

BEFORE THE OFFICE OF ENERGY INFRASTRUCTURE SAFETY

OEIS Docket: 2023 Wildfire Mitigation Plan
Annual Report on Compliance

Docket #2023-EC_ARC

**LIBERTY UTILITIES (CALPECO ELECTRIC) LLC'S (U 933-E) 2023 WILDFIRE
MITIGATION PLAN ANNUAL REPORT ON COMPLIANCE**

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Pursuant to Cal. Pub. Util. Code § 8386 and the Office of Energy Infrastructure Safety (“OEIS”) Resolution M-4860, Liberty Utilities (CalPeco Electric) LLC (“Liberty”) hereby files this Annual Report on Compliance (“ARC”) regarding Liberty’s 2023 Wildfire Mitigation Plan (“2023 WMP”). This ARC follows the guidance in Table 4 (Section 2) of the Wildfire Safety Division (“WSD”) Compliance Operational Protocols issued on February 16, 2021, associated with the California Public Utilities Commission (“CPUC”) Rulemaking (“R.”) 18-10-007.

I. ASSESSMENT OF LIBERTY’S 2023 WMP INITIATIVES

Guidance: Submit an assessment of whether Liberty met the risk reduction intent by implementing all of their approved WMP initiatives, i.e., the degree to which initiative activities have reduced ignition probabilities. If Liberty fails to achieve the intended risk reduction, EC shall provide a detailed explanation of why and a reference to where associated corrective actions are incorporated into their most recently submitted WMP.

A. Overall 2023 WMP

In accordance with Cal. Pub. Util. Code § 8386(a), Liberty constructs, maintains, and operates its electric system in a manner that minimizes the risk of catastrophic wildfire posed by its electric power lines and equipment. Liberty’s overarching WMP goal is to prevent and mitigate the risk of wildfires caused by utility equipment. In 2023, Liberty continued to identify ways to enhance its wildfire

prevention and mitigation efforts through enhancing or expanding existing programs and developing and implementing new programs. Liberty's overall progress in 2023 implementing its WMP met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences (with specific consideration to the impact on Access and Functional Needs ("AFN") populations and marginalized communities) of both wildfires and the mitigations employed to reduce them, including Public Safety Power Shutoff ("PSPS") events.

B. Risk Assessment

For Liberty's Risk Assessment, Liberty's progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them.

In 2023, Liberty and Direxyon Technologies began a proof of concept ("PoC") project to create a Risk Based-Decision Making ("RBDM") tool that would assist Liberty in planning mitigation work based on a model that includes wildfire risk, wildfire consequence, and other factors. Like its peer SMJUs, Liberty has also contracted Technosylva to statistically model key environmental data, both in support of Liberty's situational awareness activities and as inputs to the RBDM tool being developed with Direxyon.

Throughout 2023, Liberty worked with the Technosylva and Direxyon teams to scope and plan the necessary inputs and desired outputs of the RBDM tool. Liberty is utilizing outputs of Technosylva's FireSight product. Formerly named the Wildfire Risk Reduction Model ("WRRM"), FireSight is a tool used to measure the current level of risk of overhead utility equipment ignition under specific weather conditions, and the consequence if there was an ignition. FireSight incorporates terrain, weather, population, and other input data to highlight risky areas of Liberty's service territory. These datasets form the basis for additional modeling to be performed by Liberty given the Probability of Fire ("PoF") and Probability of Ignition ("PoI") indicated by FireSight.

Work on the PoC project in 2023 was initially limited to analyzing electrical poles only, with the goal of calculating individual asset risk and risk reduction metrics for pole replacement and repair activities. Liberty will continue to work with Direxyon to analyze the outputs of Technosylva's FireSight modeling, as well as Liberty data such as asset or mitigation type, budget constraints, and labor constraints for deploying each mitigation added to the model. Direxyon's tool takes these inputs and uses algorithms and logic to produce metrics and suggestions that support risk-based operational decision-making. After first proving out in 2023 a way to measure reductions to in-service risk and fire risk based on pole-related mitigation activities, Liberty will continue to make additions and improvements from 2024 onward, adding models for fuses overhead conductor, and vegetation management activities. These models will calculate not only current risk given attributes like equipment age and asset status, but also the model's perceived risk that Liberty would be able reduce through different projects or at distinct locations in its service territory

Liberty continued to utilize modeling outputs from its first-generation wildfire risk model in discussions and planning processes related to WMP initiatives. Additionally, Liberty continued to collect data (*i.e.*, pole risk, vegetation risk, grid hardening mitigations) to update its risk modeling and assessment. Liberty also participates in the Joint IOU Wildfire Risk Modeling Working Group to understand applicable modeling information and approaches among its peer utilities in California.

C. Grid Design, Operations and Maintenance

i. Grid Design and System Hardening

For Grid Design and System Hardening WMP initiatives, Liberty's progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them. In 2023, Liberty:

- Installed 5.7 miles of covered conductor (“CC”) projects. Liberty had initially targeted 2.41 miles of CC in 2023. In response to the OEIS Revision Notice issued on September 6, 2023, Liberty revised its CC target to 5.7 miles.
- Completed 9.2 miles of traditional overhead hardening, exceeding its target of 4 miles.
- Replaced 292 poles out of its target of 200 poles within its WMP pole replacement initiative, most of which were identified as G.O. 165 Level 2 replacements in the system-wide survey that Liberty completed in 2020.
- Completed 0.1 miles of targeted 1.4 miles of undergrounding. Liberty was unable to find a civil contractor that would meet the budget for the project in 2023. Liberty is currently working with Placer County, CalTrans, and Civil Contractors to replan the project scope and work through permitting and traffic control issues.
- Replaced 4,122 expulsion fuses. Liberty’s target for 2023 was initially not determined because 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 spent Quarter 1 of 2023 determining which non-expulsion fuse product to pursue and then searched for a supplier to procure enough ELFs to replace the fault tamers in 2023. Liberty then established a target to replace approximately 3,800 fault tamers with ELFs throughout the remainder of 2023, and included this target in its response to the OEIS Revision Notice issued on September 6, 2023.
- Installed five of eight targeted automatic reclosers. Liberty’s 2023 target for automatic reclosers was an estimation of the number of reclosers that would be established as part of Liberty’s initial SRP program targeted for 10 circuits. After completion of an SRP study conducted by the University of Nevada at Reno (“UNR”) for Liberty in 2023, and

evaluation of the study recommendations by Liberty's operations teams, it was determined that there is not value beyond five reclosers for the initial SRP program.

- Completed 37 of its targeted 60 tree attachment removals. Liberty was unable to complete the tree attachments due to delays in getting customer easements signed. Liberty has been working on a process to help streamline the process that typically requires a pole to be set on private property near the tree attachment being removed, and thus requires significant effort to locate the property owner, agree on a pole location, draft the easement, and receive signature with notary by the property owner.
- Installed four animal guards at substations out of its target of four animal guards. This initiative focuses on animal guarding exposed substation equipment with "green jackets," which are custom-made insulating green jackets that are field verified at each substation and then installed. Once installed, the green jackets eliminate exposed parts on equipment, which reduces ignition risk caused by animal or other object contact.
- Replaced 4.4 miles of open wire/grey wire, exceeding its target of 2.5 miles.

ii. Asset Management and Inspections

For Asset Management and Inspections WMP initiatives, Liberty's progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them.

Liberty continued to work on repairs found during its 2020 full system survey, prioritizing repairs by General Order ("G.O.") 95 level and wildfire risk, where applicable. Liberty completed the following work in 2023:

- 181 miles of detailed asset inspections. Liberty initially established a target of 156.4 miles for detailed inspections in 2023. Liberty then reduced halted detailed asset

inspections in 2023, shifting resources toward responding to and closing out open work orders from asset inspections while remaining in compliance with G.O. requirements. However, subsequent to the OEIS Revision Notice issued on September 6, 2023, Liberty completed 181 miles of detailed asset inspections.

- 702 miles of patrol inspections out of its target of 702 miles.
- 2,975 intrusive pole inspections out of its target of 2,867.
- 0.1 miles of drone infrared asset inspections as part of a pilot program in the other discretionary asset inspections WMP initiative.
- QA/QC on 12% of its detailed asset inspections out of its target of 12%.
- 44 substation inspections out of its target of 42

D. Vegetation Management and Inspections

For Vegetation Management (“VM”) and Inspections WMP initiatives, Liberty’s progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them. Liberty’s key achievements in 2023 include:

- Performed VM pole clearing on 4,957 poles, exceeding its target of 4,900 poles.
- Completed wood and slash management on 625 acres, exceeding its target of 280 acres.
- Completed 22 substation defensible space treatments, exceeding its target of 12 substations.
- Completed 702 miles of VM clearance, exceeding its target of 671 miles.
- Completed 303 miles of VM fall-in mitigation, exceeding its target of 220 miles.
- Completed 236 miles of detailed VM inspections, exceeding its target of 220 miles.

- Completed 78 miles of VM patrol inspections. Liberty did not establish a target for VM patrol inspections in 2023, as the need for patrol inspections can shift depending on identified risks such as increased risk posed by a high amount of tree mortality throughout the service territory.
- Completed 702 miles of VM LiDAR inspections, exceeding its target of 700 miles.
- Completed 300 miles of QA/QC for its VM inspections out of its target of 229 miles

E. Situational Awareness and Forecasting

For Situational Awareness and Forecasting WMP initiatives, Liberty’s progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them. Specifically:

- In 2023, Liberty continued to utilize its Fire Potential Index (“FPI”) daily during fire season to determine forecasted fire weather conditions. The FPI has been incorporated into Liberty's Fire Prevention Plan (“FPP”), which includes operating protocols for each FPI rating that are followed by field crews daily. Liberty’s FPI converts environmental, statistical, and scientific data into an easily understood forecast of short-term fire threat for Liberty’s service territory. The FPI provides a seven-day fire risk condition forecast for 11 geographic zones within Liberty’s service territory. FPI condition forecasts include five risk conditions (Low, Moderate, High, Very High, and Extreme) that are used to determine operating procedures, by zone, depending on the forecast fire risk. FPI condition forecasts are communicated to field staff daily to inform operational decisions when work restrictions are in place due to fire risk. This forecasting granularity provides a better understanding of the overall fire risk throughout the service area and allows for better decision-making in scheduling work by zone.

- Liberty’s weather monitoring program provides information to operations and allows for the safe operation of the electric grid during extreme weather events. Certain weather events can cause damage to the electrical system, which leads to the possibility of an ignition event. Real-time weather monitoring data is an important tool to help Liberty plan for operating activities during such extreme events. Liberty installed five additional weather stations in 2023. Liberty’s weather station network currently consists of 39 stations that are distributed throughout the service territory. In addition to Liberty’s weather stations, there are more RAWS and NWS weather stations within the service territory that are monitored through the MesoWest network.
- Liberty did not install fault indicators as targeted in 2023. Liberty planned to install fault indicators in conjunction with the implementation of its initial Sensitive Relay Profile (“SRP”) program targeted for 10 circuits. Liberty is working to implement SRP settings in Quarter 2 of 2024.

F. Emergency Planning and Preparedness

For Emergency Planning and Preparedness WMP initiatives, Liberty’s progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them. In 2023, Liberty:

- Held its Incident Command System (“ICS”) Training and Public Safety Power Shutoff (“PSPS”) Table-Top Exercise on May 25, 2023, and its PSPS Functional Exercise with Public Safety Partners (“PSPs”) on June 22, 2023. Both exercises included enhanced documentation and use of lessons learned.
- Conducted ICS training for Liberty’s Incident Management Team personnel, including FEMA ICS 100 and ICS 200.

- Continued maintenance of its emergency response plans.
- Continued development and implementation of its Access and Functional Needs (“AFN”) Plan. Liberty submitted its 2024 AFN Plan to the CPUC on January 31, 2024.
- Participated in Community Advisory Boards and meetings with various community leaders or PSPs to share information on Liberty’s wildfire mitigation, PSPS preparedness, and community outreach efforts. Community participation has included participation in Cal FIRE Cooperators Meetings, Local Community Emergency Response Team (“CERT”) meetings, participation in local and Regional Wildfire Safety Expos, the El Dorado County Hazard Mitigation Planning Committee, the Lake Tahoe Summit, the Palisades Tahoe Planning Group, Fire Safe Sierra County Meetings, City of South Lake Tahoe/Eldorado County Winter Storm Exercise, the City of Truckee Exercises, and the Nevada County Wildfire Stakeholders Quarterly Meetings.

G. Stakeholder Cooperation and Community Engagement

For Stakeholder Cooperation and Community Engagement WMP initiatives, Liberty’s progress in 2023 met the risk reduction intent of its 2023 WMP to reduce ignition probabilities and minimize the societal consequences of both wildfires and mitigations employed to reduce them. In 2023, Liberty:

- Continued its advertising and awareness campaign, including consistent messages specific to assistance programs, wildfire mitigation, and PSPS preparation and awareness. This included 145 emails, website updates, and social media posts throughout the year, covering topics such as emergency update procedures, reminders to update contact information, and essential PSPS readiness information. As part of this effort, direct mail and bill inserts were also sent out to customers for targeted AFN and Low-Income program outreach.

- Hosted or attended 90 in person, virtual, and hybrid events associated with its WMP, covering a range of topics such as PSPS preparedness, community engagement, and AFN outreach. This also included Community Resource Center training, PSPS exercises, and delivery of shelf-stable food boxes to AFN populations. Whenever possible, Liberty takes advantage of in person events to share information with customers and public safety partners about PSPS and Liberty's available assistance programs.
- 10 sets of print or digital advertisements on topics such as AFN outreach, low-income programs, and PSPS education.
- Continued development and implementation of its AFN Plan. Liberty submitted its 2024 AFN Plan to the CPUC on January 31, 2024.
- Continued additional engagement with CBOs and PSPs. These engagements are essential to preparing customers and stakeholders for potential PSPS and wildfire events.

II. 2023 WMP CHANGE ORDERS AND OTHER OPERATIONAL CHANGES

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

A. Change Orders

Liberty did not file any change orders in 2023 for its 2023 WMP.

B. Operational Changes

Liberty did not make any operational changes in 2023 related to its 2023 WMP.

III. 2023 WMP INITIATIVE SPEND

Guidance: Submit descriptions of all planned WMP initiative spend vs. actual WMP initiative spend and an explanation of any differentials between the planned and actual spends.

A. Planned 2023 WMP Initiative Spend vs. Actual 2023 WMP Initiative Spend

Table 1: Planned 2023 WMP Initiative Spend vs. Actual 2023 WMP Initiative Spend

2023 WMP Initiative #	Initiative Activity	Planned 2023 Spend (\$)	Actual 2023 Spend (\$)	Explanation of Differential (variance greater than 20%)
WMP-GDOM-GH-01	Covered conductor installation	3,284,760	10,787,714	In its initial 2023 WMP submission, Liberty had a lower CC target (2.41 miles vs. 5.7 miles) and projected budget.
WMP-GDOM-GH-02	Undergrounding of electric lines and/or equipment	7,692,650	170,828	Liberty only completed 0.1 miles of targeted 1.4 miles due to project rescopeing.
WMP-GDOM-GH-03	Distribution pole replacements and reinforcements	10,970,194	16,591,807	Liberty targeted 200 pole replacements as part of this WMP initiative and completed 292 pole replacements.
WMP-GDOM-GH-04	Transmission pole/tower replacements and reinforcements	-	-	-
WMP-GDOM-GH-05	Traditional overhead hardening	4,961,889	4,227,502	-
WMP-GDOM-GH-06	Emerging grid hardening technology installations and pilot progress	150,000	5,319	No additional costs for DFA, DA, and HIFD as these pilot projects are being evaluated.
WMP-GDOM-GH-07	Microgrids	-	158,298	Design, geotech and survey costs to evaluate potential microgrid project.
WMP-GDOM-GH-08	Installation of system automation equipment	1,200,000	1,512,490	Higher than expected installation costs for automatic reclosers.
WMP-GDOM-GH-09	Line removal (in HFTD)	-	-	-
WMP-GDOM-GH-10	Other grid topology improvements to minimize risk of ignitions	-	-	-
WMP-GDOM-GH-11	Other grid topology improvements to mitigate or reduce PSPS events	-	-	-
WMP-GDOM-GH-12	Other technologies and systems not listed above:	-	-	-
WMP-GDOM-GH-12a	Tree attachment removals	701,112	898,669	Higher than expected costs for tree attachment removals.
WMP-GDOM-GH-12b	Expulsion fuse replacement	-	6,338,432	Liberty did not have an expulsion fuse target when establishing its 2023 WMP and thus did not forecast costs for this initiative.
WMP-GDOM-GH-12c	Animal guards / Avian Protection	40,000	262,589	Unexpected avian protection costs.

2023 WMP Initiative #	Initiative Activity	Planned 2023 Spend (\$)	Actual 2023 Spend (\$)	Explanation of Differential (variance greater than 20%)
WMP-GDOM-GH-12d	CalFIRE exempt hardware	-	-	-
WMP-GDOM-GH-12e	Open wire/grey wire	1,000,000	8,092,598	Liberty completed more open wire/grey wire than targeted and costs were higher than expected.
WMP-GDOM-GH-12f	Substation Equipment Replacement	-	-	-
WMP-GDOM-AI-01	Detailed inspections of distribution electric lines and equipment	20,000	58,744	Liberty completed additional detailed inspections vs. what was planned and captured costs from WMP-GDOM-AI-03.
WMP-GDOM-AI-02	Intrusive pole inspections	-	209,228	Liberty erroneously did not forecast intrusive pole inspection costs in 2023.
WMP-GDOM-AI-03	Patrol inspections of distribution electric lines and equipment	15,000	-	Patrol inspection costs captured in WMP-GDOM-AI-01.
WMP-GDOM-AI-04	Other discretionary inspections of distribution electric lines and equipment	1,000,000	84,977	Costs projected in this initiative were captured in other Grid Design, Operations and Maintenance initiatives.
WMP-GDOM-AI-05	Quality assurance / quality control of inspections	10,000	-	QA/QC costs were charged to the projects subject to QA/QC.
WMP-GDOM-AI-06	Substation inspections	10,000	-	Substation inspection costs captured in substation maintenance O&M account.
WMP-GDOM-MR-01	Equipment maintenance and repair	500,000	35,073	Forecasted maintenance costs not captured in this initiative.
WMP-GDOM-GO-01	Equipment settings to reduce wildfire risk	150,000	1,858	SRP related costs forecasted in this initiative are captured in WMP-SA-02.
WMP-GDOM-GO-02	Grid response procedures and notifications	-	-	
WMP-GDOM-GO-03	Personnel work procedures and training in conditions of elevated fire risk	283,894	4,682	Costs previously recorded in this initiative are now being recorded in initiatives related to Situational Awareness, Emergency Preparedness, and Community Outreach.
WMP-GDOM-GO-04	Automatic recloser operations	-	-	-
WMP-GDOM-GO-05	Asset Management and Inspection Enterprise System	-	-	-
WMP-VM-INSP-01	Vegetation Management Inspection Program - Detailed	789,820	982,788	Actual spend is higher than planned due to completing more inspections than planned and higher cost of inspections than forecasted.
WMP-VM-INSP-02	Vegetation Management Inspection Program - Patrol	250,000	432,026	Actual spend is higher than planned due to completing more inspections than planned

2023 WMP Initiative #	Initiative Activity	Planned 2023 Spend (\$)	Actual 2023 Spend (\$)	Explanation of Differential (variance greater than 20%)
				and higher cost of inspections than forecasted.
WMP-VM-INSP-03	Vegetation Management Inspection Program - LiDAR	700,000	376,904	Actual spend is less than projected due to an invoice from 2023 being posted in 2024.
WMP-VM-VFM-01	Pole Clearing	480,000	392,405	-
WMP-VM-VFM-02	Wood and Slash Management	1,500,000	998,223	Actual spend is less than projected due to invoices from 2023 being posted in 2024.
WMP-VM-VFM-03	Substation Defensible Space	20,000	33,056	Actual spend is higher than planned due to completing more treatments than planned.
WMP-VM-VFM-04	Fire-Resilient Right-of-Ways	255,000	775,890	Actual spend is higher than planned due to completing more work than planned.
WMP-VM-VFM-05	Clearance	886,900	1,360,525	Actual spend is higher than planned due to completing more miles than planned and higher cost of work than forecasted.
WMP-VM-VFM-06	Fall-In Mitigation	7,750,000	3,823,473	Actual spend is less than planned due to less work generated from inspections than forecasted.
WMP-VM-VFM-07	High-Risk Species	-	506,948	Actual spend is more than planned due to these costs being forecasted in the planned fall-in mitigation initiative.
WMP-VM-VFM-08	Emergency Response Vegetation Management	-	-	-
WMP-VM-ESG-01	Vegetation Management Enterprise System	406,005	353,287	-
WMP-VM-QAQC-01	Quality Assurance and Quality Control	500,000	440,198	-
N/A	Vegetation Management - Discretionary Inspections	-	-	-
WMP-SA-01	Environmental monitoring systems	-	216,573	Costs recorded in this initiative were projected in WMP-GDOM-GO-03.
WMP-SA-02	Grid monitoring systems	150,000	754,455	SRP costs projected in WMP-GDOM-GO-01 are captured in this initiative.
WMP-SA-03	Fire detection and alarm systems	-	-	-
WMP-SA-04	Weather forecasting	-	-	-
WMP-SA-05	Fire Potential Index	-	-	-
WMP-SA-06	Ignition likelihood calculation	1,154,340	881,804	Wildfire and PSPS risk modeling costs were lower than projected.
WMP-SA-07	Ignition consequence calculation	-	-	-
WMP-EP-01	Wildfire and PSPS emergency preparedness plan	-	8,984	Costs recorded in this initiative were projected in WMP-GDOM-GO-03.
WMP-EP-02	Collaboration and coordination with public safety partners	-	-	

2023 WMP Initiative #	Initiative Activity	Planned 2023 Spend (\$)	Actual 2023 Spend (\$)	Explanation of Differential (variance greater than 20%)
WMP-EP-03	Public notification and communication strategy	-	-	
WMP-EP-04	Preparedness and planning for service restoration	1,369,271	222,562	Costs that were projected in this initiative are not captured.
WMP-EP-05	Customer support in wildfire and PSPS emergencies	100,000	54,787	Lower than expected costs.
WMP-EP-06	Learning after wildfire and PSPS events	-	-	-
WMP-CO-01	Public outreach and education awareness for wildfires, PSPS, outages from protective equipment and device settings, and vegetation management	90,000	86,894	-
WMP-CO-02	Public engagement in WMP decision-making process	-	-	
WMP-CO-03	Engagement with AFN populations, local governments, and tribal communities	-	-	-
WMP-CO-04	Collaboration on local wildfire mitigation and planning	-	-	-
WMP-CO-05	Best practice sharing with other electrical corporations	-	-	-
2023 TOTAL		48,390,835	62,142,589	-

IV. 2023 WMP INITIATIVE IMPACT ON PSPS

Guidance: Submit a description of whether the implementation of WMP initiatives changed the threshold(s) for triggering a PSPS event and/or reduced the frequency, scale, scope and duration of PSPS events.

A. 2023 WMP Initiative Impact on PSPS Thresholds

Liberty’s PSPS thresholds are currently fixed and do not change based on initiative progress.

Liberty anticipates that, as these initiatives progress, more data can be used to evaluate wildfire risk reduction impacts. Liberty may find a different way to combine existing fire- and weather-based threshold modeling with initiative risk reduction.

B. WMP Initiative Impact on Frequency, Scale, Scope and Duration of PSPS Events

Most WMP initiatives generally support Liberty’s vision for mitigating PSPS events and customer impacts resulting from PSPS events. Specifically, the combination of covered conductor installations, resiliency corridors, and microgrids will reduce impacts and frequency of PSPS events and service interruptions. Liberty’s enhancements to its 2023 AFN Plan and continued use of its PSPS Operations and Communications Playbook will increase support to its customers and communities and are intended to mitigate the impact to customers in the event that Liberty does have to initiate a PSPS event.

In recent years, Liberty has taken steps to establish its PSPS program through the development of protocols, procedures, and the establishment of PSPS thresholds detailed throughout its 2023 WMP. The PSPS work over the last few years, in combination with an anticipated increase in fire weather events (*i.e.*, RFW, longer fire season, high winds, etc.), may lead to more frequent use of PSPS in the next 10 years. Therefore, the information presented in Table 2 below evaluates how implementation of Liberty’s 2023 WMP initiatives is anticipated to affect a given PSPS characteristic, rather than whether a PSPS characteristic will increase/decrease in the next 10 years.

Table 2: Anticipated Impact of 2023 WMP Initiatives on PSPS Event Characteristics

PSPS characteristic	Anticipated Impact of 2023 WMP Initiatives	Comments
Number of customers affected by PSPS events (total)	Decrease	A key objective for Liberty is to limit the number of customers impacted by PSPS events through various WMP initiatives. In time, grid hardening efforts such as covered conductor, microgrids, and the addition of sectionalizing devices will help to reduce the number of customers affected by PSPS.
Number of customers affected by PSPS events (normalized by fire weather, <i>e.g.</i> , Red Flag Warning line mile days)	Decrease	A key objective for Liberty is to limit the number of customers impacted by PSPS events through various WMP initiatives. In time, grid hardening efforts such as covered conductor, microgrids, and the addition of sectionalizing devices will help to reduce the number of customers affected by PSPS.

PSPS characteristic	Anticipated Impact of 2023 WMP Initiatives	Comments
Frequency of PSPS events in number of instances where utility operating protocol requires de-energization of a circuit or portion thereof to reduce ignition probability (total)	Decrease	Weather is the primary factor that drives PSPS frequency. In time, grid hardening efforts, such as covered wire and microgrids, will eventually lead to higher thresholds for de-energization, which would potentially reduce the frequency of PSPS events.
Frequency of PSPS events in number of instances where utility operating protocol requires de-energization of a circuit or portion thereof to reduce ignition probability (normalized by fire weather, e.g., Red Flag Warning line mile days)	Decrease	Weather is the primary factor that drives PSPS frequency. In time, grid hardening efforts, such as covered wire and microgrids, will eventually lead to higher thresholds for de-energization, which would potentially reduce the frequency of PSPS events.
Scope of PSPS events in circuit- events, measured in number of events multiplied by number of circuits targeted for de-energization (total)	Decrease	The work that results in reducing impact to customers and the frequency of events will also reduce the scope of PSPS events.
Scope of PSPS events in circuit- events, measured in number of events multiplied by number of circuits targeted for de-energization (normalized by fire weather, e.g., Red Flag Warning line mile days)	Decrease	The work that results in reducing impact to customers and the frequency of events will also reduce the scope of PSPS events.
Duration of PSPS events in customer hours (total)	Decrease	Weather events determine the length of time circuits need to be de-energized. If scope and number of customers are being reduced over time, then re-energization time should decrease, which is a factor in the duration of PSPS events. PSPS training could reduce the duration of PSPS events with increased preparedness.
Duration of PSPS events in customer hours (normalized by fire weather, e.g., Red Flag Warning line mile days)	Decrease	Weather events determine the length of time circuits need to be de-energized. If scope and number of customers are being reduced over time, then re-energization time should decrease, which is a factor in the duration of PSPS events. PSPS training could reduce the duration of PSPS events with increased preparedness.

V. 2023 WMP WSD DEFICIENCIES AND LIBERTY CORRECTIVE ACTIONS

Guidance: Submit a summary of all defects within the annual compliance period, the corrective actions taken and the completion and/or estimated completion date.

A. 2023 WMP Areas for Continued Improvement Identified by OEIS

OEIS issued its Final Decision on Liberty’s 2023 WMP on February 5, 2024, including 16 Areas for Continued Improvement identified by OEIS. The 2023 Areas of Improvement and Liberty’s planned

responses are presented in Table 3 below. Given the limited time between the issuance of the OEIS Final Decision on Liberty’s 2023 WMP and the filing date for Liberty’s 2023 WMP Annual Report on Compliance, some of Liberty’s planned actions for the Areas of Continued Improvement are yet to be determined and will be addressed in Liberty’s 2025 WMP Update.

Table 3: 2023 WMP Areas for Continued Improvement Identified by OEIS

OEIS Area for Continued Improvement (Code and Title)	Corrective Actions Taken	Completion and/or Estimated Completion Date
LU-23-01. Cross-Utility Collaboration on Risk Model Development	Liberty continues to participate in the Risk Model Working Group ("RMWG"), including the most recent RMWG meeting held on March 20, 2024.	Liberty is meeting this requirement and Liberty’s efforts related to this area are ongoing.
LU-23-02. PSPS and Wildfire Risk Trade-Off Transparency	Liberty continues to work on its wildfire and PSPS risk models.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-03. Collaboration Between Vendor and Utility Risk Teams	Liberty continues to work on its wildfire and PSPS risk models.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-04. Vendor Fire Risk Model Implementation Milestones and Dates	Liberty continues to work on its wildfire and PSPS risk models, including how these models are utilized in its operational and planning processes. Liberty has established a plan with milestones and projected timelines.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
Liberty-23-05. 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	Liberty participates in all Energy Safety-organized activities related to these topics.	Liberty is meeting this requirement and Liberty will provide the required status update in its 2025 WMP Update..
LU-23-06. Effectiveness of SRP and Traditional Hardening	Liberty is working on including covered conductor, SRP and traditional hardening into its risk modeling and risk-based decision-making framework.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-07. Further Design Considerations	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty will address this area in its 2025 WMP Update.
LU-23-08. Halting Detailed Distribution Inspections	Liberty is collecting the data to complete the required analysis.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.

OEIS Area for Continued Improvement (Code and Title)	Corrective Actions Taken	Completion and/or Estimated Completion Date
LU-23-09. Covered Conductor Inspections and Maintenance	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty will address this area in its 2025 WMP Update.
LU-23-10. Distribution detailed inspection frequency	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty will address this area in its 2025 WMP Update.
LU-23-11. QA/QC sample size and pass rates	Liberty has established asset inspection QA/QC targets for 2024 and 2025. Liberty plans to provide pass rate targets for 2025 based on the results of its 2023 asset inspection QC/QC.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-12. Additional Inspection Practices	Liberty plans to provide updates on each of the technologies listed in its 2025 WMP Update.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-013. Lightning arrester replacement	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty will address this area in its 2025 WMP Update.
LU-23-14. Expulsion fuse replacement targets	Liberty has established expulsion fuse replacement targets for 2024 and 2025.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-15. Reliability Impacts of SRP	Liberty is collecting the data to complete the required analysis.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-16. Evaluation of High Impedance Fault Detection	Liberty is assessing this area of improvement to determine the necessary data and information for completing the required analysis.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-17. Energy Safety has removed LU-23-17 and has left the identification numbering for the remaining areas for continued improvement unchanged.	N/A	N/A
LU-23-18. Weather Station Optimization	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-19. Weather Station Maintenance, and Calibration	Liberty has contracted with a third-party to provide annual maintenance and calibration for each weather station.	Liberty's efforts related to this area are ongoing and will be addressed in Liberty's 2025 WMP Update as required.
LU-23-20. Early detection of Ignitions with HD Cameras	Liberty is assessing this area of improvement to determine the necessary corrective actions.	Liberty will address this area in its 2025 WMP Update.

VI. CONCLUSION

Liberty appreciates this opportunity to provide this 2023 WMP Annual Report on Compliance and looks forward to working with Energy Safety and other stakeholders to advance Liberty's wildfire mitigation planning efforts.

Respectfully submitted,

/s/ Jordan Parrillo

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