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Re: CA R.18-10-007
CalAdvocates-PacifiCorp-2021WMP-02

Please find enclosed PacifiCorp's responses to CalPA data requests 2.1-2.6. Also provided are Attachments CalPA 2.2 and 2.5.

If you have any questions, please call me at (503) 813-7314.

Sincerely,

_____/s/_____
Pooja Kishore
Manager, Regulation

CalPA Data Request 2.1

PacifiCorp’s 2021 Wildfire Mitigation Plans

Provide a list of the contractors that PacifiCorp works with to conduct vegetation management. For each contractor, state whether the contractor performs pre inspection, trimming and removal, or work verification.

Response to CalPA Data Request 2.1

Please refer to the table below which provides a list of vegetation management contractors and work performed in Pacific Power’s service territory in California. ACRT conducts pre-inspection work for distribution lines, and Trees LLC conducts pre-inspection work on transmission and distribution lines. ACRT will also assist Pacific Power’s Senior Utility and Utility foresters, on an as needed basis, in conducting work verification (post work audits).

Contractor	Work Performed
ACRT	Pre-inspection, work verification
T&S Growth Solutions	Tree growth regulator
Trees LLC	Pre-inspection, trimming and removal

CalPA Data Request 2.2

PacifiCorp's 2021 Wildfire Mitigation Plans

Provide a list of all instances in which PacifiCorp's audits of vegetation management work identified missed trees¹ or other vegetation work that did not pass quality control in 2020. For each instance provide the date, location, description of the issue and solution, and name of the contractor firm.

Response to CalPA Data Request 2.2

Please refer to Attachment CalPA 2.2. The attachment includes documented exceptions (instances where work was either missed or was not conducted in accordance with Pacific Power's vegetation management standards and specifications). In 2020, the Company began to utilize a pre-inspection contractor in addition to the tree pruning contractor, who also conducted pre-inspection activities. The Company's system of record did not explicitly identify whether an exception was tied to the tree pruning contractor or pre-inspection contractor in the past as they historically were one and the same for an area. Starting in 2021, the Company modified the data collection process to include clarifying information as to whether a pre-inspection exception is attributed to the tree pruning contractor's pre-inspector or to the third-party pre-inspection contractor. The description of the issues/exceptions identified and solution is presented in column J of the attachment.

¹ Trees that should have been identified for trimming or removal but were missed by vegetation management inspectors.

CalPA Data Request 2.3

PacifiCorp's 2021 Wildfire Mitigation Plans

In its 2020 WMP, PacifiCorp forecasted that it would install 38 miles of covered conductor in 2020, and 52 miles in 2021. In its 2021 WMP, PacifiCorp stated that it installed only 1.4 miles of covered conductor in 2020 and would install 81.22 miles in 2021.

- (a) What specific factors prevented PacifiCorp from installing the forecasted amount of covered conductor in 2020?
- (b) What changes did PacifiCorp make or does PacifiCorp plan to implement to address the factors from question 3(a) above and accelerate the pace of covered conductor installation in 2021? Please be specific.
- (c) In Table 12 of its performance metrics tables, PacifiCorp uses line miles to describe the amount of covered conductor that it installed or plans to install. What definitions does PacifiCorp use for the terms "line mile" and "circuit mile"?

Response to CalPA Data Request 2.3

- (a) In 2020, PacifiCorp was not able to accomplish its covered conductor program target of 38 miles installed due to significant challenges faced while ramping up design capabilities and adapting to the unplanned pandemic. More specifically, PacifiCorp underestimated the complexity and associated resources required to design and estimate the planned work consistent with Company standards, systems, and electrical code requirements. This led to multiple design reviews and changes not originally planned and delays in project delivery.

While the full construction was not realized in 2020, significant progress was made to design, estimate, and procure materials for the approximately 38 miles planned in 2020.

- (b) PacifiCorp incorporated lessons learned in 2020 and has implemented a more streamlined process that avoids much of the design iterations and changes experienced in 2020. Additionally, PacifiCorp brought on additional contracted resources and internal staff dedicated to the engineering and estimating of its covered conductor program. Furthermore, PacifiCorp has changed the way covered conductor projects are forecasted to better optimize around preferred construction windows and avoid harsh conditions such as heavy snow and storms that can sometimes lead to unwanted construction delays.

While these changes do not necessarily help with 2020 project delays, it does position the Company to deliver greater progress in 2021, specifically the remainder of the 38

miles originally planned in 2020 that are now ready for construction as well as the addition 2021 scope for a total of approximately 81 miles.

- (c) The line miles reported in Table 12 are synonymous with the definition of “circuit miles” in the 2021 Wildfire Mitigation Plan, which is defined in the Glossary of Defined Terms as “the total length of the project in miles of separate circuits regardless of the number of conductors used per circuit.” In other words, one line mile of a three phase circuit is “one line mile” and “one circuit mile,” while one line mile of a single phase circuit is also “one line mile” and “one circuit mile.”

CalPA Data Request 2.4

PacifiCorp's 2021 Wildfire Mitigation Plans

During the March 23, 2021 technical workshop, PacifiCorp stated that the change in pole replacement/reinforcement forecasts between its 2020 WMP and its 2021 WMP was due to a change in philosophy in implementing this mitigation in higher risk areas. Please explain in detail all the factors that PacifiCorp considered in its decision to reduce the forecasted pole replacement/reinforcement workload for 2020, 2021, and 2022 and increase the forecasted workload for 2023.

Response to CalPA Data Request 2.4

Detailed information regarding the scope, evolution, and prioritization of PacifiCorp's pole replacement/reinforcement is provided in Section 7.3.3.6 of PacifiCorp's 2021 Wildfire Mitigation Plan (WMP) Update. While the full program evolution is described in this section, the major change for the 2021 WMP includes the full development and incorporation of the prioritization method planned in the 2020 WMP for how the 4,000 proposed poles would be replaced/reinforced. This methodology incorporated factors such as pole location topography, geographic wildfire tier designation, pole condition, composition, and type, age, and age diversity.

As described in Section 7.3.3.6:

This methodology was developed and applied in 2020 to all wooden poles within Tier 2 and Tier 3 to further refine the scope of this program and, as a result, identified 4,326 specific high priority poles that require mitigation to either support ingress/egress or promote faster restoration during a wildfire event. High priority poles less than the average age of all wooden poles within Tier 2 or Tier 3 in California (less than 40 years old) were selected for reinforcement or wrapping. PacifiCorp has historically had success with pole cladding, wrapping and fireproof spray coating in advance when fires have threatened its equipment. Conversely, poles with an above average age (40 years or older) were selected for accelerated replacement by the Company's preferred non-wooden solution for deployment within the HFTD, fiberglass. This approach intended to balance cost effectiveness to specifically target older poles for accelerated replacement to promote age diversity while simultaneously reducing risk of newer, younger poles. The following table describes the refined scope and update to PacifiCorp's proactive pole replacement program.

The following is a table from Section 7.3.3.6 of the 2021 WMP Update.

Table 7-1: PacifiCorp's 2021 WMP Pole Replacement/Reinforcement Refined Scope

Type of Poles	Total Poles to be Addressed by Program	Replace	Reinforce/ Wrap
Transmission (poles)	1,321	432	889
Distribution (poles)	3,005	1,632	1,373
Total (poles)	4,326	2,064	2,262

The above table reflects a refined scope of work for this program. However, prioritization is still required to execute this scope. As summarized in Section 7.3.3.6, “PacifiCorp first prioritizes pole replacement coincident to other planned programs or projects such as the installation of covered conductor to promote efficiency and fully mitigate the risk in these extreme risk locations. Beyond where coincident with other programs, PacifiCorp will seek to align prioritization of this program with the evolution of the company’s risk model to identify where pole replacement should take place as a stand-alone project beyond CY2021.”

The table below, which was included in Section 7.3.3.6 of the 2021 WMP update, reflects progress made in 2020 as well as planned work through the remaining three-year WMP term. This reflects augmented phasing to align with the formal methodology and prioritization described above. Annual volumes included in the 2020 WMP were assumed volumes prior to developing a formal scope. Now that the scope is better understood as a result of the methodology developed and applied in 2020, PacifiCorp was able to refine the forecasted targets in its 2021 WMP Update.

Table 7-2: PacifiCorp's 2021 WMP Pole Replacement/Reinforcement Revised Annual Scope

Year	Total Program	2019 ¹	2020	2021	2022	2023 ²
Transmission (poles)	1,321	0	0	51	41	1,229
Distribution (poles)	3,005	0	29	77	231	2,668
Total (poles)	4,326	0	29	128	272	4,054

¹ 2019 efforts focused on development of engineering standard and detailed scoping.

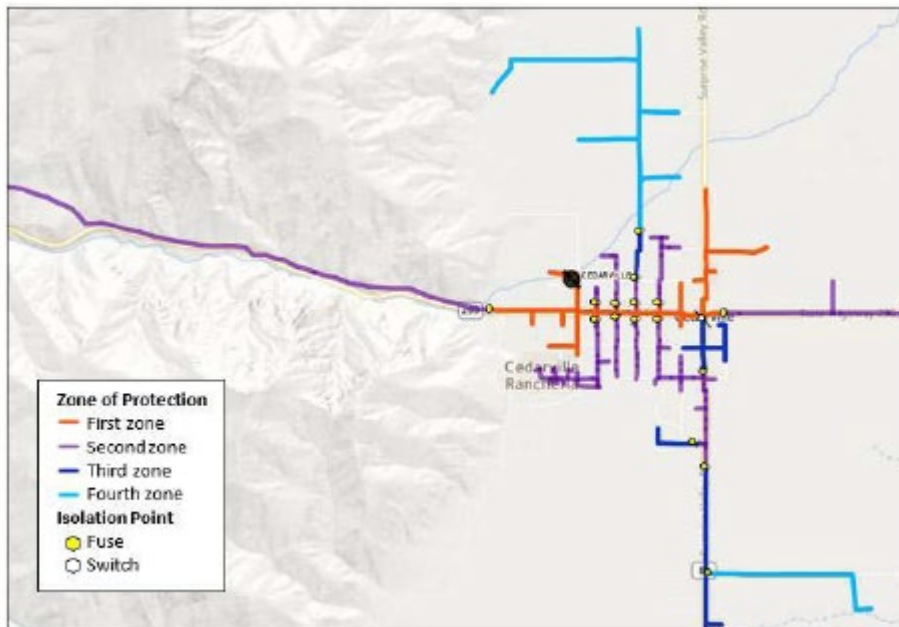
² While not explicitly requested in supplemental tables, the 2023 scope was provided to provide context for the total program values. This 2023 scope may change as the Company’s risk modeling efforts evolve.

Despite PacifiCorp's diligent efforts, certain information protected from disclosure by the attorney-client privilege or other applicable privileges or law may have been included in its responses to these data requests. PacifiCorp did not intend to waive any applicable privileges or rights by the inadvertent disclosure of protected information, and PacifiCorp reserves its right to request the return or destruction of any privileged or protected materials that may have been inadvertently disclosed. Please inform PacifiCorp immediately if you become aware of any inadvertently disclosed information.

CalPA Data Request 2.5

PacifiCorp's 2021 Wildfire Mitigation Plans

Regarding Zones of Protection (ZOP), PacifiCorp provided a map (provided below) that illustrated how PacifiCorp models ZOPs on page 57 of its 2021 WMP. For calculating wildfire risk, does PacifiCorp calculate (a) one risk score for each of the 17 distinct segments between isolation points as shown on the map, or (b) one risk score for each of the four ZOP categories (i.e., a risk score for First Zone, Second Zone, etc.), or (c) another way not listed above?



Response to CalPA Data Request 2.5

PacifiCorp calculates wildfire risk at the zones of protection (ZOP) level, and a specific fire risk score is calculated for each individual ZOP. Thus, in the example referenced above, there are distinct fire risk scores for each of the 17 distinct segments (recognizing of course that it is possible for two segments to have the same score if the calculation for each segment yields the same result). This concept is shown more precisely in Attachment CalPA 2.5 with the specific scores for the example circuit. In addition, further granularity can occur in the individual input layers, depending on the resolution of the data behind the layer, such as associated with the arc energy, for which conductor type changes within the ZOP are the level of resolution, while for climate or tree canopy, the level of granularity is reliant on the level at which weather reanalysis or canopy data may be available, which is generally not as granular.

CalPA Data Request 2.6

PacifiCorp's 2021 Wildfire Mitigation Plans

On page 144 of its 2021 WMP, PacifiCorp states that Fire Risk Conditions (defined as conditions that are designated under a particular Condition Code associated as a fire risk) are assigned a higher risk level than those outside of the HFTD. Table 7-5 of the WMP shows that PacifiCorp's correction timeframes for Priority B conditions depend on whether the condition is located in Tier 2 or Tier 3 HFTD.

Does PacifiCorp use different correction timeframes for Priority A (non-imminent) conditions that are also Fire Risk Conditions, than if they are not Fire Risk Conditions? If the answer is yes, explain such timeframes used in each HFTD tier.

Response to CalPA Data Request 2.6

No. PacifiCorp does not use a different correction timeframe for Priority A (non-imminent) conditions that are also Fire Risk Conditions than if they are not Fire Risk Conditions. PacifiCorp does have a specific methodology to correct Safety Hazards consistent with the General Orders that is separate from correction of Fire Risk Conditions. PacifiCorp's priority system ranking also pre-dates the California General Order requirements. PacifiCorp's A priority represents a middle step between A-imminent and B Priority Conditions that does not explicitly exist in the General Orders. The 30-day correction timeframe is already considered to be a very quick and accelerated correction timeframe when compared to B-priority conditions and is, therefore, applied consistently to both Fire Risk Conditions and non-Fire Risk Conditions.