2025 Wildfire Mitigation Plan Updates

Standalone Document

07/08/2024

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1 UPDATES TO RISK MODELS

The electrical corporation must report on updates to its risk models. The collective updates to risk models are categorized as either "significant" or "non-significant." The electrical corporation must categorize the collective changes to its risk models as either significant updates or non-significant updates, not both. The proceeding subsections outline the thresholds to determine if updates to risk models are "significant" or "non-significant."

When determining if updates to risk models are "significant" (Section 1.1.1) or "non-significant" (Section 1.1.2), the electrical corporation's analysis must be independent of risk reduction resulting from deployed mitigations described in the approved 2023-2025 Base WMP. For example, if a circuit was undergrounded in late 2023, the analysis would not take that risk reduction into account and would evaluate the risk for that circuit consistent with the point in time represented by WMP Table 6-52 in the approved 2023-2025 Base WMP.

An electrical corporation must analyze its top 5 percent of highest risk circuits, segments, or spans3 to determine whether updates to its risk models are significant. An electrical corporation's top ignition risk circuits, segments, or spans are the top 5 percent of highest ignition risk circuits, segments, or spans when the circuits, segments or spans are ranked individually from highest to lowest circuit-mile-weighted ignition risk. An electrical corporation's top Public Safety Power Shutoff (PSPS) risk circuits, segments or spans are the top 5 percent of highest PSPS risk circuits, segments, or spans when the circuits, segments or spans are ranked individually from highest to lowest circuit-mile-weighted PSPS risk.

As discussed in Section 6 of the 2023-2025 Final Wildfire Mitigation Plan,[1] PacifiCorp was implementing FireSight, previously known as the Wildfire Risk Reduction Module, to model the risk and consequences of an ignition to inform planning of mitigations. In 2023, the model was implemented, and Section 1 below describes the updates to baseline risk modeling as a result of the implementation, including the establishment of a High Fire Risk Area (HFRA), in addition to the High Fire Threat District's created by the CPUC, as well as the identification of the highest risk circuits.

1.1 SIGNIFICANT UPDATES

If an electrical corporation's updates to its risk models are significant, it must:

- *Discuss its updated methodology and models (e.g., using a new machine learning algorithm, changing how wildfire consequences are calculated, or changes to assumptions);*
- *Provide justification for the updates;*
- *Show how risk has shifted as a result of the updates; and*
- *Report any resulting changes to prioritization of mitigation initiatives and scheduling and workplans for the implementation of mitigation initiatives resulting from these updates.*

1 TN13738_20240222T150927: 2023-2025 Final Wildfire Mitigation Plan February 22, 2024. Sourced April 25, 2024 from 2023-25 Base Wildfire Mitigation Plans | Office of Energy Infrastructure Safety (ca.gov).

The electrical corporation must use the format established by Tables 1-1 and 1-2 of these 2025 WMP Update Guidelines to summarize the updated top 5 percent of highest-risk circuits, segments, or spans. If one or both tables are more than 20 lines, then an electrical corporation may submit a spreadsheet as an attachment to the 2025 WMP Update rather than a table to provide the information. Discussions of significant updates to risk models must be limited to 20 pages total. Figures and tables are excluded from the 20-page limit.

As discussed in Section 6 of the 2025 WMP Update, in 2023 PacifiCorp implemented the FireSight model to provide data to calculate the composite (ignition) risk scores for overhead assets. As a result of implementing the FireSight model, and applying the risk scoring (summarized below and described in detail in Section 6.2.2), PacifiCorp identified new areas of heighted risk of wildfire, with delineated geographic areas and established HFRAs, including 728 line miles of overhead transmission and distribution lines. The HFRA is discussed below and in Section **Error! Reference source not found.**.

Section 6.2 is updated with discussion of the model and how the composite (ignition) risk is calculated.

The FireSight model looks at risk through two aspects:

- Risk Associated with Ignition Location (RAIL): Considers the risk of ignition from utility assets. This considers the risk at the circuit level.
- Risk Associated with Value Exposure (RAVE): Considers the locational risk (consequence) of an ignition should one occur. This considers the consequence to an area, known as a plexel.

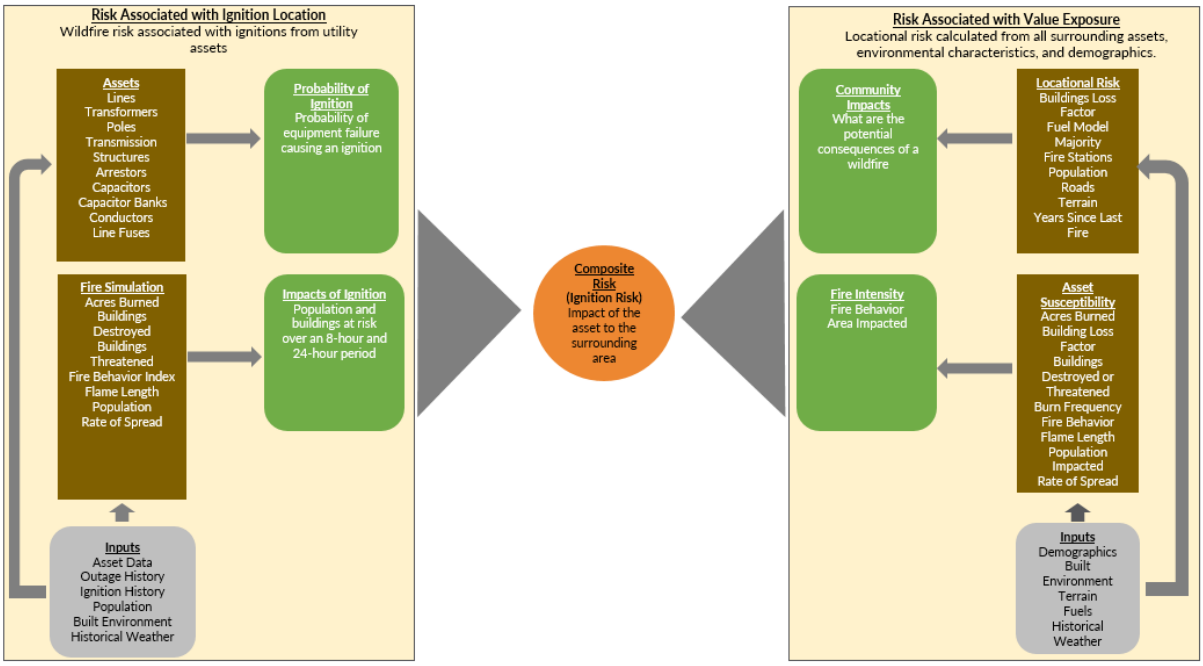


Figure 1: FireSight Model Components

The FireSight model outputs a set of attributes that can be selected to calculate the ignition risk, and the utility determines which attributes to use in the ignition risk score. Table 1 below shows the list of attributes available in FireSight, whether they are associated with RAIL, RAVE, or both, and the attributes Pacific Power selected for use in the ignition risk score.

Table 1: FireSight Attributes

RAIL (Circuit Level)	RAVE (Plexel)	Attribute	Description:	Percentiles	Used in the Composite (Ignition) Risk Score
✓	✓	Acres Burned	Number of Acres Burned	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	✓	Building Density	Building Density per Plexel	N/A	No
✓	✓	Buildings Destroyed	Number of Buildings Destroyed	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	✓	Building Loss Factor	Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	✓	Building Loss Factor (Average-Mean)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	✓	Building Loss Factor (Median)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
✓	✓	Buildings Threatened	Number of Buildings Threatened	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	✓	Burn Frequency	Burn Frequency is the number of times a plexel is touched from all asset ignited simulations run for the selected weather days. It is similar to traditional burn probability although this only represents a frequency, not a probability.	N/A	No

RAIL (Circuit Level)	RAVE (Plexel)	Attribute	Description:	Percentiles	Used in the Composite (Ignition) Risk Score
	✓	Disability Population	Disability Population Ratio	N/A	Yes
✓	✓	Fire Behavior Index	Fire Behavior Index	N/A	Yes
	✓	Fire Station Density	Density of Fire Stations in a location	N/A	Yes
✓	✓	Flame Length	Feet	N/A	Yes
	✓	Fuel Model Majority	Majority Fuel in Each Plexel	N/A	Yes
	✓	Number of Buildings	Number of Building per Plexel	N/A	No
	✓	Population Count	Population Count per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	✓	Population Density	Population Density per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
✓	✓	Population Impacted	Population Count	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	✓	Poverty Population	Poverty Population Ratio	N/A	Yes

RAIL (Circuit Level)	RAVE (Plexel)	Attribute	Description:	Percentiles	Used in the Composite (Ignition) Risk Score
✓	✓	Rate of Spread	66 Feet/Hour	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	✓	Road Availability-With Social Vulnerability Population	Availability of Roads in a Location with Consideration of Social Vulnerability Population	N/A	No
	✓	Road Availability-With No Population	Availability of Roads in a Location with No Consideration of Social Vulnerability Population	N/A	No
	✓	Road Miles	Total Miles (Major + Minor)	N/A	No
	✓	Senior Population	Senior Population Ratio	N/A	No
	✓	Terrain Difficulty Index	Terrain Difficulty per Plexel	N/A	Yes
	✓	Years Since Last Fire	Years Since Last Fire per Plexel	N/A	No

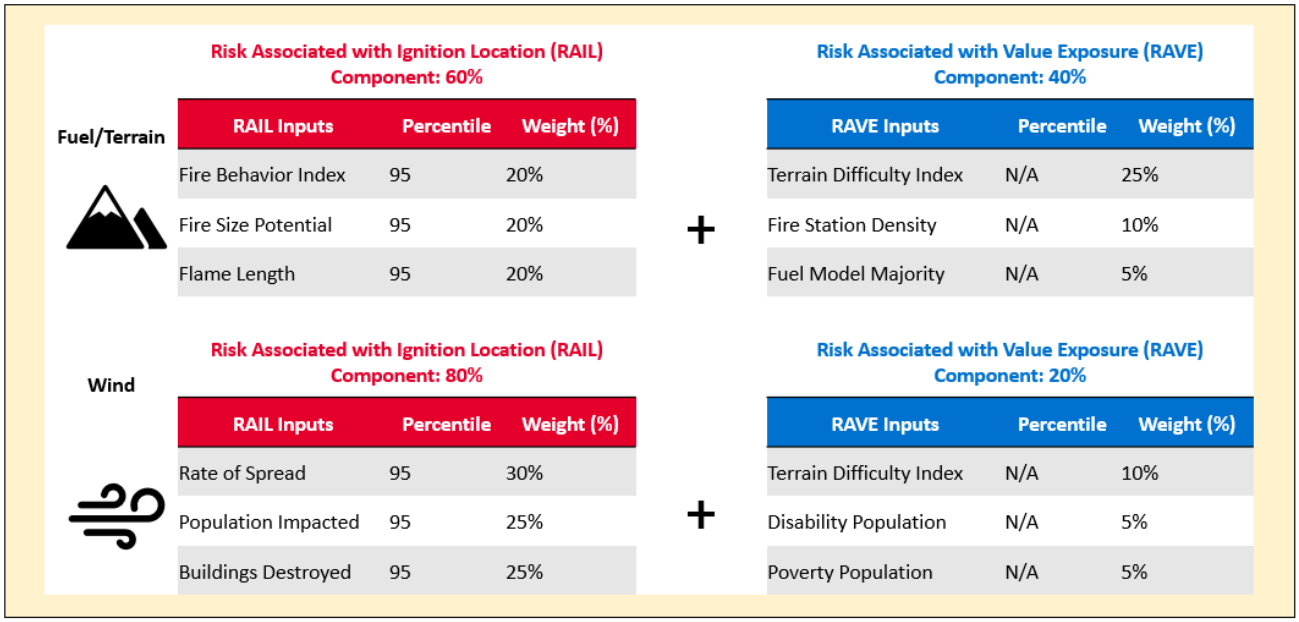
To account for the unique characteristics of its service territory, PacifiCorp models Ignition Risk for each circuit based on wind-driven fire and terrain-driven fire events. By modeling likelihood and consequence for each circuit for each type of fire, PacifiCorp expects to have a better understanding of the highest risk circuits, and the drivers to the risk, in order to apply the appropriate mitigation. Table 2 below shows the unique characteristics of each modeled wildfire type.

Table 2: Comparison of General Characteristics of Wind-Driven and Fuel/Terrain-Driven Wildfires

Category	Wind-Driven Wildfires	Fuel/Terrain-Driven Wildfires
Locational Risk	More likely in areas subject to PSPS (Public Safety Power Shutoff)	Confined to areas of complex fuels and terrain with difficult access
Frequency	Some years have none; others several	Annually during peak fire season

Category	Wind-Driven Wildfires	Fuel/Terrain-Driven Wildfires
Event Duration	One-three days per event	Can persist several weeks or months
Outage Risk	Wind-driven and somewhat predictable	Difficult to predict
Consequence	Immediately catastrophic	May be catastrophic over time

Figure 2 below shows the inputs and weightings PacifiCorp selected for the composite risk for wind-driven and fuel/terrain-driven wildfires. On the left side of the table are the RAIL inputs with the selected input for the type of wildfire, the percentile selected, and the weighting for each variable. On the right side of the table are the RAVE inputs with the weightings for each variable. There are no percentiles for these inputs as they are relatively static values, e.g., the number of fire stations, the number of disabled people in geographic area, etc. PacifiCorp selects the attributes, percentiles, and weightings used in the composite risk score calculation for wind-driven and fuel/terrain-driven events, and then performs the calculation.



Fuel/Terrain

Risk Associated with Ignition Location (RAIL) Component: 60%				Risk Associated with Value Exposure (RAVE) Component: 40%		
RAIL Inputs	Percentile	Weight (%)		RAVE Inputs	Percentile	Weight (%)
Fire Behavior Index	95	20%	+	Terrain Difficulty Index	N/A	25%
Fire Size Potential	95	20%		Fire Station Density	N/A	10%
Flame Length	95	20%		Fuel Model Majority	N/A	5%

Wind

Risk Associated with Ignition Location (RAIL) Component: 80%				Risk Associated with Value Exposure (RAVE) Component: 20%		
RAIL Inputs	Percentile	Weight (%)		RAVE Inputs	Percentile	Weight (%)
Rate of Spread	95	30%	+	Terrain Difficulty Index	N/A	10%
Population Impacted	95	25%		Disability Population	N/A	5%
Buildings Destroyed	95	25%		Poverty Population	N/A	5%

Figure 2: Inputs and Weightings for Fuel/Terrain-Driven and Wind-Driven Ignition Risk Calculations

The calculation for the combined risk score for each circuit segment is shown in Figure 3 below. Each composite score is on a scale of 0-1. PacifiCorp calculates a final composite risk score for each circuit and/or circuit segment.

$$\frac{\text{Wind Driven Composite Risk} + \text{Terrain Driven Composite Risk}}{\text{Largest Composite Score All Circuits}}$$

Figure 3: Combined Composite Risk Score Calculation

PacifiCorp applied the outputs of the FireSight risk models to identify additional areas of heightened wildfire risk in its service territory. More specifically, PacifiCorp leveraged FireSight to model risk scores for wind-driven and fuel/terrain-driven risk on each circuit, assuming a probability factor of one as described in the Section **Error! Reference source not found.**, to focus on the consequence of potential ignitions. Expressed as percentiles, the HFRA reflects those areas with FireSight model risk scores in the 85-100 percentile for either wind-driven or fuel/terrain-driven risk. The breakdown of the new HFRA and overhead incremental line miles is summarized in Table 3.

Table 3: HFTD and HFRA Overhead Line Miles

	Total Service Territory	**HFTD**				**2024 HFRA Additions**		**New HFTD and HFRA**	
	Line Miles	HFTD Tier 2	% of Service Territory	HFTD Tier 3	% of Service Territory	Line Miles	% of Service Territory	Line Miles	% of Service Territory
OH Transmission Line Miles 46kV	731	321	10%	23	1%	120	4%	464	14%
Transmission Miles 57 kV	-	-	0%	-	0%	-	0%	-	0%
Transmission Miles 69 kV	-	-	0%	-	0%	-	0%	-	0%
Transmission Miles 115 kV	440	183	6%	10	0%	45	1%	238	7%
Transmission Miles 138 kV	239	120	4%	14	0%	75	2%	209	6%
Transmission Miles 230 kV	-	-	0%	-	0%	-	0%	-	0%
Transmission Miles 345 kV	5	5	0%	-	0%	-	0%	5	0%
Transmission Miles 500 kV	-	-	0%	-	0%	-	0%	-	0%
Transmission Miles	47	13	0%	-	0%	-	0%	13	0%
OH Distribution Line Miles	2,517	771	24%	40	1%	488	15%	1,299	40%
Total	**3,248**	**1,092**	**34%**	**64**	**2%**	**728**	**19%**	**1,763**	**54%**

Totals may not foot due to rounding.

Based on the approach described in Section **Error! Reference source not found.**, PacifiCorp identified additional geographic areas for inclusion within the HFRA, depicted in purple in Figure 4 below, with the Tier 2 High Fire Threat Area (HFTD) depicted in green, and the Tier 3 HFTD depicted in orange.

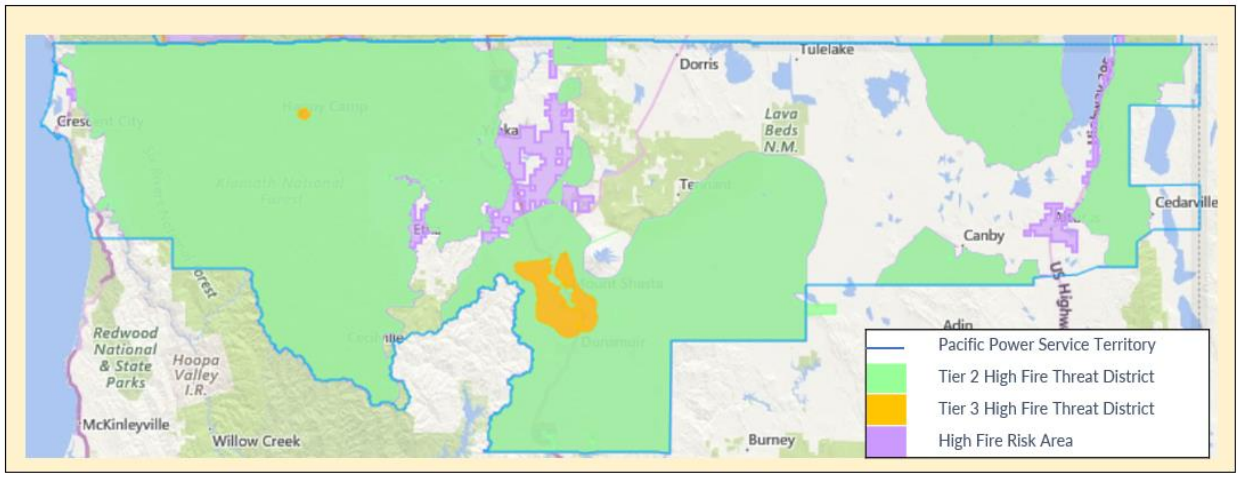


Figure 4: 2024 High Fire Threat Districts and High Fire Risk Area

The implementation of FireSight for wildfire risk scoring, and the establishment of a HFRA, will begin to inform mitigation initiatives. PacifiCorp is implementing the asset inspection and vegetation management programs discussed in Sections 8.1.3 and 8.2, respectively, in the HFRA. PacifiCorp uses the wildfire risk scoring to inform its prioritization of future grid hardening initiatives, as described in Section 7.1.3.

1.1.1 Top Risk-Contributing Circuit, Segments, or Spans

Significant updates to risk models are defined as:
• Any change or combination of changes to a risk model that moves 10 percent or more of ignition risk into or out of the top ignition risk circuits, segments, or spans,6 and/or
• Any change or combination of changes to a risk model that moves 10 percent or more of PSPS risk into or out of the top PSPS risk circuits, segments, or spans.7
The electrical corporation must use the format established by Tables 1-1 and 1-2 of these 2025 WMP Update Guidelines to summarize the updated top 5 percent of highest risk circuits, segments, or spans. If one or both tables are more than 20 lines, then an electrical corporation may submit a spreadsheet as an attachment to the 2025 WMP Update rather than a table to provide the information. Discussions of significant updates to risk models must be limited to 20 pages. Figures and tables are excluded from the 20-page limit.

In Table 4 below, the top five percent of highest risk circuits are ranked from highest to lowest by circuit-mile-weighted average ignition risk score based on the requirements described in Wildfire Mitigation Plan Update Guidelines.[2]

[2] California Office of Energy Infrastructure Safety. TN13656_20240201T154328, 2025 Wildfire Mitigation Plan Update Guidelines. January 2024.

Table 4 Summary of Top-Risk Circuits, Segment, or Spans

Rank	Circuit Name	Circuit-Mile-Weighted Ignition Risk Score	% of Total Ignition Risk in Top 5%
1	5G31	233	35.5%
2	5G33	93	14.2%
3	5G21	68	10.3%
4	5G83	65	9.9%
5	5G149	43	6.6%
6	5G5	35	5.3%
7	5L83	33	5.0%
8	5G45	23	3.5%
9	5L97	22	3.4%
10	4G1	18	2.8%
11	5G151	15	2.3%
12	7G81	5	0.8%
13	7G73	2	0.3%
14	5L87	2	0.3%
	Totals	656	100%

As discussed in Section 7.1.3 of the 2025 WMP Update, PacifiCorp prioritizes circuits for mitigation within the HFTD or HFRA, based on the maximum fuel/terrain ignition risk score on the circuit. PacifiCorp chose to use the fuel/terrain risk score due to the characteristics of its service territory. PacifiCorp chose to use the maximum risk score to ensure that scores are not skewed through using the mean risk score on a circuit. The fuel/terrain risk score is calculated as described above in Section 1 and in Section **Error! Reference source not found.** of the 2025 WMP Update.

1.1.2 Qualitative Updates

Updates to risk models are also considered significant if any of the following qualitative updates are made:
- *Introduction of a new model.*
- *Discontinuation of an existing model.*
- *Any change in existing model application or use-case. For example, newly applying an existing vegetation risk model to PSPS decision-making.*
- *Introduction of new data types. For example, incorporating additional risk drivers into newer versions of a model.*
- *Changes to data sources. For example, using a new source of data to measure vegetation moisture content.*
- *Changes to third-party vendors for risk modeling or inputs to risk modeling. Examples of qualitative updates that are not considered significant updates to risk models include, but are not limited to, the following:*
- *Updating an existing dataset (e.g., augmenting ignition and outage datasets with 2023 data).*
- *Fixing code errors.*
- *Cleaning input data.*

Below is a summary of the significant qualitative updates made by PacifiCorp in 2023:

- Introduction of a new model: In 2023, PacifiCorp implemented the FireSight model to provide data to calculate the composite (ignition) risk scores for overhead assets. Section 6.2 of the 2025 WMP Update discusses the model and how the composite (ignition) risk is calculated, with additional information provided in Appendix B.
- Introduction of a new data type: As noted in Section 6.2.1 of the 2025 WMP Update, in addition to the eight-hour model outputs (the eight-hour period is the typical period used by utilities to model risk), there is growing interest in 24-hour risk modeling and to understand how that changes the risk profile.[3] Therefore, PacifiCorp is modeling both eight-hour and 24-hour periods to better understand if there are significant differences in the results that may impact mitigation efforts.

There were no significant qualitative updates in the following areas:

- Discontinuation of an existing model.

There were no insignificant qualitative updates identified in the following areas.

- Changes to third-party vendors for risk modeling or inputs to risk modeling: There were no changes of the third-party vendor who performs the risk modeling.
- Updating existing datasets: There were no significant changes to the data sets presented in Table B-5 in Appendix B.
- Fixing code errors.

3 California Office of Energy Infrastructure Safety. "Standardized Wildfire Risk Type Classifications and in Situ Wildfire Risk Assessment." Risk Modeling Working Group. October 11, 2023.

1.2 NON-SIGNIFICANT UPDATES

If an electrical corporation's updates to its risk models do not meet the "significant" criteria of Section 1.1.1, the electrical corporation must provide a tabulated summary of changes in risk ranking of the top 5 percent ignition risk and PSPS risk circuits, segments, or spans.
The electrical corporation must use the format established by Tables 1-1 and 1-2 of these 2025 WMP Update Guidelines to summarize the updated top 5 percent of highest risk circuits, segments, or spans. If one or both tables are more than 20 lines, then an electrical corporation may submit a spreadsheet as an attachment to the 2025 WMP Update rather than a table to provide the information.

Energy Safety defines a non-significant update as:
• Any change or combination of changes to the risk model that moves less than 10 percent of ignition risk into or out of the top ignition risk circuits, segments, or spans and less than 10 percent PSPS risk into or out of the top PSPS risk circuits, segments, or spans; or
• Any change that only moves ignition and PSPS risk within the top risk segments.

As described in Section 1.1 above, significant updates include the implementation of the FireSight risk model to calculate the composite (ignition) risk scores. These scores were applied for the following:

- Establish the HFRA as shown in Figure 4.
- Identify the top five percent of highest risk circuits based on the requirements described in Wildfire Mitigation Plan Update Guidelines. The ranked list of circuits is shown in Table 4 above.

There were no non-significant updates identified.

2 CHANGES TO APPROVED TARGETS, OBJECTIVES, AND EXPENDITURES

The electrical corporation must report qualifying changes to targets, objectives, and expenditures from its approved 2023-2025 Base WMP. Each change must be justified by lessons learned, internal policy changes, new laws or regulations, corrective actions resulting from Energy Safety's compliance process, or other explanations for the change. Thresholds for qualifying changes to targets, objectives, and expenditures are set forth below.

The below information describes the initiatives with unit changes, objective shifts, and/or cost changes for 2025.

2.1 2025 TARGETS OR TARGET COMPLETION DATES

For large volume work (equal to or greater than 100 units), the electrical corporation must report changes of 10 percent or greater to a 2025 target from the electrical corporation's approved 2023-2025 Base WMP.

For small volume work (less than 100 units), the electrical corporation must report changes of 20 percent or greater to a 2025 target from the electrical corporation's approved 2023-2025 Base WMP.

Initiative Activity	Initiative ID	Original Value	Updated Value	Target Percentage Change
Transmission Intrusive Pole Inspections	AI-05	960	1257	31%
Line Rebuild - Covered conductor installation	GH-01	80	120	50%
Distribution pole replacements and reinforcements	GH-02	1600	2400	50%
Transmission pole/tower replacements and reinforcements	GH-03	160	240	50%
Expulsion Fuse Replacement	GH-05	0	500	
Active Wildfire De-Energization	-	Protocols as discussed in Section 8.1.8 Grid Response Procedures	Additional encroachment policy added	
Weather Forecasting	SA-05	Continued maintenance on 1 HPCC	Expanded to delivery of 5 HPCC's	

AI-05 – Transmission Intrusive Pole Inspections:
The differences in quantity of poles from the original value to the updated value is due to the inspection cycle and what poles are identified to be completed.

GH-01 – Line Rebuild – Covered Conductor Installation:
The line rebuild forecast increased with the on-boarding of a contractor to handle the resources and installation of covered conductor. Covered conductor installation remains a project that will continue beyond 2025.

GH-02 – Distribution Pole Replacements and Reinforcements:
Distribution pole replacements are captured under the line rebuild project, and with the increased covered conductor installation the number of poles expected to be replaced increased accordingly.

GH-03 – Transmission Pole/Tower Replacements and Reinforcements:

Transmission pole replacements are captured under the line rebuild project, and with the increased covered conductor installation the number of poles expected to be replaced increased accordingly.

GH-05 – Expulsion Fuse Replacements:
With continued updates to the risk model additional expulsion fuses were identified for replacement.

Active Wildfire De-Energization:
PacifiCorp established a new encroachment policy that will prompt de-energization based on an active wildfire's proximity to company assets. This is further described in Section 8.1.8 of the 2025 Update (Grid Response and Procedures).

SA-05 – Weather Forecasting:
Scope changes have been further discussed in Section 8.3.5 of the 2025 Update (Weather Forecasting).

2.1.1 Initiative Objectives

The electrical corporation must report any changes to forecasted initiative objective completion dates in its approved 2023-2025 Base WMP that shift an objective's completion to a different compliance period.

The electrical corporation may not add or delete 3- and 10-year objectives set forth in its approved 2023-2025 Base WMPs.

Initiative Activity	Initiative ID	Original Forecasted Completion Date	Updated Forecasted Completion Date
Risk and Risk Component Calculation	RA-01	Completion of PSPS Risk Assessment Solution by Q4 2023	Implementation expected by Q4 2024
Risk and Risk Component Calculation	RA-01	Quantification of Overall Utility Risk Completed by Q4 2024	Implementation after 2025.
Create SME process & procedure for VM database review four times a year	QA/QC, VM-11	December 2024	Deferred
Develop audits to provide understanding of the data collection process	QA/QC, VM-11	December 2024	Deferred
Install Wildfire Detection Cameras	SA-04	November 2025	December 2024

RA-01 – Risk and Risk Component Calculation:
Previously, it was expected that completion of the PSPS Risk Assessment Solution would occur in Q4 2023. This has been updated to an expected completion date of Q4 2024. Please see Section 6.1 of the WMP for additional information.

RA-01 – Risk and Risk Component Calculation:
Quantification of the overall utility risk was originally planned to be complete by Q4 2023. This work has been updated with expected completion after 2025. Please see Section 7.2.2.1 of the WMP for additional information.

VM-11 – Create SME process & procedure for VM database review four times a year:
Deferred due to GeoDigital database upgrade.

VM-11 – Develop audits to provide understanding of the data collection process:
Deferred due to GeoDigital database upgrade.

Install Wildfire Detection Cameras:
The installation timeline for wildfire detection cameras is aligned with the expectations communicated in Table 8-29 – Fire Detection Systems Currently Deployed.

2.1.2 Expenditure Changes

The electrical corporation must report any changes to 2025 projected expenditures in its approved 2023-2025 Base WMP that result in an increase or decrease of more than $10 million or constitute a greater than 20 percent change in an initiative's planned total expenditure in the 2025 compliance period.

Initiative Activity	Initiative ID	Original 2025 Expenditure ($ thousands)	Updated 2025 Projected Expenditure ($ thousands)	Difference ($) ($ thousands)	Difference %	Increase / Decrease Greater than $10M (Y/N)	Increase / Decrease Greater than 20% (Y/N)
Engagement with access and functional needs populations	CO-02	$-	$4	$4	100%	N	Y
Emergency preparedness plan	EP-01	$50	$320	$270	540%	N	Y
External collaboration and coordination	EP-02	$30	$10	$(20)	-67%	N	Y
Customer support in wildfire and PSPS emergencies	EP-05	$-	$281	$281	100%	N	Y

Initiative Activity	Initiative ID	Original 2025 Expenditure ($ thousands)	Updated 2025 Projected Expenditure ($ thousands)	Difference ($) ($ thousands)	Difference %	Increase / Decrease Greater than $10M (Y/N)	Increase / Decrease Greater than 20% (Y/N)
Transmission Detail Inspections	AI-03	$137	$20	$(117)	-85%	N	Y
Transmission Intrusive Pole Inspections	AI-05	$171	$64	$(107)	-63%	N	Y
Distribution Intrusive Pole Inspections	AI-06	$90	$175	$85	94%	N	Y
Line Rebuild - Covered conductor installation	GH-01	$62,000	$120,000	$58,000	48%	Y	Y
Expulsion Fuse Replacement	GH-05	$-	$1,000	$1,000	100%	N	Y
Top Risk Areas within the HFRA	RA-02	$-	$4	$4	100%	N	Y
Maintenance: Weather Station	MA-01	$325	$410	$85	26%	N	Y
Weather Forecasting	SA-05	$115	$670	$555	483%	N	Y
Pole clearing	VM-05	$374	$599	$225	60%	N	Y
Clearance - Transmission	VM-07	$1,416	$2,285	$869	61%	N	Y
Wildfire Mitigation Strategy Development	WP-01	$544	$845	$301	55%	N	Y
Identifying and Evaluating Mitigation Initiatives	WP-02	$100	$280	$180	180%	N	Y

CO-02 – Engagement with Access and Functional Needs Population:
The increase in expenditure is for targeted outreach initiatives to inform customers of specific programs available and requirements to be eligible.

EP-01 – Emergency Preparedness Plan:
Includes the entire emergency management team in which only a partial employee was previously forecasted.

EP-02 – External Collaboration and Coordination:
The forecast has been reduced based on actual expenditures used in performing the external collaboration being less than originally anticipated.

EP-05 – Customer Support in Wildfire and PSPS Emergencies:
The forecast has been increased to manage the increase in customer interactions on the free portable battery, battery rebate, and generator rebate programs. Those programs are designed to assist customers with a need for power were a PSPS event to occur.

AI-03 – Transmission Detail Inspections:
The reduced cost has to do with the projected units to be inspected, based on the inspection cycle, which was reduced from the original projection.

AI-05 – Transmission Intrusive Pole Inspections:
The reduced cost has to do with the projected units to be inspected, based on the inspection cycle, which was reduced from the original projection.

AI-06 – Distribution Intrusive Pole Inspections:
The increased cost has to do with the projected increase in units to be inspected, based on the inspection cycle.

GH-01 – Line Rebuild – Covered conductor installation:
The increase in cost has to do with the additional 40 miles in scope for line rebuild as well as the additional costs expended on a contractor handling the construction management.

GH-05 – Expulsion Fuse Replacement:
The cost increase correlates to the additional 500 expulsion fuses identified for replacement in 2025.

RA-02 – Top Risk Areas within the HFRA:
The cost increase is for FTE's work to maintain and make adjustments to the risk model used to determine the HFRAs.

MA-01 – Weather Station Maintenance:
The increase in cost is based on the increased material, data, and maintenance cost needed to perform annual preventative maintenance on the weather stations projected to be installed.

VM-05 – Pole Clearing:
The increase in the cost is based on actual expenditures being higher than forecasted to perform pole clearing on a similar number of units.

VM-07 – Clearance – Transmission:
With the inclusion of the HFRA areas described in the risk model updates, the costs are forecasted to increase.

WP-01 – Wildfire Mitigation Strategy Development:
The increase is based on actual expenditures realized as well as the inclusion of costs for an independent evaluator.

WP-02 – Identifying and Evaluating Mitigation Initiatives:

The cost has been updated to reflect ongoing work to pursue grant opportunities.

3 QUARTERLY INSPECTION TARGETS FOR 2025

The electrical corporation must define quarterly targets (end of Q2 and end of Q3) for 2025 asset and vegetation inspection targets established as end-of-year targets in its approved 2023-2025 Base WMP. The electrical corporation must use the format established by Table 3-1 to report these quarterly targets. Changes to end-of-year 2025 targets must be reported and explained pursuant to Section 2: Changes to Targets, Objectives, and Expenditures, above.

For its redlined and clean 2023-2025 Base WMP, the electrical corporation must add columns for end of Q2 2025 and end of Q3 2025 targets to its asset inspection and vegetation inspection target tables.

Initiative Activity	Initiative ID	Target End of Q2 2025 & Unit	Target End of Q3 2025 & Unit	X% Risk Impact 2025
Transmission Patrol inspections	AI-01	5,942	9,735	TBD
Distribution Patrol Inspections	AI-02	13,020	36,062	TBD
Transmission Detail Inspections	AI-03	90	361	TBD
Distribution Detail Inspections	AI-04	3,811	7,617	TBD
Transmission Intrusive Pole Inspections	AI-05	0	754	TBD
Distribution Intrusive Pole Inspections	AI-06	0	1,907	TBD
Enhanced IR Inspections in transmission lines	AI-07	0	700	TBD
Quality assurance / quality control	AI-12	303	530	TBD
Vegetation Inspections: Detailed Inspection – Distribution	VM-01	400	600	TBD
Vegetation Inspections: Detailed Inspection - Transmission	VM-02	100	200	TBD
Vegetation Inspections: Patrol Inspection - Distribution	VM-03	500	800	TBD
Vegetation Inspections: Patrol Inspection - Transmission	VM-04	150	329	TBD

4 NEW OR DISCONTINUED PROGRAMS

The electrical corporation must report on the creation of a new program, or the discontinuance of a program described in its approved 2023-2025 Base WMP. Each change must be justified by lessons learned, internal policy changes, new laws or regulations, corrective actions resulting from Energy Safety's compliance process, or other explanations for the change.
An electrical corporation's discussion on new or discontinued programs must be limited to 20 pages total. Figures and tables are excluded from the 20-page limit.

PacifiCorp seeks to discontinue two programs and add one new program as described below.

Program Status	Initiative ID	Section	Table or Figure	Page Number(s)	Description of Redline
Discontinue	RA-04	6.7	N/A	126	This program will be removed from future WMP filings.
Discontinue	SA-03	8.3.4.1	Table 8-29	256	The program will be removed from the table and no future targets will be installed.
New	GH-12	8.1.27	N/A	169	Adding program to complete feasibility studies.

RA-04 – Enterprise System for Risk Assessment:
As described in Section 6.7 of the WMP, the objective of this initiative was to improve ignition data collection processes to ensure the collection of additional information so that PacifiCorp could analyze trends and areas of concern. This initiative was implemented, and employees are receiving updated training, by the end of Q2 2024, on reporting outages and ignitions.

SA-03 – Smoke and Air Quality Sensors:
The installation of smoke and air quality sensors, as mentioned Section 8.3.4.1 WMP, was to support the Department of Homeland Security's Smart Cities Internet of Things Lab's wildland fire sensor program. The technology is still being developed and is not currently at a stage for implementation. The currently installed sensor will be removed, and the program will not continue further.

GH-12 – Microgrids:
PacifiCorp previously stated that it did not have any microgrids. However, there is a change in scope as PacifiCorp will be completing feasibility studies to determine if there are certain areas where microgrids could be utilized.

5 PROGRESS ON AREAS FOR CONTINUED IMPROVEMENT

The electrical corporation must report on progress required by the areas for continued improvement identified in Energy Safety's Decision on the electrical corporation's 2023-2025 WMP.15 The electrical corporation must provide narrative responses to each required progress that specified reporting in the 2025 WMP Update. This narrative response must include:

- *Code and title of the area for continued improvement,*
- *Description of the area for continued improvement,*
- *Required progress, and*
- *The electrical corporation's response to the required progress.*

The electrical corporation may refer to other sections of its 2025 WMP Update when reporting on areas for continued improvement if there is a duplication of reporting.

5.1 RISK METHODOLOGY AND ASSESSMENT

PC-23-01. Cross-Utility Collaboration on Risk Model Development

- Description: PacifiCorp and the other IOUs have participated in past Energy Safety-led risk modeling working group meetings. The risk modeling working group meetings facilitate collaboration among the IOUs on complex technical issues related to risk modeling. The risk modeling working group meetings are ongoing.
- Required Progress: PacifiCorp and the other IOUs must continue to participate in all Energy Safety-led risk modeling working group meetings.
- Discussed in Section 6, "Risk Methodology and Assessment".

PacifiCorp's Response

As discussed in Section 6.1.1, PacifiCorp engages with other utilities through forums like OEIS's Risk Modeling Working Group (RMWG) to collaborate and share best practices regarding risk modeling.

As explained in Section 6.2.1, PacifiCorp expects to participate in joint IOU workgroups or sessions, which were identified as an outcome of a July 23, 2023, Energy Safety-led scoping meeting with California IOUs. The meeting concerned how utilities can best learn from each other, external agencies, and outside experts regarding the integration of climate change into projections of wildfire risk.[4] PacifiCorp will use learnings from the workshops as an input to evaluating whether there are additional risk variables impacted by climate change, and the feasibility of integrating them into wildfire risk modeling.

PacifiCorp also takes note of the May 23, 2023, Energy Safety workshop on "Community Vulnerability in Wildfire Mitigation Planning" and, as explained in Section 6.2.1, expects to

4 California Office of Energy Infrastructure Safety. "Scoping Meeting: Climate Change and Fire Risk-Consequence." Sourced October 19, 2023.

participate in joint IOU workgroups or sessions on community vulnerability and risk modeling. If there are learnings or recommendations from these workgroups, PacifiCorp will evaluate them for potential integration into risk models.

PC-23-02. Calculating Risk Scores Using 95th Percentile Values

- Description: PacifiCorp's use of 95th percentile values, as opposed to probability distributions, to aggregate risk scores is not aligned with fundamental mathematical standards and could lead to suboptimal mitigation prioritization decisions.
- Required Progress: In its 2025 Update, PacifiCorp must:
- Provide a plan with milestones for transitioning from using 95th percentile values to probability distributions in its 2026-2028 Base WMP when aggregating risk scores for the following:
  - Mitigation evaluation.
  - Cost/benefit calculations.
  - Risk Ranking.
- If PacifiCorp is unable to transition to using probability distributions, it must:
  - Propose an alternative strategy or demonstrate that its current methodologies are providing accurate outputs for calculating known risk. PacifiCorp must provide concrete validations, including estimations for usage of percentiles and probability distributions where possible. Explain why or how it is unable to move toward the use of probability distributions when calculating and aggregating risk scores. This must include discussion of any existing limitations or potential weaknesses.
  - Provide an explanation for each calculation of risk scores where PacifiCorp is calculating or aggregating risk scores in which percentiles were used.
  - Describe any steps PacifiCorp is taking to explore the use of probability distributions in the future.
- Discussed in Section 6, "Risk Methodology and Assessment".

PacifiCorp's Response

On April 2, 2024, PacifiCorp met with Energy Safety to discuss PC-23-02 and obtain clarification on the background of the recommendation. Energy Safety expressed that they want to ensure that utilities are developing risk models that do not result in unfeasible results and are aligned with the mathematical laws of uncertainty and statistical principles of extremes in distribution models.

Based on this meeting, PacifiCorp is discussing this required progress with the FireRisk model vendor to better understand their plan and will update Energy Safety with the vendor's plan and timeline.

PC-23-03. PSPS and Wildfire Risk Trade-Off Transparency

- Description: PacifiCorp does not provide adequate transparency regarding PSPS and wildfire risk trade-offs, or how it uses risk ranking and risk buy-down to determine risk mitigation selection.
- Required Progress: In its 2025 Update, PacifiCorp must describe:
  - How it prioritizes PSPS risk in its risk-based decisions, including trade-offs between wildfire risk and PSPS risk.
  - How the rank order of its planned mitigation initiatives compares to the rank order of mitigation initiatives ranked by risk buy-down estimate, along with an explanation for any instances where the order differs.
- Discussed in Section 6, "Risk Methodology and Assessment"; Section 7, "Wildfire Mitigation Strategy Development".

PacifiCorp's Response

PacifiCorp has three initiatives to better understand long term PSPS risk to support and inform the prioritization of mitigation initiatives. PSPS Risk Assessment Solution and Annual Mitigation Selection Planning Process are detailed in Section 6.7. Risk Spend Efficiency is discussed in Section 7.1.4.1.

PC-23-04. Collaboration Between Vendor and Utility Risk Teams

- Description: PacifiCorp has not shown how its internal team and risk model vendor will share risk modeling duties.
- Required Progress: In its 2025 Update, PacifiCorp must:
  - Demonstrate how PacifiCorp differentiates between activities completed by the internal staff and vendor staff throughout risk modeling narratives. This includes processes, procedures, methodologies, flow charts, schematics, and any explanations that describe collaboration with a risk modeling vendor.
  - Demonstrate how PacifiCorp identifies activities that require vendor discretion and state whether final approval from the PacifiCorp risk team is required. This includes any decisions that need to be made, such as mitigation selection.
  - Indicate the source of the data where a description of data is required, specifically indicating whether the data are internally generated, or vendor generated. If PacifiCorp cannot indicate the source of the data, it must explain why.
- Discussed in Section 6, "Risk Methodology and Assessment".

PacifiCorp's Response

As documented in Section 6.2.2.3 Technosylva, the model vendor, performs the calculation of the model attributes shown in Table 6-4 – FireSight Attributes. PacifiCorp selects the attributes, percentiles, and weightings used in the fuel-driven and wind/terrain-driven ignition risk calculation and the Asset Risk Department performs the composite (ignition) risk calculations for fuel-driven, wind/terrain-driven, and combined composite risk.

PC-23-05. Independent Review Plan Transparency

- Description: PacifiCorp does not currently solicit external independent review of the data used by its risk models.
- Required Progress: In its 2025 Update, PacifiCorp must present actionable tasks it will complete by its 2026-2028 Base WMP to ensure it is fully compliant with the independent review requirements outlined in Section 6.6.1 of the Technical Guidelines. This must include:
    - A chronological list of tasks and estimated completion dates per task.
    - An explanation of any foreseeable complicating factors and how it will address each factor.
    - Procedures PacifiCorp expects to apply for the following review activities once its model implementation is complete: – Independent review (data collected, generated through risk models).
        - Additional review triggers.
        - Routine review schedule.
- Discussed in Section 6, "Risk Methodology and Assessment".

PacifiCorp's Response

Pacific Power has identified two internal projects to meet this requirement that are described in detail in Section 6.7:

- Develop Policy and Procedures for Review of Internal Planning Models to create and implement policy and procedures to regularly review planning models used for wildfire and PSPS risk modeling.

- Independent Review of Planning Risk Models will engage a third-party reviewer to perform an independent review of the data collected and generated through risk models to ensure that planning risk models assessing risk are aligned with risk modeling best practices and industry practices.

5.2 WILDFIRE MITIGATION STRATEGY DEVELOPMENT

PC-23-06. Vendor Fire Risk Model Implementation Milestones and Dates

- Description: PacifiCorp's operational and planning models may experience many changes once the vendor model implementation is complete. Energy Safety needs more information regarding improvements PacifiCorp expects in its operational and planning models along with expected milestones and dates to ensure PacifiCorp is being transparent about the state of its model maturity.
- Required Progress: In its 2025 Update, PacifiCorp must describe how it will use the new vendor risk modeling software to improve operational and/or planning risk analysis and provide a plan with milestones and dates for achieving those improvements.
- Discussed in Section 7, "Wildfire Mitigation Strategy Development."

PacifiCorp's Response

The WFA-E models used for operational risk analysis, as described in Section 8.3.4.1, were implemented in Q3 2022. They are being used to validate weather forecasts and to understand the impacts if there is an ignition.

After the 2024 wildfire season, Meteorology will assess the performance of the metrics output by models and evaluate if there are opportunities to use WFA-E to improve risk-informed, decision-making operational practices. This evaluation will begin with scoping in Q4 2024.

The FireSight planning model discussed throughout Section 6 was implemented in 2023 and the resulting data on risk is being used to: (1) Identify the HFRA; and (2) Identify specific circuits of highest risk and the drivers of the risk (terrain/fuel-driven, wind-driven, or both), which are used to inform planning of mitigation efforts.

PC-23-07. Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety

- Description: PacifiCorp and the other IOUs have participated in past Energy Safety-sponsored scoping meetings on these topics but have not reported other collaboration efforts.
- Required Progress: PacifiCorp and the other IOUs must participate in all Energy Safety-organized activities related to best practices for:
    - Inclusion of climate change forecasts in consequence modeling.
    - Inclusion of community vulnerability in consequence modeling.

- Utility vegetation management for wildfire safety.

PacifiCorp must collaborate with the other IOUs on developing the above-mentioned best practices. In their 2025 Updates, the IOUs (not including independent transmission operators) must provide a status update on any collaboration with each other that has taken place, including a list of any resulting changes made to their WMPs since the 2023-2025 WMP submission.

- Discussed in Section 7, "Wildfire Mitigation Strategy Development"; 8.2, "Vegetation Management and Inspections.

PacifiCorp's Response

As discussed in in Section 6.1.1, PacifiCorp engages with other utilities through forums like OEIS's RMWG to collaborate and share best practices regarding risk modeling.

PacifiCorp also participates in the Covered Conductor Joint Utility Working Group to share learnings regarding: (1) the effectiveness of cover in the field in comparison to alternative initiatives; and (2) how covered conductor installation compares to other initiatives in its potential to reduce PSPS risk. All the utilities met regularly on all workstreams in 2023, and addressed all of the commitments identified in the 2023-2025 Joint IOU Covered Conductor Effectiveness Report.

As explained in Section 6.2.1, PacifiCorp expects to participate in joint IOU workgroups or sessions, identified as an outcome of the July 23, 2023, Energy Safety-led scoping meeting with California IOUs, regarding how utilities can best learn from each other, external agencies, and outside experts on the topic of integrating climate change into projections of wildfire risk.[5] PacifiCorp will use learnings from the workshops as an input to evaluating if there are additional risk variables impacted by climate change, and the feasibility of integrating additional variables into wildfire risk modeling. PacifiCorp also takes note of the May 23, 2023, Energy Safety workshop on "Community Vulnerability in Wildfire Mitigation Planning" and, as explained in Section 6.2.1, expects to participate in joint IOU workgroups or sessions on community vulnerability and risk modeling. If there are learnings or recommendations from these workgroups, PacifiCorp will evaluate them for potential integration into risk models.

5.3 GRID DESIGN, OPERATIONS, AND MAINTENANCE

PC-23-08. Covered Conductor Installation Progress

- Description: PacifiCorp has historically failed to meet its covered conductor targets and has made only limited progress towards its 2023 target. PacifiCorp's

5 California Office of Energy Infrastructure Safety. "Scoping Meeting: Climate Change and Fire Risk-Consequence." Sourced October 19, 2023.

Base WMP does not demonstrate that its targets are feasible, nor that PacifiCorp has appropriately accounted for its past implementation barriers.

- Required Progress: In its 2025 Update, PacifiCorp must provide:
    - An update on the progress PacifiCorp has made thus far in meeting its covered conductor targets, both past and future, including any changes made in resources and availability of labor. This must include an assessment of third-party contractors hired for covered conductor installation.
    - An updated spreadsheet with the locations and mileage for covered conductor broken out by year for 2023 to 2025. This should also include project status (engineering, design, etc.) and planned completion date.
    - A list of constraints that have prevented PacifiCorp from timely reaching its covered conductor targets and PacifiCorp's plan to address each constraint.
- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.2 "Grid Design and System Hardening").

PacifiCorp's Response

Pacific Power recognizes the feedback in PC 23-08, regarding the covered conductor targets, and supplies the following narrative update in response. Pacific Power completed 101 line miles of line rebuild as of January 1, 2024, meeting 67 percent of the targeted work. In 2025, Pacific Power's target increased from 80 to 120 line miles. Attachment CA Line Rebuild Data 2023-2025.xlsx provides details regarding the locations and mileage of covered conductor, broken out by year for 2023 to 2025, including project status and planned completion dates.

The third-party contractor hired for installation brings a significant expansion in resources including 15 engineering staff, 8 project management staff, and 60 construction staff. The additional resources represent a doubling in project management resources and a 50% increase in construction staff. Pacific Power increased the 2025 target for this initiative. To manage the completion of the covered conductor installations moving forward, the contracting company will now handle the various aspects of line rebuild projects, including project management, project controls, project reporting, engineering, estimating, permitting, surveying, material management, and construction.

Pacific Power encountered the following constraints:

- Resources.
- Permitting.
- Material.

To address these constraints, Pacific Power:

- Hired a contractor to manage the various aspects of the projects.
- Plan to identify and pursue permitting earlier in the project process.
- Plans to order additional material when feasible.

PC-23-09. QA/QC Pass Rate Targets for Rural Areas

- Description: PacifiCorp achieved a QA/QC pass rate of 97 percent in 2022 for both detailed and intrusive inspections. PacifiCorp has set its QA/QC pass rate targets for these inspections significantly lower for 2023-2025, with rural and urban targets of 80 and 90 percent, respectively.
- Required Progress: In its 2025 Update, PacifiCorp must set asset inspection QA/QC pass rate targets that align with its current maturity and the California industry standard of between 95 and 100 percent.
- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.3 "Asset Inspections").

PacifiCorp's Response

While Section 8.1.3 – Asset Inspections, describes the appropriate inspection programs, PacifiCorp has provided a response to this ACI in Section 8.1.6 – Quality Assurance and Quality Control, beneath Table 8-7 where the targets are set. The response includes discussion of considerations for implementing the required progress and planned next steps.

PC-23-10. Covered Conductor Inspections and Maintenance

- Description: PacifiCorp does not incorporate checks in its inspection programs that address failures specific to covered conductor. PacifiCorp must tailor its inspection practices to address failure modes specifically related to covered conductor.
- Required Progress: In its 2025 Update, PacifiCorp must discuss how failure modes unique to covered conductor will be accounted for in its inspections, including water intrusion, splice covers, and surface damage. If PacifiCorp determines any or all the preceding changes are unnecessary, then it must discuss how its current inspection and maintenance processes adequately address covered conductor failure modes.
- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.3 "Asset Inspections").

PacifiCorp's Response

Current inspection and maintenance processes described in Section 8.1.3, allow for PacifiCorp to capture Covered Conductor failure modes. For example, there are specific condition codes for conditions associated with covered conductor, and PacifiCorp reviews and updates those condition codes on an annual basis. In application of these condition categories, a detailed inspection identifies any damage with the covered conductor, such as splice covers and surface damage. A detailed inspection also identifies

symptomatic conditions resulting from water intrusion, such as conductor sag, corrosion, or insulation damage.

PC-23-11. Distribution Detailed Inspection Frequency

- Description: PacifiCorp performs the minimum frequency of detailed inspections required by GO 95 and 165. PacifiCorp must strive to adopt a risk-based approach by increasing the frequency of detailed inspections on assets that have the highest risk according to its risk model.
- Required Progress: In its 2025 Update, PacifiCorp must either:
    - Outline a plan to update its detailed inspections in higher risk areas, including:
        - An analysis for determining the updated frequency for performing detailed inspections.
        - Prioritization of higher risk areas based on risk analysis and risk model output, including HFTD Tier 3 lands.
        - Updates to inspection checklists to account for equipment or configurations that may pose greater wildfire risk.
        - A plan to obtain any needed workforce for performing more frequent inspections; OR
    - Demonstrate that its existing inspection program adequately addresses risk. This must include analysis of the following:
        - Number of Level 1 or critical issues found during detailed inspections.
- Discussed in Section 8.1, “Grid Design, Operations, and Maintenance” (8.1.3 “Asset Inspections”).

PacifiCorp’s Response

In Section 8.1.3.2 – Detailed inspections of transmission and distribution electric lines and equipment, detailed inspections are completed on a five-year cycle in accordance with GO165. As stated in section 8.1.3, the inspections within a current cycle are prioritized by completing the areas within the HFTD prior to the non-HFTD areas. Patrol inspections (Visual Assurance) are also completed on an annual basis within the HFTD and, starting in 2025, will also be performed annually in Non-HFTD areas. PacifiCorp performed a review of the number of Priority A conditions as shown in the table below, which includes Level 1 conditions, and found that detailed inspections found more conditions than patrol inspections. Therefore, PacifiCorp is planning to perform detailed inspection on all Tier 3 locations in 2025. Inspection results will be evaluated to determine if the detailed inspection frequency should be updated within the Tier 3 or Tier 2 locations.

Table: California Detailed Inspection Priority A Conditions Found

Priority A Conditions	2020	2021	2022	2023
Detailed Inspections	183	130	257	224
Visual Assurance Inspections	-	-	7	19

PC-23-12. Priority A/Level 1 Remediation and Imminent Threat Designation

- Description: PacifiCorp's Revised 2023-2025 Base WMP has not demonstrated that PacifiCorp has a plan or approach that consistently and properly identifies Level 1 conditions as imminent threats, or that its remediation timeframe for Level 1 conditions not deemed imminent threats effectively mitigates the associated risk. PacifiCorp is not able to reliably track Level 1 conditions that have been identified as imminent threats.
- Required Progress: In its 2025 Update, PacifiCorp must:
  - Provide a plan to have third-party external audits performed on all Level 1 conditions identified in the HFTD from 2020 to 2023. For each condition, the audit must evaluate:
    - If the condition should have been classified as an imminent threat.
    - If the initially assigned remediation timeframe was appropriate given the condition.
    - If the actual remediation timeframe was appropriate given the condition.
  - Create and implement a record keeping category to track Level 1 conditions identified as imminent threats, and update asset management procedures to reflect the new record keeping category.
- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.4 "Equipment Maintenance and Repair").

PacifiCorp's Response

In Section 8.1.6 – Quality Assurance and Quality Control, of the 2023-2025 Base CA Redline and Clean WMP, Pacific Power has provided narrative discussing implementation of record keeping tracking all level 1 conditions separately from Priority A conditions.

Pacific Power is actively working with OEIS to engage a third-party auditor to perform the audit on Priority A/Level 1 conditions identified from 2020-2023. A timeline has not been established, but the company will continue to pursue engagement with a third-party auditor to perform this function.

PC-23-13. Priority A/Level 1 Condition Remediation Delays

- Description: PacifiCorp states that it has identified access, material, permitting, and resource constraints as the root causes of Level 1 conditions that are not remediated within the required timeframe. PacifiCorp states that it is developing tools and implementing changes to mitigate delays associated with the constraints but does not provide sufficient detail.
- Required Progress: In its 2025 Update, PacifiCorp must describe the specific tools and/or process changes that will address each constraint (access, material, permitting, and resource).
- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.4 "Equipment Maintenance and Repair").

PacifiCorp's Response

The delays related to access are largely due to weather conditions including snow and wet/muddy access roads. Material delays continue to be an issue for special order items that are not kept in inventory, but this accounts for a small number of conditions on the transmission system. Delays related to permitting have been mitigated to some extent by moving the permitting process into a parallel path with job design. This allows for our environmental and Right of Way teams to work with the permitting agencies (i.e., National Forest Service, Bureau of Land Management, and various Tribal Governments) as far in advance as possible to secure the necessary permits. However, the company is still subject to the timelines and processes of these external entities which do not always align with internal goals. In an effort to avoid as many of these potential delays as possible, the company continues to address condition corrections at an accelerated rate throughout the service territory.

PC-23-14. Asset Management and Enterprise Systems

- Description: PacifiCorp does not have a consolidated asset management and enterprise system and does not intend to develop one.
- Required Progress: In its 2025 Update, PacifiCorp must provide an analysis demonstrating that its current combination of contemporary and legacy systems comprehensively and efficiently covers its asset inventory, inspections, and maintenance. The analysis must discuss:

- The system/systems that contain asset inventory information for substations, distribution lines, and transmission lines.
- How asset inventory information is used to generate inspections, and which system/systems generate and track inspections for substations, distribution lines, and transmission lines
- How inspection findings are tracked, and if the work order system/systems are capable of associating pictures and inspector comments with specific findings.
- How the asset inventory system/systems are updated to reflect assets that have changed because of hardening and repair work.

- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.4 "Equipment Maintenance and Repair").

PacifiCorp's Response

In Section 8.1.5 – Asset Management and Inspection Enterprise Systems(s), Pacific Power has provided narrative discussing the analysis of its multiple asset management systems.

PC-23-15. Continued Monitoring of Enhanced Fire Risk (EFR) Settings

- Description: PacifiCorp does not currently have quantitative data to assess the effectiveness or impact of its implementation of EFR settings.
- Required Progress: In its 2025 Update, PacifiCorp must provide:
  - The following data relating to when EFR settings are enabled:
    - Number of outages.
    - Duration of outages.
    - Frequency of outages per circuit.
    - Number of customers impacted.
    - Response time for outages.
  - An updated plan of actions being taken based on the data provided above to reduce reliability impacts and safety impacts of EFR settings.
  - An update on how PacifiCorp has evaluated the effectiveness of EFR settings implementation.
  - A description of how PacifiCorp has consulted with other electrical corporations to learn about best practices, including which settings to use, thresholds for setting implementations, and impact reductions for related outages.

- Discussed in Section 8.1, "Grid Design, Operations, and Maintenance" (8.1.5 "Grid Operations and Procedures").

PacifiCorp's Response

In Section 8.1.8 of the 2023-2025 Base CA Redline and Clean WMP, Pacific Power has provided narrative discussing the implementation of equipment settings to reduce wildfire risk, which has been updated to further address PC 23-15. Responses were provided in "Reliability Impacts of EFR Settings" for required progress on bullets one and two above. There is expanded narrative in "Effectiveness of EFR Settings" to address required progress on bullets three and four above.

5.4 VEGETATION MANAGEMENT AND INSPECTIONS

PC-23-16. Vegetation Management Priority Tagging

- Description: While PacifiCorp sequences inspections based on risk-related criteria (HFTD tier, last scheduled work, predominant species, etc.), its Red Dot priority tagging system does not adequately communicate varying degrees of priority of work identified during inspections.
- Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide:
  - Risk-based criteria for determining and assigning priority to work locations, including remediation timelines for each priority level. GO 95, Rule 18(A)(2) and Liberty's "Work Priority Levels" should serve as examples.
  - A plan to operationalize the risk-based criteria that includes milestones that are specific, measurable, relevant, and timebound.
- Discussed in Section 8.2, "Vegetation Management and Inspections.

PacifiCorp's Response

Pacific Power plans to provide an update on PC-23-16 within the 2026-2028 Base WMP.

5.5 SITUATIONAL AWARENESS AND FORECASTING

PC-23-17. Weather Station Maintenance and Calibration

- Description: PacifiCorp reports having approximately 100 weather stations in its network but does not report on the annual maintenance and calibration of those weather stations. Frequent calibration and maintenance of weather stations is critical for ensuring accurate, reliable, and high-quality data. As PacifiCorp performs its annual weather station maintenance and calibration, Energy Safety will need PacifiCorp to report on the following to verify the integrity of the data collected from its weather station network.

- Required Progress: In its 2025 Update, PacifiCorp must provide documentation indicating the number of weather stations that received their annual calibration and the number of weather stations that were unable to undergo annual maintenance and/or calibration due to factors such as remote location, weather conditions, customer refusals, environmental concerns, and safety issues. This documentation must include:
  - The station name and location.
  - The reason for the inability to conduct maintenance and/or calibration.
  - The length of time since the last maintenance and calibration.
  - The number of attempted but incomplete maintenance or calibration events for these stations in each calendar year.
- Discussed in Section 8.3, "Situational Awareness and Forecasting.

PacifiCorp's Response

As discussed in Section 8.1.4 – Weather Station Maintenance, PacifiCorp's weather station maintenance is completed on an annual basis, and the status is tracked within the quarterly filings to OEIS under initiative ID MA-01. Within the reporting, PacifiCorp has reported that, in 2023, weather station maintenance was conducted to plan, and there was no incomplete maintenance, as well as the station name and location.

5.6 EMERGENCY PREPAREDNESS

PC-23-18. Emergency Resources Availability

- Description: PacifiCorp did not provide an analysis of its response times regarding its emergency resources associated with recent PacifiCorp-reported catastrophic wildfires as required by a 2022 area for continued improvement (PC-22-19). It also did not provide an evaluation of its deployment and storage of resources within California, required by this area for continued improvement depending on the results of the analysis.
- Required Progress: In its 2025 Update, PacifiCorp must fully respond to all required progress listed in Energy Safety's 2022 area for continued improvement PC-22-19 by providing the following:
  - An analysis of PacifiCorp's response times regarding its emergency resources associated with recent PacifiCorp-reported catastrophic wildfires (as reported in Table 5-4).
  - Depending on the results of this analysis, an evaluation of PacifiCorp's deployment and storage of resources within California.
- Discussed in Section 8.4, "Emergency Preparedness.

PacifiCorp's Response

As discussed in Section 8.4 – Emergency Preparedness, Pacific Power invests in and stages fire suppression tools and equipment for use throughout its California service territory. However, these resources are not used to respond to wildfires. Instead, they are dispatched to the field with field personnel to proactively mitigate wildfire risk in conditions that are identified as elevated, significant, or extreme. For example, water truck resources are strategically assigned to accompany field personnel working in wildland areas during fire season. Depending on local conditions, dry vegetation in the immediate vicinity of a work area may be sprayed with water before conducting work as a preventative measure. In the extremely unlikely event that an ignition does occur while field crews or other Pacific Power personnel are working in the field, they are also equipped with basic tools to extinguish small fires. For this reason, Pacific Power does not evaluate deployment and storage of resources dispatched to the field by response time to wildfire, as described in PC-23-18 – Emergency Resources Availability.

Pacific Power also engages with customers via direct call, text, or by other methods such as social media, its website, the Pacific Power app, and partnerships with local media during emergencies. 24/7 real time situation updates are also utilized as appropriate.

Additionally, during a wildfire and/or PSPS event Pacific Power engages in communications with local emergency management agencies (via the County Office of Emergency Services), tribal partners, telecommunications infrastructure providers, large customers, and other local partners through the duration of the event as described in Section 8.4.2.1 – Overview of Protocols, Policies and Procedures.

5.7 LESSONS LEARNED

PC-23-19. Lessons Learned Narratives

- Description: While PacifiCorp provides information on lessons learned in tabular form, it does not provide the narrative summaries required for Section 10 "Lessons Learned."
- Required Progress: In its 2025 Update, PacifiCorp must provide all required information on lessons learned in both tabular and narrative form, as required by Section 10 of the Technical Guidelines.
- Discussed in Section 10, "PacifiCorp's Process for Continuous Improvement" (10.3 "Areas for Continued Improvement").

PacifiCorp's Response

Pacific Power provided all required information on lessons learned in tabular form and added a narrative summary to Section 10 of the 2025 Update.

PC-23-20. Lessons Learned from Past Wildfires

- Description: In response to a 2022 area for continued improvement (PC-22-06), PacifiCorp states that it is planning to implement fire incident tracking and expects to perform trend and root cause analysis for ignitions by the end of 2024. Given this timeline, PacifiCorp has not yet investigated the causes of its ignitions or PacifiCorp-reported wildfires and does not provide any associated lessons learned within its WMP.
- Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide an update on its fire incident tracking database as it relates to PacifiCorp's analysis of the root causes of its ignitions and PacifiCorp-reported catastrophic wildfires as well as associated lessons learned. This update must provide information on and a response to all required progress listed in Energy Safety's 2022 area for continued improvement PC-22-06.

PacifiCorp's Response

Pacific Power plans to provide an update on PC-23-20 within the 2026-2028 Base WMP.

APPENDIX A – REFERENCE TO CHANGED TABLE/FIGURE NUMBERS AND/OR LOCATION

Title of Changed Figure or Table	From	To
Pacific Power's Baseline Risk Assessment Framework	N/A	Figure 6-1
Timeline for implementation of PSPS risk assessment solution	Figure 6-1	Figure 6-2
High-Level Risk Assessment Approach	Figure 6-2	Figure 6-3
Pacific Power Risk Assessment Model	Figure 6-3	Figure 6-4
~~WRMM~~ FireSight Model Components	Figure 6-4	Figure 6-5
Outage Causes with Possible Correlation to Ignition Potential		Table 6-2
Historic Ignition Risk Drivers During Fire Season	N/A	Figure 6-6
Historic Ignition Risk Drivers During Non-Fire Season	N/A	Figure 6-7
Probability of Outage from Ground Level Wind Gusts	Figure 6-5	N/A
Probability of Fault from Ground Level Wind Gusts at Circuit 5G83	Figure 6-9	Figure 6-8
~~WRMM~~ FireSight Calculation Schematic	N/A	Figure 6-6
Illustrative Example of Fuel/Terrain-Driven Composite Risk Compared to the Wind Driven Composite Risk in Seiad Valley, CA	Figure 6-13	Figure 6-12
Illustrative Example of Fuel/Terrain-Driven Composite Risk Compared to the Wind Driven Composite Risk in Montague, CA	Figure 6-14	Figure 6-13
Calculation of Wind-Driven and Fuel/Terrain-Driven Composite Risk	Figure 6-15	Figure 6-14
Combined Composite Risk Score Calculation	Figure 6-16	Figure 6-15
Risk Modeling Assumptions and Constraints/Limitations	Table 6-2	Table 6-5
Design Basis Scenarios	Table 6-3	Table 6-6
Extreme-Event Scenarios	Table 7-4	Table 7-7
HFTD and HFRA Overhead Line Miles	N/A	Table 6-8
2024 HFTD and HFRA	Figure 6-17	Figure 6-16

Title of Changed Figure or Table	From	To
Ignition Risk Values in the HFRA	Figure 6-18	Figure 6-17
HFRA Establishment and Update Plan	Figure 6-8	N/A
Timeline for the Establishment and Implementation of HFRA	Figure 6-9	N/A
Summary of Top-Risk Circuits, Segments, or Spans	Table 6-5	Table 6-10
California Cumulative Ignition Risk Drivers and Wire Downs Outside of Fire Season	Figure 6-10	N/A
California Cumulative Ignition Risk Drivers and Wire Downs During Fire Season	Figure 6-11	N/A
Analytics Platform Implementation Timeline	Figure 6-12	N/A
Risk Assessment Improvement Plan	Table 6-7	Table 6-12