 R1

PacifiCorp raises several arguments in an attempt to show that it did not violate FAC-009-1 R1. First, PacifiCorp argues that any references in its FRM to consideration of design criteria and the NESC do not require that actual in-the-field clearances must be used in its rating calculations.[129] Staff disagrees. PacifiCorp's interpretation of its FRM's language regarding NESC, design criteria, and clearances—essentially to know about clearance issues without timely accounting for them in its ratings—renders the language in its FRM meaningless. PacifiCorp failed to sufficiently identify and remediate clearance issues that it knew for years existed on its entire BES, and it failed to timely heed Engineering's concerns and recommendations about these clearance issues.[130] This conduct does not reflect consideration of clearances, as required by its FRM.[131]

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[128] PacifiCorp's responses also included attachments, including affidavits from three industry witnesses, Earl W. Shockley, Vickie VanZandt, and David L. Marne.

[129] *See* PF Response at 7; 1b.19 Response at 32. In support of this position, PacifiCorp quotes historical NERC documents from the time the FAC-008 standards were being drafted, including one such document indicating that "[t]he word '[c]onsider' is not the same as the word, 'use.'" 1b.19 Response at note 140 (citing and quoting NERC, *Consideration of Comments on Third Draft of FAC-008-2 Facility Ratings* (*Project 2006-09*) at 24-26 (Sept. 16, 2007)).

[130] *See supra* Section III.

[131] Moreover, PacifiCorp's interpretation of "consideration" in its FRM is undercut by its 2012 self-report to WECC, in which it agreed and stipulated to a violation of FAC-009-1 R1 for failing to establish facility ratings consistent with its FRM by not considering 100 kV to 200 kV protective relay settings in its transmission line ratings. Notice of Penalty, Docket No. NP14-3 (Oct. 30, 2013) at 2-3. In that instance, PacifiCorp stipulated to a violation "'where settings for 100-200 kV protective relays were not included in the facility ratings analysis process.'" *Id.* at 3 (quoting PacifiCorp

Second, PacifiCorp claims that it did not receive fair notice of what was required to comply with FAC-009-1 R1 and argues that prior statements by WECC in response to PacifiCorp self-reports provide defenses to Staff's findings.[132] For example, PacifiCorp notes that WECC (1) responded to PacifiCorp's 2007 self-report by stating "that it was in full compliance with FAC-009-1;"[133] and (2) dismissed PacifiCorp's 2011 self-report after determining that "PAC did, in fact, apply its [FRM] to calculate Facility Ratings pursuant to FAC-009-1 R1."[134]

PacifiCorp's fair notice argument ignores ample evidence in this matter showing that it in fact had notice of its compliance requirements. For example, the testimony of its witnesses evidences that notice. As early as 2007, Engineering raised concerns about clearance issues and inaccurate transmission line ratings, but its concerns were ignored by senior management.[135] Staff's investigation did not show that senior management decided to ignore these concerns in reliance on statements from WECC, but that its decision was based upon a desire to avoid costly remediation measures.[136] Indeed, part of the conduct that led to Staff's conclusions predated WECC's response to the 2007 self-report or its dismissal of the 2011 self-report.[137] Moreover, PacifiCorp elected not to consult with NERC about what actions it should have taken given the findings of Engineering's P&P analysis that there were extensive clearance issues, and the subsequent verification of those findings by the Aerial Survey Project. PacifiCorp failed to do so even though NERC stated in its 2011 Q&As that the RE should be contacted for guidance when zero-ampere ratings issues arose.[138] Rather than contacting NERC and providing complete disclosure of the facts, PacifiCorp made two self-reports to WECC in which it omitted material information and mischaracterized the nature of its clearance problems. PacifiCorp stated in its 2007 self-report that "[n]oncompliance is due to

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self-report). Yet, in the instant matter, PacifiCorp claims that the requirement in its FRM to consider the NESC does not actually require it to use it in its rating analyses.

[132] *See, e.g.,* PF Response at 1, 8-9; 1b.19 Response at 21, 41-44.

[133] 1b.19 Response at 42 (citation and internal quotations omitted).

[134] 1b.19 Response at 43-44 (citation and internal quotations omitted).

[135] *See supra* Section III.A.

[136] *Id*.

[137] *Id*.

[138] *See supra* Section II.D.

documentation."[139] Similarly, PacifiCorp described its FAC-009-1 R1 issues in its November 2011 self-report as merely "potential discrepancies," even though it knew at the time that it had actual clearance problems and that, in many instances, the issues were so severe as to result in zero-ampere ratings.[140]

In addition, the conditions addressed in this report and recommendation are different from those identified in PacifiCorp's self-reports. Staff found that PacifiCorp violated the FPA and a Commission regulation because it failed to establish facility ratings consistent with its FRM. This determination is based on Staff's finding that PacifiCorp's FRM during the applicable periods required consideration of NESC clearance standards, that clearance violations existed on at least 58 percent of PacifiCorp's BES transmission lines, and that the clearance violations on at least 45 percent of those lines were so severe that, under PacifiCorp's FRM, the transmission lines should have been rated at zero-amperes.[141] Importantly, it is the Commission that has ultimate and independent authority to investigate violations of the Reliability Standards and to impose a penalty for these violations, notwithstanding any statements made by WECC.[142]

PacifiCorp also relies on prior NERC statements in the context of the NERC Alert, arguing that NERC did not intend the Alert to be a compliance exercise.[143] While at the time of its NERC Alert, NERC commented that compliance concerns should not "supersede the desired activity" of locating clearance problems[144] and in 2011 noted that

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[139] WECC Response 001_0007-0009 at -0007. As described in this report, PacifiCorp's FAC-009-1 R1 violations go beyond mere documentation errors. It *rated* and *operated* its transmission line facilities inconsistent with its documented FRM.

[140] Self-Report form submitted by PacifiCorp for November 8, 2011 violation relating to FAC-009-1 at P-20131227-0042586.

[141] *See* PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 7 (identifying clearance issues on 215 out of 367 BES transmission lines); PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 6 and Spreadsheet E (identifying clearance issues with a zero-ampere rating on 169 out of 367 BES transmission lines).

[142] *See* 16 U.S.C. §824o(e)(3) (the Commission may order compliance with a Reliability Standard and impose a penalty for the violation of a Reliability Standard).

[143] *See, e.g.*, PF Response a 27-28; 1b.19 Response at 43.

[144] *See, e.g.,* November 30, 2010 Letter from Gerald Cauley, President and CEO of NERC, to Industry CEOs at 3,

certain circumstances would present strong considerations for the imposition of "zero-dollar" penalties,[145] NERC never stated there would be (or could be) no enforcement actions relating to clearance violations. Rather, the NERC Alert noted the "[i]ssuance of this Recommendation does not lower or otherwise alter the requirements of any approved Reliability Standard, or excuse the prior failure to follow the practices discussed in the Recommendation if such failure constitutes a violation of a Reliability Standard."[146] In addition, the NERC Alert focused on discrepancies between design specifications and actual field conditions of transmission facilities.[147] Again, PacifiCorp's issues were much broader; it was operating its lines with knowledge of discrepancies between actual field clearances and design clearances in a manner that was not consistent with its FRM.

Third, PacifiCorp argues that Staff's interpretation of FAC-009-1 R1 threatens reliability by sending a signal that transmission lines must be derated upon discovering clearance issues. That is not correct. Staff is not arguing that PacifiCorp was required to or should have derated all of its impacted lines all at once, especially given the scope of its clearance issues. But there was a range of steps that PacifiCorp could have (and should have) taken to address its clearance issues, including contacting the RC, which is the only entity with visibility of the entire region and capable of determining the impact of PacifiCorp's violations on that portion of the BES. PacifiCorp could have consulted with and obtained guidance from the RC about available options, including (1) performing analyses to identify the scope and severity of its violations and how best to remediate them; (2) derating certain lines, as necessary and with due regard to safety and reliability; (3) using LiDAR to conduct analyses of more lines; (4) performing physical remediation, such as re-sagging lines or removing obstacles under the lines; and (5) scheduling outages on certain of its affected lines to expedite remediation. Instead, as described above, PacifiCorp failed to take timely steps to identify and remediate clearance issues across its entire BES until issuance of the NERC Alert, despite concerns raised much earlier by its Engineering department.

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http://www.nerc.com/pa/rrm/bpsa/Facility%20Ratings%20Alert%20DL/Cauley-Facility-Ratings-CEO-Letter-113010.pdf (last visited March 5, 2021).

[145] November 11, 2011 Compliance Application Notice -0009 (FAC-008 and FAC-009 Facility Ratings and Design Specifications, at 5, http://www.nerc.com/files/CAN-0009%20FAC-008%20and%20FAC-009%20Facility%20Ratings%20and%20Design%20Specifications%20(Revised).pdf (last visited March 5, 2021).

[146] NERC Alert at 1.

[147] NERC Alert at 1.

B. PacifiCorp Fails to Overcome Staff's Finding of a Moderate Risk of Extreme Harm

Staff finds that PacifiCorp's violations resulted in a moderate risk of extreme harm. This view is based on Staff's findings that during the relevant period of 2009-2017, PacifiCorp (1) had clearance violations on over 58 percent of its BES (2) could not safely energize over 45 percent of its BES lines due to zero-ampere ratings resulting from clearance violations; (3) continued knowingly to use over-rated lines and to publish those incorrect ratings; and (4) continued to use what should have been zero-ampere rated lines. PacifiCorp's use of incorrect ratings also risked PacifiCorp's transmission system planning and operations because it relied on such ratings for its planning and operations. Had PacifiCorp followed its FRM, the problem on the Huntington-Mona Line likely would have been detected and remediated well in advance of the flashover.

Staff dismissed the categories involving lesser risk and harm. Staff acknowledges that the most extreme risk occurred when the system was most stressed and the system was not always stressed to its capacity. However, because of the breadth and severity of the clearance problems that existed on PacifiCorp's system during the time of the violations, staff nonetheless believes there was a moderate risk of extreme harm. Staff also dismissed the higher category of risk. Although possible given PacifiCorp operating nearly half of its lines with actual ratings of zero amperes, and maybe appropriate under different facts, staff believes this category to be more appropriate for a worst-case scenario such as the collective circumstances leading up to the Northeast Blackout of August 14, 2003. That situation was unlikely in this case because of the number and severity of violations that would need to be present most of the time to lead to this type of event.

PacifiCorp argues that its alleged violations did not present a moderate risk of extreme harm.[148] As a threshold issue in support of this argument, PacifiCorp claims that the harm considered under the Commission's Penalty Guidelines analysis is limited to "harm to the bulk power system, i.e., reliability harm, which harm, PacifiCorp claims, is not present here."[149] PacifiCorp's argument is inconsistent with the FPA and prior Commission statements on its penalty authority in reliability matters. The FPA requires a reliability penalty to "bear a reasonable relation to the seriousness of the violation."[150] The Commission interprets "seriousness" broadly to include any effects—reliability or otherwise—of a violation, as well as other considerations. For example, in interpreting "seriousness" under the FPA, the Commission has explained that it "must be able to

[148] 1b.19 Response at 48-62.

[149] 1b.19 Response at 49-51.

[150] 16 U.S.C. § 824o(e)(6).

consider the outcomes of a violation—including, when present, losses of load *or harm to customers*, as well as the reasons for the violation *and any other factors relevant to its seriousness.*"[151]

The Commission's use of the Penalty Guidelines does not change these broad statutory considerations. Rather, the Penalty Guidelines serve as the framework by which the Commission makes the required statutory considerations regarding a particular violation's seriousness.[152] In fact, when the Commission adopted the Penalty Guidelines in 2010, it provided an example penalty calculation in a hypothetical reliability matter and it broadly considered the impact and harm, rather than limiting its consideration to BES harm.[153] PacifiCorp's argument would force the Commission to ignore certain harms that result from violations of the Reliability Standards that the Commission has independent authority to enforce.

In any event, whether the Commission's consideration of harm is limited to reliability harm is not an issue here because Staff finds that PacifiCorp's violations presented *both* harm to reliability and other harm, including harm to property and life. As discussed more fully *infra* in Section V, Staff finds that PacifiCorp's violations of FAC-009-1 R1 presented a moderate risk of extreme harm. Clearance violations

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[151] *North American Electric Reliability Corp*, 139 FERC ¶ 61,248, at P 17 (2012) (emphasis added). *See also Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, 114 FERC ¶ 61,104, at P 551 (2006) ("While the actual or potential effect of a violation is certainly one consideration in determining the seriousness of the violation, it is not the only consideration.").

[152] *See Barclays Bank PLC*, 144 FERC ¶ 61,041, at P 119 (2013) ("Under the procedures the Commission has established, the Penalty Guidelines provide a method for considering the statutory factors with respect to a company."); *Enforcement of Statutes, Orders, Rules, and Regulations*, 130 FERC ¶ 61,220, at P 6 (2010) ("Congress instructs that we must specifically consider the seriousness of the violation and the efforts a company takes to remedy it. As we will discuss more fully below, these two factors have been at the forefront of our penalty determinations since EPAct 2005 and will continue to be significant factors under the Penalty Guidelines that we announce here.").

[153] *See Enforcement of Statutes, Orders, Rules, and Regulations*, 130 FERC ¶ 61,220 at P 56 (accounting for timing and fact that "[n]o one was injured as a result of the loss of load" in penalty analysis).

impacted at least 58 percent of PacifiCorp's BES transmission lines.[154] Clearance violations on at least 45 percent of those lines were so severe that, under PacifiCorp's FRM, lines should have been rated at zero-amperes.[155] Because of the number and magnitude of clearance violations across PacifiCorp's system, the risk of large scale outages and potential load loss increased. For example, the likelihood of a flashover and fault (as occurred in the Wood Hollow fire), increases with more clearance problems and with the severity of such problems. Increased flashovers and faults lead to a greater risk of cascading outages.

Staff's finding of moderate risk of extreme harm is supported by statements from PacifiCorp witnesses and NERC documents. PacifiCorp's CEO, for example, acknowledged in an email message that "PacifiCorp did not actively address existing clearance issues . . . which introduced risk into the business. Corrections identified were not acted on and completed in a timely manner. As a result, a significant fire occurred in an area where mitigation plans had not been executed."[156] In addition, Linden testified that a zero-ampere rated line should not be used for carrying load: "you can't put any current through it. . . ."**[157]** He also testified that it is inappropriate to use an old, published transmission line facility rating for a line that should be rated at zero-amperes due to a clearance issue.**[158]** In fact, he testified that he had never seen a line with a zero rating and if such a rating came across his desk, he "would recommend to turn it off."**[159]** Similarly, in response to a question regarding how to handle a line that has discrepancies and the rating becomes zero, PacifiCorp knew that NERC had stated, "The scenario you describe

[154] PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 7 (identifying clearance issues on 215 out of 367 BES transmission lines).

[155] PacifiCorp Supplemental Response to Data Request No. 43, May 19, 2017, at 6 and Spreadsheet E (identifying clearance issues with a zero-ampere rating on 169 out of 367 BES transmission lines).

[156] December 31, 2012 email from Greg Abel, the Chairman and CEO of PacifiCorp and Chairman, CEO and President of Mid-American Holding Company, to "Employees," P-20131125-0030004-0008.

[157] Linden Testimony at 157:22-158:1, 158:3-8.

[158] Linden Testimony at 157:5-11, 22-25; 158:1; 162:15-25.

[159] Linden Testimony at 170:2-25; 172:15-25; 173:8-16; 173:21-176:1.

sounds too extreme. Please contact your Regional Entity for assistance with any further questions."[160]

Staff also is not persuaded by the affidavits of PacifiCorp's industry witnesses. For example, Ms. VanZandt opines that PacifiCorp's clearance issues posed less risk because a majority of the issues existed in the eastern portion of the Western Interconnection on lower voltage facilities and on paths with lower transfer ratings.[161] This focus on the geographic concentration of the violations far from eliminates the possibility of extreme harm for several reasons. First, while the majority of the issues existed in the eastern portion of the Western Interconnection where the PacifiCorp East service area is located, it is also where PacifiCorp serves the majority of its customers and the only place where it serves a major metropolitan area in its footprint.[162] While the majority of the clearance issues existed in the eastern portion of the Western Interconnection, we do not agree with the claim that most of them existed on "lower voltage lines." Ms. Van Zandt assumes that the only high voltage lines are 345 kV and above. In general, lines above 200 kV are considered important lines such that they warrant special consideration. If PacifiCorp's 230 kV lines are considered higher voltage lines, then the majority of the lines in PacifiCorp's eastern service territory (Rocky Mountain Power) with clearance issues are higher voltage lines (with 821 issues having been found on PacifiCorp's 115 kV, 138 kV, and 161 kV lines (28%) and 2,147 issues having been found on its 230 kV and 345 kV lines (72%)).

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[160] FAC Assessment Plan Review Participant Questionnaire May 2011, P-20130925-0003285-3289.

[161] 1b.19 Response at 52 (citing Van Zandt Aff. PP 53-55).

[162] PacifiCorp identified 2,968 clearance issues in its eastern portion of the western Interconnection, as opposed to 726 clearance issues in its western portion from January 1, 2011 to May 19, 2017 (these numbers do not include issues identified and mitigated as part of the Aerial Survey Project). PacifiCorp data from the eastern and western portions of its system indicate 1,100,000 customers are currently served in the eastern region (parts of Utah, Wyoming and Idaho) and 773,000 customers are currently served in the western region (parts of Oregon, Washington, and California). *See* Rocky Mountain Power, https://www.rockymountainpower.net/about.html; Pacific Power, https://www.pacificpower.net/about.html. Of the top 50 most populous metropolitan regions in the United States, PacifiCorp serves two - Salt Lake City, Utah in its eastern territory and Portland, Oregon in its western territory. While the latter has a higher population, PacifiCorp only serves the Northeast portion of the city - approximately 21% of the population.

We also disagree with the assertion that the severity of the situation is reduced because the identified clearance issues existed on paths with lower transfer ratings. While Ms. VanZandt's affidavit indicates few large transfer paths in the eastern portion of PacifiCorp's system where the majority of the clearance issues were identified, she overlooks the fact that these clearance issues were concentrated around the most densely populated portion of PacifiCorp's service area - Salt Lake City.

The high concentration of affected facilities in the PacifiCorp East service area would have made an event in that area both more probable and more serious. By increasing the number of clearance issues in a geographic area, there is increased probability that one will cause a flashover and fault and cause an event. Similarly, increasing the number of issues in a geographic area increases the potential for a serious event, since there is an increased likelihood that an initial flashover and fault could cause system conditions to change, increasing loading and sagging on additional lines which could induce a flashover and fault additional lines. Were such an event to occur, it is unclear whether any installed safety net or remedial action schemes (RAS) would operate correctly to mitigate the spread of an outage since they likely were designed based on ratings developed from the P&Ps which would not have been consistent with the actual, zero-ampere ratings. An incorrect operation of a RAS under such conditions would put the system into an unstudied state and could turn an otherwise localized outage into a region-wide event.

Similarly unpersuasive is Ms. VanZandt's view that a "zero-ampere condition does not pose a risk of harm that is different in nature from a non-zero-ampere condition."[163] Staff recognizes the physical properties by which a flashover and fault occur between a line and nearby object is the same whether the clearance has been so reduced that the line cannot safely carry electrical current (a zero-ampere clearance condition) or whether the clearance is ample enough to allow it to carry some amount of current (a non-zero-ampere clearance condition). However, the likelihood of a flashover and fault occurring increases with an increase in the severity of such issues (i.e., the reduction in their respective clearances), since those lines with reduced clearances require less aberrant conditions to cause a fault and flashover.[164] The increased risk of a flashover and fault leads to greater risk of line outages. As the risk of line outages

[163] 1b.19 Response at 55.

[164] The closer two electrical conductors with a voltage between them get, the greater the electric field concentration and the less insulation between them. Should an aberrant condition occur (*e.g.*, a lightning strike), there is a greater chance for the electric field intensity to overcome the insulating properties and cause a flashover.

increases, so does the risk of multiple, simultaneous line outages, and in the extreme case, this could lead to cascading outages.[165]

Staff also is not persuaded by PacifiCorp's arguments that the number of clearance issues[166] coupled with the lack of major events nationwide and lack of load loss on PacifiCorp's BES weigh against Staff's extreme harm finding.[167] The lack of major nationwide events (or any events) or load loss does not indicate that there was not *a risk of* extreme harm. Indeed, if entities could argue that the lack of an occurrence of an event shielded them from a finding that their actions created a risk of harm (however categorized), the Commission's goal of preventing incidents (such as blackouts) versus only investigating them after the fact would be nullified. PacifiCorp similarly misses the mark by focusing on the "Medium" Violation Risk Factor (VRF) for FAC-009-1 R1 violations. VRFs apply to a single instance of a Reliability Standard violation; here, there were 3,694. Furthermore, VRFs cannot be considered in a vacuum when assessing risk from violations. As the Commission has cautioned, "VRFs apply to particular Reliability Standard requirements uniformly, without regard to individual facts and circumstances. Thus, they do not necessarily account for the *actual* risk or harm resulting from a specific violation of a Reliability Standard."[168] It is the consideration of the individual facts and circumstances surrounding PacifiCorp's violations that dictate Staff's risk analysis.

Lastly, staff is unpersuaded by PacifiCorp's argument that NERC's issuance of an alert with a four-year mitigation period should reflect a lower level of harm.[169] First, the

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[165] The more line outages occur, the greater the burden on the remaining lines on the system, as system load is distributed over fewer and fewer lines. As the number of line outages increases to the point that the remaining lines on the system are inadequate for serving all of the system load, lines will overload to the point where they will begin to be taken out of service automatically by the system's protection devices due to overloading, leading to uncontrolled load shed. This is known as a cascading outage.

[166] PacifiCorp notes that during the period of responding to the NERC Alert, industry identified over 59,000 clearance discrepancies that transmission owners mitigated by derating facilities or restoring appropriate clearances. PF Response at 1.

[167] 1b.19 Response at 59.

[168] *North American Electric Reliability Corp*, 139 FERC ¶ 61,248 at P 20.

[169] The next level of alert NERC could have issued is an Essential Action – "specific actions that NERC has determined are essential for certain segments of owners, operators, or users of the Bulk Power System to take to ensure the reliability of the Bulk Power System. Such Essential Actions require NERC Board approval before issuance." North America Reliability Corporation (NERC), *Rules of Procedure*,

NERC Alert required high risk lines to be mitigated first, illustrating the increased risk those lines presented to the BES.[170] Second, while the NERC Alert was issued to address an industry-wide problem, it was focused on unknown discrepancies between how facilities were designed and how they were actually constructed. Here, PacifiCorp created its own issues by operating lines above the temperatures they were designed for and without timely identifying and remediating the issues when it discovered such problems. Third, NERC had no reason to suspect that a single entity had such widespread violations. Accordingly, there was no reason to issue a higher-level alert or shorten the mitigation period.

C. PacifiCorp Fails to Sufficiently Rebut Staff's Proposed Penalty

In challenging Staff's proposed penalty, PacifiCorp raises several objections to Staff's penalty analysis and contests the Commission's authority to consider the Wood Hollow fire in its penalty determination.

First, PacifiCorp argues that Staff's proposed penalty is inconsistent with other reliability penalties.[171] Staff bases the proposed penalty on the unique set of facts and circumstances surrounding PacifiCorp's violations: (1) had longstanding knowledge of significant clearance issues; (2) made very limited efforts until the NERC Alert to further identify or remediate those clearance issues; (3) ignored a known clearance problem reported by field crews; (4) had field inspection programs that were flawed by senior management's own estimation; (5) failed to inform NERC of its zero-ampere re-rated lines; and (6) caused a fire resulting in the death of a person, wildlife, and livestock, and significant destruction of property.[172]

Second, PacifiCorp suggests that significant penalties should be imposed only where there is significant loss of load. Because there was no significant loss of load related to the Wood Hollow fire or PacifiCorp's clearance violations, PacifiCorp claims

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http://www.nerc.com/filingsorders/us/ruleofproceduredl/nerc_rop_effective_20161031.pdf (last visited March 5, 2021).

[170] NERC Alert at 2.

[171] 1b.19 Response at 63-64.

[172] Moreover, PacifiCorp's penalty is approximately quadrupled because of culpability factors completely within its control. Had PacifiCorp had a more robust compliance program, it might have avoided an increased penalty based on culpability factors for prior violations, senior management involvement in the violations, an inadequate compliance program, failure to properly self-report, and lack of cooperation during the investigation.

there can be no significant penalty.[173] While loss of load is a relevant factor in the penalty context, it is not the only factor in the Commission's penalty assessments.[174] As set forth below, Staff's proposed penalty is based on numerous factors, including that PacifiCorp (1) had clearance violations on over 58 percent of its BES lines; (2) could not safely energize over 45 percent of its BES lines due to zero-ampere ratings resulting from clearance violations; (3) exhibited a lack of urgency or concern in its plans to identify and remediate what it knew to be severe clearance issues on its BES; and (4) created a risk of extreme harm, an example of which was the Wood Hollow fire.

Third, PacifiCorp takes issue with Staff's finding that high-level personnel at PacifiCorp were involved in the alleged violations.[175] Senior PacifiCorp officials were made aware of the clearance issues both before and after the NERC Alert, and they continually disregarded concerns raised by Engineering.[176] In addition, the company's 2011 self-report to WECC reported potential clearance issues which "may not ultimately be found to be a violation of FAC-009," even though PacifiCorp knew at that time that it had actual clearance issues and that, in many instances, the clearance issues resulted in zero-ampere re-ratings.[177] That self-report was authored by the then Vice President and General Counsel of Pacific Power, who was also the head of the PacifiCorp Corporate Compliance office and a member of the PacifiCorp Board of Directors from at least 2010 through 2015.

Fourth, PacifiCorp argues that Staff fails to give it credit for its efforts to remedy the alleged violations.[178] Staff's consideration of PacifiCorp's efforts to remedy is grounded in its factual findings. Specifically, Staff found that PacifiCorp had longstanding knowledge of clearance issues; took limited efforts until the NERC Alert to further identify and remediate clearance issues; ignored a known clearance problem reported by field crews; relied on a flawed field inspection program; and failed to inform

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[173] PF Response at 28; 1b.19 Response at 63.

[174] *See North American Electric Reliability Corp*, 139 FERC ¶ 61,248 at P 17 (explaining that "the Commission must be able to consider the outcomes of a violation—including, when present, losses of load *or harm to customers*, as well as the reasons for the violation *and any other factors relevant to its seriousness*" (emphasis added)).

[175] 1b.19 Response at 64-65.

[176] *See supra* Section III.

[177] Self-Report form submitted by PacifiCorp for November 8, 2011 violation relating to FAC-009-1 at P-20131227-0042586.

[178] 1b.19 Response at 65.

NERC of lines at ratings that exceeded (and, in some instances, greatly exceeded) those determined by its FRM (including zero-ampere re-rated lines).[179] PacifiCorp did not timely act to identify and remediate clearance issues when first discovered, nor did it act upon Engineering's recommendations to verify clearance calculations with LiDAR studies of PacifiCorp's entire BES or even a 2,400-mile subset of the lines. Instead, PacifiCorp delayed funding of even its 1,200-mile LiDAR study until 2009 and did not decide to fully investigate its system until the NERC Alert.[180]

Finally, PacifiCorp argues that the Commission cannot consider the Wood Hollow fire as part of any penalty assessment because, PacifiCorp alleges, the Commission lacks jurisdiction over safety of electric facilities under FPA section 215(i) and because the DOJ Settlement precludes the Commission from considering the fire.[181] This argument lacks merit and misapprehends Staff's investigation and basis for the proposed penalty. While Staff began this investigation after learning of the Wood Hollow fire, the investigation focused on potential violations of Commission-approved Reliability Standards. Staff finds that PacifiCorp violated a Reliability Standard, not safety standards. Such a violation is squarely within the Commission's jurisdiction. As part of its findings, Staff considered the significant harm caused by PacifiCorp's violation, including the loss of human and animal life and widespread property damage, to ensure that any penalty imposed bears "a reasonable relation to the seriousness of the violation" as FPA section 215(e)(6)[182] requires.[183]

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[179] *See supra* Section III.

[180] Although not required, the use of LiDAR would have helped PacifiCorp's remediation efforts. *See supra* note 18.

[181] PF Response at 31-32; 1b.19 Response at 65-67.

[182] 16 U.S.C. §824o(e)(6).

[183] *See North American Electric Reliability Corp*, 139 FERC ¶ 61,248 at P 17 (interpreting "seriousness," and explaining that "the Commission must be able to consider the outcomes of a violation—including, when present, losses of load *or harm to customers*, as well as the reasons for the violation *and any other factors relevant to its seriousness*" (emphasis added)); *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, 114 FERC ¶ 61,104 at P 551 ("While the actual or potential effect of a violation is certainly one consideration in determining the seriousness of the violation, it is not the only consideration."); *Enforcement of Statutes, Orders, Rules, and Regulations*, 132 FERC ¶ 61,216 at P 76 ("We have interpreted this [section 215(e)(6)] obligation as requiring us to consider any actual harm as well as the risk to reliability posed by a violation of a Reliability Standard." (citing *Rules*

Because Staff's investigation and proposed penalty are based on violations of Reliability Standards and not the Wood Hollow fire, the DOJ Settlement also does not preclude the Commission from considering the fire. The DOJ Settlement released RMP from claims brought by the United States or Utah "relating to or arising from the [Wood Hollow] Fire" or "Covered Conduct," which the DOJ Settlement defines as RMP's "actions and/or omissions, including its ownership, planning, operation, and maintenance of these electrical facilities [identified in the agreement as the power lines involved in the fire], to the extent such actions and/or omissions caused or contributed to the Wood Hollow Fire."[184] As stated above, Staff is not pursuing a penalty against PacifiCorp in connection with or as a result of the Wood Hollow fire or "Covered Conduct," as that term is defined in the agreement. Rather, Staff recommends assessment of a penalty based on PacifiCorp's violations of Reliability Standard FAC-009-1 R1. While Staff considers the fire as one factor related to the *seriousness* of PacifiCorp's violations, the violations alone—with their broad scope across a majority of PacifiCorp's BES transmission lines—justify Staff's recommendation.

Thus, there is no basis in law or fact for the argument that the Commission should ignore the Wood Hollow fire—one of the outcomes of PacifiCorp's violations—as part of its penalty determination.[185] In any event, staff's penalty recommendation would be the same irrespective of the fire in light of the risk posed by the violations.

Concerning Certification of the Electric Reliability Organization; and Procedures for Establishment, Approval and Enforcement of Electric Reliability Standards, Order No. 672, 123 FERC ¶ 61,046, at P 11 (2008)).

[184] October 6, 2015 Settlement Agreement and Mutual Release at 2-3.

[185] As relevant to whether the Commission can consider the Wood Hollow fire, PacifiCorp also avers that no one can prove what caused the fire. PF Response at 31; 1b.19 Response at 65. This argument is inconsistent with the facts. The Utah State Deputy Fire Marshal's Report concludes that an inadequate clearance caused the fire. And, three other fire investigators—including two from federal agencies—agree with him. *See* Report of Lyn Christensen, USDA Forest Service, Wildfire Origin and Cause Supplemental Incident Report, P-20130925-0001040-1044; Report of Nick Howell, Bureau of Land Management, Wildland Fire Investigation Origin & Cause, P-20130925-0001045-1050; Report of Brett Ostler, Juab County Fire Warden, Final Investigation Summary at P- 20130925-1037. Moreover, communications among PacifiCorp employees occurring around the time of the fire suggest those employees believe a clearance issue caused the fire. *See supra* Section III.E. Finally, the 2012 year-end report by Abel, Chairman and CEO of PacifiCorp and Chairman, CEO and President of MEHC, demonstrates that he believed a clearance issue caused the fire. *See* December

VI. Recommended Civil Penalty

Staff's civil penalty recommendation is well within the Commission's statutory authority to impose penalties of up to $1,291,894 per day per violation.[186] As Congress indicated, the amount of a civil penalty for reliability violations must bear a "reasonable relation to the seriousness of the violation" and shall "take into consideration the efforts of such person to remedy the violation in a timely manner."[187] PacifiCorp's violations were serious. As described above, clearance violations impacted a majority of the company's BES transmission lines and the violations on at least 45 percent of the lines were so severe that, under PacifiCorp's FRM, the transmission lines should have been rated at zero-amperes. This means the lines were not safe to energize. In addition, PacifiCorp failed to take prompt actions to remedy its violations. Despite the fact that since at least 2007, PacifiCorp's management and employees knew of clearance issues on these lines, PacifiCorp continued to energize the vast majority of them at their published incorrect ratings without making timely efforts to identify and remediate them and

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31, 2012 email from Greg Abel, the Chairman and CEO of PacifiCorp and Chairman, CEO and President of Mid-American Holding Company, to "Employees," P-20131125-0030004-0008 (Describing as one of 2012's "greatest disappointments" that "PacifiCorp did not actively address existing clearance issues and did not move aggressively enough to manage vegetation programs, which introduced risk into the business. Corrections identified were not acted on and completed in a timely manner. As a result, a significant fire occurred in an area where mitigation plans had not been executed.").

[186] 16 U.S.C. § 825*o*-1(b); *Civil Monetary Penalty Inflation Adjustments*, 170 FERC ¶ 61,001 (2020) (adjusting penalty authority for inflation). In Order No. 672, the Commission confirmed that this statutory penalty authority applies to violations of the Reliability Standards. *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, 114 FERC ¶ 61,104 at P 575 ("The Commission confirms its interpretation that section 316A of the FPA establishes a limit on a monetary penalty for a violation of a Reliability Standard that may be imposed by the Commission, the ERO, or a Regional Entity pursuant to FPA section 215."). The increased amount is applied at the time that the penalty is assessed regardless of when the conduct took place. *See* Federal Civil Penalties Inflation Adjustment Act of 1990, Pub. L. No. 101-410, § 6 (codified at 28 U.S.C. § 2461 note) ("Any increase under this Act in a civil monetary penalty shall apply only to civil monetary penalties, including those whose associated violation predated such increase, which are assessed after the date the increase takes effect.").

[187] 16 U.S.C. § 824o(e)(6).

without heeding recommendations of Engineering. The Huntington-Mona 345 kV line involved in the Wood Hollow fire is just one example of PacifiCorp's violations.

To determine an appropriate penalty amount within the statutory maximum, the Commission utilizes its Penalty Guidelines. Based on application of the Penalty Guidelines, as set forth below, Staff recommends a penalty of $42 million against PacifiCorp.

In determining the recommended penalty under Part C of the Penalty Guidelines, Staff first used the applicable Chapter Two guidelines to determine the Base Violation Level and then applied, in the order listed, those appropriate adjustments contained in that guideline.[188] PacifiCorp's violations fall under Penalty Guidelines section 2A1.1 of Chapter Two, which applies to violations of Commission-approved Reliability Standards. This section provides for a Base Violation Level of 6.[189] Based on the specific violation characteristics, additional levels are added to this base level.[190] Here, Staff added 24 levels based on its finding that PacifiCorp's violations created a moderate risk of extreme harm.[191] Among the factors Staff considered in reaching this finding are that PacifiCorp (1) had clearance violations on over 58 percent of its BES lines; (2) could not safely energize over 45 percent of its BES lines due to zero-ampere ratings resulting from clearance violations, but without electing to consult WECC or NERC, PacifiCorp knowingly kept these lines energized contrary to NERC guidance and what some of its employees would have recommended; (3) continued knowingly to use over-rated lines and to publish those incorrect ratings; (4) exhibited a lack of urgency or concern in its plans to identify and remediate what it knew to be severe clearance issues on its BES; and (5) continued to use what should have been zero-ampere rated lines, creating a risk of extreme harm, an example of which was the Wood Hollow fire, which resulted in the death of James Martin, killed and displaced wildlife and livestock, burned over 47,000 acres, and destroyed more than 50 residences or cabins and more than 100 outbuildings. Combining the 6-level Base Violation Level with the 24-level Risk of Loss adjustment creates a total Violation Level of 30.

Staff then considered the Base Penalty, which is the greatest of either (1) the amount from the Violation Level Penalty Table in section 1C2.2(b) corresponding to the Violation Level determined under step one, above; (2) the pecuniary gain to the

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[188] FERC Penalty Guidelines § 1C2.1 (Violation Level).

[189] FERC Penalty Guidelines § 2A1.1(a).

[190] FERC Penalty Guidelines § 2A1.1(b)(1)-(2).

[191] FERC Penalty Guidelines § 2A1.1(b)(1)(G) (Risk of Loss adjustment).

organization from the violation; or (3) the pecuniary loss from the violation caused by the organization.[192] Here, the Violation Level of 30 corresponds with a $10,500,000 amount from the Violation Level Penalty Table, which staff applied as the Base Penalty.[193]

Staff then considered PacifiCorp's level of culpability by applying a base culpability score and then adjusting the base by six separate culpability factors to generate a Culpability Score.[194] That Culpability Score was then used to determine which multipliers to apply to PacifiCorp's Base Penalty in order to calculate a civil penalty range.[195] Staff's analysis of PacifiCorp's Culpability Score follows:

- Base Culpability Score (§ 1C2.3(a)): **5**

- Involvement in or Tolerance of Violations (§ 1C2.3(b)): Staff found that senior level personnel condoned and/or were willfully ignorant of PacifiCorp's violations. For example, senior PacifiCorp officials were made aware of the clearance issues both before and after the NERC Alert, but failed to timely approve the identification and remediation of those issues. *See supra* Section III. Given the size of PacifiCorp, this factor results in an increase of **5**.[196]

- Prior History (§ 1C2.3(c)): PacifiCorp has had prior adjudications as defined in the Penalty Guidelines.[197] This factor results in an increase of **2**.

[192] FERC Penalty Guidelines § 1C2.2 (Base Penalty).

[193] FERC Penalty Guidelines § 1C2.2(b).

[194] FERC Penalty Guidelines § 1C2.3(a)-(g).

[195] FERC Penalty Guidelines § 1C2.4 (Minimum and Maximum Multipliers); § 1C2.5(a) and (b) (Guideline Penalty Range).

[196] The Commission cannot impose penalties against individuals for violating the Reliability Standards because they are not "users, owners, and operators of the Bulk Power System" under section 201(f) of the FPA.

[197] *See PacifiCorp*, 137 FERC ¶ 61,176 (2011) ($3.925 million penalty for violation of NERC Reliability Standards); *In re PacifiCorp*, 118 FERC ¶ 61,026 (2007) ($10 million penalty concerning OATT and standards of conduct violations allegations). *See also* Docket No. NP14-3-000 (filed October 30, 2013) (WECC imposed a

- Effective Compliance Program (§ 1C2.3(f)): While PacifiCorp had a compliance program, Staff recommends no compliance credit be awarded in part based on its findings that senior level personnel had involvement in the violations, PacifiCorp unreasonably delayed fully reporting the clearance issues, and PacifiCorp failed to timely identify and remediate the clearance issues.

- Self-Reporting, Cooperation, Avoidance of Trial-Type Hearing, and Acceptance of Responsibility (§ 1C2.3(g)): PacifiCorp did not self-report its potential violations, cooperate fully with Staff's investigation, avoid a trial-type hearing, or accept responsibility for its violations. Regarding cooperation, many of PacifiCorp's document productions were not timely and lacked quality control, resulting, for example, in productions of voluminous extraneous material.

- Regarding self-reporting, PacifiCorp does not receive credit for self-reporting its potential violations to WECC because it withheld crucial clearance information from WECC. PacifiCorp should not be given the benefit of a decision made by WECC based on PacifiCorp's omissions. PacifiCorp's self-reports to WECC never reported clearance problems. For example, the 2011 self-report made reference to potential clearance discrepancies which "may not ultimately be found to be a violation of FAC-009," even though PacifiCorp knew at that time that it had actual clearance issues and, in many instances, the clearance issues resulted in zero-ampere re-ratings.[198]

- Total Culpability Score: 12. A Culpability Score of 12 corresponds with a multiplier range of 2.0 to 4.0.[199]

Finally, applying these multipliers to the Base Penalty of $10,500,000 produces a civil penalty range of $21,000,000 to $42,000,000 under the Penalty Guidelines. Staff recommends that the Commission assess a civil penalty against PacifiCorp on the high

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$92,000 penalty on PacifiCorp for violating FAC-009-1 R1 beginning June 18, 2007 in response to an October 4, 2012 self-report, and another Standard violation).

[198] *See* Self-Report form submitted by PacifiCorp for November 8, 2011 violation relating to FAC-009-1 at P-20131227-0042586.

[199] FERC Penalty Guidelines § 1C2.4.

end of this range at $42,000,000, consistent with the application of the Penalty Guidelines.

VII. Conclusion

For the reasons discussed above, Staff recommends that the Commission direct PacifiCorp to show cause why it has not violated FPA section 215(b)(1)[200] and section 39.2(b) of the Commission's regulations[201] by failing to comply with Reliability Standard FAC-009-1, R1 between August 31, 2009, when FAC-009-1 R1 became enforceable, and August 2017, when PacifiCorp completed remediation of all of its incorrect clearances to make them consistent with its FRM. Staff further recommends the Commission direct PacifiCorp to show cause why it should not pay a penalty of $42 million, consistent with the Penalty Guidelines.

[200] 16 U.S.C. § 824o(b)(1) ("All users, owners and operators of the bulk-power system shall comply with reliability standards . . . .").

[201] 18 C.F.R. § 39.2(b) (all users, owners, and operators of the bulk-power system "shall comply with applicable Reliability Standards . . . made effective under this part").

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp Docket No. IN21-6-000

(Issued April 15, 2021)

CHATTERJEE, Commissioner, *concurring*:

1. I join the majority in directing PacifiCorp to show cause as to why it should not be found to have violated applicable Reliability Standards as detailed in the order. While I fully support this further inquiry, I write separately to urge the Commission to carefully consider in any future order in this proceeding whether the recommended $42 million civil penalty is appropriate in light of the facts and circumstances presented.

2. To date, the highest civil penalty assessed by the Commission for alleged Reliability Standard violations is $25 million for alleged violations of *seven groups* of Reliability Standards associated with "an event that led to the loss of 22 transmission lines, 4,300 MW of generation, and 3,650 MW of customer service or load."[1] By comparison, the alleged violations of a single Reliability Standard requirement[2] here resulted in "a minimal loss of load to customers served by a local distribution line" and "no loss of BES transmission load."[3]

3. It is difficult to understand how the alleged violations here are substantially more serious than those that warranted the $25 million civil penalty discussed above. The arguments in support of the recommended civil penalty are confounding. The report rigorously defends the choice to consider the Wood Hollow Fire in its determination of the recommended civil penalty, but then claims that "the violations alone . . . justify [OE] Staff's [civil penalty] recommendation" and that its "penalty recommendation would be the same irrespective of the [Wood Hollow Fire] in light of the risk posed by the

[1] *Florida Blackout*, 129 FERC ¶ 61,016, at P 5, 10-18 (2009). The $25 million civil penalty included $5 million to be spent on "reliability enhancement measures that go above and beyond . . . what the Reliability Standards require." *Id.* at 18.

[2] Reliability Standard FAC-009-1, Requirement 1 (and its successor Reliability Standard requirement) requires a transmission owner to establish facility ratings that are consistent with its Facility Ratings Methodology. *See* OE Staff Report at 1 & n.2.

[3] PacifiCorp 1b.19 Response at 7.

violations."[4] The Wood Hollow Fire cannot be both relevant and irrelevant; it is illogical to point to a devastating wildfire as support for a recommended $42 million civil penalty, only to then claim that the wildfire had no bearing on the recommended penalty.[5] The Commission can and must be more transparent.

4. Fairness also requires the Commission to consider the fact that, as of August 2016, PacifiCorp had spent in excess of $127 million to conduct LiDAR surveys of its entire transmission system and to remediate all of the identified clearance conditions identified.[6] PacifiCorp made these substantial expenditures in the wake of the events at issue here;[7] these efforts directly relate to the alleged Reliability Standard violations and improve the reliability of the Bulk-Power System. The Commission's penalty calculations should take into consideration such expenditures, which directly benefit PacifiCorp's consumers.

5. I do not discount the seriousness and pervasiveness of the alleged violations at issue here. Rather, because the stakes are so high, if the Commission ultimately determines that Reliability Standard violations occurred, the Commission must strive to get it right and assess a penalty amount that transparently reflects the complex considerations at play in this case.

For these reasons, I respectfully concur.

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Neil Chatterjee
Commissioner

[4] OE Staff Report at 46-47. At the same time, the report states that it "considers the fire as one factor related to the *seriousness* of PacifiCorp's violations." *Id.* at 54.

[5] It is more appropriate to consider damages arising from wildfires in venues where the wildfire victims can receive compensation. I urge the Commission to consider that PacifiCorp has "resolved all [of the hundreds of] claims associated with the Wood Hollow fire." PacifiCorp 1b.19 Response at 22.

[6] *Id.* at 12 & n.44.

[7] These expenditures substantially exceed the $56.5 million expected cost of PacifiCorp's remediation plan. *Id.* at 16.