

Request #: LU-43879-C-194

1. Liberty shall provide a discussion regarding ignition risk drivers, pursuant to the requirements in the WMP Guidelines adopted via ALJ Ruling on December 16, 2019.

Supplement to Liberty CalPeco's 2020 WMP, Section 4.2.1 – Service territory fire-threat evaluation and ignition risk trends

As outlined in the Commission's WMP Guidelines, the following is a list of identified ignition probability drivers. In addition, Liberty CalPeco reported its historic performance metrics for these key drivers of ignition probability as shown in Table 11 of its 2020 WMP and discussed in further below. This discussion also includes how these drivers are expected to evolve over time and mitigation efforts in place or being explored, ranked from highest to lowest.

- **Contact from object:** Contact from foreign objects on Liberty CalPeco's overhead facilities can cause an ignition event. These include animal contacts, balloon contacts (esp. mylar), vegetation contact, and vehicle contacts. Vehicle contacts can bring the conductor to the ground, resulting in energized conductor on the ground. Many third party and foreign object contacts are out of the control of Liberty CalPeco, however, system hardening efforts such as covered conductor and undergrounding will mitigate these types of line contacts. Also, Liberty CalPeco's escalated vegetation management program will help to mitigate many vegetation contacts where system hardening has not happened yet.
- **Equipment/Facility Failures:** There are several equipment and/or facility failures that can cause ignition events. These include capacitor bank failures, conductor failures and conductor failures that lead to wire down, blown fuses or cutout failures (including insulator failures and hardware failures leading to blown fuses), lightning arrestor failures, switch failures or arcing, and transformer failures. Again, Liberty CalPeco's system hardening efforts will alleviate some of this risk. For example, energized wire down causing ignition is mitigated by the replacement of overhead lines with covered conductor. Also, our fuse changeout program is geared to replace all expulsion type fuses with non-expulsion fusing within six years. Liberty CalPeco is also investigating non-expulsion type arrestors, or limiting the use of expulsion arrestors and strategically placing them. Capacitor banks have not caused ignition events on Liberty CalPeco's system since the system acquisition in 2011, but are regularly inspected as part of our G.O. 165 inspection process and any anomalies are reported and repaired in a timely manner. Wire down events can be extremely hazardous in regard to ignition and public safety. Liberty CalPeco is exploring technologies to better detect wire down and to clear faults quickly and safely or even drive the fault current to near zero. High impedance fault detection (HIFD) and rapid earth fault current limiting (REFCL) are two technologies currently being explored. Also, distribution fault anticipation (DFA) is being explored as a means to find failures before they lead to ignitions. Liberty CalPeco's 2020 WMP includes detailed discussions on these wildfire mitigation initiatives in Section 5.3.

- **Wire-to-wire contact/contamination:** Wire-to-wire contacts and contamination of insulators can cause ignition events. These events are largely mitigated with Liberty CalPeco's covered conductor and undergrounding efforts. Some contamination will be discovered before causing ignition using emerging technologies such as DFA, which has the capability to catch tracking insulators before causing ignitions.
- **Other:** Other is a broad category that captures many unknown causes, or causes not captured by the categories above, that could or have caused ignitions in the past. Liberty CalPeco has one such ignition event in the last five years (as shown in Table 11) caused by failure of third-party attachments. Liberty CalPeco is mandated by the CPUC to allow communication providers to attach to utility poles when space is available. These providers may not properly install or inspect their equipment that led to contact of a fiber line with a Liberty CalPeco 120kV line and caused an ignition event. Much of this risk will be mitigated going forward by Liberty CalPeco's more aggressive pole loading calculations.
- Additional operation factors may cause increased risk of ignition or lack of fire suppression. These include but are not limited to lack of internal or external response or not observing operational procedures. Not observing procedures, for example not adhering to limiting activities that may cause ignition on RFW days, could lead to ignition. This is mitigated with careful coordination and training of Liberty CalPeco operations personnel and contract personnel. In addition, a well-coordinated response can lead to an increase in rapid fire suppression if a wire down event were to occur. Liberty CalPeco works closely with first responders and continues to collaborate with them annually as outlined in our Corporate Emergency Management Plan.

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For Table 10, please provide all values for Liberty's overall system, and not just at the circuit level.

Table 10

Weather Measurement	2015	2016	2017	2018	2019	5-year historical average	Unit(s)
Red Flag Warning Days	2,601	424	1,104	2,930	813	1,575	RFW circuit mile days per year
Days rated at the top 30% of proprietary fire potential index or similar fire risk index measure	4,792	10,154	12,296	17,027	19,811	12,816	Circuit mile days where proprietary measure rated above top 30% threshold per year
95th percentile wind conditions	19,938	55,059	78,355	96,396	116,492	73,248	Circuit mile days with wind gusts over 95th percentile historical (meaning the prior 10 years, 2005-2014) conditions per year
99th percentile wind conditions	3,546	15,607	20,689	24,455	28,127	18,485	Circuit mile days with wind gusts over 99th percentile historical (meaning the prior 10 years, 2005-2014) conditions per year

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- 1) For all aspects and subparts of Table 22, explain why any cell filled as “N/A” is not applicable.
- 2) For all aspects and subparts of Table 25, explain why any cell filled as “Unknown” is unknown, and how and when Liberty plans on determining what is unknown.

Table 22: Advanced Weather Monitoring and Weather Stations

Mitigation activity	Year	Total per-activity spend	Line miles to be treated	Spent/treatable line miles	Further probability drivers targeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/new	Existing: What proceeding has reviewed/program	# new memorandum account	Is/Exceeding compliance with regulation	Cite associated rule	Comments
Advanced weather monitoring and weather stations	2019 plan	148,720	2,055	72	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	Existing	2019 WMP	WMP memorandum account	Exceeding	N/A	2019 Plan included installation of 13 weather stations. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.
	2019 actual	199,297	2,055	97	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	Existing	2019 WMP	WMP memorandum account	Exceeding	N/A	Installation of 10 weather stations and development of advanced weather monitoring tool by Roax Engineering. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.
	2020	300,000	2,055	146	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	Existing		WMP memorandum account	Exceeding	N/A	Installation of 20 new weather stations. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.
	2021	300,000	2,055	146	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	Existing		WMP memorandum account	Exceeding	N/A	Installation of 20 new weather stations. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.
	2022	15,000	2,055	7	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	Existing		WMP memorandum account	Exceeding	N/A	Installation or upkeep of stations. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.
	2020-2022 plan total	615,000												

- 1) “N/A” was used in the “Cite Associate Rule” column because Liberty CalPeco is not aware of any rules associated with weather station monitoring.
- 2) Liberty CalPeco used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.2.2a Continuous monitoring sensors – distribution fault anticipation

Initiative activity	Year	Total project initiative spend	Line items to be tracked	Spent/ tracked per mile	System priority/ driver/ targeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/new	Existing/What proceeding the reviewed program	Memorandum account	Exceeding compliance with regulations	Cite associated rule	Comments
Continuous monitoring sensors	2019 plan													
	2019 actual													
	2020													
	2021	706,000	313	2,256	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	Distribution fault anticipation (DFA) at Stateline, Northstar, Tahoe C by. All OH miles out of those 3 subs.
	2022	162,000	313	518	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	Distribution fault anticipation (DFA) at Stateline, Northstar, Tahoe C by. All OH miles out of those 3 subs.
2020-2022 plan total	868,000													

- 1) “N/A” was used in the “Cite Associate Rule” column because Liberty CalPeco is not aware of any rules associated with continuous monitoring sensors. “N/A” was used in the “Existing: What proceeding...” column because the program is new.
- 2) Liberty CalPeco used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.2.2b Continuous monitoring sensors – ALERTWildfire cameras

Initiative activity	Year	Total project initiative spend	Line items to be tracked	Spent/ tracked per mile	System priority/ driver/ targeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/new	Existing/What proceeding the reviewed program	Memorandum account	Exceeding compliance with regulations	Cite associated rule	Comments
Continuous monitoring sensors	2019 plan													
	2019 actual													
	2020	80,000	2,055	39	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	Liberty CalPeco to maintain 8 cameras that are part of the ALERTTahoe camera network.
	2021	80,000	2,055	39	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	
	2022	80,000	2,055	39	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	
2020-2022 plan total	240,000													

- 1) “N/A” was used in the “Cite Associate Rule” column because Liberty CalPeco is not aware of any rules associated with continuous monitoring sensors. “N/A” was used in the “Existing: What proceeding...” column because the program is new.
- 2) Liberty CalPeco used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.2.4 Forecast of a fire index, fire potential risk, or similar

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spent/Line miles	System priority drivers budgeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/new	Existing/What proceeded/has reviewed program	Existing/What proceeded/has reviewed program	Existing/What proceeded/has reviewed program	Existing/What proceeded/has reviewed program	Cite associated rule	Comments
Forecast of a fire risk index, fire potential index, or similar	2019 plan														
	2019 actual														
	2020	70,000	2,055	34	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A	FPI under development by Reax as of Jan. 2020. Considers all line miles as treated since entire service territory is in scope. Line miles provided by GIS dept.	
	2021	10,000	2,055	5	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A		
	2022	10,000	2,055	5	All types of contact, all types of equipment failure	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	N/A		
	2020-2022 plan total	90,000													

- 1) "N/A" was used in the "Cite Associate Rule" column because Liberty CalPeco is not aware of any rules associated with fire forecasting. "N/A" was used in the "Existing: What proceeding..." column because the program is new.
- 2) Liberty CalPeco used "Unknown" for columns "Risk reduction", "Risk spend efficiency", and "other risk drivers addressed" because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

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Info incomplete - Table provided on page 114 is cut off

Level	Description	Action
5 Small Impact Event (Localized Response Condition)	Minor disruption of operating systems, business systems, or electric service that can be managed with existing resources at the local or department level.	Normal activity, daily internal crew assignments
4 Moderate Impact Event (Heightened Alert)	An event that maximizes the resources and management capability of the local region and may require additional resources and support.	Possible crew transfer between areas; utility contractor crews (overhead line and tree) limited to normal daily complement.
3 Serious Impact Event (Enhanced Support)	A disaster or major emergency that may affect several areas of our electric system and may require the services of all operations personnel.	Regional or System ICS may be initiated and Regional EOC's may be opened. All available operations personnel are utilized. Utility contractor, mutual aid Assistance, tree crews, and support functions such as logistics will be used as needed.
2 Major Impact Event (Comprehensive Support)	A disaster or major emergency that affects several areas of our electric system and requires the services of all operations personnel.	Regional or System ICS will be initiated. All available operations personnel are utilized. Utility contractor, mutual aid assistance, tree crews, and support functions such as logistics will be used as needed.
1 Catastrophic Impact Event (Emergency Support)	A disaster or major emergency requiring a corporate response to minimize corporate risk. This level requires policy guidance, strategic planning, and coordination of internal and external resources, internal communication and coordination, dissemination of public information.	Regional and/or system ICS will be initiated. All available operations personnel are utilized. Utility contractor, mutual aid assistance, tree crews, and support functions such as logistics will be used as needed.

Request #: LU-43879-E-202

Clarification - where is procedure to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure?

From Liberty CalPeco's Corporate Emergency Response Plan (CEMP):

Public Safety Partner Emergency Coordination: Liberty CalPeco serves customers in seven California counties. Larger, more populous counties may have a more robust emergency management department and more emergency providers, whereas smaller ones are more limited. Regardless of county size and structure, the following agencies, departments, and/or facilities are part of Liberty CalPeco's Public Safety Partner group with whom Liberty CalPeco coordinates in advance of and during any emergency or significant power outage.

a. Public Safety Partners

- i. Cal OES
- ii. County OES Offices
- iii. Fire departments (including volunteer)
- iv. Sheriff offices
- v. Highway patrol
- vi. Local police departments
- vii. Town managers/mayors
- viii. Utility providers (water, wastewater)
- ix. Telecom companies
- x. Cellular tower engineers
- xi. Hospitals and medical clinics
- xii. School districts
- xiii. County health and human services
- xiv. County superior court
- xv. Community emergency response teams (CERT)
- xvi. County supervisors and/or staff
- xvii. Social services
- xviii. Airports

Liberty CalPeco maintains a robust Public Safety Partner database of key contacts. This database is reviewed with each partner agency/department/facility on an annual basis for accuracy. Liberty CalPeco participates in several emergency operation and communication workshops and hosts its own such workshops throughout the year to familiarize all partners of standard emergency operating procedures and communication efforts. Emergency plans and operations are tested with partners during TableTop exercises and practiced on a smaller scale during small, less significant power outage scenarios. Documentation for the TableTop exercises, held November 13, 2018, and the Business Community Meeting, held November 15, 2018, is attached as Appendix D to this plan.

Liberty CalPeco is working to establish no later than April 10, 2020 an emergency communication plan with Pacific Gas & Electric Co. (PG&E) for incidents related to the Meyers

3300 line.

Governmental and Regulatory Communications: During emergency events, Liberty CalPeco is closely involved with local law enforcement, medical agencies, and fire agencies. In larger emergencies, city and county emergency management representatives provide coordinating responsibilities in responding to the event. In escalating emergency events, additional coordinating resources, such as an Emergency Response Liaison and/or a Government Liaison, can be activated by the Incident Commander.

1. During emergency events, Liberty CalPeco will provide communications to, or a liaison to, the highest level of city or county Emergency Operations Center activated. This will be accomplished through the Emergency Response Liaison or Government Liaison, who are both members of the Emergency Management Team.
2. If an emergency event is large enough to initiate the activation of a State level Emergency Operations Center or Regional Emergency Operations Center, the Emergency Response Liaison will communicate with the State Emergency Operations Center (EOC). The California state coordination will be through the California Utilities Emergency Association (CUEA) Emergency Operations Center. The CUEA operates as a Utility Branch of the State Standardized Emergency Management System (SEMS) and reports directly to the State Operations Center (SOC) in Sacramento. As a member of CUEA, Liberty Utilities is party to its Mutual Assistance Agreement and is represented in the Utility Operations Center (UOC), which is located in the State Operations Center (SOC). All mutual assistance activities will be communicated to the State EOC and the Utilities Operations Center (UOC)/Office of Emergency Services (OES) during an emergency at 916-636-3704 or by email at CUEAUOC@CALOES.CA.GOV.
3. Non-emergency 24/7 contacts for Cal OES are Don Boland (don.boland@caloes.ca.gov, O: 916-845-8517, C: 916-717-7570) and Jenny Regino (jenny.regino@caloes.ca.gov, O: 916-845-8518, C: 916-709-6708). Website: WWW.CUEAINC.com
4. Liberty CalPeco is a member of CUEA, which provides emergency planning, training, resource assistance, and operates the Utility Emergency Operations Center as the Utility Branch for the Office of Emergency Services (OES) at the State EOC. The Company Emergency Response Liaison is a responder to the CUEA EOC, which is co-located with the SOC.
5. The CPUC requires reporting for safety and for substantial outages. Guidelines for reporting to the CPUC follow this section in Table 1. Reporting forms and checklists are also contained in the Regulatory Reporting Attachment to this plan.

- a. Communications Strategy – Planned Outages

In the event of a pre-planned power outage, such as a PSPS, Liberty CalPeco will communicate with government/agency partners and the public/customers. Liberty CalPeco will inform the Electric Safety and Reliability Branch of the CPUC by email at ESRBcompliancefilings@cpuc.ca.gov at least 10 days in advance of any pre-event coordination

Request #: LU_DR_43879-F-205

Provide RSE calculations for incremental mitigations proposed. Not subject to full RAMP but need some level of risk reduction analysis.

F-205: Liberty CalPeco does not use quantitative risk reduction calculations to inform its mitigation activity implementation strategy. Rather, the company chooses its implementation strategy based on the following three factors: compliance, best utility practices, and subject matter expertise. Compliance factors are considered mandatory in nature and constitute the minimum or baseline strategies of the company. Best utility practices are considered and implemented based on applicability to our smaller utility, and resources available to implement. Subject matter expertise is used in all facets of strategy development and implementation and is used as a way to prioritize strategies that score similarly in risk mitigation. At a high-level, the company does identify its risk to wildfire, and scores the risk based on inherent and residual risk factors. The residual risk is a result of the mitigations and controls used to mitigate a utility wildfire event in its service territory. Furthermore, the residual risk is looked at holistically and not on a mitigation by mitigation basis. Probability and consequence modeling, quantitative analysis, and metrics are not used by the utility to determine its risk reduction.

Looking ahead, the utility welcomes the opportunity to introduce risk-spend efficiency and associated risk reduction scoring into its wildfire mitigation strategy. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the near future.

Liberty must provide Table 31, or documentation showing how it plans to assess the data necessary to fill out Table 31.

Table 31: Change in drivers of ignition probability taking into account planned initiatives, for each year of plan

Incident type by ignition probability driver	Detailed risk driver	Are near misses tracked?		Number of incidents per year			Average percentage likelihood of ignition per incident			Number of ignitions per year		
				2020	2021	2022	2020	2021	2022	2020	2021	2022
Contact from object	All types of object contact	N		60	54	49	0.7%	0.6%	0.5%	0.4	0.3	0.2
	Animal contact	Y		20	18	16	0.0%	0.0%	0.0%	-	-	-
	Balloon contact	N		-	-	-	0.0%	0.0%	0.0%	-	-	-
	Vegetation contact	Y		35	32	28	0.6%	0.5%	0.4%	0.2	0.2	0.1
	Vehicle contact	Y		5	5	4	0.0%	0.0%	0.0%	-	-	-
All types of equipment / facility failure	All types	N		79	71	64	0.5%	0.4%	0.4%	0.4	0.3	0.2
	Capacitor bank failure	N		-	-	-	0.0%	0.0%	0.0%	-	-	-
	Conductor failure—all	N		8	7	6	2.5%	2.1%	1.7%	0.2	0.2	0.1
	Conductor failure—wires down	Y		5	5	4	4.0%	3.3%	2.8%	0.2	0.2	0.1
	Fuse failure—all	Y		50	45	41	0.0%	0.0%	0.0%	-	-	-
	Fuse failure—conventional blown fuse	Y		50	45	41	0.0%	0.0%	0.0%	-	-	-
	Lightning arrester failure	Y		5	5	4	4.0%	3.3%	2.8%	0.2	0.2	0.1
	Switch failure	N		-	-	-	0.0%	0.0%	0.0%	-	-	-
	Transformer failure	Y		16	14	13	0.0%	0.0%	0.0%	-	-	-
Wire-to-wire contact / contamination	Y		45	41	36	0.0%	0.0%	0.0%	-	-	-	
Other	Y		85	77	69	0.2%	0.2%	0.2%	0.2	0.2	0.1	

LU-43879-G-213

Liberty must provide a consolidated table that includes reported metrics for its grid design and system hardening efforts. In particular, Liberty must provide estimates of risk reduction and risk spend efficiency.

<u>Item #</u>	<u>Wildfire Mitigation Category</u>	<u>WMP Initiative</u>	<u>Reported Metrics</u>
1	Grid Design & System Hardening	Covered Conductor Installation	Number of conductor miles replaced
2	Grid Design & System Hardening	Distribution Pole Replacement	Number of poles replaced
3	Grid Design & System Hardening	Expulsion Fuse Replacement	Number of fuses replaced
4	Grid Design & System Hardening	Grid Topology Improvements	Installation of Sagehen Project
5	Grid Design & System Hardening	Install System Automation Equipment	Number of automatic reclosers replaced
6	Grid Design & System Hardening	Pole Loading Infrastructure Hardening	Number of poles replaced from pole loading assessment
7	Grid Design & System Hardening	Undergrounding Overhead Lines (Rule 20A)	Number of miles of OH conductor replaced with UG lines
8	Grid Design & System Hardening	Tree Attachment Removal	Number of tree attachment removals
9	Grid Design & System Hardening	Wire Upgrade Program	Number of conductor miles replaced
10	Grid Design & System Hardening	Repairs and G.O. 165 Outcome from System Survey	Reported repairs from system survey

Provide numerical values for the 2019 performance column that align with the given units for Table 4.

Description of program targets Instructions for Table 4:

Table 4: Description

In addition to the metrics specified above, list and describe all program targets the electrical corporation uses to track utility WMP implementation, the utility's performance on those

Program target	2019 performance	Units	Underlying assumptions	Third-party validation
High-Speed Clearing (Automatic Reclosers and Fast-Curve Sensitive Relay Settings). Program target was to install 6 automatic reclosers with "fire season" settings in 2019.	6	Number of reclosers installed	Remote monitoring of system assets promotes faster outage response. Supervisory controls will provide the settings necessary to reduce electrical ignition, while also helping to mitigate power outages.	Purchase orders and receipts for relay and recloser equipment, work orders, job design, field verification of installation.
Improve situational awareness and determination of local conditions.	14	Number of fire weather notification alerts generated by forecast tool	Improved situational awareness results in improved PSPS decision making.	Access to fire monitoring website, fire weather notification emails and text messages.
Fuse replacement program. Replace 60 fuses per month starting at approval date of 2019 WMP.	250	Number of fuses installed	Energy and spark potential at faulted locations is mitigated by non-expulsion fuses.	Quote for material, purchase order, fuse installation tracking spreadsheet, field verification of installation.
Installation of 2.7 miles of covered conductor in HFTD Tier 2 areas.	0	Miles of covered conductor installed	Mitigate contact of ignition source by covering the wire.	Quote for material, purchase order, job designs.
Install of 13 weather stations in 2019-2020 to support weather forecasting and monitoring efforts.	10	Weather stations installed	Improved situational awareness results in improved PSPS decision making.	Quote for material, purchase order, field verification of installation.
Routine Vegetation Maintenance - Increase vegetation management budget from \$2.5 million to \$4 million to allow for additional contractor staffing to support additional tree inspections, trimming, and removal.	39% Trees Worked 12% Trees Inspected	Percent increase in number of trees worked and inspected	Increase in number of trees inspected will result in decrease in non-compliant trees, tree related outages, and potential ignitions.	Work orders, work tracking spreadsheets, verification of identification and trimmed trees.
Elevated Weather Events Operations.	56	Number of devices with fire season settings activated. Including substation breakers and reclosers	Elimination of reclosing operations reduces potential ignition events.	Physical fire season tags, SCADA records of "fire mode" activation.

Perform On-Ground Routine Inspections and Equipment Asset Inspections.	3444	Number of devices and locations inspected.	Completed inspections result in detection of non-compliant items and decrease in potential ignition events.	GO165 inspection records stored.
Perform Vegetation Risk Inspections.	12%	% increase in # of trees inspected	Increase in number of trees inspected will result in decrease in non-compliant trees, tree related outages, and potential ignitions.	Tree inspection records, vegetation contractor invoices.
Perform pole loading calculations and replacement on new conductor or pole replacement projects.	126	Number of pole loading calculations completed	Determine if structural integrity of the pole is within calculated threshold.	Pole loading calculation files (O-Calc) stored with each project folder.
Substation Design Hardening.	1	Number of Hardened Substations Completed	Hardened design of substation leads to less equipment failure and decrease in potential ignitions.	Design drawings for Brockway removal and replacement of OCB's. Meeting notes. Field verification of replaced breakers.
Tree Attachment Removal.	35	Number of tree attachments removed per year.	Decrease in number of tree attachments results in decrease in potential ignitions.	Tree attachment removal job folders.
Tree Mortality Removal Project.	1539	Number of Trees removed	Removal of dying trees in or adjacent to right of way decreases potential ignitions.	Work orders, work tracking spreadsheets, invoices.
Forest Resiliency Corridor Development.	0	Number of acres treated	Expanded vegetation management and fuel reduction in the forest reduces ignition source and minimizes fire propagation .	Work orders.
PSPS events.	0	Number of PSPS events	De-energization of power lines under elevated fire risk conditions results in decreased potential ignitions.	PSPS event reports.
Post-incident recovery, restoration, and remediation.	0	Number of events	Post-incident recovery, restoration and remediation allows for expedited recovery and power restoration following emergencies.	Documentation of training, program elements, comprehensive emergency plans, exercises, debriefing, corrective action and evaluations for due diligence, training, and regulatory compliance.

Request #: LU-43879-I-211

- 1) For all aspects and subparts of Table 25, explain why any cell filled as “N/A” is not applicable.
- 2) For all aspects and subparts of Table 25, explain why any cell filled as “Unknown” is unknown, and how and when Liberty plans on determining what is unknown.
- 3) For all aspects and subparts of Table 25, explain why any cell is left blank, and provide the content that would be in such cell. If content is unknown or not applicable, please explain why.
- 4) Report risk reduction, risk spend efficiency for years 2020-2022 or explain why this is not possible to estimate.

5.3.5.1 Additional efforts to manage community and environmental impacts

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/ treated line mile	Ignition probability drivers targeted	Risk reduction	Risk-spend efficiency	Other risk drivers addressed	Existing/ new	Existing: What proceeding has reviewed program	If new: Memorandum account	In / exceeding compliance with regulations	Cite associated rule	Comments
Additional efforts to manage community and environmental impacts	2019 plan													
	2019 actual													
	2020	660,000	14	47,143	Vegetation Contact	Unknown	Unknown	Unknown	Existing	WMP Memorandum Account	N/A	Exceeding	PRC 4293, GO 95 Rule 35	
	2021	660,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	Existing	WMP Memorandum Account	N/A	Exceeding	PRC 4293, GO 95 Rule 35	
	2022	660,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	Existing	WMP Memorandum Account	N/A	Exceeding	PRC 4293, GO 95 Rule 35	
	2020-2022 plan total	1,980,000	Unknown	Unknown										

- 1) “N/A” was used in the “If new: Memorandum account” column because the program was in Liberty CalPeco’s 2019 WMP filing.
- 2) “Unknown” was used for columns “Line miles to be treated” and “Spend/treated line mile” in rows 2021 and 2022 because the schedule for those years has not been created. Liberty CalPeco will work with agency partners to prioritize projects that account for high risk circuits, forest health, environmental considerations, and timing of other vegetation management projects in order to develop a project schedule. When the 2020 Forest Resilience Corridor project is completed, Liberty CalPeco will evaluate the project to determine viability of the program and make adjustments as necessary to improve efficiency and effectiveness. Liberty CalPeco will update line miles to be treated and spend/treated line mile for years 2021 and 2022 in the 2021 WMP filing.

Liberty CalPeco also used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

- 3) Liberty CalPeco did not have additional comments to make in the “Comments” column and so the cells were left blank. “2019 Plan” and “2019 Actual” Rows were left blank because no work was planned or performed since Liberty CalPeco was awaiting a decision on the Categorical Exemption from the US Forest Service to implement this type of work.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.2&3 Detailed inspections of vegetation around distribution and transmission electric lines and equipment

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/ treated line mile	Ignition probability drivers targeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/ new	Existing/ What has been reviewed	Existing: Memorandum account	Exceeding compliance with regulations	In / associated rule	Cite	Comments
Detailed inspections of vegetation around distribution electric lines and equipment	2019 plan	500,000	200	2,500	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC	N/A	Exceeding	PRC 4293, GO 95 Rule 35		
	2019 actual	450,000	170	2,647	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC	N/A	Exceeding	PRC 4293, GO 95 Rule 35		
	2020	610,000	230	2,652	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC	N/A	Exceeding	PRC 4293, GO 95 Rule 35		
	2021	556,000	210	2,650	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC	N/A	Exceeding	PRC 4293, GO 95 Rule 35		
	2022	570,000	215	2,651	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	2021 GRC	Exceeding	PRC 4293, GO 95 Rule 35		
	2020-2022 plan total	1,736,000	655	2,650											

- 1) “N/A” was in the “If new: Memorandum Account” column because the program is existing.
- 2) Liberty CalPeco used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.
- 3) Liberty CalPeco did not have additional comments to make in the “Comments” column and so the cells were left blank.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.5 Fuel management and reduction of “slash” from vegetation management activities

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/treated line mile	Ignition probability drivers targeted	Risk reduction	Risk-spend efficiency	Other risk drivers addressed	Existing/ new	Existing: What proceeding has reviewed program	If new: Memorandum account	In / exceeding compliance with regulations	Cite associated rule	Comments
Fuel management and reduction of “slash” from vegetation management activities	2019 plan													
	2019 actual													
	2020	2,000,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4291	
	2021	2,500,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4291	
	2022	2,500,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4291	
	2020-2022 plan total	7,000,000	Unknown	Unknown										

- 1) “N/A” was in the “Existing: What proceeding...” column because the program is new.
- 2) “Unknown” was used for columns “Line miles to be treated” and “Spend/treated line mile” in rows 2020, 2021 and 2022 because the schedule for those years has not been created. This is a new program and the scope is still in development. Once the program is fully developed, line miles to be treated and spend/treated line mile can be estimated before the implementing the work.

Liberty CalPeco also used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

- 3) Liberty CalPeco did not have additional comments to make in the “Comments” column and so the cells were left blank. “2019 Plan” and “2019 Actual” columns were left blank because there was no program for this type of work in 2019.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.9&10 Other vegetation management around distribution and transmission electric lines and equipment, beyond inspections mandated by rules and regulations

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/treated line mile	Ignition probability drivers targeted	Risk reduction	Risk-spend efficiency	Other risk drivers addressed	Existing/ new	Existing: What proceeding has reviewed program	Existing: What proceeding has reviewed program	If new: Memorandum account	In / exceeding compliance with regulations	Cite associated rule	Comments
Other Vegetation Management	2019 plan														
	2019 actual														
	2020	400,000	50	8,000	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35		
	2021	400,000	50	8,000	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35		
	2022	400,000	50	8,000	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35		
2020-2022 plan total	1,200,000	150	8,000												

- 1) "N/A" was in the "Existing: What proceeding..." column because the program is new.
- 2) Liberty CalPeco used "Unknown" for columns "Risk reduction", "Risk spend efficiency", and "other risk drivers addressed" because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.
- 3) Liberty CalPeco did not have additional comments to make in the "Comments" column and so the cells were left blank. "2019 Plan" and "2019 Actual" columns were left blank because there was no program for this type of work in 2019.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.11&12 Patrol inspections of vegetation around distribution and transmission electric lines and equipment

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/treated line mile	Ignition probability drivers targeted	Risk reduction	Risk-spend efficiency	Other risk drivers addressed	Existing/ new	Existing: What proceeding has reviewed program	Existing: What proceeding has reviewed program	If new: Memorandum account	In / exceeding compliance with regulations	Cite associated rule	Comments
Patrol inspections of vegetation around distribution electric lines and equipment	2019 plan	300,000	150	2,000	Vegetation Contact	Unknown	Unknown	Unknown	Existing	CEMA	N/A	N/A	In	PRC 4293, GO 95 Rule 35	
	2019 actual	260,000	132	1,970	Vegetation Contact	Unknown	Unknown	Unknown	Existing	CEMA	N/A	N/A	In	PRC 4293, GO 95 Rule 35	
	2020	300,000	150	2,000	Vegetation Contact	Unknown	Unknown	Unknown	Existing	CEMA	N/A	N/A	In	PRC 4293, GO 95 Rule 35	
	2021	300,000	150	2,000	Vegetation Contact	Unknown	Unknown	Unknown	Existing	CEMA	N/A	N/A	In	PRC 4293, GO 95 Rule 35	
	2022	300,000	150	2,000	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	2021 GRC	N/A	In	PRC 4293, GO 95 Rule 35	
	2020-2022 plan total	900,000	450	2,000											

- 1) "N/A" was in the "If new: Memorandum Account" column because the program is existing.
- 2) Liberty CalPeco used "Unknown" for columns "Risk reduction", "Risk spend efficiency", and "other risk drivers addressed" because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision

D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

- 3) Liberty CalPeco did not have additional comments to make in the “Comments” column and so the cells were left blank.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.13 Quality assurance//quality control of inspections

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/treated line mile	Ignition probability drivers targeted	Risk reduction	Risk-spend efficiency	Other risk drivers addressed	Existing/new	Existing: What proceeding has been reviewed	If new: Memorandum account	Exceeding compliance with regulations	In / associated rule	Comments
QA/QC of Inspections	2019 plan													
	2019 actual													
	2020	250,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35	
	2021	250,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35	
	2022	250,000	Unknown	Unknown	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	WMP memorandum account	Exceeding	PRC 4293, GO 95 Rule 35	
2020-2022 plan total	750,000	Unknown	Unknown											

- 1) “N/A” was in the “Existing: What proceeding...” column because the program is new.
- 2) “Unknown” was used for columns “Line miles to be treated” and “Spend/treated line mile” in rows 2020, 2021 and 2022. This information will be quantified before the program begins. Liberty CalPeco anticipates having this data available before the upcoming fire season.

Liberty CalPeco used “Unknown” for columns “Risk reduction”, “Risk spend efficiency”, and “other risk drivers addressed” because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

- 3) Liberty CalPeco did not have additional comments to make in the “Comments” column and so the cells were left blank. “2019 Plan” and “2019 Actual” columns were left blank because there was no official program in place that would track the information required in the table.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

5.3.5.15 Remediation of at-risk species

Initiative activity	Year	Total per-initiative spend	Line miles to be treated	Spend/treated line mile	Ignition probability drivers targeted	Risk reduction	Risk spend efficiency	Other risk drivers addressed	Existing/new	Existing: What proceeding has reviewed program	If new: Memorandum account	In / exceeding compliance with regulations	Cite associated rule	Comments
Remediation of at-risk-species	2019 plan	4,200,000	300	14,000	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC, CEMA	N/A	Exceeding	GO 95 Rule 35; PRC 4292	
	2019 actual	4,504,905	268	16,809	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC, CEMA	N/A	Exceeding	GO 95 Rule 35; PRC 4293	
	2020	4,500,000	380	11,842	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC, CEMA	N/A	Exceeding	GO 95 Rule 35; PRC 4293	
	2021	4,500,000	360	12,500	Vegetation Contact	Unknown	Unknown	Unknown	Existing	2019 GRC, CEMA	N/A	Exceeding	GO 95 Rule 35; PRC 4293	
	2022	5,000,000	365	13,699	Vegetation Contact	Unknown	Unknown	Unknown	New	N/A	2021 GRC	Exceeding	GO 95 Rule 35; PRC 4293	
	2020-2022 plan total	14,000,000	1105	12,670										

- 1) "N/A" was in the "If new: Memorandum Account" column because the program is existing.
- 2) Liberty CalPeco used "Unknown" for columns "Risk reduction", "Risk spend efficiency", and "other risk drivers addressed" because quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.
- 3) Liberty CalPeco did not have additional comments to make in the "Comments" column and so the cells were left blank.
- 4) Liberty CalPeco does not currently have the ability to report risk reduction and risk spend efficiency. Quantitative risk reduction calculations have not yet been developed to inform each mitigation activity. As part of the requirements set forth by the Commission in its Voluntary Agreement for utility risk-based decision-making found in Decision D.19-04-020 for Small and Multi-Jurisdictional Utilities, Liberty CalPeco fully anticipates utilizing risk-spend efficiency to evaluate each of its wildfire mitigation activities in the next WMP filing.

Guideline 1 requests an accounting of responsibilities of the responsible person(s) executing the WMP including 2) Program owners specific to each component of the plan. Your WMP includes a table of division/departments/offices overseeing each component of the plan, not the persons or primary contacts leading those divisions/departments/offices. Please resubmit the Table of Program Owners (page 2) to include the names of individuals for each component listed.

Instructions

1 Persons responsible for executing the WMP

Provide an accounting of the responsibilities of the responsible person(s) executing the plan, including:

1. Executive level with overall responsibility

2. Program owners specific to each component of the plan

Ensure that the plan components described in (2) include an accounting for each of the WMP sections and subsections.

Description	Name	Title
1. Executive level with overall responsibility	Chris Alario	President, California
2. Program owners specific to each component of the plan	Eliot Jones	
1 Persons responsible for executing the WMP	Eliot Jones	Sr. Manager, Wildfire Prevention
1.1 Verification	Chris Alario	President, California
2 Metrics and underlying data	Eliot Jones	Sr. Manager, Wildfire Prevention
2.1 Lessons learned: how tracking metrics on the 2019 plan has informed the 2020 plan	Eliot Jones	Sr. Manager, Wildfire Prevention
2.2 Recent performance on progress metrics, last 5 years	Eliot Jones	Sr. Manager, Wildfire Prevention
2.3 Recent performance on outcome metrics, annual and normalized for weather, last 5 years	Eliot Jones	Sr. Manager, Wildfire Prevention
2.4 Description of additional metrics	Eliot Jones	Sr. Manager, Wildfire Prevention
2.5 Description of program targets	Eliot Jones	Sr. Manager, Wildfire Prevention
2.6 Detailed information supporting outcome metrics	Eliot Jones	Sr. Manager, Wildfire Prevention
2.7 Mapping recent, modelled, and baseline conditions	Todd Gee	Manager, Operations Compliance
3 Baseline ignition probability and wildfire risk exposure	Eliot Jones	Sr. Manager, Wildfire Prevention
3.1 Recent weather patterns, last 5 years	Eliot Jones	Sr. Manager, Wildfire Prevention
3.2 Recent drivers of ignition probability, last 5 years	Jeremy Vanyi	Engineer IV
3.3 Recent use of PSPS, last 5 years	Eliot Jones	Sr. Manager, Wildfire Prevention
3.4 Baseline state of equipment and wildfire and PSPS event risk reduction plans	Todd Gee	Manager, Operations Compliance
3.4.1 Current baseline state of service territory and utility equipment	Todd Gee	Manager, Operations Compliance
3.4.2 Planned additions, removal, and upgrade of utility equipment by end of 3-year plan term	Todd Gee	Manager, Operations Compliance
3.4.3 Status quo ignition probability drivers by service territory	Eliot Jones	Sr. Manager, Wildfire Prevention
4 Inputs to the plan and directional vision for wildfire risk exposure	Eliot Jones	Sr. Manager, Wildfire Prevention
4.1 The objectives of the plan	Eliot Jones	Sr. Manager, Wildfire Prevention
4.2 Understanding major trends impacting ignition probability and wildfire consequence	Eliot Jones	Sr. Manager, Wildfire Prevention
4.2.1 Service territory fire threat evaluation and ignition risk trends	Eliot Jones	Sr. Manager, Wildfire Prevention
4.3 Change in ignition probability drivers	Eliot Jones	Sr. Manager, Wildfire Prevention
4.4 Directional vision for necessity of PSPS	Eliot Jones	Sr. Manager, Wildfire Prevention
5 Wildfire mitigation strategy and programs for 2019 and for each year of the 3-year WMP term	Eliot Jones	Sr. Manager, Wildfire Prevention
5.1 Wildfire mitigation strategy	Eliot Jones	Sr. Manager, Wildfire Prevention
5.2 Wildfire Mitigation Plan implementation	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3 Detailed wildfire mitigation programs	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3.1 Risk assessment and mapping	Greg Campbell	Sr. Analyst, Rates and Regulatory Affairs
5.3.2 Situational awareness and forecasting	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3.3 Grid design and system hardening	Blaine Ladd	Manager, Substations
5.3.4 Asset management and inspections	Blaine Ladd	Manager, Substations
5.3.5 Vegetation management and inspections	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3.6 Grid operations and protocols	Blaine Ladd	Manager, Substations
5.3.7 Data governance	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3.8 Resource allocation methodology	Greg Campbell	Sr. Analyst, Rates and Regulatory Affairs
5.3.9 Emergency planning and preparedness	Eliot Jones	Sr. Manager, Wildfire Prevention
5.3.10 Stakeholder cooperation and community engagement	Kurt Althof	Program Manager, Communications and Media Relations
5.3.11 Definitions of initiative activities by category	Eliot Jones	Sr. Manager, Wildfire Prevention
5.4 Methodology for enterprise-wide safety risk and wildfire-related risk assessment	Greg Campbell	Sr. Analyst, Rates and Regulatory Affairs
5.5 Planning for workforce and other limited resources	Eliot Jones	Sr. Manager, Wildfire Prevention
5.6 Expected outcomes of 3-year plan	Eliot Jones	Sr. Manager, Wildfire Prevention
5.6.1 Planned utility infrastructure construction and upgrades	Eliot Jones	Sr. Manager, Wildfire Prevention
5.6.2 Protocols on Public Safety Power Shut-off	Eliot Jones	Sr. Manager, Wildfire Prevention
6 Utility GIS attachments	Eliot Jones	Sr. Manager, Wildfire Prevention
6.1 Recent weather patterns	Todd Gee	Manager, Operations Compliance
6.2 Recent drivers of ignition probability	Todd Gee	Manager, Operations Compliance
6.3 Recent use of PSPS	Todd Gee	Manager, Operations Compliance
6.4 Current baseline state of service territory and utility equipment	Todd Gee	Manager, Operations Compliance
6.5 Location of planned utility equipment additions or removal	Todd Gee	Manager, Operations Compliance
6.6 Planned 2020 WMP initiative activity by end-2022	Todd Gee	Manager, Operations Compliance

Request #: LU_DR_43879-L-235

Section 2.4 requests a detail of “additional metrics” to be used in WMP 2020. Liberty does not include any or the Associated Table 3 (page 10). Please provide a more complete explanation of what additional metrics may have been considered and why none have been identified.

Liberty CalPeco considered other metrics other than those identified in Section 2.3 but was ultimately unable to report on them due to current data deficiencies. Specifically, near-miss reporting could be improved if a more accurate assessment of the localized fire risk was available for each calendar day (i.e. FPI). For example, while Table 2 row 1 identifies potential near misses in Liberty CalPeco’s service territory, the corresponding outage data does not include detailed information about the fire threat at the time of the near miss. The quality of the near miss data is likely diminished as many of the reported near miss events could have occurred on low fire-threat days.

Ideally, near miss metrics can be reported and categorized by fire risk, but shortcomings in Liberty CalPeco’s current systems did not allow for the creation of such metrics in its 2020 WMP. Liberty CalPeco has identified two programs within the WMP to address the quality of near miss data and outage reporting. These programs include, creating an FPI, and an update to outage reporting programs. The combination of these two programs will allow for all potential near-misses to contain Liberty CalPeco to examine fire-weather conditions information have detailed information about fire-weather at the time of the near miss event. This will allow for a more in-depth analysis of near miss events as it pertains to fire weather conditions.