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Liberty Utilities®

(U 933-E)

2019 General Rate Case

Before the California Public Utilities Commission

Chapter 4: Vegetation Management Program

Tahoe Vista, California

November 30, 2018

Liberty CalPeco-04: Vegetation Management

Table Of Contents

Section		Page	Witness
I.	VEGETATION MANAGEMENT PROGRAM	1	E. Jones
A.	Program Overview	1	
B.	Current Program and Areas for Improvement	1	
C.	Fire Safety Preventative Measures.....	2	
D.	Program Enhancements	3	
E.	Forecast of 2019-2021 Expenses	4	
Appendix A Witness Qualifications			

Liberty CalPeco-04: Vegetation Management

List Of Tables

Table	Page
Table I-1 Vegetation Management Program.....	5

I.

VEGETATION MANAGEMENT PROGRAM

A. Program Overview

Public safety is at the forefront for Liberty CalPeco. Given that our service territory is mountainous and densely-forested, and includes remote and other relatively inaccessible areas, Liberty CalPeco has focused on creating a proactive and cost-effective vegetation management program that will enable us to continue providing safe and reliable service. Our vegetation management program is especially important considering the catastrophic damage that can be caused from forest fires in our service territory. Risk-based assessment of our current vegetation management program has demonstrated the need for process improvements to further mitigate the risk of fires by (1) shortening tree maintenance cycles and (2) planning and prioritizing our work efforts on a longer-term basis. Liberty CalPeco plans to increase investment in our vegetation management program to better serve our community and reduce the risk of wildfires in our service territory.

B. Current Program and Areas for Improvement

Our vegetation management program consists of a centralized work group with standardized processes and procedures to plan annual maintenance work and select circuits. The vegetation maintenance program prioritizes circuits based on the number of years since last tree trim, fire risk, circuit outage history, and operating budget. The circuit priority list is created and maintained by the Manager, Vegetation Control and Regulatory Compliance, and the annual work plan is developed based on projected work load and budget. When the annual workload is not met in a given year, deferred work is included for the following year and the plan is updated to reflect the change. In its current form, the program focuses on near-term, annual planning rather than long-term, multiple year planning.

Planning for the near-term on an annual basis is not optimal and leads to more reactive and less proactive work. For example, reactive work constituted 19% of total program spend in 2017.¹ Many utilities strive to restrict reactive maintenance to 10% of the total budget. Additionally, near-term planning has contributed to longer maintenance cycles than our company objective to complete

¹ See workpapers.

1 maintenance of our service territory on a three-year cycle. From 2012 to 2017, approximately 69% (an
2 average of 74 miles per year) of the cycle miles were completed, equating to an 8.72-year cycle.
3 Between 2016 and 2017 that cycle was reduced to 7.3 years with an estimated cycle completion in
4 2022.² This timing is far from where we strive to be in order to suitably reduce fire risks for our
5 customers and our community. We seek to improve the current program by planning our work efforts
6 on a longer-term basis and creating a budget that better ties estimated resource requirements and
7 workload to cycle mileage targets and achieves Liberty CalPeco's vegetation management objective of a
8 three-year maintenance cycle.

9 **C. Fire Safety Preventative Measures**

10 In recent years, California wildfires have become more intense and more devastating than
11 previously experience. California's climate is trending toward longer, hotter and drier fire seasons which
12 has created an urgency for State Legislators and utilities to take action to prevent the recurring devastation.
13 In the last two years, California has experienced the two most destructive wildfires in the state's history.

14 In 2007, five power-line related fires burned approximately 334 square miles in Southern
15 California leading to the adoption of dozens of fire-safety regulations in a series of CPUC rulemakings.
16 The recent Commission Decision (D. 17-12-024) lead to a revision of General Order 95 to include (a) a
17 High Fire-Threat District, (b) maps of the High Fire-Threat District, and (c) new fire-safety regulations.
18 Changes that will affect Liberty CalPeco's vegetation management program include:

- 19 1. The revision of General Order 95, Rule 35, Table 1, Case 14 to include the High Fire-
20 Threat District. Within the High Fire-Threat District of Liberty CalPeco's service territory,
21 minimal radial clearance between power lines and vegetation increased from 18 inches to
22 48 inches. Previously, the 48 inch vegetation clearances under Public Resource Code 4293
23 applied only during fire season. Case 14 now applies the same clearance requirement year-
24 round.
- 25 2. The amendment of General Order 95, Appendix E modifies minimum radial clearances
26 between bare line conductors and vegetation at the time vegetation is trimmed ("time-of-

² See workpapers.

1 trim clearances”). For the majority of Liberty CalPeco’s overhead distribution system, the
2 recommended time-of-trim clearances have increased from 6.5 feet to 12 feet.

3 Approximately 94% of Liberty CalPeco’s overhead system is within the High Fire-Threat district
4 where the rule changes apply. As the Commission observed in D. 17-12-024, “[i]t is likely that electric
5 utilities and communications infrastructure providers will incur additional but unquantified costs to
6 implement the fire-safety regulations adopted by this decision. This Decision finds that the additional
7 costs are exceeded by the substantial public-safety benefits of the adopted regulations.”

8 **D. Program Enhancements**

9 In 2017, Liberty CalPeco engaged Western Environmental Consultants Inc. (“WECI”), a
10 specialist in the unique vegetation management challenges California utilities face, to comprehensively
11 review our vegetation management program and identify an optimum vegetation maintenance cycle
12 strategy and other improvement opportunities.³ WECI was also asked to make a recommendation
13 regarding our maintenance cycle and the proposed annual spending associated with the recommended
14 cycle. Maintenance cycle recommendations are based on fire risk, species frequency and regrowth
15 information, and reliability data. WECI considered four key system attributes in determining the
16 recommended maintenance cycle:

- 17 1. Historically low tree-caused outages at Liberty Utilities.
- 18 2. Potential reductions in total tree density by right-of-way reclamation.
- 19 3. Potential fire risk from grow-ins and hazard trees.
- 20 4. Potential for significant bark beetle kill impacting fire risk for fallen trees.

21 WECI’s review included a Line Clearance Workload Survey and Documentation Study
22 documenting vegetation workload on the distribution system and recommended scheduling approaches
23 and budgets. WECI’s review also included a Growth Study and Cycle Analysis identifying the optimum
24 tree maintenance cycle and proposing a cost-effective line clearance program based on local re-growth

³ WECI has completed similar studies for more than 200 electric utilities around the world. WECI’s study involved an in-depth evaluation of Liberty CalPeco’s operating procedures, work practices and vegetation workload. See workpapers for study details.

1 data.

2 WECI's review concluded that the previously authorized funding of \$2.523 million per year is
3 insufficient as it results in an approximately 7.3-year maintenance cycle. WECI recommended that
4 Liberty CalPeco improve its vegetation management program by focusing on longer-term planning, a
5 shorter maintenance cycle and preventative measures. A long-range plan can be developed through
6 work prioritization, but must be supported by appropriate program funding to achieve the 3-year
7 maintenance cycle target. A continued emphasis on the elimination of potential causes of tree and
8 branch failure through aggressive identification and removal of such hazards during the maintenance
9 cycle will help reduce the volume of unscheduled reactive work. WECI recommends reducing the
10 amount unscheduled reactive work to 14% with further reductions in subsequent cycles. Moving
11 forward with these plans is essential to properly assess program efficiencies and effectiveness in meeting our
12 long-term goals.

13 **E. Forecast of 2019-2021 Expenses**

14 As noted above, the WECI review of Liberty CalPeco's vegetation management program
15 recommended the enhanced schedule and augmented budget necessary to maintain the desired level of
16 service reliability and fire risk mitigation.⁴ Liberty CalPeco considered alternative scheduling plans
17 WECI proposed and determined the three-year maintenance cycle with estimated program costs of \$3.98
18 million per year most reasonably supported our long-term goals. See Table I-1 below for details and
19 comparison with other cycle strategies.

⁴ WECI evaluated a vegetation workload survey, known regrowth rates for the common tree species, and Liberty CalPeco's production cost generated from contractor supplied unit and man-hour data, as well as numerous program alternatives and program funding scenarios.

Table I-1
Vegetation Management Program

VM Activity	Average 12 - 17	Current 2017	WECI Recommended	Option 2: 4 YR Cycle w/ Hazard Tree Patrol	Option 3: 2 YR Cycle
			Option 1: 3 YR Cycle		
Planned Maintenance Total:	1,387	1,120	2,069	1,707	3,103
Circuit Maintenance	1,381	1,114	2,063	1,547	3,094
Accessible	946	763	1,413	1,059	2,119
Inaccessible	435	351	650	488	975
Hazard Tree	-	-	-	155	-
Brush Control	6	6	6	5	9
Reactive Maintenance Total:	290	434	289	340	248
Other VM Maintenance	702	969	1,626	1,353	1,754
Debris Disposal / Traffic Control	53	115	212	173	230
Pre-Inspection	308	364	670	546	728
Permits / Environmental / Cultural / Legal	41	52	96	78	104
Pole Clearing	108	167	150	150	150
Misc.	26	51	94	77	102
Labor	166	220	405	330	440
TOTAL VM PROGRAM:	2,379	2,523	3,984	3,400	5,105
Incremental \$ Over 2017 Actuals:		-	1,461	877	2,582
Contract Crew Requirements					
Equivalent 3 Man Lifts:	3.0	3.0	4.6	4.0	6.6

Appendix A
Witness Qualifications

LIBERTY UTILITIES (CALPECO ELECTRIC) LLC
QUALIFICATIONS AND PREPARED TESTIMONY
OF ELIOT JONES

Q. Please state your name and business address for the record.

A. My name is Eliot Jones and my business address is 701 National Avenue, Tahoe Vista, California 96148.

Q. Briefly describe your present responsibilities at Liberty Utilities (CalPeco Electric) LLC.

A. I am currently the Manager of Vegetation Control and Regulatory Compliance for Liberty Utilities (CalPeco Electric) LLC, ("Liberty CalPeco") and am responsible for Liberty CalPeco's Vegetation Management Program.

Q. Briefly describe your educational and professional background.

A. I graduated from the University of California, Davis in 2006 with a Bachelor of Science Degree in Environmental Horticulture and Urban Forestry. I am an International Society of Arboriculture (ISA) Certified Arborist and a Certified Utility Specialist. I also hold a Tree Risk Assessment Qualification (TRAQ) through the ISA. I am a current member of the Western Chapter ISA and the Utility Arborist Association. I have held a variety of positions in the Horticulture and Arboriculture Industry and have Utility Vegetation Management experience working with Liberty Utilities and under contract for PG&E.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor Chapter 4 – Vegetation Management Program.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgement, does it represent your best judgement?

1 A. Yes, it does.

2 Q. Does this conclude your qualifications and prepared testimony?

3 A. Yes, it does.