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# PUBLIC ADVOCATES OFFICE COMMENTS ON THE WILDFIRE MITIGATION PLANS

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## Introduction

Pursuant to the Assigned Commissioner's Scoping Memo and Ruling dated December 7, 2017, the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) provides these comments on the Senate Bill (SB) 901[1] Wildfire Mitigation Plans (WMP or Plan). Cal Advocates' comments primarily focus on the Plans of the three largest investor-owned utilities, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E), and to a lesser extent addresses the Plans filed by Bear Valley Electric Service (Bear Valley), Liberty Utilities, and PacifiCorp. Cal Advocates has not conducted a detailed review of the reasonableness of the cost estimate information included in the Plans. Due to the compressed review and comment schedule on the Plans, Cal Advocates' evaluation has focused on: (a) overall effectiveness of the programs and strategies proposed in addressing 2019 catastrophic wildfire risks; (b) whether the plans have sufficient details that will allow for objective measurement of success in the compliance reviews; and (c) whether the Plans contain a balanced strategy in light of utility specific factors.

## I. Meaning of Plan Approval

Many parties have raised the issue implicit in some of the utilities' WMPs, that the costs of the programs and activities in the WMPs, if approved, constitute "compliance requirements," and therefore not subject to further scrutiny and reasonableness review by the Commission.[2] While admitting that this proceeding does not pre-approve the costs, SCE and PG&E maintain that the programs and activities in the WMPs are "compliance requirements" and that the Commission's review is limited to "confirm[ing] that actual

[1] Sen. Bill No. 901 (2017-2018 Reg. Sess.) Ch. 626; provisions for the annual wildfire mitigation plans are codified at § 38, codified as Public Utilities Code (PU Code) § 8386.

[2] Conditional Motion of TURN for Evidentiary Hearings (February 20, 2019), p. 2; SCE WMP, p. 7. Joint Response of SCE and PG&E to Motions for Evidentiary Hearings by TURN and POC (February 25, 2019), p. 3.

costs were incurred for the Commission-approved programs and were consistent with the cost estimates offered by the utilities *as measured by a reasonableness band*."[3]

The Commission should reject this proposition. PU Code § 8386, which sets forth the required elements for the WMPs, states:

> "The commission shall consider whether the cost of implementing each electrical corporation's plan is just and reasonable in its general rate case (GRC) application. Nothing in this section shall be interpreted as a restriction or limitation on . . . Section 451. . ."[4]

Thus, it would be contrary to the statute, to argue that any cost or cost estimate in the Plans is pre-approved, nor is any "band of reasonableness" established by the statute. Rather, each utility is authorized to establish a memorandum account to track costs beginning with the date the Plans are approved, which allows for the consideration of whether the costs incurred to implement the plan was just and reasonable in their GRCs.[5]

A related issue is whether the Plans amount to a compliance document such that compliance demonstrates prudent management. For example, SCE asserts that: "Substantial compliance with the objective metrics set forth in the WMP (when approved by the Commission) will demonstrate that SCE prudently operated its system, and met the Commission's 'prudent manager' standard regarding wildfire risk mitigation."[6] However, SCE's assertion is contrary to law on at least two counts. First, the prudent manager standard is a fact-specific determination made in light of the factors that were known (or should have been known) at the time.[7] Second, SCE's suggestion is contrary to PU Code § 8386 which specifically states: "The commission's approval of a plan does

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[3] Joint Response of SCE and PG&E to Motions for Evidentiary Hearings by TURN and POC (February 25, 2019, p. 3, (emphasis added); see also SCE's WMP, p. 8, [the WMPs are "not cost recovery exercises."]

[4] PU Code § 8386(g).

[5] PU Code § 8386(e).

[6] SCE's 2019 WMP, p. 7.

[7] D.87-06-021 (1987) *Cal. PUC LEXIS 588, *28-29;* 24 CPUC 2d 476, 486.

not establish a defense to any enforcement action for a violation of a commission decision, order or rule."[8] Therefore, the Commission should also clarify in the decision on the WMPs that mere compliance with the WMPs does not establish a defense to wildfire-related liabilities. Moreover, per the Order Instituting Rulemaking, additional compliance issues may be discussed in a separate proceeding.[9]

Moreover, it would contravene the fundamental principles of due process and PU Code § 451, to argue that the estimated costs of the Plans could be pre-approved without being subjected to the Commission's usual processes of discovery, testimony, and evidentiary hearings in the GRC process in order to establish the burden of proof that the proposed rate is just and reasonable. For one thing, the cost information in the WMPs are represented as estimates or ranges of costs, with PG&E's range being plus or minus a half a billion dollars, "depend[ing] on a variety of factors."[10] The imprecision of the cost information alone makes it impossible to know what actual costs will be included by the time they are submitted in the GRCs. Certain utilities opposed inclusion of any cost estimates in the Plans; however, this cost information was required by a Commission Ruling based on suggestions by intervening parties, including Cal Advocates.[11] This issue is an important one, with potentially billions of dollars at stake. Therefore, the Commission should, as TURN suggests, clarify in its final decision on the WMPs that new programs are adopted as utility-proposed goals that will be further reviewed for reasonableness in the GRCs.[12]

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[8] PU Code § 8386(f).

[9] Order Instituting Rulemaking, p. 5, footnote 7.

[10] PG&E's 2019 Wildfire Safety Plan Overview (presented at the February 13, 2019 Workshop), p. 11.

[11] *Administrative Law Judge's Ruling on Wildfire Mitigation Plan Template* (January 17, 2019) p. 2; Public Advocates Office Comments on the Wildfire Mitigation Plan Templates (January 10, 2019).

[12] TURN Conditional Motion for Evidentiary Hearings, p. 9.

## II. Overall Objectives and Strategies

SB 901 requires each electrical corporation to "construct, maintain and operate its electrical lines and equipment in a manner that will minimize the risk of *catastrophic wildfire* posed by those electrical lines and equipment."[13] The statute further directs electrical corporations to annually prepare wildfire mitigation plans, for review and approval by the Commission, in consultation with the California Department of Forestry and Fire Protection (CAL FIRE).

The Commission has recognized the critical need to address this year's wildfire season by determining that it is important to approve the initial WMPs "as close to the beginning of summer 2019 as possible."[14] The ALJ-approved template for the WMPs requires categorizing the preventative strategies and programs into three timeframes as suggested by Cal Advocates:[15] (1) before the 2019 wildfire season; (2) before the 2020 annual Plan filing; and (3) within the next 5 years.[16] The utilities' WMPs should provide the most effective and efficient ways of reducing wildfire risks within these timeframes. In keeping with CAL FIRE's mission of safeguarding people, protecting property and resources, the WMPs should focus on preventing the devastating loss of life and communities.[17]

While the utilities must take a balanced approach and consider long-term strategies, the 2019 WMPs should focus on near term strategies that will help avoid catastrophic wildfires in the 2019-20 season. Investing up-front in certain strategies can provide maximum benefits, and utilities can learn from the best practices of each other.

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[13] PU Code § 8386(a) (emphasis added).

[14] Order Instituting Rulemaking, p. 3.

[15] Cal Advocates Comments on the WMP Templates (January 10, 2019), p. 5.

[16] Administrative Law Judge Ruling on Wildfire Mitigation Plan Template, and Adding Additional Parties as Respondents (January 17, 2019), Attachment A, p. 2.

[17] California Department of Forestry and Fire Protection's Submission in Response to Court's January 9, 2019, Request (January 28, 2019) submitted in U.S. District Court, Northern District of California, Case. No. 3:14-cf-00175-WHA, p. 1.

For example, SDG&E has developed a situational awareness[18] system over the years in the aftermath of the 2007 wildfires in its territory, and SDG&E has identified this as one of its key preventative strategies.[19] Consistent with the above goals of focusing on preventing catastrophic wildfires in time for the 2019 fire season, Cal Advocates offers these comments and recommendations on ways to improve the 2019 WMPs in a manner that will increase safety and accountability.

### 1. Pacific Gas and Electric

PG&E estimates its overall 2019 WMP costs to be between $1.7 and 2.3 billion in incremental new costs.[20] Some of these costs are reflected in current 2019 rates. Many of PG&E's proposed programs are either new programs or large expansions of existing programs and are included in its 2020 General Rate Case application (covering 2020-2022).[21] PG&E's proposed WMP programs and strategies appear aspirational, and its cost estimates uncertain. As discussed above, it is not clear PG&E will be able to hire the necessary workforce to scale up its efforts as proposed in its Plan.[22] Many of PG&E's proposed programs represent large infrastructure improvements with significant increases in cost or level of work relative to existing practices, ranging from a 200-1400% increase. For example, "System Hardening" is proposed to increase costs by 880% and Vegetation Management costs by 235-320%.[23]

PG&E admits that acquiring and attaining a qualified work force is an "intense demand for skilled labor."[24] Given the uncertainty of PG&E's ability to successfully

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[18] Situational awareness improves fire detection and response time and can also inform the utilities' decision to call a Public Safety Power Shutoff (PSPS) de-energization event, enabling them to make better decisions based on visual evidence and more granular weather data.

[19] SDG&E WMP, p. 8.

[20] PG&E WMP Presentation (February 14, 2019), Slide 11.

[21] *See* PG&E 2019 WMP, Attachment E, pp. AtchE-1 to Atch E-3.

[22] Many of these increases are apparently also included in PG&E's proposed 2020 GRC Application 18-12-009. *See* for example, Section 4.2.1 (WSIP, Distribution) in page AtchE-1 of PG&E's WMP.

[23] *See* PG&E 2019 WMP, Table 1, pp. 3-4.

[24] PG&E 2019 WMP, pp. 80-85.

execute its plan due to this workforce challenge, PG&E may be better off focusing on quickly implementable technologies within the highest fire threat areas.[25] PG&E's substantially new programs[26] should be scaled back or, where appropriate, proposed as pilots in this WMP filing (for programs where technologies or approaches are untested).

Other large-scale programs proposed are not fully explained or justified. For example, PG&E's covered conductor program proposes to increase installation from the current length of less than 10 miles[27] to 150 miles in 2019, and thereafter by 600 to 860 miles per year for nearly a decade.[28], [29] Given PG&E's limited installation experience and lack of an experienced workforce of sufficient size,[30] it is unclear whether PG&E's goal of 600 to 860 miles/year is feasible or a reasonable estimate. In some instances, PG&E has not yet developed metrics to define the program scope and scale.[31]

The effectiveness of PG&E's proposed Resiliency Zones, covered conductor installation, alternative technologies, and the Wildfire Safety Inspection Program will be examined in next year's compliance reviews. The Commission should direct PG&E, if PG&E wishes to continue these programs, to make a better demonstration of the need, benefit, costs, and overall efficacy in the 2020 WMP.

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[25] For example, PG&E's proposed System Hardening Program is expected to take 10 years to complete. *See* PG&E 2019 WMP, p. 63. Improvements in Situational Awareness and the use of the Public Safety Power Shutoff are likely to lead to more immediate wildfire risk reduction.

[26] For example, System hardening and Wildfire Safety Inspection Program (WSIP).

[27] PG&E's representative at the February 27th workshop in this proceeding indicated that PG&E had approximately 7 miles of spacer cable installed as a pilot program in its service territory.

[28] Data Request CalPA-PGE-R1810007-002, Question 6.

[29] Data Request CalPA-PGE-R1810007-003, Question 4.

[30] Data Request CalPA-PGE-R1810007-003, Question 6.

[31] Data Request CalPA-PGE-R1810007-003, Question 9.

### 2. Southern California Edison

SCE's estimated costs for its 2019 WMP are approximately $519 million.[32] Many of SCE's WMP programs are included in its Grid Safety and Resiliency Program (GSRP) Application and will be reviewed in that proceeding.[33]

SCE's WMP is focused on 2019 activities, although many programs, such as covered conductor, will take many years to complete. SCE describes its programs in terms of a 2019 target, as well as an "accelerated" target for activities that will span multiple years. For example, SCE plans to install at least 315 new weather stations in High Fire Risk Areas (HFRA) and 62 high definition (HD) cameras on 31 towers in the SCE service territory.[34] Additionally, SCE is pursuing acceleration of enhanced overhead inspections in order to complete them by summer 2019.[35] However, SCE does not explain *how* it will accomplish accelerating completion of the activities (for example, through use of additional contracted labor or if existing appropriately qualified workforce already exists). SCE's description of how it will accelerate activities could be useful information for other utilities, allowing them to implement procedures to accelerate completion of their own wildfire mitigation activities.

While SCE describes its proposed programs in detail, it should provide detailed analyses that demonstrates program effectiveness and detailed information to support its cost estimates. For example, Enhanced Overhead Inspections and Remediation activities are expected to cost $248 million in 2019, but there is no justification as to why it will cost that much, or what tangible risk reduction these activities will provide.[36] Thus, it cannot be determined if the activity/program will be effective at reducing risk, cost-effective for ratepayers, or an effective use of SCE resources. The efficacy will need

[32] SCE estimates a range of $237 – 346 million for capital costs, and $290 – 334 million for Operation & Maintenance costs. This averages to $519 million.

[33] SCE Application for Grid Safety and Resiliency Program, (A.18-09-002) filed September 2018.

[34] SCE WMP, p. 64.

[35] SCE WMP, p. 15.

[36] SCE WMP, PDF p. 101 (this page is not officially numbered in the WMP).

to be further examined in next year's compliance review. SCE's 2020 WMP should include a more specific breakdown of how SCE generated its cost estimates and effectiveness estimates.

#### 3. San Diego Gas & Electric

SDG&E's WMP is estimated to cost approximately $40 million. SDG&E's WMP describes a three-pronged approach to minimizing the risk of catastrophic wildfires caused by its electrical infrastructure: (1) Operations and Engineering - building and maintaining its electric system; (2) Situational Awareness – monitoring and understanding the fire environment; and (3) Customer Outreach and Education – communication and collaboration with customers.[37] SDG&E operates its system in accordance with four operating conditions, from normal to Red Flag Warnings. SDG&E states that it maintains robust situational awareness and weather technologies, with over 175 weather stations and 100 cameras.[38] Customers are informed of anticipated severe weather conditions, in the event of a Public Safety Power Shutoff (PSPS) event, and SDG&E has established Community Resource Centers in areas most-at-risk that provide information and support during outage events.[39]

## III. Risk Analysis and Risk Drivers

#### 1. Pacific Gas and Electric

PG&E's risk analysis is based on the methodology used in its 2017 Risk Assessment and Mitigation Plan (RAMP) Report, as updated and submitted in its 2020 GRC application to reflect an increase in the number of circuit miles exposed to wildfire risk, and an updated evaluation of wildfire likelihood.[40] PG&E explains that since its 2017 RAMP filing, it relies on more granular ignition source data, as well as updated risk modeling based on the Commission's High Fire Threat Map and High Fire Threat

[37] SDG&E WMP, p. 6.

[38] SDG&E WMP, p. 8.

[39] SDG&E WMP, p. 9.

[40] PG&E WMP, p. 22.

Districts (HFTD), adopted subsequent to its RAMP submission, and wind-related outage data from northeast wind events.[41] Many of PG&E's programs lack sufficient information, including vital information regarding risk reduction and program effectiveness. This includes substantial programs such as the Wildfire Safety Inspection Program and expanded Grid Hardening measures, as well as new programs like the Resiliency Zone implementation.

While PG&E explains generally how it evaluates risk and prioritizes certain assets, the WMP lacks a quantifiable risk assessment explanation. Given the expedited nature of this proceeding, and the lack of a risk analysis, Cal Advocates cannot affirm or evaluate the risk reduction and risk-reduction effectiveness of PG&E's proposed programs in PG&E's WMP. PG&E identified wildfires as its 5th highest risk in the 2017 RAMP when utilizing its Multi-Attribute Risk Score, Tail Average risk model.[42]

### 2. San Diego Gas & Electric

SDG&E uses a six-step process to determine its risk factors and drivers, discussed in Chapter 3 of its WMP. SDG&E uses the Fire Risk Mitigation program and the Wildfire Risk Reduction Models, both described in the Safety Model Assessment Proceeding (S-MAP), for prioritizing wildfire mitigation projects.[43] SDG&E has evolved its risk analysis, since its 2016 RAMP filing, to include other factors.[44] SDG&E's Plan includes approaches such as technology-based analysis (i.e. supercomputer simulations), coordination between relevant parties such as CAL FIRE, and historical potential wildfire drivers.[45] SDG&E states that it has been developing situational awareness, a greater

[41] PG&E WMP, p. 22-23, citing D.17-12-024.

[42] Table 1 from the SED Risk and Safety Aspects of Risk Assessment and Mitigation Phase Report of Pacific Gas & Electric Company Investigation 17-11-003, p. 21. PG&E has other tools it uses to evaluate and rank risk, and the wildfire risk varies somewhat between these models.

[43] SDG&E WMP, p. 18; S-MAP Proceeding A.15-05-002.

[44] SDG&E WMP, p. 16.

[45] SDG&E WMP, pp. 14-15.

understanding of operational conditions, inspection plans, system hardening, response protocols and technology to address wildfire risks.[46]

SDG&E has not yet completed a risk spend efficiency (RSE) calculation for its fire hardening strategy.[47] It is unclear whether SDG&E considered alternatives that may be more cost effective or have a greater mitigation factor than the proposed measures. In the 2020 SDG&E WMP, the Commission should direct SDG&E to provide the RSE justification for its proposed programs.

For example, CAL FIRE and the Safety and Enforcement Division (SED) determined pole failure comprised less than 5% of the reported equipment/facility failure ignitions.[48] SDG&E proposes a Pole Risk Mitigation and Engineering (PRiME) strategy to mitigate pole failures (which has ancillary fire risk reduction benefits), at a cost of approximately $18.6 million in combined capital expenditures and expense in 2019.[49] This compares to the proposed Fire Risk Mitigation (FiRM) program at approximately $55 million in costs which is designed to replace high risk conductor with known high failure rates.[50] The comparative impacts in reducing risk between these two programs given their different primary justifications demonstrates the need for risk-spend efficiency justification for all proposed mitigation measures.

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[46] SDG&E WMP, pp. 8,18, 20-21.

[47] In response to discovery (CalPA-SDGE-R1810007-002, Q2.b), SDG&E stated: "SDG&E has not completed risk spend efficiency calculations for its fire hardening strategy, which includes the use of steel poles. SDG&E's 2019 RAMP Report will include risk spend efficiency calculations consistent with D.18-12-." [sic]

[48] Pursuant to R.15-05-006, the SED-CalFire Joint Assessment and Recommendation Report at p. 14 (Joint Report), finds that poles account for less than 5% of ignitions related to equipment/facility failure reported, p. 14.

[49] $18.6 million is obtained by using the average of the high and low estimates for capital and expense for PRiME, p. A-23.

[50] $55 million is obtained by using the average of the high and low estimates for capital expenditures for FiRM, p. A-22.

## IV. Wildfire Prevention Strategy and Programs

### A. Operational Practices

#### 1. Pacific Gas and Electric

In response to questions regarding how it will update its line recloser deployment program as conditions change, PG&E stated it "will evaluate the need to add new devices" with no further discussion of how it will perform such an evaluation.[51] Since PG&E's proposal lacked sufficient detail, Cal Advocates was unable to determine the overall effectiveness of adding new devices. PG&E should update their 2019 WMP to include this information, such as the conditions which would trigger the need for new devices.

### B. Inspections

#### 1. Pacific Gas and Electric

PG&E's distribution, transmission and substation inspection costs are estimated to range from a low of $798 million to a high range of $1.396 billion,[52] making it one of the highest budgeted areas in the WMP, and 57% of its 2019 forecast costs.[53] PG&E proposes to ramp up its inspections by an estimated 130-400% compared to 2018.[54] PG&E estimates it will be able to complete inspections of 685,000 distribution poles in High Fire Threat District areas in addition to routine inspections.[55] The Commission should closely monitor if PG&E meets these inspection targets and ensure PG&E has sufficiently trained personnel to carry out the inspections.

PG&E states that its efforts to improve[56] its Geographic Information Systems (GIS) and the associated data are important to many of PG&E's wildfire risk reduction

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[51] Data Request CalPA-PGE-R1810007-002, Question 9.

[52] PG&E WMP, Attachment E, page AtchE-1.

[53] PG&E WMP, Attachment E.

[54] PG&E WMP, Table 1, p. 3.

[55] PG&E Workshop Presentation "2019 Wildfire Safety Plan Overview" p. 9.

[56] PG&E 2019 WMP, p. 54.

programs its Wildfire Safety Inspection Program, and "critical" to its PSPS program.[57] PG&E's brief description of these improvements and upgrades and does not provide any specific actions or timelines.[58] Additional detail is needed as an update to PG&E's 2019 WMP before these proposed improvements are approved so that the Commission can hold PG&E accountable for its stated goals to improve its GIS.

### C. System Hardening

#### 1. Pacific Gas and Electric

One type of System Hardening is covered conductor. The advantages and disadvantages of covered conductor were discussed at the Workshop on February 27, 2019. Covered conductor can help prevent ignitions from contacts with power lines and from encroaching or blowing vegetation. However, it is unclear whether PG&E's proposed covered conductor program is redundant with other vegetation management measures planned, or Public Safety Power Shutoffs (PSPS), thus it may not achieve the same efficiencies as those analyzed when covered conductor is considered as a stand-alone mitigation. There are some downsides to covered conductor, including the possibility that it will make detecting high-impedance faults (for example, when a covered conductor falls on a concrete or otherwise high-resistance surface) more difficult.[59]

PG&E's proposed System Hardening Program for the 2019 WMP would cover 150 out of 7,100 Tier 2 and 3 circuit miles.[60] Given that this is only a small percentage of the total circuit miles in the High Fire Threat Zones, it seems unlikely that System Hardening will substantially mitigate wildfire threat in time for the 2019 wildfire season. PG&E should be directed to update its 2019 Plan to identify the number of miles that will be addressed through System Hardening in 2020 and by 2024, as well as to identify if the

[57] PG&E 2019 WMP, p. 54.

[58] Data Request CalPA-PGE-R1810007-002, Question 4.

[59] This was discussed at the February 27th workshop but, to Cal Advocates' knowledge, has not been explored in any of the utilities' WMPs.

[60] PG&E WMP, p. 63.

proposed 150 circuit miles of work in 2019 is redundant with other risk reduction programs.

### 2. Liberty Utilities

Liberty has identified two substations that it claims pose a potential wildfire risk. Liberty proposes to entirely relocate the Brockway substation and replace portions of the Stateline substation.[61] The estimated combined cost of upgrades to both substations is $16.5 million. Liberty previously had requested permission to replace the Brockway Substation through an advice letter, but the Commission rejected this request, finding Liberty's increase in load did not justify the substation cost.[62] Liberty should demonstrate the wildfire risk reduction benefits before the Commission approves this program.

Liberty identified covered conductor as a program that will reduce wildfire risk. Liberty proposes to replace a total of 217 miles of bare conductor with covered conductor on 9 distribution lines at a pace of only 1-2 miles per year.[63], [64] Liberty has not clearly identified the wildfire risk reduction, instead focusing on other factors, including "worst performing circuit" and "below freezing temperatures."[65] Thus, it is not clear that Liberty's approach to replacing bare conductor prioritizes the highest risk areas. Therefore, Liberty should be directed to update this part of its 2019 WMP with a timeline that demonstrates the risks, costs and benefits of its covered conductor proposal.

Based on its maximum proposed pace of work (two miles per year), it will take a century for Liberty to reconductor 217 miles of distribution lines. The Tahoe City Line 7300 was identified as a priority project, but it will take at least 29 years to complete

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[61] Liberty WMP, pp. 23-27.

[62] The February 2018 amended filing discusses the Brockway substation, *see* Advice Letter 64-E-A (U 933-E). See: https://california.libertyutilities.com/uploads/LU%20AL%2064-E-A.pdf

[63] Liberty WMP, p. 21.

[64] Data Request Response CalPA-Liberty-R1810007-002, Question 6.

[65] Liberty WMP, p. 21.

under Liberty's proposed schedule.[66] The second highest priority, the Topaz Line 1261, would take 27 years to complete.[67] Liberty's 2019 WMP should be updated to clarify if it intends to ultimately replace all of these 217 miles of distribution line, or if the 7 to 14 miles in 2019 to 2023 represents all of the covered conductor Liberty intends to install as of 2019.[68] Liberty should also update its 2019 WMP with approaches for accelerating its covered conductor program, similar to SCE, for projects that mitigate the most significant wildfire risks.[69]

### 3. Bear Valley

Bear Valley claims that due to complications with the June 2016 Holcomb Fire, it must underground the Ute Lines. Bear Valley also claims that the undergrounding project would involve a transfer of the Ute Lines from SCE to Bear Valley.[70] However, Bear Valley does not provide sufficient information to justify this undergrounding request as a wildfire risk reduction measure, versus a system reliability enhancement measure. Bear Valley does not explain why it did not identify this project in its General Rate Case application, A.17-05-004.[71] Bear Valley should be required to provide additional information in this portion of its plan in its 2020 WMP filing.

Bear Valley also plans to replace all fuses on its system over the next two years with approximately 457 electronic fuses and 2,327 with current-limiting fuses,[72] for an estimated total of $5.2 million.[73] Bear Valley does not include any data or testing information as to how effective the fuse changes are in reducing the risk of wildfires on

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[66] Liberty WMP, p. 20.

[67] Liberty WMP, pp. 20-21.

[68] Liberty WMP, p. 22.

[69] SCE WMP, p. 15.

[70] Bear Valley WMP, pp. 20-21.

[71] Bear Valley's GRC was filed approximately one year after the Holcomb Fire.

[72] Current-limiting fuses and electronic fuses expel no hot particles and gases that can start fires, limit the available fault current, and may reduce the duration of faults, *see* Bear Valley WMP, p. 21.

[73] Bear Valley WMP, pp. 21-22.

its system. Bear Valley states this project follow the trend[74] of utilities replacing conventional fuses with current limiting fuses. In addition, Bear Valley does not provide information about the benefits and uses of electronic programmable fused trip savers, which it proposes to install systemwide. Bear Valley does not state why this project is not listed in its GRC application. Additionally, Bear Valley should identify if the proposed new fuses pose new or different risks than the existing fuses. This information should be provided as an update to Bear Valley's 2019 WMP.

#### 4. PacifiCorp

PacifiCorp's primary strategies to address wildfire risks are to install covered conductor on its distribution and transmission lines and replace wooden structures totaling about $77 million.[75] Overall, PacifiCorp's WMP lacks detail and risk-spend efficiency comparisons with alternative measures. PacifiCorp does address some of its more immediate concerns regarding vegetation and animal power line contact. Cal Advocates recommends that PacifiCorp further develop its more immediate mitigation strategies and address timeline feasibility, possible obstacles, and alternatives considered with cost-efficiency justifications in the 2020 WMP.

### D. Vegetation Management Plans

No comments.

### E. Situational Awareness

#### 1. Pacific Gas and Electric

PG&E proposes to spend approximately $31.9 million on Situational Awareness in its 2019 Wildfire Plan.[76] PG&E proposes to deploy 70 high definition cameras in 2019, in addition to the 9 cameras deployed in 2018, all in HFTD areas. PG&E's goal is to establish roughly 90 percent coverage in high fire-risk areas by 2022, which may

[74] Bear Valley WMP, p. 21.

[75] *See* PacifiCorp WMP, Table 7, p. 29.

[76] PG&E Day 1 Workshop Presentation, Slide 11. SDG&E's situational awareness program has been identified as a key factor in their wildfire risk program, *see* SDG&E WMP, p. 8.

require approximately 600 cameras.[77] PG&E also proposes to deploy an additional 400 weather stations in 2019,[78] doubling its current 200 weather stations.[79] PG&E states that these increased measures will enable PG&E and first responders to deploy resources more quickly and provide increased system condition awareness.[80] Cal Advocates generally supports PG&E's increased situational awareness measures. However, PG&E should update its 2019 WMP to identify why it did not install cameras and increased weather stations prior to 2019.

### 2. Southern California Edison

SCE is enhancing its weather stations and plans to install 315 weather stations in HFRA by 2019.[81] SCE states that its weather stations will provide more granular data and assist in making key decisions during wildfire risk conditions, including PSPS.[82] SCE also plans to deploy a total of 160 pan-tilt-zoom cameras in the HFRA between 2018 and 2020, providing approximately 90% visual coverage of SCE's HFRA. SCE's 2019 goals are to deploy 62 cameras.[83] The estimated costs of SCE's High Definition Cameras are $4.9 million (under the normal goal) to $7.1 million (under the accelerated goal).[84] Cal Advocates is generally supportive of enhancing situational awareness programs and is reviewing SCE's situational awareness programs in SCE's Grid Safety and Reliability Program proceeding.

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[77] By comparison, SDG&E has over 100 cameras, *see* SDG&E WMP, p. 8.

[78] By comparison, SDG&E has over 175 weather stations, *see* SDG&E WMP, p. 8.

[79] PG&E WMP, p. 4.

[80] PG&E WMP, pp. 87 & 91.

[81] SCE WMP, p. 61.

[82] SCE WMP, p. 61.

[83] SCE WMP, p. 64.

[84] SCE WMP, p. 99 (this page is not numbered in SCE's WMP).

### 3. San Diego Gas & Electric

SDG&E's situational awareness program is one of the strongest proposals in SDG&E's plan. SDG&E has a wide range of technology systems, fire science, operational practices, and methodologies to determine heightened risk conditions, giving them the ability to respond accordingly to wildfire risk. In addition, SDG&E shares weather data from its meteorology supercomputers with partners such as the U.S. Forest Service and makes the information available to the public.

SDG&E utilizes cameras, weather stations, meteorologists, meteorology supercomputers, threat indexes[85] to help develop other tools such as its Wildfire Risk Reduction Model—Operational System (WRRM—Ops).[86] SDG&E operates a network of over 175 weather stations, and has 107 cameras to enhance situational awareness.[87] SDG&E states that it will continue to develop situational awareness protocols and practices to address climate and topography changes. Incremental 2019 WMP costs are estimated to be $1.6 to $2.4 million.[88] Cal Advocates considers SDG&E's situational awareness program as a good guideline for other utilities to follow given how this component clearly informs other areas of training, needs assessment and changes in weather patterns. In addition, situational awareness can help all utilities in the assessment of their own strategies, including PSPS.[89]

### 3. Bear Valley

Bear Valley outlines several critical operations and resources that enhance situational awareness, but asserts in its WMP and responses to data requests that it has limited staff, especially for afterhours work.[90] For example, Bear Valley proposes to

[85] Fire Potential Index (FPI) and Santa Ana Wildfire Threat Index (SAWTI). SDG&E use a combination of variables to determine fire potential.

[86] SDG&E WMP, p. 50.

[87] SDG&E WMP, pp. 50 & 52.

[88] SDG&E WMP, Appendix B-2.

[89] Or in other words, de-energization of electric transmission or distribution lines.

[90] Bear Valley WMP, p. 31.

install HD cameras for remote monitoring in areas that are difficult to patrol on foot, but states that it does not have staff to monitor the cameras.[91] Bear Valley considered hiring contractors to monitor the cameras, but did not discuss the possibility of increasing its internal staff as an option.[92] It is not clear given these staffing limitations how Bear Valley will benefit from the camera installations. Therefore, Bear Valley should update its 2019 Plan to address this specific issue. The Commission should require Bear Valley to conduct a cost-benefit analysis that compares hiring additional staff versus hiring contractors in its 2020 WMP, particularly if Bear Valley finds its enhanced situational awareness program valuable this year in reducing risk or enhancing safety.

### F. Public Safety Power Shutoffs

The Commission opened a separate rulemaking on de-energization in December 2018. Cal Advocates anticipates discussing and exploring this issue further in that rulemaking.[93] Initial comments on phase 1 of that proceeding are due on March 25, 2019.

#### 1. Pacific Gas and Electric

PG&E states that in 2019, it will expand its PSPS program to include all distribution and transmission lines (up to 500 kV) that traverse Tier 2 or Tier 3 HFTD areas, a substantial expansion from 2018, which included only Tier 3 lines under 70 kV.[94] PG&E states that it modeled its PSPS program after SDG&E, explaining that SDG&E has 8 years of experience in this area.[95] In particular, PG&E points out that it emulated SDG&E's methodology for the decision factors for initiating PSPS events.[96]

Cal Advocates supports customer engagement and education. However, PG&E's proposal differs from SDG&E's PSPS program where PG&E includes all its customers in

[91] Bear Valley WMP, p. 33.

[92] Data Request Response CalPA-BVES-R1810007-002, Question 4b.

[93] R.18-12-005.

[94] PG&E WMP, p. 96.

[95] PG&E WMP, p. 95.

[96] These factors have been approved by the Commission in D.09-09-030 and ESRB-8.

its PSPS notification program. PG&E should update its 2019 WMP to specifically address how it will ensure that inclusion of all its customers in this program will not undermine the effectiveness of education to customers who are most at risk and likely to be affected by PSPS events.[97]

### 2. San Diego Gas & Electric

SDG&E's decision to use PSPS is not determined by one single factor, but a combination of factors that assess the risk of a wildfire.[98] Its situational awareness programs play a significant part in determining when de-energization is required to decrease electrical infrastructure fire risks for its customers.[99] SDG&E has a system in place for PSPS that seeks to minimize the impacts of these events by having sectionalizing devices, which reduces the number of customers affected by a de-energization event.[100] SDG&E is seeking to install additional sectionalizing devices to further reduce these impacts.

SDG&E has communication campaigns in five languages in compliance with Public Utilities Code Section § 8386(c)(16)(B).[101] The campaigns address preparedness in emergency events, education campaigns, communication prior to PSPS including medical baseline, etc.[102] Much of SDG&E's notification information is transmitted through phone, text, email, and/or social media. For medical baseline customers who participate in the Medical Baseline program, the normal notification practice of contacting customers via the methods described above is followed. If no positive

[97] Data Request CalPA-PGE-R1810007-006, Question 1.

[98] SDG&E WMP, pp. 54-55.

[99] Cal Advocates understands that de-energization can reduce the risks of electric utility caused fires, while increasing other risks, such as for customers reliant on electric medical equipment or the operation of pumps to engage in fire suppression efforts.

[100] SDG&E WMP, p. 39.

[101] SDG&E WMP, p. 55.

[102] SDG&E WMP, p. 56.

response is received, a live call will be attempted followed by dispatching personnel to deliver the message in person.[103]

### 3. Bear Valley

Bear Valley's PSPS procedures could be improved to ensure customers are given adequate notification of possible de-energization events under Imminent Extreme Fire Weather Conditions. When wind speeds are measured at or above 50 mph for more than three seconds, Bear Valley initiates its plan of action which can include de-energizing power lines that may pose a hazard.[104] At this stage, Bear Valley's planned notifications include continuing coordination with local government and agencies, updating notifications on its website and social media to warn of potential power shutoffs, and issuing press releases to the local media. During Validated Extreme Fire Weather Conditions,[105] notifications are sent to customers through an Interactive Voice Response (IVR) system.[106]

Bear Valley should consider amending its PSPS procedures or explain why it is not reasonable to include IVR notifications to all customers that may be affected by a de-energization event during Imminent Extreme Fire Weather conditions. Bear Valley's WMP does not mention if notifications will be available in Spanish and the top three primary languages in the state other than English or Spanish determined in accordance with PU Code Section §8386(c)(16)(B): "Plans for community outreach and public awareness before, during, and after a wildfire, including language notification in English, Spanish, and the top three primary languages used in the state other than English or

[103] SDG&E WMP, p. 55-56, does not detail time or protocols followed between efforts to reach medical baseline customers.

[104] Imminent Extreme Fire Weather Conditions are conditions where wind speeds are measured at 50 mph for more than three seconds. *See*, Bear Valley WMP, p. 36.

[105] Validated Extreme Fire Weather Conditions are conditions where wind speeds are measured at greater than 55 mph for more than three seconds. *See*, Bear Valley WMP, p. 36.

[106] Bear Valley WMP, p. 36.

Spanish, as determined by the Commission based on the U.S. Census data." The Commission should direct Bear Valley to rectify this in an update to its 2019 WMP.

#### 4. PacifiCorp

PacifiCorp has narrowed the areas where it will utilize the PSPS while also developing criteria with different inputs.[107] In addition, PacifiCorp will follow a notification protocol starting 48 hours, 24 hours, 2 hours, and 1 hour prior to an event, as well as 2 hours after power restoration.[108] This notification protocol appears likely to ensure that impacted customers will be aware that a PSPS will occur.

While PacifiCorp mentions additional outreach and back-up plans for medical baseline customers, it does not detail what these measures would be nor the effort to determine if the count of Medical Baseline customers identified is accurate. PacifiCorp should provide these measures and explain how it will determine an accurate Medical Baseline customer count and locations in its next WMP filing.

### G. Alternative Technologies

#### 1. Southern California Edison

In 2019, SCE will evaluate 12 alternative technologies for application on the distribution system through Alternative Technology Pilots, the Grid Safety and Reliability Program (GSRP) Wildfire Mitigation Program Study, Alternative Technology Evaluations, and Alternative Technology Implementation.[109] SCE does not explain how these programs were developed, who within SCE is responsible for these programs, nor do they provide timelines for completion or cost considerations. In future WMPs, SCE and all other utilities should be required to supply this information and the accompanying risk-mitigation analysis so that the Commission and other utilities can understand what alternatives technologies were considered and why they were rejected.

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[107] These inputs are the: Hourly Fosberg Fire Weather Index (FFWI), Ketchy-Byram Drought Index (KBDI), Red Flag Warning (RFW), wind gusts and sustained winds. An example is given how these systems interact is provided in the PacifiCorp WMP at p. 63.

[108] PacifiCorp WMP, Table 27, p. 65.

[109] SCE WMP, pp. 71-73.

### 2. Bear Valley

Bear Valley states that the technologies it has chosen to mitigate fire risks are appropriate and, therefore, it has not discussed any alternative technologies in its WMP.[110] Bear Valley plans to consider implementing alternative technologies as they become available and to explore its options in future iterations of the WMP. Bear Valley's future WMPs should be informed by consideration of alternative technologies.

## H. Post-incident Recovery, Restoration and Remediation

No comments.

# V. Emergency Preparedness, Outreach and Response

Cal Advocates has no comments on this element of the WMPs, but is participating in the R.18-03-011 on Emergency Disaster Response Programs.

# VI. Performance Metrics and Monitoring

### 1. General Comments

In future WMPs, the utilities should include more detailed and meaningful metrics incorporating outcome-based goals. For example, the metrics should consider the level of risk reduced, cost of implementation, risk-spend efficiency, and alternate strategies considered with a metric-based justification for selection. The fact that a utility considered cost factors provides little information on how the decision was made. The utilities should be required to provide supporting workpapers and calculations of such considerations to the Commission in future plans so that there is a transparent process. The independent evaluator process may be appropriate for examination of specific topics such as pole risk mitigation strategies.[111] Some utilities did include outcome-based goals, which will look at the number of incidents that are often related to wildfires and targeting

[110] Bear Valley WMP, p. 23.

[111] Pursuant to R. 15-05-006 SED-CAL FIRE Joint Assessment and Recommendation Report (Joint Report), finds that poles (on p. 14, ¶1) accounts for less than 5% of ignitions reported. In its WMP, SDG&E is looking to spend $58 million in 2020 alone.

the number of events (for example, Bear Valley will track and compare the number of line contacts with vegetation with years prior).[112] However, these metrics were relatively few and did not include any analysis of alternate options and/or the cost per unit performed, which can help determine the efficiency of their spending.

Therefore, the WMPs do not provide enough transparency or efficacy metrics and the Commission should direct the utilities to improve their showing in the 2020 WMPs.

## VII. Recommendations for Future WMPs

The submitted WMPs are a work-in progress given the compressed schedule and are a good template for utilities to implement more targeted strategies to mitigate wildfires in their service territories. Cal Advocates initially recommends the following improvements be required for future WMPs.

1. The Commission may, pursuant to its authority in PU Code §8386(c)(20), direct the utilities to modify their WMPs, by way of requiring a supplemental or amended WMP. Based on Cal Advocate's review, the Commission should direct the utilities to amend the WMPs where the Commission agrees with parties' comments, prior to approval.

2. As discussed above, some programs and strategies in the WMPs lacked details, descriptions and supporting analysis, particularly large new programs. Future WMPs should include fully developed strategies, and metrics based on risk reduction, cost, and program goals. To address these concerns regarding the adequacy of the plans in the next WMP cycle, the Commission should consider a Notice of Intent type process, where the utilities would provide their future WMPs and parties would have a limited time opportunity to identify shortcomings in the WMPs so they can be addressed prior to the formal WMP filing.

3. In order to assist with 2020 WMPs and the forthcoming annual compliance reviews, each electrical corporation should list (in its WMP) the evidence and metrics

[112] Bear Valley in Section 6.2 of its WMP delineate its outcome-based metrics to assess the effectiveness of its overall plan.

that will demonstrate compliance of each activity/program proposed in their WMPs. Having a clear list of compliance metrics will be useful in helping to determine compliance with the WMPs. It also will be beneficial to the overall efforts of wildfire risk mitigation because it will push the utilities to produce proof efforts before the next filing, ensuring they are taking documentable actions to mitigate wildfire risk. If a utility is not able to submit any compliance evidence for an activity listed in its WMP, they must provide adequate explanation as to why, which will be taken into consideration when determining compliance. The Commission should direct SED or Energy Division to develop a common Excel template for reporting this evidence in time for the submission of the 2020 WMPs and the compliance reviews for the 2019 WMPs.

4. Detailed cost information was generally lacking in the plans and should be improved in future filings. For example, PG&E provided only very broad ranges for many of its programs,[113] none of the utilities provided program-specific breakdowns,[114] and rate impacts were not discussed at all.

Recognizing that the WMP process is iterative and that utilities' plans are expected to improve in future years, Cal Advocates does not have any specific changes to individual program cost reporting at this time. Nor does Cal Advocates recommend any changes to actual program costs, as such costs will be reviewed in a future proceeding and are not being considered for reasonableness here. Cal Advocates will actively participate in the cost review proceedings before the Commission.

5. Cal Advocates recommends the following cost information components be modified in future plans. This list would not necessarily provide all the needed cost information in the plans' next iterations, but would serve as an improvement on the current filings:

- Cost information should include detail as to the specifics of a program. Utilities should provide greater detail on the major components of programs (for

[113] Errata – Clean of PG&E Attachment E (Cost Estimates for 2019 Plan Programs) to PG&E 2019 WMP.

[114] None of the utilities filing WMPs provided detailed cost information beyond that explicitly required by the Commission, which did not break down programs by component.

example, capital cost of installed equipment vs. overhead/administrative costs vs. labor costs).

- Cost information should provide high-level revenue requirement impacts for the subsequent five years following the plan. This information should be provided for programs as described in each individual plan (1-year timeframe) and for the duration of the program, if it has a specific end-date.
- Utilities should be required to narrow their cost estimate ranges as much as possible.[115] To the extent that costs are unknowable to a single number or where ranges cannot be converted into a single cost estimate or a single cost estimate with a tolerance band, utilities should be required to specifically describe the most significant factors that could affect costs within that band (for example, cost of materials or success in hiring additional workers).

## VIII. Other Issues

### 1. Liberty Utilities & Bear Valley

Both Liberty CalPeco (Liberty) and Bear Valley[116] request authority to establish second memorandum accounts to record the expenses related to WMP programs and projects not currently within the scope of their respective GRCs. The Commission should direct both Liberty and Bear Valley to utilize the SB 901 memorandum account and Fire Hazard Prevention memorandum account as appropriate. Subaccounts within these accounts could be established to allow for more granular tracking if necessary.

Additionally, for projects that the Commission has previously not authorized cost-recovery but where the utility now seeks cost recovery again, the Commission should direct the utility to provide supplemental information about the specific changed facts and conditions around seeking authorization this time through the WMPs.[117]

[115] For example, many PG&E program costs included ranges spanning over 100% difference between the low and high ends of the range, while SCE was able to provide specific cost estimates for each program.

[116] Bear Valley WMP, p. 21.

[117] Liberty WMP, p. 27.

### 2. Liberty Utilities

Liberty's WMP states that efforts to address some specific issues are no longer manageable with current staffing levels, and that resulting costs have been identified that exceed Liberty's budgets by $1 million annually.[118] In response to a Cal Advocates' data request, Liberty confirms that it does not plan on creating additional staff positions to fill this gap, but will rely on additional contract personnel.[119] To ensure that operational resources are utilized to their full potential, Liberty Utilities should conduct a cost-benefit analysis to determine whether hiring additional staff is more cost-effective than contracting if these positions will be long-term in nature.

## IX. Conclusion

For all the foregoing reasons, Cal Advocates recommends that the Commission adopt and incorporate the recommendations proposed above.

In summary, Cal Advocates recommends the following changes to Wildfire Mitigation Plans starting in 2020, as described above. Utilities should be required to:

- Provide additional detailed information on the scope and scale of programs;
- Provide additional detail on the risk-mitigation analysis of each of their proposed programs;
- Provide improved and additional metrics that demonstrate programs are working effectively and as anticipated in reducing wildfire risk; and

The Commission should consider implementing a Notice of Intent-type process to identify shortcomings in future WMPs.

[118] Liberty WMP, p. 30.

[119] Data Request Response CalPA-Liberty-R1810007-002, Question 2.

Respectfully submitted,

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