Liberty
933 Eloise Avenue
South Lake Tahoe, CA 96150
Tel: 800-782-2506
Fax: 530-544-4811

July 12, 2023

DATA REQUEST RESPONSE

LIBERTY UTILITIES (LIBERTY)

Data Request No.:	OEIS-P-WMP_2023-LU-001
Requesting Party:	Office of Energy Infrastructure Safety
Originator:	Nathan Poon Nathan.Poon@energysafety.ca.gov
Cc:	Nicole Dunlap Nicole.Dunlap@energysafety.ca.gov Jorge Luna Jorge.Luna@energysafety.ca.gov Andie Biggs Andie.Biggs@energysafety.ca.gov Jeff Fuentes Jeff.Fuentes@fire.ca.gov
Subjects:	Q01. Regarding Weather Station Standards and Locations Q02. Regarding Fuel Moisture Sampling Q03. Regarding Expulsion Fuse Replacements Q04. Regarding QA/QC for Asset Inspections Q05. Regarding Open Work Orders Q06. Regarding Fast Trip Settings Q07. Regarding AlertWildfire Cameras Sponsorship
Date Received:	July 7, 2023
Due Date:	July 12, 2023

Q01. Regarding Weather Station Standards and Locations:

a. Liberty states in section 8.3.2.1 of its WMP (p. 243): "…weather station network currently consists of 35 stations that are distributed throughout the service territory and plans to add an additional four stations in 2023. In addition to Liberty's weather stations, there are dozens more RAWS and NWS weather stations within the service territory that are monitored through the MesoWest network".

   i. Provide the installation and equipment standard that all Liberty weather stations are installed to, including height from ground, direction of cross-arm, and which side of the pole/tower they are installed on.

   ii. Provide the total number of stations that were serviced annually over the past three years, and the maintenance preformed on each station.

   iii. Provide the total number of stations not serviced annually over the past three years.

   iv. Provide the estimated life span of each sensor and the replacement cycle for each.

   v. Provide the total number of repair requests initiated, per year, over the past three years. Include the time duration from initiation to completion of repair.

   vi. Provide the number of times per day Liberty is collecting weather data for use in its decision-making processes and situational awareness.

   vii. Provide either a map or table showing the locations of all weather stations currently being used by Liberty for its situational awareness and the location of the four weather stations that will be installed in 2023. Include all weather stations owned by outside entities that Liberty uses for its situational awareness.

Response to Q01.:

i. Standards including the height from ground and side of pole for installation are based on existing equipment that occupy the pole as well as bucket truck accessibility. Additional installation guidelines are provided in supporting materials: "Attachment Q01.i._LibertyWeather Station Installation Guide."

ii. None.

iii. 2020: 10; 2021: 29; 2022: 29.

iv. Refer to supporting materials: "Attachment Q01.iv._LIB-Parts-Lifespan-Warranty."

v. None.

vi. Liberty continuously collects weather data and compares observations to forecast in real time. Refer to: https://tahoefireweather.com/actuals/. The number of observations per hour depends on the type of station (*e.g.,* utility stations report every 10 minutes, RAWS report every 60 minutes, etc.).

vii. Refer to:
- https://liberty.westernweathergroup.com/
- Supporting materials: "Attachment Q01.vii._Liberty Weather Station Locations"
- Supporting materials; "Attachment Q01.vii_Future Liberty Weather Station Locations"

Q02. Regarding Fuel Moisture Sampling:

a. Liberty states in section 8.3.2.1 of its WMP (p. 243): "In 2022, fuel moisture sampling was conducted on a weekly basis and will continue during the 2023 fire season."

i. Provide a map of the Live Fuel Moisture (LFM) and Dead Fuel Moisture (DFM) sampling sites, including any sites used that are being collected by other entities (CAL FIRE, USFS, BLM, etc.).

ii. Provide a list of the vegetation types being sampled at each location.

iii. Does Liberty use the National Fuel Moisture Database for any additional fuel moisture data and/or to house its collected data?

iv. Will Liberty continue to conduct fuel moisture sampling after the 2023 season?

1. If no, explain why.

Response to Q02.:

i. Refer to: https://fuelmoisture.com
ii. Vegetation types:
- Sagebrush at Meyers and Topaz (CA)
- Manzanita at Ward Creek and Burton Creek (CA)
- Sagebrush at Verdi (NV)

iii. No, the national fuel moisture database is no longer maintained.
iv. Yes

Q03. Regarding Expulsion Fuse Replacements:

a. On page 167 of Liberty's 2023 WMP, Liberty states:

"At the end of 2022, Liberty became aware that one of the current-limiting fuse options on the market was experiencing failures in the field. Liberty halted expulsion fuse replacements because these current-limiting fuses failed to provide ignition risk reduction."

i. Provide the number of failures Liberty experienced with this current-limiting fuse.

ii. Provide the number of ignitions associated with this current-limiting fuse that Liberty has experienced, broken down by year, if applicable.

b. On page 167 of Liberty's 2023 WMP, Liberty states:

"The current-limiting fuse vendor suggested that no more fuses should be installed, and any that were installed needed to be continuously checked to confirm they did not have any air gaps that would lead to excessive heat buildup."

i. Provide Liberty's current process for performing such continuous checks.

ii. Provide Liberty's plans to reduce ignition risk relating to current-limiting fuses that have been installed.

iii. Provide the number of such current-limiting fuses Liberty has installed within its territory, as well as the number of fuses installed by year since 2018.

c. On page 167 of Liberty's 2023 WMP, Liberty states:

"In collaboration with other utilities and experts in the field, Liberty determined that removing this particular current-limiting fuse altogether and replacing it with a traditional expulsion fuse—along with adding overreaching sensitive relay profiles to prevent the likelihood of the expulsion fuses operating, grubbing the poles, and clearing vegetation around the expulsion fuses—will reduce ignition risk more than keeping the current-limiting fuses in place."

i. Describe Liberty's plans and targets for performing such removals and replacements of the current-limiting fuse, including details on the fuses being used in the replacements.

ii. What other options has Liberty evaluated for replacements of expulsion fuses? Why is Liberty not pursuing such options?

iii. Describe the collaboration Liberty has performed with other utilities and experts, including a list of such participants and Liberty's lessons learned.

Response to Q03.:

a.

i. Liberty experienced four documented failures.

ii. Liberty has experienced no ignitions associated with these fuses.

b.

i. The language quoted in this question was incorrectly stated in Liberty's 2023 WMP. The words "continuously checked" were an error and should have been "continuity-checked."

ii. Liberty plans to replace the fuses with ELF non-expulsion fuses.

iii.

	2018	2019	2020	2021	2022
Fuses Replaced	-	250	1150	557	1858

c.

i. Liberty plans to replace the fuses with ELF non-expulsion fuses. Liberty will work to remove and replace as many fuses as possible throughout 2023 and will conduct work in conjunction with pole repairs and replacements when possible.

ii. Liberty conducted a search for alternative non-expulsion fuses working with vendors and industry experts. The ELF fuse was selected as the best solution.

iii. Liberty has reviewed non-expulsion fuse issues with San Diego Gas and Electric Company (SDG&E) and Pacific Gas and Electric Company (PG&E). After a thorough internal engineering review and collaboration call with PG&E's asset management team, Liberty decided to use the ELF fuses.

Q04. Regarding QA/QC for Asset Inspections:

a. On page 182 of Liberty's 2023 WMP, Liberty states: "Current pass rates and pass rate targets are not currently available. Pass rates and targets will be established and implemented for use during its 2023 QA/QC of inspections."

i. Has Liberty established these pass rates? If so, provide pass rates broken down by inspection type as applicable. If not, provide Liberty's expected timeline for establishment, and describe how Liberty plans to develop such pass rates.

Response to Q04.:

a.

i. No. Liberty expects it to take two years of program implementation and data collection to determine the appropriate metrics and scoring criteria to measure QA/QC program performance, including establishing an Acceptable Quality Level ("AQL") and Conformance Rate ("CR").

Q05. Regarding Open Work Orders:

a. In Table 8-11 of Liberty's 2023 WMP, Liberty shows a total of 390 overdue work orders in HFTD Tier 2 or 3, with 285 work orders 181+ days overdue.

i. Provide details as to why these work orders are overdue, including trends on cause for delay.

Response to Q05.:

a.

i. The main cause includes limited resources being diverted to respond to storm events instead of being directed toward GO 95 infractions. Liberty plans to continue to address its outstanding Level 2 repairs in 2023 and plans to bring on additional contract resources in Q3 and Q4 of 2023 in order to stay in compliance with GO timelines.

Q06. Regarding Fast Trip Settings:

a. On page 185 of Liberty's 2023 WMP, Liberty states "the use of fast trip settings will have an impact on system reliability." What, if any, reliability impacts has Liberty observed from use of fast trip settings so far? This should include data on the following:

i. Number of outages that occurred while fast trip settings were enabled.

ii. Number of customers affected by such outages.

iii. Duration of outages that occurred while fast trip settings were enabled.

iv. Customer interruption minutes associated with such outages.

b. How is Liberty working to reduce reliability impacts from fast trip settings moving forward?

c. What percentage of Liberty's territory is currently included in its fast trip program?

d. What percentage of Liberty's territory will be included in the expansion of its fast trip program through the inclusion of the 12 additional feeders?

e. On page 185 of Liberty's 2023 WMP, Liberty states that "Liberty management will take all pertinent data into consideration before implementing a settings change for wildfire mitigation with the understanding of the possible effects on reliability to its customers." List the data that Liberty takes into consideration.

f. Provide data on the number of times fast trip settings were enabled in 2022. This should include:

i. Number of devices with fast trip setting capabilities.

ii. Number of days fast trip settings were enabled.

iii. Number of times fast trip settings were enabled.

iv. Duration of enablement.

Response to Q06.:

a. Refer to supporting materials: "Attachment Q06.a. and Q06.f._Liberty Fast Trip Data."
b. Liberty is planning to implement sensitive relay profile (SRP) settings that are designed to not cause nuisance trips but will trip as needed to provide protection. Settings will be staged to minimize portions of circuits that will be de-energized. In addition, Liberty will be adding fault indicators on circuits with SRP settings in order to aide in quickly locating faults and restoring power.
c. The percentage of Liberty's system with fast trip capabilities is three percent.
d. The percentage of Liberty's system with planned fast trip capabilities is 18 percent.
e. Liberty will utilize its weather consultant, Reax, to monitor forecast and real-time weather conditions, just like a PSPS scenario. Weather data that Reax monitors includes wind speed, wind gusts, relative humidity, FFW index, ERC, fuel moisture samples, and Red Flag Warning days. Liberty also collaborated with University of Nevada, Reno PhD Electrical Engineering program and other California utilities to help develop the settings. Settings changes will be implemented at thresholds below those of a PSPS.
f. Refer to supporting materials: "Attachment Q06.a. and Q06.f._Liberty Fast Trip Data."

Q07. AlertWildfire Cameras Sponsorship:

a. In Liberty's 2023 WMP (pp. 265-266), Liberty states it intends to sponsor and support eight HD Cameras within its territory in 2023. Liberty stated it is finalizing the partnership for the eight cameras prior the fire season in both its 2021 (p. 83) and 2022 (p. 107) WMP submissions.

    i. Provide an overview of the process involved in adopting/partnering/sponsoring of these eight cameras.

    ii. Provide an explanation behind the delays in achieving the previous targeted goals for partnering/adopting/sponsoring of the eight HD Cameras, including specific challenges or obstacles that has led to the postponement.

    iii. Provide the locations of the eight targeted locations that Liberty plans to sponsor.

Response to Q07.:

a.

i. Liberty has partnered with the University of Nevada, Reno and the AlertWildfire camera network to bring eight cameras in the Lake Tahoe Basin as well as the ability to access other existing cameras within Liberty's service territory. The process has included discussions with AlertWildfire regarding the AlertWildfire annual operations services, scope of work, pricing and locations. The process has also included negotiating a service agreement for the targeted AlertWildfire cameras.

ii. Liberty has experienced challenges finalizing terms in the service agreement for the targeted AlertWildfire cameras, specifically the minimum insurance coverage requirement.

iii.

- D. L. Bliss State Park, CA
- Alpine Meadows CTC, CA
- Martis Peak, CA
- Slide Mtn, NV
- Diamond Peak, NV
- Zephyr Cove, NV
- Bald Mtn, NV
- Fallen Leaf Lake

If you have any questions or require any additional information, please contact me at:

Jordan Parrillo
Manager of Regulatory Affairs
Liberty Utilities (CalPeco Electric) LLC
701 National Ave,
Tahoe Vista, CA 96148
Telephone: 530-721-7818
jordan.parrillo@libertyutilities.com