

March 31, 2022

VIA OEIS E-FILING

Office of Energy Infrastructure Safety
715 P Street, 20th Floor
Sacramento, CA 95814
efiling@energysafety.ca.gov

RE: PacifiCorp 2021 Wildfire Mitigation Plan Update – Annual Compliance Plan

Dear Director Jacobs:

PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) provides the attached 2021 Annual Compliance Plan pursuant to Public Utilities Code § 8386.3(c)(1), addressing the Company's compliance with its WMP over the prior compliance period (Calendar year 2021).

If you have any questions regarding this request, please contact Pooja Kishore, Regulatory Affairs Manager at (503) 813-7314.

Sincerely,



Shelley McCoy
Director, Regulation

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**ANNUAL REPORT ON COMPLIANCE
SUBMITTED BY PACIFICORP (U 901 E)
REGARDING COMPLIANCE WITH ITS 2021 WILDFIRE MITIGATION PLAN**

Pursuant to the California Public Utilities Code Section 8386.3(c)(1), PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) provides this Annual Report on Compliance (ARC) addressing implementation of PacifiCorp's 2020-2022 Wildfire Mitigation Plan (WMP). PacifiCorp's 2020-2022 WMP and subsequent 2021 WMP Update were conditionally approved by the California Public Utilities Commission (Commission) on June 11, 2020, and June 15, 2021, respectively.

BACKGROUND

During the calendar year of 2021, the company worked diligently to implement the measures set forth in the 2021 WMP Update and to address the conditions set forth in Resolutions WSD-011 (general conditions for all IOUs) and WSD-017 (conditions specific to PacifiCorp). The Company previously reported detailed 2021 WMP progress in quarterly submissions to the Office of Energy Safety (Energy Safety) throughout 2021 and early 2022. These include PacifiCorp's four 2021 Quarterly reports submitted May 1, 2021, August 1, 2021, November 1, 2021, and February 1, 2022, PacifiCorp's Fourth Quarterly Report Update, submitted March 18, 2022, and the 2021 PacifiCorp Progress Report, submitted on November 1, 2021. As detailed in the Company's 2021 Change Order Report, submitted November 1, 2021, the Company has worked to incorporate valuable feedback from stakeholders and staff to make significant progress in many key areas.

In the ARC previously submitted in 2021 for the 2020 compliance year, PacifiCorp included a progress update and identified key accomplishments achieved in 2020. To ensure consistency moving forward, specific requirements for the ARC were set forth in the letter dated

February 16, 2021, from the Wildfire Safety Division (WSD) regarding Compliance Operational Protocols. These protocols require that the electric corporations (EC) include a written narrative in ARC submissions addressing the following five key components:

- a. An assessment of whether the EC met the risk reduction intent by implementing all of their approved WMP initiatives. i.e., the degrees to which initiative activities have reduced ignition probabilities;*
- b. A full and complete listing of all change orders and any other operational changes, such as initiative location changes, made to WMP initiatives, with an explanation of why the changes were necessary, and an assessment of whether the changes achieved the same risk reduction intent;*
- c. Descriptions of all planned WMP initiative spend vs actual WMP initiative spend an explanation of any differentials between planned and actual spends;*
- d. A description of whether the implementation of WMP initiatives changes the threshold(s) for triggering a PSPS event and/or reduced the frequency, scale, and scope and duration of PSPS events; and*
- e. A summary of all defects identified by the WSD within the annual compliance period, the correction actions taken, and the completion and/or estimated completion date.*

This report addresses each of the five components in a distinct subsection, for the reporting period of January 1, 2021, through December 31, 2021.

A. An assessment of whether the EC met the risk reduction intent by implementing all of their approved WMP initiatives. i.e., the degrees to which initiative activities have reduced ignition probabilities.

PacifiCorp's risk model assigns a composite wildfire risk score based on outage data, vegetation data and historical climatological data for sections of the electric grid which can be isolated by protective devices. The model produces a composite score which can be used for the prioritization of existing grid hardening initiatives. This helps reduce the impacts of Public Safety Power Shut-offs (PSPS), because it helps PacifiCorp focus on the specific sections of circuits which should be hardened first due to elevated risk and heightened probability of PSPS events.

At the urging of the Commission, PacifiCorp has spent a significant amount of time and resources in 2021 learning from what other utilities are developing, as to better align risk modeling for initiative evaluation. This learning has taken place both informally, through workshops and consortiums, and more formally, as part of both the OEIS-guided joint utility risk modeling working group and the Joint Utility Covered Conductor Effectiveness Workstream initiated in 2021. As PacifiCorp continues to utilize its modeling tool, it expects to improve and periodically update the model inputs and methodology consistent with this collaborative effort.

PacifiCorp believes that wildfire risk reduction is achieved through cumulative implementation of all WMP initiatives. Along those lines, it is extremely difficult to assign quantitative risk reduction values to one individual initiative or initiatives implemented at a certain location. For example, asset inspections help identify and accelerate Condition corrections and prevent equipment-related risk events, while implementation of covered conductor reduces the risk of incident contact. At the same time, upgrades to relays and reclosers connected to the same equipment facilitates the use of advanced protection and control settings to isolate and ensure rapid fault response. These initiatives all work together to reduce wildfire

risk. Even when viewed together, there are challenges in quantifying risk reduction for a set of initiatives. Timing is an issue. While certain, short-term initiatives, such as asset inspections, have been implemented throughout the high fire threat district (HFTD), certain components of the long-term grid hardening plans have yet to be completed. Additionally, planned work often occurs on different segments of a single circuit with different completion dates. As of January 1, 2022, there were no full circuits where all initiatives have been completed. Therefore, it is challenging to quantitatively determine the effectiveness of the initiatives implemented to date.

Additionally, the methodology for assessing quantitative risk reduction remains under development. As an example, the Joint Utility Covered Conductor Effectiveness Workstream identified that limited data is available today to empirically evaluate the effectiveness of covered conductor, a key initiative toward reducing risk. Most utilities are currently relying on extrapolated data sets, subject matter expertise, and general estimation. As the utilities move to refine this methodology, additional data, including potentially years of data, may be required to properly assign a quantitative value for the wildfire risk reduction achieved by implementation of WMP initiatives.

While it is challenging to quantitatively measure wildfire risk reduction achieved through the implementation of mitigation initiatives, PacifiCorp's WMP and all initiatives were developed with the objective of reducing faults, ensuring rapid fault response, facilitating situational awareness and operational readiness and considering the impact to customers and communities. Material progress was made in 2021 through implementation of WMP objectives. For example, 20 miles of covered conductor were installed.

Based on progress achieved in 2021, improvements in these areas have been realized. By progressing these initiatives, PacifiCorp has contributed to future risk reduction and met intent. Additionally, PacifiCorp plans to continue to use metrics included in the WMP to track progress and understand changes to ignition or risk drivers realized through the implementation of the Company's WMP.

B. A full and complete listing of all change orders and any other operational changes, such as initiative location changes, made to WMP initiatives, with an explanation of why the changes were necessary, and an assessment of whether the changes achieved the same risk reduction intent.

In its 2021 WMP Update - Change Order Report, filed November 1, 2021, PacifiCorp outlines eight key changes grouped by initiative category. The changes included four new programs to meet new regulatory requirements,¹ address areas for improvement identified in WSD-017 or reduce the PSPS impact to customers. PacifiCorp also augmented four existing initiatives to accelerate the reduction of risk and provide greater transparency. The below table is a full list of all the changes made to the WMP initiatives.

Initiative Name	2021 WMP Update Section	Type of Change	Objective	Justification	Impact of Change to 2020-2022
Category: Risk Assessment and Mapping Changes					
Advanced Weather Monitoring and Weather Stations	7.3.2.1	Increase in scale	Improve Situational awareness & PSPS decision making through additional data collection	This proposed change facilitates an improved, more complete initiative by allowing for the collection of more granular data. Expansion of the Company's weather station network will also improve the effectiveness of this initiative.	\$105K increase for 7 additional weather stations in 2022
Fault indicators for detecting faults on electric lines and equipment	7.3.2.3	New / Increase in scale	Improve effectiveness of fire season protection and control settings through reduction in restoration times (less impact to customers)	The proposed change includes more discrete tracking and transparency. It also includes implementation of a new, better technology to identify fault locations. This proposed change also significantly improves the effectiveness of other wildfire mitigation initiatives, namely the implementation of more sensitive protection and control settings during heightened risk. Additionally, this proposed change improves the efficiency of other initiatives by expediting patrols and restoration activities post outage, which reduces the impact to customers and communities without compromising the reduction in wildfire risk.	\$750K to install communicating fault indicators on circuits subject to sensitive protection and control settings in the HFTD
Category: Grid Design and System Hardening					
Installation of Covered Conductor	7.3.3.3 ¹	Change to timeline / Increase in cost	Shift 56 miles from 2021 into Q1/Q2 of 2022 and increased funding based on 2021 experience	The proposed change reflects actual costs and more accurate forecasted values based on the actual costs experienced to date. While the total number of miles planned for completion has not	\$44.7M increase to reflect more accurate forecasts and costs and shift 56 miles from 2021 to Q1/Q2 2022

¹ Decision 21-06-034, Adopting Phase 3 De-energization Guidelines, issued 6/29/2021.

Initiative Name	2021 WMP Update Section	Type of Change	Objective	Justification	Impact of Change to 2020-2022
				changed, the proposed change also reflects more attainable targets for completion in 2021.	
Distribution Pole Replacement and Reinforcement, including composite poles	7.3.3.6	Increase in Scale / Change to timeline	Increase scale of pole replacements coincident with covered conductor based on 2021 experience and better reflect needs	Where poles need to be replaced to accommodate the additional weight of covered conductor, replacing wooden poles with fiberglass will increase resiliency and eliminate the need to return at a later date. This approach also ensures that pole replacements are prioritized effectively. Furthermore, this proposed change will provide the additional clarity and transparency sought in WSD-017 Action Statement. This change will also be used to inform updates to the 2022 WMP Update to ensure program targets are better defined, can be achieved, and are justified as requested. PacifiCorp intends to refine and alter future program targets to ensure replacements more clearly reduce risk.	\$5M reduction / shift to the covered conductor initiative to replace an additional 2,288 wooden poles in 2021/2022
Expulsion Fuse Replacements	7.3.3.7	New / Increase in scale	Increase effectiveness and expedite delivery in response to WSD-017	<p>The change will improve the effectiveness of the initiative. As this proposed change increased the scope of fuse replacements and inclusion of other pole hardware, the mitigation tactic will be more widespread, incrementally reduce risk throughout Tier II and Tier III locations in addition to targeted PSPS zones. Additionally, this proposed change will expedite the replacements, reducing risk more quickly.</p> <p>Additionally, this proposed change will facilitate additional transparency in reporting. In 2020 and</p>	\$800K increase to accelerate, track, and replace expulsion fuses and other similar pole hardware as a separate program

Initiative Name	2021 WMP Update Section	Type of Change	Objective	Justification	Impact of Change to 2020-2022
				<p>2021, PacifiCorp tracked expulsion fuse replacements at the circuit level as part of the covered conductor initiative, demonstrated during the Independent Evaluation conducted during May and June of 2021. However, in response to this proposed change and the WSD-017 action statement, PacifiCorp is establishing a different system for tracking expulsion fuse replacements independently and at a more granular level.</p>	
<p>Mitigation of Impact on Customers and Other Residents Affected During a PSPS Event – Part A (Generator Rebate)</p>	7.3.3.11	New / Increase in scale	Reduce the potential impact of PSPS events	<p>Reducing the impact of PSPS is a significant goal of PacifiCorp’s wildfire mitigation planning. While de-energization of power lines during periods of extreme wildfire weather benefit public safety by reducing the risk of a utility-related wildfire, PacifiCorp understands that there can also be negative consequences on the community if electric power is unavailable. De-energization can impact communication systems, businesses that rely on power to serve customers, residential customers, irrigation systems, and traffic lights. This proposed change will mitigate the potential impacts to customers if a PSPS is necessary.</p>	<p>\$67K increase to facilitate new generator rebate program in the HFTD</p>

Initiative Name	2021 WMP Update Section	Type of Change	Objective	Justification	Impact of Change to 2020-2022
Mitigation of Impact on Customers and Other Residents Affected During a PSPS Event – Part B (Portable Battery)	7.3.3.11	New / Increase in scale	Meet new PSPS Phase III Requirements and reduce the potential impact of PSPS events	PSPS Phase III Guidelines, issued June 29, 2021, identified a need requirement for utilities to administer a program to support resiliency for customers that rely on electricity to maintain necessary life functions, including for durable medical equipment and assistive technology. This proposed change includes implementation of a new program designed to meet this new requirement.	\$451K increase to offer portable batteries to medically dependent customers in Tier II/III
Category: Data Governance					
Central repository for data	7.3.7.1	Increase in scale	Enhance data reporting and quality and meet GIS Data Schema Quarterly Compliance and Assurance Protocols	Based on experience gained in 2021, PacifiCorp now has a better understanding of the resources required to support this effort. Additionally, PacifiCorp now better understands the role that data plays in supporting the various initiatives included in the WMP, namely risk assessment and mapping and PSPS decision making. Location specific details regarding initiative progress can and should significantly impact how decisions are made and risk is assessed. Furthermore, the Office of Energy Safety has expressed that the data reporting requirements will continue to remain in place, with the data requirements themselves evolving, improving, and changing.	\$248K total increase to the initiative to add resources

C. Descriptions of all planned WMP initiative spend vs actual WMP initiative spend and an explanation of any differentials between planned and actual spends.

PacifiCorp’s planned 2021 and actual spend are included in the upcoming May 2022 WMP Update as Table 3.1-2 in Section 3.1. This table is reproduced below with additional information regarding the cost variation and includes any modifications or updates from the 2021 WMP Update managed through the Change Order submitted in November of 2021.

WMP Category	2021 Planned (\$k)	2021 Actual (\$k)	Variance (\$k)	Variation Explanation / Notes
Risk and Mapping	\$186	\$188	(\$2)	The summarized risk map initiative was within 1% of plan.
Situational Awareness	\$462	\$1,197	(\$735)	Personnel monitoring of electric lines and equipment in elevated fire risk conditions program tracks spend for PSPS emergency type work, however, did not planned targets at the time of the 2021 WMP Update. Spend incurred during Q3 to support PSPS event which accounts for the variance.
Grid Design and System Hardening	\$25,035	\$23,882	\$1,153	The 2021 WMP Update planned spend for covered conductor initiative was \$15M. However, as a result of increased costs, a Change Order was filed November 1, 2021, to account for a decrease in costs to \$10.5M. As a result of construction challenges, only 20 of the planned 25 miles were constructed in 2021. The overall variance for the year was 5% favorable but 5 less miles of covered conductor were completed than planned.
Asset Management and Inspections	\$848	\$919	(\$71)	PacifiCorp was able to complete 12,291 an additional transmission patrol inspections of electric lines and equipment over plan.
Vegetation Management	\$6,561	\$6,639	(\$78)	Vegetation Management to achieve clearance around electric lines and equipment costs were slightly higher than plan, 1% over plan.
Grid Operations	\$0	\$0	\$0	No incremental spend planned or tracked.
Data Governance	\$210	\$215	(\$5)	Centralized repository of data was withing 2% of plan.
Resource Allocation	\$0	\$0	\$0	No incremental spend planned or tracked.
Emergency Planning	\$0	\$0	\$0	No incremental spend planned or tracked.
Stakeholder Cooperation and Community Engagement	\$73	\$58	\$15	Some community engagement programs were not tracked through a separate spending mechanism. The plan is to correct spend accounting for all community engagement programs in 2022.
Total	\$33,375	\$33,098	\$277	

D. A description of whether the implementation of WMP initiatives changes the threshold(s) for triggering a PSPS event and/or reduced the frequency, scale, and scope and duration of PSPS events.

The prior implementation of initiatives did not have a significant impact on the Company's thresholds for triggering a PSPS event in 2021 and/or reducing the frequency, scale, scope and duration of PSPS events in 2021. Network hardening, including installation of covered conductor, is a significant factor. PacifiCorp remains committed to the continued deployment of grid hardening in targeted PSPS zones to significantly reduce the need for PSPS, as outlined in Section 8 of the Company's 2022 WMP Update to be filed in May 2022.

PacifiCorp plans to continue reviewing how the implementation of grid hardening and other mitigation initiatives will impact the PSPS decision making processes and risk assessment framework. For example, in 2022, PacifiCorp will review, among other factors, whether covered conductor has been completed on a circuit during periods of extreme risk where implementation of a PSPS may be considered. The presence of covered conductor will likely impact the PSPS decision making process qualitatively, making a PSPS event less likely to happen at the specific location where covered conductor deployment is complete. However, as the Company has yet to complete all mitigation measures for each PSPS Zone, it is less likely that WMP initiatives completed will directly impact the program overall in 2022.

E. A summary of all defects identified by the WSD within the annual compliance period, the correction actions taken, and the completion and/or estimated completion date.

From July 2020 to October 31, 2021, Energy Safety initiated its Field Inspection Program, which included conducting 43 inspections to assess PacifiCorp's implementation of and compliance with approved WMP initiatives filed in its 2021 WMP. These field inspections focused mainly on implementation of situational awareness and grid hardening initiatives such as

weather station installation, recloser installations and replacements and relay replacements. No defects were identified as part of this process.

CONCLUSION

PacifiCorp's WMP efforts continue to evolve, both through internal learning and through additional guidance received from the Commission, Energy Safety (formerly Wildfire Safety Division), stakeholders, and our customers. While the Company has made great progress in implementing the objectives of its 2021 WMP, it continues to evaluate and refine programs and measures to ensure that it is taking actions that will reduce risk without imposing unnecessary costs and burdens on customers.