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July 24, 2024

DATA REQUEST RESPONSE

LIBERTY UTILITIES (CAPECO ELECTRIC) LLC 2023-2025 Wildfire Mitigation Plans

Data Request No.: CalAdvocates-Liberty-2025WMP-01

Requesting Party: The Public Advocates Office

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Due Date: July 24, 2024

The following questions relate to your 2025 WMP Update.

Question 1:

Liberty states on p. 140 of its 2023-2025 Redline Redacted WMP, “Using the outputs from CloudFire, Liberty has identified circuits ordered by the most risk and targeted the circuits with the high risk.”

For the circuits that have been identified by Liberty’s CloudFire application, please provide an Excel document that lists the top 20 circuits ordered by risk. The spreadsheet should include the following information in separate columns, at a minimum:

- a) Risk ranking of the circuit segment
- b) Circuit ID number
- c) Name of circuit, if applicable
- d) Number of customers served by the circuit
- e) Measure taken, or planned to be taken, to reduce the wildfire risk of the circuit
- f) The expected or actual start date of the mitigation project referenced in your response to part (e) above.
- g) The expected completion date of the mitigation project referenced in your response to part (e) above.

Response to Question 1:

Liberty was previously utilizing the risk score outputs from Reax and Arup to quantify its 20 risk circuits. Since Liberty is beginning to use the Direxyon Risk Assessment Tool (“DRAT”) to identify risk, the requested information has been provided in relationship to the Preliminary Risk Score outputs from DRAT described in Section 6.4 of Liberty’s Updated 2023-2025 WMP.

- a) Refer to Section 6 of Liberty’s Updated 2023-2025 WMP.
- b) Refer to Section 6 of Liberty’s Updated 2023-2025 WMP.
- c) Refer to Section 6 of Liberty’s Updated 2023-2025 WMP.
- d) Refer to supporting materials: DR01-Question 1
- e) Refer to supporting materials: DR01-Question 1
- f) Refer to supporting materials: DR01-Question 1
- g) Refer to supporting materials: DR01-Question 1

Question 2:

Liberty states on p. 24 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-02: PSPS and Wildfire Risk Tradeoff Transparency, “Liberty does not currently calculate trade-offs between wildfire risk and PSPS risk. Liberty prioritizes mitigation initiatives based on wildfire risk and asset failure risk.”

- a) What variables, if any does Liberty utilize to calculate PSPS risk?
- b) Please provide a brief description of Liberty’s process and calculations used in calculating PSPS risk.
- c) What variables, if any does Liberty utilize to calculate wildfire risk?
- d) Please provide a brief description of Liberty’s process and calculations used in calculating wildfire risk.
- e) Does Liberty view prioritizing mitigation initiatives (based on wildfire risk and asset

failure risk) as a substitute for calculating tradeoffs between PSPS and Wildfire Risk? Please explain why or why not.

- f) According to Liberty, what are the disadvantages of calculating PSPS and Wildfire Risk tradeoffs?
- g) Does Liberty intend to be able to calculate PSPS and Wildfire Risk Tradeoffs in the future? If yes, when?
- h) What does Liberty need in order to be able to calculate tradeoffs between wildfire risk and PSPS risk?
- i) What decisions would Liberty be better informed about if it were able to calculate PSPS and Wildfire Risk tradeoffs? Please list all of these decisions.

Response to Question 2:

- a) Liberty PSPS Risk Model is currently in development.
- b) Liberty PSPS Risk Model is currently in development.
- c) Refer to Section 6.2 of Liberty's Updated 2023-2025 WMP
- d) Refer to Section 6.2 of Liberty's Updated 2023-2025 WMP
- e) Liberty does not view prioritizing mitigation initiatives as a substitute for calculating tradeoffs between PSPS and Wildfire Risk. Liberty's PSPS Risk Model is currently in development, so there is not a tradeoff between PSPS Risk and Wildfire Risk to evaluate.
- f) Liberty has not identified disadvantages of calculating PSPS and Wildfire Risk tradeoffs.
- g) Liberty is evaluating its ability to calculate PSPS Risk following the implementation of its Asset and Fire Risk tool. Following the integration of Liberty's PSPS Risk with its Asset and Fire Risk, Liberty will be able to evaluate its intention to calculate a tradeoff between PSPS and Wildfire Risk.
- h) Liberty is currently working on better capabilities to make informed decisions based on fire risk. Liberty is unable to anticipate the specific informed decision-making abilities of PSPS Risk vs Fire Risk as it has not fully realized the abilities of risk modeling for either risk metric.
- i) Liberty is not prepared to list decision making capabilities related to PSPS and Wildfire Risk tradeoffs.

Question 3:

Liberty states on p. 28 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-06: Effectiveness of Sensitive Relay Profile (SRP) and Traditional Hardening:

SRP has not been implemented on the system or included in the risk model to allow for calculations on its effectiveness. In selecting SRP for its ignition reduction effectiveness, Liberty relied on data from other utilities that have been using it as a mitigation strategy.

- a) Please describe or provide a timeline of when Liberty will have the necessary data to show the effectiveness of SRP implementation as a mitigation strategy.
- b) Please describe or provide a timeline of when Liberty will incorporate SRP into the Direxion Risk Assessment Tool (DRAT).

Response to Question 3:

- a) Liberty plans to enhance the Direxion Risk Assessment Tool to quantify risk of additional asset types with SRP being in the initial list of enhancements. Liberty expects to be completed with the additional enhancements by the end of Quarter 3 2025.
- b) See Response 3a.

Question 4:

On p. 32-33 of its 2025 WMP Update, Liberty provides its response to Area of Continued Improvement LU-23-09: Covered Conductor Inspections and Maintenance.

Please provide the previous version of the Spacer Cable Inspection Checklist found in Appendix A of the WMP Update, prior to the recent updates.

Response to Question 4:

Liberty does not have a previous version.

Question 5:

Liberty forecasts significantly increased 2025 updated expenditures for:

- Undergrounding of electric lines and/or equipment (WMP-GDOM-GH-02)
 - Tree-attachment removal (WMP-GDOM-GH-12a)
 - Detailed inspections of distribution electric lines and equipment (WMP-GDOM-AI-01)
 - Patrol inspections of distribution electric lines and equipment (WMP-GDOM-AI-03)
 - Substation inspections (WMP-GDOM-AI-06)
 - Grid monitoring systems (WMP-SA-02)
- a) For each of the initiatives listed above, please explain the reasoning behind the 2025 updated expenditure forecast.
 - b) Provide any available documentation that supports your response to part (a).
 - c) What are the cost uncertainties that resulted in a decrease in targets with an increase in 2025 expenditures for WMP-GDOM-GH-02?
 - d) For the increase in 2025 expenditures for tree-attachment removals (WMP-GDOM-GH-12a), provide historical spending data (at least the 5 most recent years) to support the forecasted 2025 expenditures.
 - e) For the increase in 2025 expenditures for detailed inspections of distribution electric lines

and equipment (WMP-GDOM-AI-01), please provide historical spending data (at least the 5 most recent years) to support the forecasted 2025 expenditures.

- f) Please explain the causes of increased labor costs for detailed inspections of distribution electric lines and equipment (WMP-GDOM-AI-01)
- g) Provide historical data (at least the 5 most recent years) on labor costs for detailed inspections of distribution electric lines and equipment (WMP-GDOM-AI-01), and compare the historical data to the current labor costs estimates.
- h) For the increase in 2025 expenditures for patrol inspections of distribution electric lines and equipment (WMP-GDOM-AI-03), please provide historical spending data (at least the 5 most recent years) to support the forecasted 2025 expenditures.
- i) Please explain the causes of increased labor costs for patrol inspections of distribution electric lines and equipment (WMP-GDOM-AI-03)
- j) Provide historical data (at least the 5 most recent years) on labor costs for patrol inspections of distribution electric lines and equipment (WMP-GDOM-AI-03) and compare the historical data to the current labor costs estimates.
- k) For the increase in 2025 expenditures for substation inspections (WMP-GDOM-AI-06), please provide historical spending data (at least the 5 most recent years) to support the forecasted 2025 expenditures.
- l) For the increase in 2025 expenditures for grid monitoring systems (WMP-SA-02), please describe what new experience or data supports an increase in 2025 expenditures.

Response to Question 5:

- a) Refer to supporting materials: DR01 – Question 5
- b) Refer to supporting materials: DR01 – Question 5
- c) Liberty rescoped the Rule 20 Tahoe Vista project in 2023. Based on RFPs conducted in 2023, civil contractor costs increased significantly. The original scope also included directional boring, which resulted in higher than expected costs and subsequently was removed from the project scope, resulting in decreased mileage.
- d) WMP-GDOM-GH-12a actual spend (\$ thousands):

2020	2021	2022	2023
\$1,358	\$597	\$989	\$899

- e) Liberty does not have historical asset inspection costs at the WMP initiative level.
- f) Labor costs are projected to increase due to factors such rate increase agreements.
- g) Liberty does not have historical asset inspection costs at the WMP initiative level.
- h) Liberty does not have historical asset inspection costs at the WMP initiative level.

- i) Labor costs are projected to increase due to factors such as rate increase agreements.
- j) Liberty does not have historical asset inspection costs at the WMP initiative level.
- k) Liberty does not have historical asset inspection costs at the WMP initiative level.
- l) Liberty plans to implement its SRP program on seven additional circuits in 2025. Liberty re-allocated costs from WMP-GDOM-GH-06 to WMP-SA-02 in its updated 2025 WMP forecast. The updated cost forecast is based on the cost of fault indicators associated with implementing Liberty's SRP program and the inclusion of a UNR fault analysis study.

Question 6:

Liberty states on p. 35 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-11: Quality Assurance/Quality Control (QA/QC) sample size and pass rates: "Liberty has established an asset inspection QA/QC target of 90% for 2024 and 2025."

- a) Please describe the QA/QC audit process for asset inspections.
- b) Please provide Liberty's internal protocols, procedures, or checklists regarding the QA/QC audit process for asset inspections.
- c) Will Liberty conduct field audits of each inspector's work to validate the results of an asset inspection?
- d) If the answer to part (c) above is yes, who will conduct the field audits (e.g., a supervisor, a peer inspector, or a contractor) and when will the field audits occur (e.g., the same day, within 30 days, or on some other schedule)?
- e) If the answer to part (c) above is yes, what percentage of inspections would be validated?
- f) Has Liberty established a percentage of QA/QC asset inspections that will be further audited?

Response to Question 6:

- a) Liberty describes its WMP QA/QC process for asset inspections in Section 8.16 of its Updated 2023-2025 WMP.
- b) Refer to supporting materials: DR01 – Question 6b
- c) Liberty's QA/QC of detailed inspections is a random sample, so it is not specific to inspectors.
- d) N/A
- e) N/A
- f) No.

Question 7:

Liberty states on p. 35 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-13: Lightning arrester replacement:

Regarding the currently installed non-exempt arresters, Liberty's asset tracking application will be utilized to identify and track arresters in the field. When an exempt arrester is selected, Liberty will use the asset tracking application for project tracking.

- a) Has Liberty completed the development of the "asset tracking application"?
- b) If the answer to part (a) above is no, when will Liberty complete the development of the "asset tracking application"?
- c) How many non-exempt arresters are currently in place across Liberty's service territory?
- d) Does Liberty have plans to replace all non-exempt arresters currently in place across Liberty's service territory?
- e) How many non-exempt arresters will be replaced in 2024?
- f) How many non-exempt arresters will be replaced in 2025?

Response to Question 7:

- a) No.
- b) The timeline for finalizing the development of arresters in Liberty's asset tracking application is not determined at this time.
- c) Liberty does not have this information at this time.
- d) No.
- e) Not determined.
- f) Not determined.

Question 8:

Liberty states on p. 36-37 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-15: Reliability impacts of SRP:

Liberty plans to implement its SRP program on 15 circuits in 2024 and seven circuits in 2025, which will result in 67.45% of Liberty's primary distribution conductor being covered by SRP by the end of 2025..... Based on an analysis of historical weather data for the system, Liberty estimates approximately 10-12 days per year when SRP will be enabled.

- a) How did Liberty determine that the 22 circuits that will have SRP implemented (15 in 2024 and seven in 2025) would result in a 67.45% coverage of Liberty's primary distribution conductors? Please show your calculations or provide workpapers.
- b) When Liberty implements SRP on the 15 circuits in 2024, what is the total percentage of coverage that Liberty will achieve on the primary distribution conductors?

- c) When Liberty implements SRP on the seven circuits in 2025, what is the total percentage of coverage that Liberty will achieve on the primary distribution conductors?
- d) Does Liberty plan on implementing SRP across all of Liberty's primary distribution conductors?
- e) If the answer to part (d) above is no, what is the estimated percentage of coverage that Liberty will achieve?
- f) If the answer to part (d) above is yes, when will Liberty achieve its goal of full coverage across all of Liberty's primary distribution conductors?
- g) Please provide the historical weather data used by Liberty to estimate that SRP will be enabled approximately 10-12 days per year.

Response to Question 8:

- a) Refer to supporting materials: DR01 – Question 8 and 9
- b) Refer to supporting materials: DR01 – Question 8 and 9
- c) Refer to supporting materials: DR01 – Question 8 and 9
- d) Yes.
- e) N/A
- f) Liberty plans to implement SRP across all of Liberty's primary distribution conductors during the 2026-2028 WMP cycle.
- g) The origin of the 10-12 days estimate comes from SFDI rating definition, which is "severe" at 97th percentile or above, i.e. 3% of days of the year. $365 \text{ days} * 3\% = 11 \text{ days}$, which was broadened to 10-12 days.

Question 9:

Liberty states on p. 36-37 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-15: Reliability impacts of SRP:

Liberty plans to implement its SRP program on 15 circuits in 2024 and seven circuits in 2025, which will result in 67.45% of Liberty's primary distribution conductor being covered by SRP by the end of 2025..... Based on an analysis of historical weather data for the system, Liberty estimates approximately 10-12 days per year when SRP will be enabled.

Please provide a list of the 22 circuits that have been identified for SRP implementation, with the following information about each circuit:

- a) Circuit ID number
- b) Circuit-segment name or ID number (if the projected SRP switch affects more than one-circuit segment, please identify each one)

- c) Year of planned implementation (2024 or 2025)
- d) How many SRP switches will be implemented across the circuit
- e) The expected or actual start date of the project
- f) The expected completion date of the project
- g) Length (in circuit miles) of each project

Response to Question 9:

- a) Refer to supporting materials: DR01 – Question 8 and 9
- b) N/A
- c) Refer to supporting materials: DR01 – Question 8 and 9
- d) Refer to supporting materials: DR01 – Question 8 and 9
- e) Refer to supporting materials: DR01 – Question 8 and 9
- f) Refer to supporting materials: DR01 – Question 8 and 9
- g) Refer to supporting materials: DR01 – Question 8 and 9

Question 10:

Liberty states on pp. 40-41 of its 2025 WMP Update, in response to Area of Continued Improvement LU-23-20: Early detection of Ignitions with HD Cameras, that “University of Nevada Reno (UNR) is performing a view shed analysis to propose locations of existing cameras for Liberty to adopt or potentially install new cameras where current coverage is lacking for the service territory.”

- a) When does Liberty expect that UNR will complete the view shed analysis?
- b) Has Liberty developed any policy or procedures related to the implementation and maintenance of the HD wildfire cameras?
- c) If the answer to part (b) above is yes, please provide Liberty’s policy and procedures for the implementation and maintenance of the HD wildfire cameras.
- d) Does Liberty know of any HD cameras (or cameras of similar function) within its service territory that it does not own?
- e) Does Liberty have access to any HD cameras (or cameras of similar function) within its service territory that it does not own?
- f) If the answer to part (e) above is yes, please list the HD cameras or cameras of similar function that are within Liberty’s service territory including:
 - i. Whom the cameras belong to
 - ii. The camera’s or cameras’ location

iii. How Liberty has gained access to footage from the cameras

Response to Question 10:

- a) UNR has completed the viewshed analysis and shared relevant results with Liberty on July 15, 2024.
- b) Liberty is currently reviewing the proposal and budget from UNR for set-up of new cameras within the service territory and maintenance of existing cameras that lack sustainable funding. New cameras are being proposed in areas that were missing coverage in the viewshed analysis done by UNR. Liberty has not yet entered into a contract with UNR for these cameras and does not have any existing policy or procedures related to the implementation and maintenance of the HD wildfire cameras.
- c) N/A
- d) Yes. There are currently 22 fire detection cameras that cover areas within Liberty’s service territory. These cameras are available through the ALERTWildfire Program that is a consortium between UNR and University of Oregon.
- e) Yes, similar to the previous answer, these cameras are publicly viewable through alertwildfire.org.
- f) Fire Cameras that cover Liberty’s Service Territory:

Camera Name	Camera Ownership	Camera Location	Liberty Access
Babbitt Peak	AlertWildfire	Babbitt Peak, CA	Publicly available through alertwildfire.org
Peavine Peak	AlertWildfire	Peavine Peak, NV	Publicly available through alertwildfire.org
Chimney Peak	AlertWildfire, sponsored by NV Energy	Chimney Peak, NV	Publicly available through alertwildfire.org
Sage Hen	AlertWildfire	Sagehen Creek Field Station, 11 miles NW of Truckee, CA	Publicly available through alertwildfire.org
Tahoe Donner	AlertWildfire, sponsored by Tahoe Prosperity Center	Truckee, CA about 600 meters west of Ski Slope Way in Tahoe Donner	Publicly available through alertwildfire.org
Martis Peak	AlertWildfire, sponsored by Tahoe Prosperity Center	Truckee, CA at the Martis Peak Fire Outlook	Publicly available through alertwildfire.org
Slide Mountain	AlertWildfire	Slide Mountain, NV atop Mt. Rose Ski Area	Publicly available through alertwildfire.org
Diamond Peak	AlertWildfire, sponsored by Tahoe Prosperity Center	Lodge at Diamond Peak Ski Area, Incline Village, NV	Publicly available through alertwildfire.org

Camera Name	Camera Ownership	Camera Location	Liberty Access
Little Valley	AlertWildfire, sponsored by US Forest Service	East of Diamond Peak Ski Resort and West of Washoe Lake, Washoe County, NV	Publicly available through alertwildfire.org
Dollar Point	AlertWildfire	1.5 km north of North Tahoe High School, Tahoe City, CA	Publicly available through alertwildfire.org
Snow Valley Peak	AlertWildfire	Snow Valley Peak, NV	Publicly available through alertwildfire.org
Alpine Meadows	AlertWildfire, sponsored by Tahoe Prosperity Center	West end of Ward Canyon, Tahoe City, CA	Publicly available through alertwildfire.org
Siberia	AlertWildfire, sponsored by Tahoe Prosperity Center	Weather station at top of Siberia Chairlift, Olympic Valley, CA	Publicly available through alertwildfire.org
Homewood Ski Area	AlertWildfire, sponsored by US Forest Service	Near top of Madden Chairlift, Homewood, CA	Publicly available through alertwildfire.org
D.L. Bliss State Park	AlertWildfire, sponsored by Tahoe Prosperity Center	D.L. Bliss State Park, 60 meters west of CA HWY 89, 1km south of park entrance	Publicly available through alertwildfire.org
Zephyr	AlertWildfire, sponsored by Tahoe Prosperity Center	Zephyr Cove, NV, approximately 0.5km east of George Whittell High School	Publicly available through alertwildfire.org
Edgewood Tahoe Resort	AlertWildfire, sponsored by Tahoe Prosperity Center	Edgewood Tahoe Resort, Stateline, NV	Publicly available through alertwildfire.org
Ridge Tahoe	AlertWildfire, Sponsored by NV Energy	Tahoe Ridge Resort, Stateline, NV	Publicly available through alertwildfire.org
Heavenly Ski Area	AlertWildfire, sponsored by US Forest Service	Heavenly Ski Resort, near Lakeview Lodge, South Lake Tahoe, CA	Publicly available through alertwildfire.org
Fallen Leaf Lake	AlertWildfire, sponsored by Tahoe Prosperity Center	Fallen Leaf Lake Store, South Lake Tahoe, CA	Publicly available through alertwildfire.org
Sierra at Tahoe	AlertWildfire, sponsored by US Forest Service	360 Smokehouse at Sierra at Tahoe, Twin Bridges, CA	Publicly available through alertwildfire.org

Camera Name	Camera Ownership	Camera Location	Liberty Access
Hawkins Peak	AlertWildfire, sponsored by PGE	Hawkins Peak, CA	Publicly available through alertwildfire.org