

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

**PACIFIC GAS AND ELECTRIC
COMPANY'S 2020 WILDFIRE
MITIGATION PLAN**
Service List(s): R.18-10-007

R.18-10-007
(Filed Oct. 25, 2018)

**COMMENTS OF PROFESSOR CATHERINE SANDOVAL ON THE ACTION
STATEMENT OF THE WILDFIRE SAFETY DIVISION (WSD) AND DRAFT
RESOLUTION WSD-003**

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May 27, 2020

I. Introduction

Thank you for the opportunity to comment on the Action Statement of the Wildfire Safety Division (WSD) and Draft Resolution WSD-003.¹ These comments are submitted in my individual capacity as a law professor at Santa Clara University School of Law who teaches energy and communications law, as well as contracts and antitrust law, and as a concerned stakeholder in the territory PG&E serves. I also serve as Co-Director of the Broadband Institute of California @ Santa Clara University School of Law (BBIC) and am filing these comments in my individual capacity as a law professor as SCU Law continues its transition to online education during the COVID-19 pandemic. I am a former Commissioner of the California Public Utilities Commission (CPUC) and had the honor of serving the people of California in that capacity from January 2011-January 2017.

These comments focus on WSD's analysis of PG&E's Wildfire Safety Mitigation Plan (WSMP or WMP) and proposed conditions. The fires associated with PG&E infrastructure and operation and large-scale power shutoffs (Public Safety Power Shutoffs (PSPS)) PG&E employed in 2019 merit additional scrutiny as the CPUC considers PG&E's WSMP. The COVID-19 pandemic underscores the importance of keeping Californians safe at home and throughout the state.

These comments focus on: 1) the lack of sufficiently detailed analysis and explanation in PG&E's Wildfire Mitigation Plan (WMP) as PG&E continues to engage in poor data management and record retention practices; 2) PG&E's failure to develop a WMP that considers and addresses layers and interrelationships of fire risk factors; 3) PG&E's failure to adequately

¹ CPUC, Wildfire Safety Division Draft Action Statement on Pacific Gas And Electric Company's 2020 Wildfire Mitigation Plan, May 7, 2020, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M336/K461/336461920.PDF> [hereinafter *WSD Draft Action Statement PG&E WMP, 2020*].

discuss risk factors associated with joint use utility poles and PG&E's reporting policies; 4) PG&E's failure to adequately account for the public impacts of its PSPS and WSMP and to integrate public comment into its operation; 5) PG&E's failure to learn lessons from its fires, near misses, and other utilities such as focusing on the types of trees most likely to cause fires.

II. PG&E's WSMP Lacks Sufficient Analysis and Explanation and Must be Updated to Address COVID-19 Pandemic Risks

Analysis:

A. PG&E's Lack of Analytical Foundation and Explanation Pervades its WMP

PG&E's lack of analysis and explanation pervades PG&E's WMP and the comments in the CPUC *Wildfire Safety Division Draft Action Statement on Pacific Gas And Electric Company's 2020 Wildfire Mitigation Plan [WSD Draft Action Statement PG&E WMP, 2020]*.² The lack of thorough and publicly communicated analytical foundation for PG&E's WMP raises questions about whether PG&E has an analytical problem (also related to its data and record-keeping problems), a sharing or communication problem, or a combination of both. The conditions proposed in the *Appendix to the Wildfire Safety Division Draft Action Statement on Pacific Gas And Electric Company's 2020 Wildfire Mitigation Plan [WSD Appendix]* do not adequately capture the pervasiveness of PG&E's failure to analyze and explain its WMP.³

PG&E, like other utilities, has a duty to offer safe, reliable service, with adequate facilities, at just and reasonable rates per CA PU Code 451. The CPUC should require PG&E to submit more detailed records and discussion of its analytical methodologies and basis.

California Public Utilities (CA PU) Code 313 allows the CPUC plenary access to utility records. The lack of records of such analysis underlying PG&E's WMP would point to a larger problem with PG&E's WMP and safety culture. BBIC's comments regarding PG&E application

² See *Id.* at 4.

³ CPUC Wildfire Safety Division *Draft Action Statement PG&E WMP, 2020, Appendix A, Deficiencies and Conditions*, [hereinafter *WSD Appendix, Draft Action Statement PG&E WMP, 2020*].

A-19-07-019 observed, “PG&E’s Application reflects the utility’s safety problems and its safety culture failures.”⁴ That observation also applies to PG&E’s 2020 WMP.

In 2014 the CPUC adopted in D.14-12-025 a Risk-Based Decision-Making Framework (Risk-Based Framework) that requires electric and natural gas utilities to identify risks and align them with rate-making applications such as the General Rate Case (GRC).⁵ CPUC Decisions including D. 16-08-018 and D. 14-12-025 called for shared learning as part of risk-based utility operation and the framework for alignment of resources and risks in ratemaking.

One example of PG&E’s failure to demonstrate analytical rigor is its assessment that PSPS “were highly effective at reducing the risk of vegetation or other flammable items contacting live wires and starting fires,” and its statement of “increased appreciation of the burden PSPS places on affected customers and communities.”⁶ PG&E represented to the public that it experienced over 100 instances of damage during the windstorms of October 9-12, 2020 when it widely employed PSPS.⁷ PG&E has yet to release photos publicly documenting all of those instances or types of damage examples and has not integrated into the WMP the detailed lessons it learned from the types of damage to PG&E infrastructure that occurred during the wind and Red Flag fire danger events. These absences reflect PG&E’s lack of analysis and disclosure that pervade PG&E’s WMP and its operation.

⁴ BBIC, Comments, PG&E Application A-19-07-019, p. 6, February 21, 2020.

⁵ CPUC D.14-12-025, DECISION INCORPORATING A RISK-BASED DECISION-MAKING FRAMEWORK INTO THE RATE CASE PLAN AND MODIFYING APPENDIX A OF DECISION 07-07004, 2-3,5, Dec. 4, 2014 (requiring utilities to file General Rate Case (GRC) applications to address and mitigate risks, and to act to manage and mitigate risk during their daily operations); CPUC D. 16-08-018, INTERIM DECISION ADOPTING THE MULTI-ATTRIBUTE APPROACH (OR UTILITY EQUIVALENT FEATURES) AND DIRECTING UTILITIES TO TAKE STEPS TOWARD A MORE UNIFORM RISK MANAGEMENT FRAMEWORK, p. 48, 146, 151, 154, 173, August 18, 2016.

⁶ See *WSD Draft Action Statement PG&E WMP, 2020*, *supra* note 1, at 69.

⁷ PG&E, Press Release, *15 Things You Need to Know About PG&E’s Oct. 9-12 Public Safety Power Shutoff*, October 14, 2020,

https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20191014_15_things_you_need_to_know_about_pges_oct_9-12_public_safety_power_shutoff.

B. PG&E Record-Keeping and Data Management Deficiencies Fuel its Analytical and Safety Gaps

PG&E’s analytical gaps may be related to its record-keeping deficiencies, operational and safety culture. As part of the probation of PG&E’s criminal conviction, Judge Alsup asked “[p]rior to the Camp Fire, did PG&E keep records from which PG&E could determine how long the C-hooks and/or hanger plates in question had been in place?”⁸ PG&E’s response was not a plain “yes,” but a statement that “PG&E’s records may not in every instance allow PG&E to determine how long any particular C-hook or hanger plate has been in place.”⁹ “Prior to the Camp Fire, PG&E did not specifically track the length of time that individual C-hooks and hanger plates on its overhead power lines had been in place, but maintained records that enabled it to identify the installation date of components on transmission lines, including C-hooks and hanger plates, in certain circumstances described below,” PG&E replied to Judge Alsup.¹⁰

PG&E explained that “work orders relating to the replacement of attachment hardware that occurred several decades ago may be archived in hard copy or no longer be available, consistent with applicable record retention periods,” citing CPUC and FERC policies about “corrective actions” and “maintenance work orders and job orders,” which require record retention for ten years and five years, respectively.¹¹ PG&E’s response and citation to CPUC and FERC standards on corrective actions and maintenance work orders ignores its duties to safe and

⁸ U.S. v. PG&E, Response To Follow-Up Questions Re CPUC Report On Camp Fire, Further Questions To Be Answered By PG&E By December 19 And Supplemental Question 6a, Case No. 14-CR-00175-WHA, p. 5, Dec. 19, 2019 [hereinafter *PG&E Response to Criminal Probation Camp Fire Questions*].

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* (citing CPUC General Order 95, Section I, Rule 18(A)(1) (requiring that “corrective action” records “be preserved by the company for at least ten (10) years and . . . be made available to Commission staff upon 30 days notice”); 18 C.F.R. §§ 125.1-125.3 (regulations promulgated by the Federal Energy Regulatory Commission (“FERC”) prescribing a five-year retention period for “maintenance work orders and job orders” for transmission and distribution facilities owned by public utilities subject to FERC’s jurisdiction)).

reliable service under CA PU Code 451 and other statutes and CPUC General Orders which include record-keeping duties.

PG&E's response to Judge Alsup indicates that PG&E may not acknowledge that records are "missing." PG&E's response does not recognize a broad duty to retain records such as those of "cold-end hardware" including C-hooks which the CPUC's Safety and Enforcement Division reported were "responsible for the highest number of "A" priority post-Camp Fire tags on Caribou-Palermo, and the second highest number of "B" priority tags."¹² Suggested below are additions to Condition PG&E-16 to identify record-keeping issues important to public safety.

C. PSPS and COVID-19:

PG&E must update its WMP and PSPS plans to reflect the COVID-19 pandemic. The CPUC directed utilities to keep wildfire safety plan implementation on track and to coordinate with local jurisdictions to ensure "that electrical corporations are prepared for the upcoming and subsequent wildfire seasons, while complying with COVID-19 restrictions requiring residents to shelter-in-place, practice social distancing, and comply with other measures that California's public health officials may recommend or that Governor Newsom or other officials may require in response to the COVID-19 pandemic."¹³

Health experts warn that COVID-19 infections will likely resurge in the fall as have other flu pandemics.¹⁴ The CPUC should order PG&E to reassess its WMP and PSPS plans considering COVID-19's anticipated resurgence during wildfire and red flag warning season.

¹² SED Incident Investigation Report for 2018 Camp Fire with Attachments, Nov. 8, 2019, Attach. A, Camp 0035 ("Cold-End hardware - Components used to attach the nonconductor end (cold-end) of the insulator to the tower. Both the tower and the insulator attachment components are considered cold-end hardware) [hereinafter SED Camp Fire Report]; *Id.*, Attach. A, CAMP-0547.

¹³ *WSD Draft Action Statement PG&E WMP, 2020, supra* note 1, at 69.

¹⁴ Len Strazewski, *What's ahead on COVID-19? Expert offers forecast for summer, fall*, American Medical Association (AMA) April 6, 2020, <https://www.ama-assn.org/delivering-care/public-health/what-s-ahead-covid-19-expert-offers-forecast-summer-fall> (Interview with Nicholas A. Christakis MD,

With millions likely sheltering-at-home in fall 2020 due to COVID-19, continued power to homes is more important now than ever. Many homes lack the power backup that some businesses, hospitals, and critical infrastructure institutions may have. Even at such institutions, power backup is often available for hours, not several days. With people stocking food in freezers to minimize shopping and contact with others during the Coronavirus pandemic, power outages that last for more than three hours risk spoiling food and increase health and safety risks. Millions of Californians are newly unemployed and cannot afford food spoilage or to retreat to a hotel (even if it were open and had power) to alleviate the hardships of multi-hour or multi-day power outages. Some Californians have moved elderly relatives to their home to avoid COVID-19 dangers at nursing homes, and others use medical devices that require electricity.

WSD’s Draft resolution observes that “PG&E includes no external costs to the community impacted by the power shutoffs and assumes 100 percent wildfire mitigation where power is shut off. PG&E shall not continue to rely on this calculation to justify PSPS.”¹⁵ This admonition should be included in the conditions in Appendix A such as in condition PG&E-7.

D. Climate Change and Critical Infrastructure

WSD’s Draft resolution reports that “PG&E states that it does not use recent data for modeling and relies instead on historical trends to account for climate change.”¹⁶ “PG&E lacks

PhD, MPH, Sterling Professor of Social and Natural Science, Internal Medicine and Biomedical Engineering and Director of the Human Nature Lab at Yale University, predicting at least a 75% chance COVID-19 “will come back with a second wave as it did in 1918 and 1957 pandemics”); Berkeley Lovelace Jr. and Kevin Breuninger, *Dr. Anthony Fauci warns US could ‘be in for a bad fall’ if coronavirus treatments don’t work*, CNBC, April 28, 2020, <https://www.cnbc.com/2020/04/28/fauci-warns-us-could-be-in-for-a-bad-fall-if-coronavirus-treatments-dont-work.html>.

¹⁵ *WSD Draft Action Statement PG&E WMP, 2020, supra* note 1, p. 13.

¹⁶ *Id.* at 26.

insight on the current effects of climate change, since today's fires are unprecedented in terms of size and spread.”¹⁷ This observation should be included in the conditions such as PG&E-7.

The East Bay Municipal Utility District April 7, 2020 comments on PG&E's WMP suggested that “PG&E should prioritize hardening in areas where there is critical infrastructure, such as hospitals or water treatment plants, which may potentially adversely impact the health and safety of a large number of customers in the event of PSPS.” With the COVID-19 pandemic potential resurgence in fall 2020 and continued COVID-19 precautions until an effective vaccine is distributed, a breakthrough hoped for by early to mid-2021, maintaining power to hospitals, water treatment, waste water, communications, and public safety facilities is critical to public health and safety.

A condition should be added that reflects the priority of Critical Infrastructure, particularly health care, water and waste-water, communications, and public safety facilities in wildfire mitigation planning and PSPS minimization. Plans to install batteries and microgrids should consider Critical Infrastructure facilities and public safety needs.

E. Recommendation for Draft Resolution WSD-003, Appendix, A

PG&E-1:

Add text in italics:

- iv. *Disclose the analytical methodology and data that informed the development of its program and break them down into initiatives. That analysis must include an examination of intersections or layers of factors that contribute to wildfire risk and enhance risks for populations.*
- v. *PG&E shall update its WMP and report to the CPUC and the public no later than August 31, 2020 to address the increased risks of power shutoffs during the COVID-19 pandemic.*

¹⁷ *Id.*

PG&E-16: Classify as Class A, not Class C.

Add text in italics:

PG&E's 2021 WMP update, PG&E shall:

- i. disclose any problems with its paper record keeping system described in its WMP, and
- ii. *Identify whether PG&E has records (whether in paper, analogue, digital or any other form) of all electrical equipment parts, maps, and procedures used in its electrical distribution and transmission system.*
- iii. outline any gaps (missing records, *defined as the absence of records of all electrical equipment parts, maps, and procedures used in its electrical distribution and transmission system*), inaccuracies (inadvertent or intentional *including mismatches between analogue and digital records*) and other errors.

PG&E-7: It is not clear if PG&E's line risk scoring sufficiently incorporates all risks that cause ignition and PSPS

Add text in italics:

- iv. *PG&E shall include external costs to the community impacted by the power shutoffs including costs and hardships due to the COVID-19 pandemic, and report to the CPUC and the public no later than August 31, 2020 about this calculation. PG&E shall not assume 100 percent wildfire mitigation where power is shut off. Neither shall PG&E rely on assuming zero community impacts and 100% wildfire mitigation to justify PSPS.*
- v. *PG&E's modeling shall include climate change projections and their consequences for ignition drivers such as trees, weather, wildfire danger zones, not merely rely on historical trends.*

PG&E-13: PG&E does not explain how the factors limiting microgrid deployment will impact its microgrid plans.

Add text in italics:

- iv. *Analyze and discuss Critical Infrastructure, particularly health care, water and wastewater, and communications facilities in wildfire mitigation and microgrid planning, battery installation, and PSPS minimization.*

III. PG&E fails to analyze the interrelationship of fire risk factors and to develop a plan that considers and addresses layers of risk including its inspection, maintenance, and categorization process

A. Analysis: Examining the Interrelationship of Risk Factors is Key to Protecting Public Safety

WSD Appendix PG&E-2 highlights the role of PG&E equipment failure in ignition.¹⁸

The importance of equipment failure as an ignition cause and PG&E's lack of analysis and explanation of this issue indicates that the CPUC should categorize this failure as a Class A deficiency – aspects of the WMP are lacking or flawed. The condition WSD proposes to address this deficiency does not specifically require PG&E to examine and explain factors such as equipment age or the interrelationship between drivers of PG&E equipment failure.

PG&E should analyze, for example, drivers of equipment failures including, but not limited to: equipment age and type, insulated or uninsulated equipment; pole age, type, and loading factors; pole and equipment location in persistent wind or Red Flag Warning areas; vegetation type and management; and PG&E's inspection, operation, and record-keeping practices including its reporting of third-party issues that affect poles, conductors and equipment. More detailed analysis of the drivers of equipment failure is a threshold for well-calibrated WMP programs, initiatives, and investments to protect public safety.

Similarly, WSD Appendix PG&E-3 underscores that “PG&E has approximately 50% more conductor failure ignitions as a percentage of total ignitions, nearly 2.5 times the number of “conductor failure”- driven ignitions per overhead circuit mile compared to peer utilities. Since PG&E has the most overhead circuit miles and thus conductors compared to peer utilities, the high rate of conductor failure poses a serious risk.” WSD's Appendix PG&E-3 proposes to

¹⁸ *WSD Appendix, Draft Action Statement PG&E WMP, 2020, supra* note 3, at A2.

categorize this deficiency as Class C. This comment recommends categorizing this condition as Class A since conductor failure is a key component of PG&E equipment failure that causes fires.

The CPUC Safety and Enforcement Division (SED's) 2019 report on the Camp Fire underscores the importance of examining a variety of factors including equipment failure, record-keeping gaps, and PG&E maintenance and inspection practices to protect public safety. SED's Camp Fire report found for the Caribou-Palermo and other North Fork Feather River Canyon lines that sparked the Camp Fire, "[f]actors such as design (link connectors and a relatively large number of non-tensioned insulated conductors), long-duration exposure to higher winds, age, and historical inspection methodologies likely all contributed to these cold-end hardware wear issues" such as those found on C-hooks whose failure sparked the Camp Fire.¹⁹ "Repeated relative motion between the connector and the eye of the hanger plate (or shackle) gradually wears away material from both," motion that wind, stresses, and other forces can cause and noting damage accumulated over years.²⁰

The Camp Fire highlights the need to analyze the interrelationship of risk factors, not simply the interrelationship of initiatives as WSD's draft report suggests.²¹ PG&E must examine and explain how wildfire risk is related to equipment including equipment age, type, condition, PG&E replacement, inspection, and prioritization practices, and pole loading; third-party practices such as pole loading, equipment lashing, incursions into climbing space, GO 95 violations, and PG&E's reporting practices of such violations to the CPUC; geographic and weather factors such as Wildfire Threat zone status, high or sustained wind patterns in an area, records of Red Flag Zones; community resources including fire-fighting, public safety, and water

¹⁹ SED Camp Fire Report, *supra* note 12, at Attach. A, VI, Camp-0549

²⁰ *Id.* at Attach. A, VI, Camp-0549, CAMP-0612.

²¹ *WSD Draft Action Statement PG&E WMP, 2020, supra* note 1, at 60.

resources; egress factors that affect evacuation; and population factors including resources to evacuate, socio-economic status, population age, health factors including but not limited to medical baseline, information about populations highly dependent on refrigeration such as diabetics and nursing parents (parents nursing young children).

This comment urges the CPUC to require PG&E to engage in layered and integrated analysis of factors affecting wildfire safety and planning including, but not limited to: 1) equipment factors and policies; 2) history of incidents and near misses in that area or for similar types of conditions of equipment or practices; 3) third-party practices and policies; 4) geographic and weather factors; 5) community resources; 6) egress factors; 7) population factors. Integrated, multi-layered, multi-factorial analysis should guide PG&E's priorities, help it determine areas to target with community collaboration, improve its analysis of replacement and upgrade priorities, and improve public safety.

PG&E states it has two basic inspection approaches: "proactive replacement" and "run to condition."²² "Proactive replacement" is for assets with a high risk of catastrophic wildfire if they fail (conductor, pole, and fuses and surge arresters that cause sparks and potential ignition). PG&E uses a "run to condition" approach for assets it contends pose a lower risk of contributing to catastrophic wildfire (including cross arms, insulators, voltage regulation, protective equipment, transformers and switching equipment).²³

PG&E's "run to condition" approach raises serious risks that it may run past safe operational condition. Insulators in the "run to condition" list may include cold-end hardware such as C-hooks, equipment implicated in both the Camp Fire and the Kincaide fire.²⁴ PG&E

²² *Id.* at 38.

²³ *Id.*

²⁴ SED Camp Fire Report, *supra* note 12, at Attach. A, CAMP-0035.

informed Judge Alsup that per “the guidelines in PG&E’s Electric Transmission Preventive Maintenance (“ETPM”) Manual in effect at the time of the Camp Fire, material loss of between 30% and 50% on insulators and steel structures, including C-hooks, is a condition that should be assigned Priority Code E. Such conditions must be addressed within 12 months.”²⁵

“Run to condition” fails to account for factors such as equipment age, wind, interaction with other equipment, pole loading, high fire threat, and population factors that merit proactive replacement. PG&E’s “run to condition” standard does not appear to factor in anticipated useful life, a failure which may lead to practices such as tolerating towers and equipment that are more than one hundred years old such as those which ignited the Camp Fire.

“Improved understanding of the relationships between near misses and ignitions can better inform utility performance and track progress,” WSD’s draft report observed.²⁶ PG&E should be required to incorporate lessons from near misses and incidents into its prioritization and to make public the analytical methods by which it does so.

B. Recommendation for Draft Resolution WSD-003:

PG&E-2, Equipment Failure

Classify as Class A, not Class B.

Add text in italics:

iv. Examine and explain causes of equipment failure such as age, type of equipment, maintenance, pole loading, location in a high or persistent wind zone, weather, or other relevant factors and the interrelationship between drivers of PG&E equipment failure.

PG&E-3, Conductor Failure

Recommendation: Classify as Class A, not Class C.

Accelerate the required analysis of the root cause of conductor failure to PG&E’s first quarterly report. Require incorporation of that analysis into updates to PG&E’s 2020 WMP and its preparation for its 2021 WMP.

²⁵ *PG&E Response to Criminal Probation Camp Fire Questions*, *supra* note 7, at 3.

²⁶ *WSD Draft Action Statement PG&E WMP, 2020*, *supra* note 1, at 16.

PG&E-15, It is unclear how PG&E classifies findings at the appropriate level.

Add text in italics:

PG&E shall develop and furnish an RCP that includes:

iii. analyze and discuss the analysis of “run to condition” categorization as risk drivers for ignition including analysis of the age, useful life, type, location, wind, pole loading and other factors that affect equipment PG&E has placed in this category.

PG&E-24, Improving Prioritization

Add text in italics:

In its first quarterly report, PG&E shall explain its *analysis*, method and process for:

- i. prioritizing between system hardening and vegetation management efforts in a single location;
- ii. *Identifying locations where a combination of system hardening and vegetation management would reduce fire danger and the resort to PSPS, taking into account the role of that location and circuit in the system and factors such as historical wind patterns, fire threat zones, population factors as described above, equipment age and condition including pole loading, maintenance and inspection.*
- iii. *incorporate lessons from near misses and incidents into its prioritization and make public the analytical methods and data through which PG&E does so.*

VI. PG&E fails to adequately discuss risk factors associated with joint use utility poles and PG&E operational protocols

A. Analysis: Pole Safety and PG&E Operation and Reporting Protocols Must be Addressed in the WMP

PG&E stated at the February 12, 2019 workshop for A-19-07-019 that if it received public photos of communications equipment issues, it would report the issue to the communications attacher or owner of the communications space. CPUC OII 17-06-027 is examining the interrelationship between utility pole safety and competitive access. PG&E’s Wildfire Safety Mitigation 2020 Proposal states “poles at highest risk of being overloaded are

jointly owned, Class 5 (smallest pole) with both primary and secondary conductors and multiple communication attachments.”²⁷

“Violations of CPUC rules in the communications space hinders PG&E’s proposal to increase its use of communications and information technology to improve situational awareness,” BBIC’s comments in A-19-07-019 contend. PG&E’s 2020 WMP proposes increased camera and weather monitoring equipment use.²⁸ “Figure 5-9 in PG&E’s Wildfire Safety Mitigation proposal shows equipment throughout the pole’s length, including in the communications space. Mounting cameras, fire, and wind detection equipment on poles, whether jointly or solely owned, requires space and contributes to pole loading. Jointly owned poles with multiple attachments or CPUC rule violations preclude or complicate safety equipment mounting.”²⁹ PG&E must analyze the extent to which pole loading and attachment practices including PG&E’s practice of reporting issues to the communications attacher or communications space owner, and not to the CPUC, affect its infrastructure safety and its ability to implement its WMP.

B. Recommendation for Draft Resolution WSD-003:

PG&E-2, Equipment Failure

Classify as Class A, not Class B.

Add text in italics:

- iv. *Analyze and discuss the role of third party practices for joint use poles and attachments and PG&E’s practices regarding reporting GO 95 violations and other issues that may affect PG&E’s safety and reliability to the CPUC, not just to pole owners.*

²⁷ PG&E, 2020 Wildfire Safety Mitigation Plan, R.18-10-007, p. 5-134, Feb. 7, 2020.

²⁸ *Id.* at Figure 5-9, pg. 5-69.

²⁹ BBIC, Comments, *supra* note 6, p. 23, February 21, 2020.

V. PG&E Fails to Adequately Account for PSPS Public Impacts and Fails to Integrate Public Comment into its Learning and WMP System

A. Analysis: The CPUC and PG&E Must Put the Public at the Center of Public Safety

The CPUC and PG&E must put the public at the center of public safety. The CPUC should require PG&E to coordinate with the public in all aspects of its WMP process. The CPUC should require PG&E's WMP to facilitate public input such as by enabling the public to submit photos of PG&E infrastructure and safety concerns, rather than relegating the public to 20th century phone calls to complain about PG&E issues.³⁰ PG&E's WMP Plan mentions "public meetings" only once in its emergency preparedness outreach plan section where it mentions "public meeting (e.g., city council meetings, board of supervisor meetings)."³¹ PG&E does not propose meetings with community organizations not mediated by government officials such as Firewise Councils.³²

PG&E fails to include public meetings and consultation as a cornerstone of operational planning, reporting about PG&E infrastructure conditions, and collaboration. The CPUC and PG&E must recognize and enlist the public in improving wildfire safety throughout the planning and implementation process. "From students to teachers, farm workers, Girl Scout Troops, Firewise Safety Councils, local and tribal governments, to Californians in a variety of occupations, Californians are eager to use their time and talent to enhance the safety of our state's infrastructure," Professor Sandoval observed in her comments to the CPUC.³³

³⁰ *Id.* at p. 24-25, February 21, 2020 ("A well-designed App can harness photos and 21st century technology to make the complaint process more effective and increase public safety.")

³¹ PG&E, 2020 Wildfire Safety Mitigation Plan, R.18-10-007, p. 5-236, Feb. 7, 2020.

³² Santa Clara County, Fire Safe Council, *What is Firewise USA*, <https://sccfiresafe.org/learn/what-is-firewise-usa/>.

³³ BBIC, Comments, *supra* note 6, p. 24-25, and Professor Sandoval Workshop Comments for A-19-07-019.

Researchers Yueping Zhenga and Hindy Lauer Schachte examined the role of “administrator willingness” or desire to enable citizen participation through information and communications technology (ICT).³⁴ Zhenga and Schachte found that ICT action “is most likely to take place when administrators both want it to occur and possess the resources to make change happen.”³⁵ PG&E’s administrator unwillingness is evident in its scant treatment of the public’s role in wildfire safety and PG&E’s responsibility to put the public at the forefront of its operation and planning. The CPUC and PG&E must put the public at the center of public safety.

Analysis of egress factors exemplifies the need to consider data about the population and public input. WSD’s Appendix PG&E-9 would require PG&E to explain in more detail its analysis of egress factors (evacuation) as they are weighted against other factors and impact its prioritization and deployment of initiatives. Egress factors must be considered in tandem with other factors that affect prioritization, identification, and deployment of initiatives and PSPS.

Analysis of egress factors should be integrated to consider: 1) equipment factors and policies; 2) history of incidents and near misses in that area or for similar types of conditions of equipment or practices; 3) third-party practices and policies; 4) geographic and weather factors; 5) community resources; 6) egress factors; and 7) population factors. Such an integrated analysis should guide PG&E’s priorities, help it determine areas to target with community collaboration, improve its analysis of replacement and upgrade priorities, and improve public safety, as described above on pgs. 11-12.

³⁴ Yueping Zhenga and Hindy Lauer Schachte, *The Impact of Administrator Willingness on Website E-Participation: Some Evidence from Municipalities*, PUBLIC PERFORMANCE & MANAGEMENT REVIEW, Vol. 41, No. 1, 1–21 (2018).

³⁵ *Id.* at 2-3.

B. Recommendation for Draft Resolution WSD-003:

PG&E-9: How PG&E weighs egress as a risk factor.

Add text in italics:

iii. Analysis of egress factors should also consider their relationship to population factors such as socio-economic status (resources to evacuate), population age and health factors including but not limited to medical baseline, information about population highly dependent on refrigeration such as diabetics and nursing parents. Such analysis must be part of an integrated analysis considering layers of risk and a range of data including: 1) equipment factors and policies; 2) history of incidents and near misses in that area or for similar types of conditions of equipment or practices; 3) third-party practices and policies; 4) geographic and weather factors; 5) community resources; 6) egress factors; 7) and population factors.

PG&E-27: Public Safety Partner Coordination

Add a requirement for coordination with Native American tribes as indicated by text in italics:

- i. provide an updated “coordination with public safety partners” plan that details precisely how PG&E works with cities, counties, *federally recognized Native American tribes*, incident management teams, and other first responders;

PG&E-28: Lack of justification and detail for PG&E’s self-assessed stakeholder engagement capabilities.

Add a requirement for coordination with Native American tribes and the public as indicated by text in italics:

- i. list and describe all actions it is taking to coordinate and collaborate with local communities *including federally recognized Native American tribes* regarding its wildfire mitigation activities and PSPS;
- ii. *report to the CPUC and the public by August 31, 2020 on plans to reduce PSPS during the COVID-19 pandemic, taking into account local vulnerabilities to COVID-19 based on data about poor outcomes among population segments, and the status of wildfire mitigation steps to reduce PSPS frequency and duration.*
- iii. *improve coordination with the public to reduce wildfire risks including by facilitating submission of photos with complaints about PG&E infrastructure and not limiting the public to complaining via telephone call.*

- iv. *Convene and report on meetings with the public through a variety of organizations such as government organizations including Native American tribes, non-governmental organizations, schools and universities, business organizations, associations, etc. throughout the WMP planning and execution process and in preparation for WMP reports and the next set of plans.*
- v. *Analyze trends in community comment and incorporate that analysis into the WMP.*
- vi. *improve PG&E's website capacity prior to months in which PSPS may be scheduled to maintain informational capacity for the public, and coordinate with the media to provide information about PG&E outages.*

V. Integrate Lessons from Fires, Near Misses, and Other Utility Practices including Analyzing and Prioritizing the Types of Trees Most Likely to Cause Fires

A. Analysis: Learn and Integrate Learning into WMP Analysis and Operation

WSD identifies PG&E's failures to "describe in detail how its hazard tree analysis focuses on at-risk areas (based on wind conditions, outage history and the like) and specific species that pose a high risk (due not only to fast growth rate but other risk factors) to focus its current proposal."³⁶ WSD's draft states that "PG&E's hazard tree program should focus on at risk trees first, rather than on every tree within striking distance."

The analytical foundation for tree hazard assessment is missing from PG&E's WMP. In contrast, SDG&E plans to target eucalyptus, oak, sycamore, and pine trees in High Fire Threat Districts.³⁷ SDG&E developed a "Vegetation Risk Index" that analyzes the total "number of trees in the vicinity of a circuit, Height of trees, Tree species, Historical tree related outages."³⁸ PG&E should conduct an analysis that examines the role of tree species in outages, and its relationship to other risk data such as high wind zones and high fire threat areas.

³⁶ *WSD Appendix, Draft Action Statement PG&E WMP, 2020*, at PG&E-18.

³⁷ SDG&E, *Wildfire Mitigation*, slide 11, Sept. 17, 2019, https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/News_Room/NewsUpdates/2019/SDGE%20Wildfire%20Plan%20Update%20at%20the%20CPUC%209.17.19%20R1.pdf

³⁸ *Id.* at slide 12.

B. Recommendation for Draft Resolution WSD-003:

PG&E-18: add to the Condition:

Add text in italics:

In its first quarterly report, PG&E shall detail:

- i. *develop a Vegetation Risk Index (VRI) that considers factors such as trees in the vicinity of a circuit, tree height, tree species, historical tree related outages and their relationship to factors such as tree species. Learn from other utilities and incidents about high risk trees and incorporate that information into the VRI. The VRI shall include analysis of wind, red flag zones, high fire threat districts, population factors, egress, equipment age and condition, pole loading, and other factors that have contributed to fires. Explain how the VRI is employed to prioritize the highest risk areas and types of trees.*

VI. Conclusion

Thank you for considering these comments and recommendations submitted to improve public safety.

Dated: May 27, 2020

Updated filing submitted on May 28, 2020
to correct non-substantive errors

Respectfully submitted,

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