

S273340

**IN THE
SUPREME COURT OF CALIFORNIA**

**ANTHONY GANTNER, individually and on behalf of all those
similarly situated,**
Plaintiff and Appellant,

v.

PG&E CORPORATION and PACIFIC GAS & ELECTRIC COMPANY,
Defendants and Respondents.

UPON CERTIFICATION PURSUANT TO CALIFORNIA RULES OF COURT, RULE 8.548, TO DECIDE A QUESTION
OF LAW PRESENTED IN A MATTER PENDING IN THE UNITED STATE COURT OF APPEALS FOR THE NINTH
CIRCUIT — CASE No. 21-15571

**MOTION FOR JUDICIAL NOTICE; DECLARATION OF
OMID H. NASAB; [PROPOSED] ORDER**

**[FILED CONCURRENTLY WITH
RESPONDENTS' ANSWER BRIEF ON THE MERITS]**

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TABLE OF CONTENTS

TABLE OF AUTHORITIES3

INTRODUCTION4

LEGAL ARGUMENT7

I. This Court has the authority to take judicial notice of the administrative records of the Public Utilities Commission.7

II. This Court should take judicial notice of the PUC’s administrative records and filings, which are relevant to the question of whether Plaintiff’s lawsuit is preempted by section 1759.8

CONCLUSION..... 10

DECLARATION OF OMID H. NASAB..... 12

[PROPOSED] ORDER..... 15

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Associated Builders & Contractors, Inc. v. San Francisco Airports Comm'n</i> (1999) 21 Cal. 4th 352	7
<i>Hartwell Corp. v. Superior Court</i> (2002) 27 Cal. 4th 256	7
<i>PG&E Corp. v. Pub. Utils. Comm'n</i> (2004) 118 Cal. App. 4th 1174	7
<i>San Diego Gas & Elec. Co. v. Superior Ct. (Covalt)</i> (1996) 13 Cal. 4th 893	8, 10
Statutes & Rules	
Evidence Code § 452	4, 7
Evidence Code § 453	4, 7
Evidence Code § 459	4, 7
Public Utilities Code § 1759	5, 6, 8, 9
Other Authorities	
California Rules of Court, rule 8.252(a)	4

**IN THE
SUPREME COURT OF CALIFORNIA**

**ANTHONY GANTNER, individually and on behalf of all
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Plaintiff and Appellant,

v.

**PG&E CORPORATION and PACIFIC GAS & ELECTRIC
COMPANY,**
Defendants and Respondents.

MOTION FOR JUDICIAL NOTICE

INTRODUCTION

Pursuant to Evidence Code [sections 452, 453, and 459](#), and [rule 8.252\(a\)](#) of the California Rules of Court, Respondents PG&E Corporation and Pacific Gas and Electric Company (“PG&E”) request that this Court take judicial notice of administrative records of the Public Utilities Commission (“PUC”), attached as exhibits 1 through 11 to the Declaration of Omid H. Nasab.¹

This case involves PG&E’s prospective de-energization of its powerlines—Public Safety Power Shutoffs or PSPSs—as a public

¹ This motion is being filed concurrently with PG&E’s Answer Brief on the Merits.

safety tool when strong winds and tinder dry vegetation significantly increase the risk of PG&E's energized lines igniting a catastrophic wildfire. In 2018, the PUC authorized PG&E and all other regulated utilities in California to prospectively de-energize their lines when certain weather conditions exist, namely high wind speeds, low humidity levels and dry vegetation. Since 2018, PG&E has used PSPS, under the guidance and oversight of the PUC, to reduce the risk of deadly wildfires when such conditions exist.

In December 2019, Plaintiff filed a class action complaint by initiating an adversary proceeding in PG&E's Chapter 11 proceeding. Plaintiff seeks \$2.5 billion, as well as punitive damages and injunctive relief, for damages (such as distress from fear of the dark, lost food, and the cost of candles and batteries) that he and other PG&E customers allegedly sustained during PG&E's 2019 PSPS events, and each and every PSPS event PG&E has conducted since. While Plaintiff alleges that the PSPS events were necessary to protect the public from the risk of wildfire, and concedes that PG&E complied with all applicable rules in conducting those PSPSs, Plaintiff claims that PG&E's alleged historical failure to maintain its grid caused the need for the shutoffs in the first place.

In April 2020, the Bankruptcy Court dismissed Plaintiff's complaint, finding, among other things, that Plaintiff's lawsuit—which seeks damages arising from PSPS events authorized by the PUC—would hinder or interfere with the PUC's regulatory authority over PSPS and is, therefore, preempted by Public

Utilities Code [§ 1759](#) (“section 1759”). Plaintiff appealed that dismissal to the District Court, which affirmed the Bankruptcy Court’s order. Plaintiff then appealed to the Ninth Circuit. After hearing oral argument, the Ninth Circuit certified two questions to this Court. As relevant to this Motion, the Ninth Circuit asked this Court to decide:

Does California Public Utilities Code [§ 1759](#) preempt a plaintiff’s claim of negligence brought against a utility if the alleged negligent acts were not approved by the California Public Utilities Commission, but those acts foreseeably resulted in the utility having to take subsequent action (here, a Public Safety Power Shutoff), pursuant to CPUC guidelines, and that subsequent action caused the plaintiff’s alleged injury?

In part because of the procedural posture of this case, several relevant PUC records are not part of the appellate record filed with this Court. These records are nonetheless relevant to this Court’s evaluation of the certified question of whether Plaintiff’s lawsuit is preempted by [section 1759](#). These documents shed light on the PUC’s broad and continuous regulation of PSPS, and that regulation is important to determining whether Plaintiff’s lawsuit would hinder or interfere with the PUC’s regulation and, thus, is preempted. Accordingly, PG&E requests that this Court take judicial notice of these documents.

LEGAL ARGUMENT

I. This Court has the authority to take judicial notice of the administrative records of the Public Utilities Commission.

Under Evidence Code [section 452, subdivisions \(c\) and \(h\)](#), judicial notice may be taken of legislative and executive acts and “[f]acts and propositions that are not reasonably subject to dispute.”

Under these provisions, courts may take judicial notice of administrative records of the PUC. (*See Hartwell Corp. v. Superior Court* (2002) [27 Cal. 4th 256, 286 fn. 4](#) [taking judicial notice of PUC orders issued after filing of the Court of Appeal opinion]; *Associated Builders & Contractors, Inc. v. San Francisco Airports Comm’n* (1999) [21 Cal. 4th 352, 375 fn. 4](#) [court may take judicial notice of administrative agency records]; *PG&E Corp. v. Pub. Utils. Comm’n* (2004) [118 Cal. App. 4th 1174, 1220 fn. 38](#) [taking judicial notice under Evidence Code [§ 452\(c\)](#) of “briefs filed . . . in rulemaking proceedings before the PUC”].) Appellate courts have the same right, power, and duty to take judicial notice as trial courts. (Evid. Code, [§ 459](#).)

Under Evidence Code [section 453](#), judicial notice is compulsory if “a party requests it and: [¶] (a) [g]ives each adverse party sufficient notice of the request, through the pleadings or otherwise, to enable such adverse party to prepare to meet the request; and [¶] (b) [f]urnishes the court with sufficient information to enable it to take judicial notice of the matter.”

II. This Court should take judicial notice of the PUC’s administrative records and filings, which are relevant to the question of whether Plaintiff’s lawsuit is preempted by section 1759.

As this Court has held, a plaintiff’s action is preempted when it hinders or interferes with a “broad and continuing supervisory [and] regulatory program”. (*San Diego Gas & Elec. Co. v. Superior Ct. (Covalt)* (1996) [13 Cal. 4th 893, 919.](#)) Therefore, the nature and scope of the PUC’s regulation of PSPS are central to this Court’s determination of whether Plaintiff’s lawsuit, if allowed to proceed in the trial court, would hinder or interfere with the PUC’s ongoing regulation of PSPS. As explained in greater detail in PG&E’s Answer Brief on the Merits, the PUC’s decisions, press releases, and utility filings with the PUC (including utilities’ annually filed wildfire mitigation plans) shed light on that issue.

As PG&E describes in its Answer Brief on the Merits, the PUC’s regulation of PSPS is active and ongoing. Ahead of each wildfire season, the PUC reviews for approval utilities’ wildfire mitigation plans (which include the utilities’ PSPS protocols), and during each wildfire season, the PUC reviews, *post hoc*, each PSPS event to ensure that utilities not only comply with the PUC’s PSPS guidelines but also strike the proper balance between the need to reduce the risk of wildfire, on the one hand, and to protect against the adverse impacts of de-energization, on the other hand. [Exhibits 1 through 11](#), which include utilities’ wildfire mitigation

plans (setting forth their PSPS protocols) and documents describing the PUC's review of utilities' PSPS plans and enforcement actions taken after PSPS events, are thus relevant to PG&E's arguments and, in turn, to this Court's evaluation of the nature of the PUC's regulation of PSPS.²

[Exhibits 7 and 9 through 11](#) are also relevant to this Court's review of whether Plaintiff's lawsuit is preempted under [section 1759](#) because they describe the PUC's current and ongoing role in PSPS. Plaintiff argues that his lawsuit would not hinder or interfere with the PUC's regulation of PSPS because certain responsibilities were supposedly transferred away from the PUC to a different agency effective July 2021. The PUC's PSPS-related actions since July 2021 (as reflected in [exhibits 7 and 9 through 11](#)) are, thus, relevant to PG&E's argument that the PUC, in fact, continues to regulate PSPS.

Moreover, because of the procedural posture of this case, the record on appeal is limited to documents that existed at the time the parties briefed PG&E's motion to dismiss (in early 2020). Since that time, the PUC has continued to take significant action with respect to PSPS, including by refining its PSPS guidelines and reviewing utilities' PSPS decisions for compliance with its guidelines. PG&E has also continued to refine its PSPS decision-making criteria, submitted to the PUC in its annual wildfire

² Due to the length of PG&E's post-event PSPS report and PG&E's wildfire mitigation plans, attached as [exhibits 2, 3 and 8](#) are relevant excerpts of those documents. The entirety of those documents can be found at the internet addresses provided in the Declaration of Omid H. Nasab.

mitigation plans. Thus, [exhibits 3 through 11](#) (which were not available at the time PG&E briefed its motion to dismiss in the Bankruptcy Court) are all relevant to show the evolution of the PUC's regulation of PSPS in the years since Plaintiff filed his complaint and describe the "broad and continuing supervisory [and] regulatory program" that the PUC has established with PSPS. (*Covalt*, [13 Cal. 4th at 919](#).)

For the reasons discussed above, and as addressed in more detail in PG&E's Answer Brief on the Merits, the administrative records of the PUC, attached as [exhibits 1 through 11](#) to the Declaration of Omid H. Nasab, are all relevant to this Court's consideration of whether Plaintiff's lawsuit would hinder or interfere with the PUC's active and ongoing regulation of PSPS.

CONCLUSION

For the foregoing reasons, PG&E respectfully requests that this Court take judicial notice of the administrative records attached hereto as [exhibits 1 through 11](#).

DECLARATION OF OMID H. NASAB

I, Omid H. Nasab, declare as follows:

1. I am an attorney admitted *pro hac vice* in this matter. I am a partner in the law firm of Cravath, Swaine & Moore, LLP, which is counsel for Respondents PG&E Corporation and Pacific Gas and Electric Company (“PG&E”). I am the attorney principally responsible for preparing PG&E’s Answer Brief on the Merits.

2. The listed documents that accompany this declaration are true and correct copies of the following administrative records and filings of the California Public Utilities Commission:

- a. [Exhibit 1](https://docs.cpuc.ca.gov/PublishedDocs/EFILE/A/95833.PDF): Application of San Diego Gas & Electric Company for Review of its Proactive De-Energization Measures and Approval of Proposed Tariff Revisions (U 902-E) (Dec. 22, 2008),
<https://docs.cpuc.ca.gov/PublishedDocs/EFILE/A/95833.PDF>
- b. [Exhibit 2](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/reports/pmps-post-event-reports/a-pmps-post-event-reports-2019/oct-26-and-29-2019-pge-esrb8-report-for-1.pdf): PG&E, *Public Safety Power Shutoff (PSPS) Report to the CPUC October 26 & 29, 2019 De-Energization Event* (Nov. 18, 2019),
<https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/reports/pmps-post-event-reports/a-pmps-post-event-reports-2019/oct-26-and-29-2019-pge-esrb8-report-for-1.pdf>
- c. [Exhibit 3](https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2020-Wildfire-Safety-Plan.pdf): Excerpts of PG&E, *Pacific Gas and Electric Company 2020 Wildfire Mitigation Plan Report Updated* (Feb. 28, 2020),
https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2020-Wildfire-Safety-Plan.pdf

- d. [Exhibit 4](https://www.cpuc.ca.gov/-/media/cpuc-website/consumer-support/documents/psps/prior-actions/batjer-letter-sce-psps-execution-jan-19-2021.pdf): M. Batjer, letter to K. Payne re 2020 SCE Public Safety Power Shutoff Performance (Jan. 19, 2021), <https://www.cpuc.ca.gov/-/media/cpuc-website/consumer-support/documents/psps/prior-actions/batjer-letter-sce-psps-execution-jan-19-2021.pdf>
- e. [Exhibit 5](https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M385/K400/385400379.PDF): Presiding Officer’s Decision on Alleged Violations of Pacific Gas and Electric Company with Respect to Its Implementation of the Fall 2019 Public Safety Power Shutoff Events (Cal. P.U.C. May 26, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M385/K400/385400379.PDF>
- f. [Exhibit 6](https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-to-hold-public-briefings-on-utility-readiness-for-2021-public-safety-power-shutoffs): PUC, Press Release, *CPUC to Hold Public Briefings on Utility Readiness for 2021 Public Safety Power Shutoffs* (Cal. P.U.C. July 15, 2021), <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-to-hold-public-briefings-on-utility-readiness-for-2021-public-safety-power-shutoffs>
- g. [Exhibit 7](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M402/K404/402404306.pdf): Cal. P.U.C. Res. WSD-020 (Aug. 19, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M402/K404/402404306.pdf>
- h. [Exhibit 8](https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2022-Wildfire-Safety-Plan-Update.pdf): Excerpts of PG&E, *Pacific Gas and Electric Company 2022 Wildfire Mitigation Plan* (Feb. 25, 2022), https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2022-Wildfire-Safety-Plan-Update.pdf
- i. [Exhibit 9](https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-staff-propose-utility-penalties-for-poor-execution-of-certain-2020-psps-events): PUC, Press Release, *CPUC Staff Proposed Utility Penalties for Poor Execution of Certain 2020 PSPS Events* (Cal. P.U.C. June 15, 2022), <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-staff-propose-utility-penalties-for-poor-execution-of-certain-2020-psps-events>

- j. [Exhibit 10](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/meeting-documents/psps-briefings-august-2022/final_pge-cpuc-public-psps-briefing.pdf): PG&E, *Public Safety Power Shutoff (PSPS), Cal. P.U.C. Public Briefing* (Aug. 2, 2022), https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/meeting-documents/psps-briefings-august-2022/final_pge-cpuc-public-psps-briefing.pdf
- k. [Exhibit 11](https://www.cpuc.ca.gov/psps/): PUC, *Utility Public Safety Power Shutoff Plans (De-Energization)* (last visited Aug. 14, 2022), <https://www.cpuc.ca.gov/psps/>

I declare under penalty of perjury under the law of California that the foregoing is true and correct and that this declaration was executed on August 31, 2022, at Summit, New Jersey.

/s/ Omid H. Nasab
Omid H. Nasab

**IN THE
SUPREME COURT OF CALIFORNIA**

**ANTHONY GANTNER, individually and on behalf of all
those similarly situated,**
Plaintiff and Appellant,

v.

**PG&E CORPORATION and PACIFIC GAS & ELECTRIC
COMPANY,**
Defendants and Respondents.

[PROPOSED] ORDER

IT IS HEREBY ORDERED that judicial notice is taken of the materials identified in the motion for judicial notice submitted by Respondents PG&E Corporation and Pacific Gas and Electric Company.

DATED: _____

CERTIFICATE OF SERVICE

Gantner v. PG&E Corporation

Supreme Court Case No. S273340

STATE OF NEW YORK, COUNTY OF NEW YORK

At the time of service, I was over 18 years of age and not a party to this action. I am employed in the County of New York, State of New York. My business address is 825 Eighth Avenue, New York, New York 10019.

On August 31, 2022, I served true copies of the following document(s) described as **MOTION FOR JUDICIAL NOTICE** on the interested parties in this action as follows:

SEE ATTACHED SERVICE LIST

BY E-MAIL OR ELECTRONIC TRANSMISSION: Based on a court order or an agreement of the parties to accept service by e-mail or electronic transmission via Court's Electronic Filing System (EFS) operated by ImageSoft TrueFiling (TrueFiling) as indicated on the attached service list.

I declare under penalty of perjury under the laws of the State of New York that the foregoing is true and correct.

Executed on August 31, 2022, at New York, New York.

/s/ Melissa Syring

Melissa Syring

SERVICE LIST

Gantner v. PG&E Corporation
Supreme Court Case No. S273340

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EXHIBIT 1



FILED

12-22-08

04:59 PM

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

Application of SAN DIEGO GAS & ELECTRIC)
COMPANY for Review of its Proactive De-)
Energization Measures and Approval of Proposed)
Tariff Revisions)
(U 902-E))
_____)

Application No. 08-12-____

A0812021

**APPLICATION OF
SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)**

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December 22, 2008

#225091

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

3
4 Application of SAN DIEGO GAS & ELECTRIC)
5 COMPANY for Review of its Proactive De-) Application No. 08-12-____
6 Energization Measures and Approval of Proposed)
7 Tariff Revisions)
8 (U 902-E))
9 _____)

10 **APPLICATION OF**
11 **SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)**

12 **I.**

13 **INTRODUCTION**

14 Pursuant to Public Utilities Code § 451 and Rule 2.1 of the California Public
15 Utilities Commission (“CPUC” or “Commission”) Rules of Practice and Procedure, San
16 Diego Gas & Electric Company (“SDG&E”) files this Application for Commission
17 review of the proactive de-energization measures in SDG&E’s Fire Preparedness Plan.
18 Proactive de-energization, as discussed in this Application, refers to those situations
19 where under certain extreme weather conditions and in limited high risk fire areas
20 SDG&E will shut-off power to certain distribution and/or tie lines. SDG&E has already
21 implemented the majority of its Fire Preparedness Plan, which includes various system
22 modifications to help ensure reliable and safe system operations related to heightened fire
23 risk situations. To provide adequate customer outreach and communications, as well as
24 an opportunity for Commission review, however, SDG&E has not yet implemented the
25 proactive de-energization portion of the Fire Preparedness Plan. SDG&E intends to
26 implement that portion of the Fire Preparedness Plan by no later than September 1, 2009.

1 As discussed in Section V below, SDG&E also seeks in this Application
2 Commission approval of changes to its Tariff Rule 14, which addresses responsibility for
3 losses in the event there is an interruption of electricity delivery. The modifications to
4 Tariff Rule 14 provide more detail regarding (1) the circumstances that could lead to an
5 interruption and (2) the customer's responsibility for losses in the event of an interruption
6 of electricity delivery. The changes also conform SDG&E's Tariff Rule 14 to Pacific
7 Gas and Electric Company's (PG&E).
8

9 Due to the importance of fire preparedness and the limited nature of this
10 Application, SDG&E requests that the Commission expeditiously complete its review of
11 this Application and issue a final decision on this Application by no later than July 9,
12 2009. A proposed schedule and comprehensive showing regarding the topics
13 summarized above are discussed in more detail below and in the testimony that is also
14 being served on this day.
15

16 II.

17 EXECUTIVE SUMMARY

18 There are a number of significant changes in the conditions that are prevalent in
19 Southern California and/or SDG&E's service territory that support implementation of
20 proactive de-energization. For example, there have been near-drought conditions for the
21 past eight to ten years, and the fire agencies have declared that the "fire season" has
22 become a virtually year-round phenomenon. Cyclic climate change has also contributed
23 to the circumstance where measures such as proactive de-energization are appropriate for
24 SDG&E's service territory. Since the October 2007 fires, SDG&E has undertaken
25
26
27

1 numerous additional steps to help ensure safe and reliable operations under a variety of
2 high fire risk situations.

3
4 Along these lines, SDG&E petitioned last year for the Commission to undertake
5 an Order Instituting Rulemaking (OIR) to determine the extent to which additional
6 measures might be necessary for disaster preparedness related to operation of the
7 electrical system.¹ Additionally, SDG&E has revised a number of its operating protocols
8 and programs as part of its Fire Preparedness Plan, including a wood-to-steel pole
9 replacement program and modification of its re-closer policy to limit or eliminate line re-
10 energization after an outage, depending on fire weather conditions. A final portion of the
11 Fire Preparedness Plan is proactive de-energization, where under certain limited
12 circumstances of extremely high fire risk and for a limited period of time SDG&E will
13 shut-off power to certain distribution and/or tie lines. In 2009, approximately 60,000²
14 customers could be potentially impacted by proactive de-energization. If there is a de-
15 energization event, however, it is expected that a much small number of customers would
16 be impacted at a given time, as explained in the testimony of Mr. Yari. Past fires, high
17 winds, and sustained drought conditions are increasingly common weather factors in the
18 San Diego region, so SDG&E considers these operational revisions an important step in
19 helping to protect against the dangers these conditions present. As the Commission is
20 also aware, these conditions can cause damage to property and power lines, and helping
21
22
23

24
25 ¹ See P.07-11-007, filed November 6, 2007, and subsequent filings. See also D.05-08-030. The
26 Commission has since issued R.08-11-005 regarding safety of electric utility and communications
27 infrastructure provider facilities.

28 ² The 60,000 customer number is based on preliminary data which will be finalized in the first four months
of 2009. In 2008, approximately 45,000 customers lived in or near the Highest Risk Fire Areas and would
have been potentially impacted by proactive de-energization.

1 to ensure safety and reliability is a cornerstone of SDG&E’s mission and Fire
2 Preparedness Plan.
3

4 **A. STATUS OF SDG&E’s 2008 FIRE PREPAREDNESS PLAN**

5 As noted above, SDG&E’s Fire Preparedness Plan has numerous elements that
6 are already being implemented today. Proactively shutting off power in high risk fire
7 areas during extreme weather has been suspended, however, until September 1, 2009, to
8 allow for additional community input, customer outreach, and review of this Application.
9

10 **B. SDG&E IS STRENGTHENING POWER LINES**

11 One aspect of SDG&E’s Fire Preparedness Plan that is already being
12 implemented is replacing certain wood poles with steel poles. These hardened facilities
13 should be more resistant to damage in a wildfire and also should also reduce the time
14 required to restore power after a large fire. Key wood to steel replacements underway are
15 near Fallbrook, Ramona and Campo/Boulevard. SDG&E is also expanding ground and
16 aerial inspections of power lines and poles. These inspections help SDG&E to prioritize
17 and repair problems promptly for safety and reliability. To date, SDG&E has inspected
18 more than 40,000 distribution poles and approximately 7,000 transmission poles.
19

20 **C. SDG&E DISABLES AUTOMATIC SWITCHES UNDER RED FLAG**
21 **WARNING**

22 Under normal operating conditions, power lines have switches (known as
23 re-closers) that are designed to automatically restore power after an outage occurs. For
24 dry conditions that SDG&E calls the “Elevated Fire Condition,” but without a Red Flag
25 Warning being declared by the National Weather Service, the operation of re-closers will
26

1 be limited in SDG&E’s Highest Risk Fire Areas.³ Under the Fire Preparedness Plan,
2 these re-closers are disabled in SDG&E’s Wildland Fire Area⁴ when a Red Flag Warning
3 is issued so that power will be restored only after visual inspections show it is safe.
4

5 Outages are typically caused by lightning, dust storms, accidents, and other contact with
6 equipment. SDG&E also will stage crews in the backcountry during Red Flag Warnings.
7 Ramona and Mountain Empire along with other operation centers will be on high-alert
8 during Red Flag Warnings. These actions should allow SDG&E to provide a quicker
9 response to emergencies, such as those that are caused by fires.
10

11 **D. SDG&E’S PROACTIVE SHUT-OFF OF POWER HAS BEEN**
12 **SUSPENDED FOR THIS YEAR**

13 SDG&E anticipates implementing the proactive de-energization portion of the
14 Fire Preparedness Plan on September 1, 2009. A de-energization event would most
15 likely occur during the months of September through December. These dates can vary,
16 however, according to the weather and fire risk conditions as discussed in Mr. Yari’s
17 testimony. Customer communications and outreach before, during, and after an event are
18 critical, and SDG&E has taken extensive steps in this area, as described in the testimony
19 of Mr. Velasquez.
20

21 **E. PROACTIVE DE-ENERGIZATION**

22 Before SDG&E would implement proactive de-energization, five conditions must
23 first be met:
24

25 _____
26 ³ Certain terms used in this Application, such as “Elevated Fire Condition,” “Wildland Fire Area,” and
“Highest Risk Fire Areas” are defined and explained in the testimony.

27 ⁴ The Wildland Fire Area includes all of the Highest Risk Fire Areas, but also goes beyond that territory, as
discussed in the testimony of Mr. Yari.

- 1 1. The moisture level in “non-living” materials (sticks, twigs and leaves) is less than 6%
2 (per weather stations);
- 3 2. The moisture level in “living” plants and bushes is less than or equal to 75% (per Cal
4 Fire);
- 5 3. The relative humidity (moisture in the air) is less than or equal to 20% (per weather
6 stations);
- 7 4. The National Weather Service has called a Red Flag Warning; and
- 8 5. Localized wind speeds in an area are greater than or equal to 35 mph sustained or
9 greater than or equal to 55 mph gusts when accompanied by sustained winds greater
10 than or equal to 30 mph (per weather stations).

11 Under SDG&E’s proactive de-energization procedure, not all potentially “at risk”
12 areas would be affected at the same time. SDG&E’s de-energization plan currently
13 utilizes 15 weather stations tied to specific areas (see map that follows).

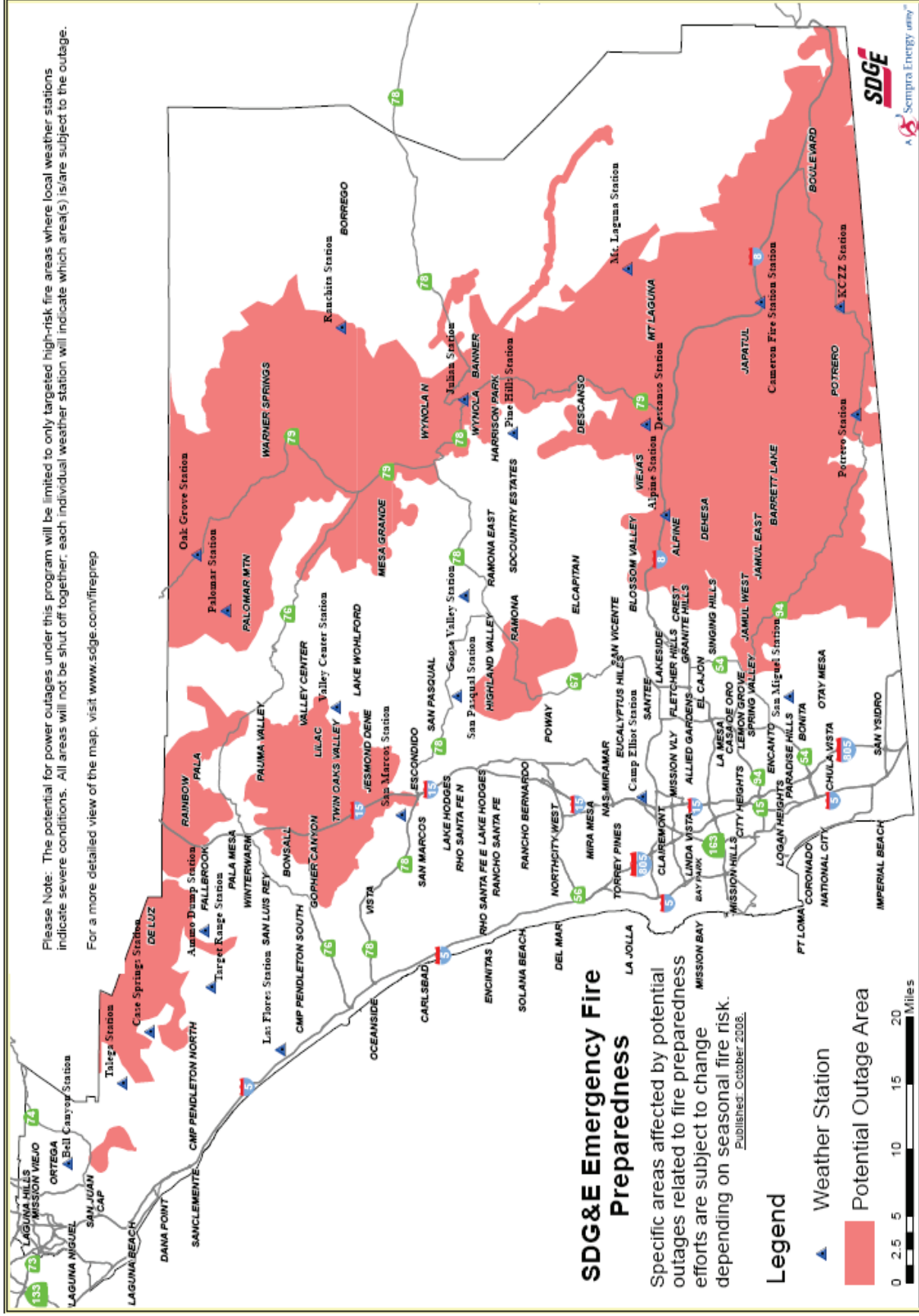
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Please Note: The potential for power outages under this program will be limited to only targeted high-risk fire areas where local weather stations indicate severe conditions. All areas will not be shut off together, each individual weather station will indicate which area(s) is/are subject to the outage. For a more detailed view of the map, visit www.sdge.com/fireprep



1 As the Highest Risk Fire Areas change, weather stations and customers will be
2 added or dropped out of the plan. SDG&E estimates that customers may experience
3 power outages of approximately 12 to 72 hours. Customers can use SDG&E's new web
4 page (www.SDGE.com/fireprep) to learn about and remain updated regarding SDG&E's
5 Fire Preparedness Plan, including implementation of proactive de-energization measures.
6 To do so, customers enter their addresses to determine whether they are in a Highest Risk
7 Fire Area and to look up weather station(s) nearby. Customers will be able to monitor all
8 five conditions that must be met for a de-energization to occur. If a power shut-off
9 emergency is likely, SDG&E will ask Reverse 9-1-1 (Alert San Diego) to notify affected
10 customers four - six hours in advance, and SDG&E will attempt to notify affected
11 customers two hours in advance. If weather conditions improve, SDG&E will also so
12 notify affected customers. If weather conditions do not improve and a power shut-off
13 emergency is called, SDG&E/Red Cross will open nearby Care Centers, medically
14 sensitive customers will be offered transportation, and special needs/low income
15 customers may qualify for modest financial support. Customers can call 2-1-1, 1-800-
16 411-7343, or check SDGE.com for more information.

17
18
19
20 SDG&E has undertaken an extensive communication and outreach effort
21 regarding its Fire Preparedness Plan, including direct mail to potentially impacted
22 customers, convening numerous customer meetings, participating in over 40 local
23 community events and organization meetings, and extensive contact with Special Needs
24 (low-income and medical baseline) and Essential customers. Additionally, SDG&E
25 estimates that it would be contacting Essential and Special Needs customers as many as
26

1 seven times throughout the various elements and stages of implementing the Fire
2 Preparedness Plan.

3 4 **III.**

5 **SUMMARY OF RELIEF REQUESTED AND SUPPORTING TESTIMONY**

6 As noted above, SDG&E is already undertaking numerous efforts as part of its
7 Fire Preparedness Plan to help ensure the safe and reliable operation of its electric system
8 during high fire risk situations. For example, SDG&E has implemented a wood-to-steel
9 pole conversion program, and it has also expanded aerial inspections of low-voltage and
10 high-voltage lines.⁵ Hardening of the system will provide improved performance during
11 severe conditions, such as Santa Ana wind events, and lessen the risk associated with
12 keeping the circuits in service during these conditions. In addition, the hardened facilities
13 should be more resistant to damage if a wildfire passes through the area, and the time
14 required to restore power in these areas after a large fire should be reduced. SDG&E has
15 also made changes in reprogramming or disabling the electrical switches (re-closers) that
16 automatically try to restore power after an outage, depending on the weather and fire
17 conditions.
18
19

20
21 On October 2, 2008, SDG&E announced that it would also turn off power
22 proactively in the Highest Risk Fire Areas when the National Weather Service advises
23 the conditions are ripe for fires, but only if all five weather triggers are met, and would
24 not restore service until the lines have been inspected. To better inform customers of this
25 change, however, and in response to a Commission letter inviting SDG&E to file this

26
27 ⁵ As noted above, SDG&E has inspected more than 40,000 distribution poles and approximately 7,000
transmission poles.

1 Application, on October 30, 2008, SDG&E announced the suspension until next year of
 2 its plan to shut-off power proactively during extreme weather conditions. Proactive de-
 3 energization is only one part of SDG&E's Fire Preparedness Plan targeted to increase
 4 community safety and reduce the likelihood of utility facilities being involved in
 5 wildfires. SDG&E is submitting this Application for Commission review of the
 6 proactive de-energization portion of SDG&E's Fire Preparedness Plan (in addition to
 7 seeking approval for proposed tariff changes). As further described in testimony also
 8 being served today, SDG&E is continuing to implement fire preparedness measures,
 9 including:
 10

- 11 1. Replacing wood poles with steel poles, increasing the distance between the power
 12 line conductors, and using heavier wire on part of the transmission system in rural
 communities;
- 13 2. Expanding aerial and ground inspections of distribution and transmission lines;
- 14 3. During dry or windy weather in which a Red Flag Warning is declared, disabling
 15 electrical switches (re-closers) that are designed to restore the power
 automatically after an outage; and
- 16 4. Proactively staging operations personnel in backcountry areas for quicker
 17 response during extreme weather conditions.

18 The following prepared direct testimony of SDG&E's witnesses is also being
 19 served today:

20 Exh. #	SDG&E TESTIMONY TOPIC	WITNESS
21 SDGE-1	Prepared Direct Testimony – Policy	David L. Geier
22 SDGE-2	Prepared Direct Testimony – Engineering and Operations	Sohrab A. Yari
23 SDGE-3	Prepared Direct Testimony – Customer Issues	Joe Velasquez
24 SDGE-4	Prepared Direct Testimony – Special Needs and Low-Income Customer Issues	Greg Lawless

25 The prepared direct testimony of David L. Geier provides an overview of
 26 SDG&E's testimony and addresses the policy issues underlying the proactive de-
 27 energization portion of SDG&E's Fire Preparedness Plan. The prepared direct testimony

1 of SDG&E witness Sohrab A. Yari explains the engineering and operational aspects of
2 SDG&E's Fire Preparedness Plan and proactive de-energization. The prepared direct
3 testimony of SDG&E witness Joe Velasquez presents the customer notification and
4 outreach issues of SDG&E's Fire Preparedness Plan, as well as a proposed, optional
5 Back-up Generation Tariff, demand normalization tariff revisions, and proposed revisions
6 to Tariff Rule 14. The prepared direct testimony of SDG&E witness Greg Lawless
7 presents the customer notification and outreach issues with regard to special needs and
8 low-income customers.
9

10 **IV.**

11 **IMPLEMENTATION**

12 SDG&E urges the Commission to resolve the issues raised in this Application no
13 later than July 9, 2009. Because some of the details of the Fire Preparedness Plan will
14 change as fire risk parameters change from year-to-year, SDG&E proposes filing an
15 informational advice letter annually specifying the details of its resulting fire preparedness
16 plan to be effective June 1 of that year.
17

18 **V.**

19 **PROPOSED MODIFICATIONS TO TARIFF RULE 14**

20 SDG&E also proposes modifications to its Tariff Rule 14 in this Application.
21 SDG&E filed Advice Letter (AL) 2025-E on September 26, 2008, requesting to modify
22 its Tariff Rule 14 to clarify and update the language regarding circumstances that may
23 lead to an interruption of electricity delivery, including for situations to protect public
24 safety, and the customer's responsibility for losses in the event of an interruption of
25 electricity.
26

1 Tariff Rule 14 (both existing and as proposed herein) requires SDG&E to exercise
2 due diligence and care to deliver a continuous supply of electricity to its customers and
3 indicates that the utility will not be liable for an interruption in service “caused by
4 inevitable accident, act of God, fire, strikes, riots, war or any other cause not within its
5 control.” The current rule, which has not been updated for approximately 25 years, is not
6 consistent with PG&E’s Tariff Rule 14. To achieve tariff consistency, AL 2025-E
7 requested SDG&E’s Tariff Rule 14 track the language included in PG&E’s Tariff Rule
8 14.
9

10
11 In its October 24, 2008 rejection of SDG&E’s AL, the Commission directed
12 SDG&E to file this request in an Application, and accordingly the proposed Tariff Rule
13 14 changes are included in Mr. Velasquez’ testimony. This tariff rule modification is
14 important for customers to understand more clearly those circumstances in which power
15 may be unexpectedly unavailable, such as where SDG&E interrupts delivery of
16 electricity to protect public safety or SDG&E’s distribution system. As with current
17 Tariff Rule 14, customers are responsible for losses that might result from an interruption
18 of electricity delivery. As is also explained in Mr. Velasquez’ and Mr. Lawless’
19 testimony, to the extent electricity delivery is unavailable due to proactive de-
20 energization, Essential, Special Needs, and Low-Income Customers have received
21 extensive notice and information regarding how to prepare for these events.
22

23
24 Given that the Commission has already approved nearly identical Tariff Rule 14
25 changes for PG&E, approving the proposed changes for SDG&E should not be
26 controversial. In addition, the proposed revisions to Tariff Rule 14 do not change the
27 fundamental allocation of responsibility for loss that exists in current Tariff Rule 14,
28

1 which is the primary purpose of that tariff rule. The additional examples and language
2 around the circumstances in which there may be an interruption of electricity delivery is
3 useful to customers and provides much more detailed information than the existing Tariff
4 Rule 14. SDG&E therefore urges the Commission to approve these proposed changes.
5

6
7 **VI.**

8 **COMPLIANCE WITH SENATE BILL 960 RULES,**
9 **INCLUDING PROPOSED SCHEDULE**

10 In compliance with Rule 6(a)(1), which was adopted in response to Senate Bill 960,
11 SDG&E is required to state “the proposed category for the proceeding, the need for hearing,
12 the issues to be considered, and a proposed schedule.” SDG&E proposes to categorize this
13 Application as a quasi-legislative proceeding. SDG&E anticipates that hearings may be
14 necessary. The principal issues to be considered are as follow:
15

- 16 1. The proactive de-energization portion of the Fire Preparedness Plan;
17 2. The proposed changes to Tariff Rule 14; and
18 3. SDG&E’s proposed tariff changes regarding Back-Up Generation and Demand
19 Normalization.

20 SDG&E suggests the following proposed schedule:

21 December 22, 2008 Application filed
22 January, 2009 Prehearing Conference
23 February, 2009 Intervenor Testimony served
24 March, 2009 Utility Rebuttal Testimony Served
25 April, 2009 Hearings if necessary
26
27

1 May, 2009 Opening and Reply Briefs filed
2 June, 2009 Proposed Decision
3 July, 2009 Commission Decision issued
4 August, 2009 Final Tariffs filed
5

6 **VII.**

7 **CORPORATE INFORMATION**

8
9 SDG&E is a public utility corporation organized and existing under, and by virtue
10 of, the laws of the State of California, and is engaged principally in the business of
11 providing electric service in a portion of Orange County and electric and gas service in San
12 Diego County.⁶ SDG&E's principal place of business is 8330 Century Park Court, San
13 Diego, California 92123, and its mailing address is Post Office Box 1831, San Diego,
14 California 92112.

15
16 All correspondence or communications regarding this Application should be
17 addressed to:

18 Rebecca W. Giles
19 Regulatory Case Administrator
20 San Diego Gas & Electric Company
21 8316 Century Park Court, CP-32D
22 San Diego, CA 92123
23 (858) 636-6876
24 RGiles@semprautilities.com

25
26 ⁶ SDG&E is a corporation created under the laws of the State of California. A certified copy of the Restated
27 Articles of Incorporation of San Diego Gas & Electric Company presently in effect and certified by the
28 California Secretary of State, was filed with the Commission on December 4, 1997 in connection with
SDG&E's Application 97-12-012 and is incorporated herein by reference.

1
2 with a copy to:

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4 Keith W. Melville
5 Attorneys for San Diego Gas & Electric Company
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10 (619) 699-5039 (Melville)
11 (619) 699-5027 (facsimile)
12 Lurick@sempra.com
13 Kmelville@sempra.com

9 **VIII.**

10 **STATUTORY AND OTHER AUTHORITY**

11 This Application is made pursuant to Section 451 of the Public Utilities Code of the
12 State of California, the Commission's Rules of Practice and Procedure, and prior decisions,
13 orders and resolutions of this Commission.
14

15 **IX.**

16 **NOTICE**

17 SDG&E will within 10 days after this Application is filed with the Commission:
18

19 1. Mail a notice to cities and counties in SDG&E's service territory, stating in
20 general terms the proposed operational and rule revisions. The notice will also state that a
21 copy of this Application and related testimony will be furnished by SDG&E upon written
22 request;
23

24 2. The notice will also state that a copy of this Application and related exhibits
25 may be examined at the offices of the Commission and in such SDG&E offices as are
26 specified in the notice.
27

1 SDG&E will also provide a similar notice to all customers affected by the proposed
2 operational changes by including such notice with the regular bills transmitted to these
3 customers, or by mailing notices in the United States Mail.
4

5 In addition, SDG&E will serve a copy of this Application and related exhibits on all
6 persons designated in the Certificate of Service, which includes all parties to SDG&E's prior
7 General Rate Case proceeding (A.06-12-009) and the Commission's Fire Preparedness OIR
8 (R.08-11-005) service list.
9

10 **X.**

11 **ADDITIONAL DOCUMENTATION**

12 SDG&E's Prepared Direct Testimony as described above is being served on this
13 day.
14

15 SDG&E is ready to proceed with its showing.

16 **WHEREFORE**, San Diego Gas & Electric Company respectfully requests that the
17 Commission:

- 18 1. Review this Application;
- 19 2. Issue necessary tariff approvals by July 9, 2009;
- 20 3. Issue an Order authorizing SDG&E to make such changes to SDG&E's tariffs as are
21 consistent with the relief requested herein; and
22

23 ///

24 ///

1
2 4. Grant such other and further relief as the Commission finds to be just and reasonable.
3

4 Dated at San Diego, California this 22nd day of December, 2008.

5
6 Respectfully submitted,

7 SAN DIEGO GAS & ELECTRIC COMPANY

8
9 By: /s/ LEE SCHAVRIEN

10 Lee Schavrien
11 Senior Vice President -
12 Regulatory & Finance

San Diego Gas & Electric Company

13 By: /s/ KEITH W. MELVILLE

14 LISA G. URICK
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VERIFICATION

I, Lee Schavrien, am an officer of the applicant corporation herein, to wit: Senior Vice President - Regulatory & Finance – San Diego Gas & Electric Company, and am authorized to make this verification on its behalf. The content of this document is true, except as to matters that are stated on information and belief. As to those matters, I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 22, 2008 at San Diego, California.

/s/ LEE SCHAVRIEN

Lee Schavrien
Senior Vice President –
Regulatory & Finance

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CERTIFICATE OF SERVICE

I hereby certify that a copy of **APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)** has been electronically mailed to each party of record of the service list in A.06-12-009 and R.08-11-005. Any party on the service list who has not provided an electronic mail address was served by placing copies in properly addressed and sealed envelopes and by depositing such envelopes in the United States Mail with first-class postage prepaid.

Executed this 22nd day of December, 2008 at San Diego, California.

/s/ LISA FUCCI-ORTIZ
Lisa Fucci-Ortiz



California Public
Utilities Commission

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CALIFORNIA PUBLIC UTILITIES COMMISSION

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LIST NAME: LIST
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[TOP OF PAGE](#)

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[TOP OF PAGE](#)
[BACK TO INDEX OF SERVICE LISTS](#)

EXHIBIT 2



Meredith E. Allen
Senior Director
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November 18, 2019

Elizaveta Malashenko
Deputy Executive Director, Safety and Enforcement
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA, 94102

Dear Ms. Malashenko:

As required by Resolution ESRB-8 and in accordance with Ordering Paragraph 1 of California Public Utilities Commission (CPUC) Decision (D.) 19-05-042, Pacific Gas and Electric Company (PG&E) respectfully submits a compliance report for the proactive de-energization event that was initiated on October 26, 2019 and October 29, 2019, and fully restored on November 1, 2019. This report has been verified by a PG&E officer in accordance with Rule 1.11 of the Commission's Rules of Practice and Procedure.

If you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in black ink that reads 'Meredith E. Allen'.

Meredith E. Allen
Senior Director – Regulatory Relations

Enclosures

cc: Leslie Palmer, SED
Anthony Noll, SED
Charlotte TerKeurst, SED
Dan Bout, SED
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PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC
October 26 & 29, 2019 De-Energization Event

Section 1 – Executive Summary

Starting on October 26, 2019 and subsequently October 29, 2019, PG&E implemented two Public Safety Power Shutoff (PSPS) events in order to mitigate catastrophic wildfire risk presented by significant offshore wind events combined with low humidity levels and critically dry fuels. The first offshore wind event started on October 26 with weather conditions lasting through October 28. The second offshore wind event started on October 29 with weather conditions lasting through October 30 for the majority of areas in scope for de-energization and ending on October 31 in the remaining areas in scope. Within these offshore wind events, PG&E planned de-energization times specific to different geographic areas based on their unique weather timing to minimize outage durations. These unique de-energization phases are referred to as Time Periods (TP) and were defined as described in Table 1, Figure 1, and Figure 2 below. In total, approximately 941,000¹ unique customers were impacted over the course of both events, with some customers impacted by both events.

Weather is closely monitored throughout the course of the event, up until just before de-energization, to ensure that operational plans are adjusted to any observed increase or decrease in weather risk. Based on the dynamic nature of the forecasted weather, both events had Time Periods added where new risks were presented after initial scoping, and both events had Time Periods where de-energization was “aborted” when incoming weather data indicated improvement and it was determined safe to keep the area energized. Specifically, during the October 26 event, TP7 was added after initial scoping and TP6 was aborted. During the October 29 event, TP1A and TP3B were added after initial scoping and TP6, TP7, and TP8 were aborted.

Over the course of the combined October 26 and October 29 events, customers were impacted with longer outage durations than other events this year. Two factors contributed to extended outages. First, the duration of the offshore winds was longer in comparison to past events. The wind during the October 26 event lasted roughly 36 hours in some areas, and during the October 29 event weather lasted roughly 24 hours. Second, the consecutive and close timing of the two offshore wind events created a scenario where the October 26 event “**all clears**” occurred roughly 24 hours prior to when the October 29 offshore winds were expected to arrive, and de-energization was to begin in many of the same areas. This overlap of 2 events, one concluding and one beginning, resulted in approximately 12 hours of day-light restoration time available for patrols and restoration for the October 26 event. Customers in scope for both events experienced a cycle of either being de-energized and restored for a short period of time, and then de-energized again, or being de-energized and remaining de-energized over the duration of both events. The average customer outage duration for the combined events was approximately 55 hours. PG&E recognizes that the timely restoration of customers is of the utmost importance and is committed to leveraging all currently available resources while continuing to explore new processes and technologies that reduce restoration times.

Shutting off power to our customers creates significant disruptions and hardships, and it is a decision PG&E makes only after thorough analysis of all options. As PG&E prepared to de-energize for public safety, action was taken to mitigate the impacts of our customers losing power through the use of temporary generation, and implementing lessons learned from previous PSPS events including improving call center operations and website operations.

Leading up to and during this PSPS event, PG&E:

- Communicated about the potential de-energization event through calls, emails, texts, online /social media, and news outlets in order to prepare the public for PSPS and mitigate potential

¹ Customer impact counts and related details are subject to further adjustment and reconciliation. After each PSPS event, PG&E teams reconcile outage details and categorization to ensure PSPS outages are properly labeled and do not include outages driven by other factors such as wind related outages outside of the PSPS scope. These data reviews and corrections are typically updated for several weeks after a PSPS event.

customer impacts. Medical Baseline customers received repeated outreach efforts including door knocks when positive contact was not made.

- Embedded representatives from CAL FIRE, Cal OES, and the CPUC in **PG&E's Emergency Operations Center (EOC)** to solicit real-time input.
- Sectionalized 272 circuits to reduce customer impacts by approximately 533,000 customers.
- Mobilized 77 Community Resource Centers (CRCs) in coordination with local agencies and governments to support customers impacted by de-energization.
- Provided temporary generation support in response to circumstances that posed a risk to public **safety due to the imminent failure or lack of customers' backup generation** systems. Recipients of temporary generation for this event included water treatment and pumping facilities, medical centers, tunnels, 911 dispatch centers, senior living facilities, a fire department, and a prison.
- Safely provided power to portions of four de-energized communities by configuring and energizing four temporary microgrids.

After the weather passed, PG&E:

- Utilized over 7,200 personnel, including approximately 800 mutual assistance and contractor personnel, and 46 helicopters to restore power as rapidly as possible.
- Identified approximately 328 cases² of damages or hazards through patrols and repaired or cleared these conditions to allow for safe re-energization.

PG&E captured additional lessons learned and critical feedback from the CPUC, state and local agencies, and customers as part of **the company's** ongoing effort to improve its execution of PSPS events. Initial areas highlighted for further improvement include enhanced scoping ability, increasing the accuracy of data, Estimated Times of Restoration (ETOR) precision and communication, improved map precision and communication, optimizing external communication, and addressing EOC staff fatigue.

² Damages include things such as a tree falling on a powerline and resulting in damage to PG&E assets, while hazards include things that could have sparked an ignition if the line was left energized such as a tree limb found suspended in electrical wires.

Section 2 – Explanation of PG&E’s Decision to De-Energize

PG&E considers many factors in weighing the risk of catastrophic wildfire against the impacts of de-energization. These factors include meteorological forecasts and wildfire risk data to determine the scope and impact of de-energization, as well as the efficacy of alternatives and mitigations to the extent possible prior to the potential de-energization. The same decision-making process was followed for both the decision to de-energize for the October 26 event and the decision to de-energize for the October 29 event. This process is described in this section with information unique to the individual events noted where applicable.

Forecast models showed high windspeeds, low humidity levels, and critically dry fuels in areas with PG&E **electrical assets. PG&E’s internal models and forecasts were in consensus with external forecasting services**, including the European Center for Medium-Range Weather Forecasts (ECMWF), Global Forecast System (GFS), Northern and Southern Operations Predictive Services and the National Weather Service (NWS). Red flag warnings were in effect in the areas in and around the scope identified for de-energization. High resolution weather modeling providing forecasts specific to 3-kilometer by 3-kilometer geographic areas were used to identify localized areas of high risk. This granular area identification **establishes the foundation of the PSPS scope. Approaching the event, PG&E’s weather model is updated every six hours, and scope is adjusted accordingly for increases or decreases in area of risk.**

Based on the meteorological footprint, circuits within the geographic area of forecasted weather-impact are assessed. For distribution lines, the PG&E team determines which circuits are impacted and evaluates the ability to sectionalize circuits to limit the de-energization scope and resulting customer impact.

For transmission lines, the PG&E team analyzes wildfire risk of each transmission line within scope based on forecasted wind speeds and Fire Potential Index (FPI) as well as structure type, historical outage performance, and recent enhanced inspection information. As a result, select lines were determined to be below risk thresholds based on the forecasted weather conditions and, therefore, the risk reduction benefit of de-energizing these lines did not outweigh the societal impact of de-energization. These lines were approved to stay in service during the event, and only lines deemed to be at a higher risk of catastrophic wildfire remained in scope for potential de-energization.

Select specific transmission circuit scenarios were reviewed in greater detail for their profile of risk, customer impact, and/or mitigation opportunities. In these cases, the PG&E Officer-in-Charge (OIC) weighs the risk of leaving the lines energized against the public safety impact of de-energizing them, and in many cases requests additional mitigations be performed on those lines to leave them energized. Examples of transmission circuit scenarios reviewed for the October 26 and October 29 events:

- a. In Santa Rosa, the Corona 115kV runs through a portion of the High Fire Threat District (HFTD) in scope as well as adjacent lower risk areas not in the HFTD and therefore not in scope. De-energizing Corona 115kV for the area in scope would also result in approximately 20,000 customers losing service as well in the adjacent area. However, a sectionalizing solution was identified and approved that would isolate the in-scope portion of Corona 115kv allowing for the approximately 20,000 customers to remain in service without added risk.
- b. In the Central Coast area, the Soledad #1 and #2 115kV circuits were determined to be included in scope. De-energizing these two lines would result in de-energization of a substation fed by the lines, which would result in the loss of service to approximately 40,000 **customers. However, PG&E’s Grid Control Center confirmed a solution for sourcing the substation from other lines without introducing added risk, allowing for the 40,000 customers to remain in service. This solution was approved.**
- c. In the Bay Area, two transmission lines serving Half Moon Bay were in scope for de-energization. The Hillsdale Junction – Half Moon Bay 60kV line was further reviewed as only portions were within the HFTD and de-energization would impact the Tom Lantos Tunnel and portions of Half Moon Bay, if de-energized. Upon further assessment, it was determined that there was very little incremental customer impact tied to de-energizing the line, and that PG&E could provide temporary generation to the tunnel. In this case, the risk reduction benefit from de-energizing the line was determined to outweigh the minimalized and

mitigated customer de-energization impact. Therefore, the decision was made to keep the Hillsdale Junction – Half Moon Bay 60kV line in scope for de-energization.

Further, a Power Flow Analysis is conducted, and coordinated with the CAISO, on the in-scope transmission lines to analyze any potential downstream impacts of load shedding and confirm solution feasibility with PG&E's Transmission System Protection team. Thirteen transmission lines were added to the de-energization scope as a result of the Power Flow Analysis for the October 26 event. Twenty-three transmission lines were added to the de-energization scope as a result of the Power Flow Analysis for the October 29 event.

Based on the identified circuits remaining in scope, the customer impact is determined. For Time Periods 1-6 of the October 26 event, the total estimated customer impact was approximately 935,000 customers, including approximately 5,800 critical customers, and approximately 34,000 medical baseline customers. For the October 29 event, the total estimated customer impact was approximately 596,000 customers, including approximately 3,800 critical customers, and approximately 21,000 medical baseline customers. The status of notifications to these customers was also reviewed at the time of the de-energization decisions. (These values represent customer counts estimated prior to the event. Actual customer impact data is reconciled after the event. The reconciled counts are stated in the remainder of this report.)

In light of the meteorological information indicating the potential for catastrophic wildfire and the customer impacts from mitigating that risk through de-energization, the PG&E team considered whether alternatives to de-energizing could adequately reduce the risk of catastrophic wildfire to obviate the need for de-energization. These alternatives included the following:

- Hazard trees recently inspected but not yet cleared were identified within the scope of each event. Focused mitigation of these hazard trees took place ahead of the event to clear portions of these populations. Trees with higher risk to PG&E assets were prioritized during mitigation. It was determined that removal of these hazard trees did not adequately reduce the risk of catastrophic wildfire under the forecasted wind conditions.
- Pre-event patrols were carried out on transmission lines in advance of the October 26 event and continued on the morning of the de-energization decision. For the October 29 event, patrol and restoration activities from the October 26 event occurred in place of typical pre-event patrol opportunities. Insights gathered through the pre-event patrols prior to October 26 and conditions reported during the restoration patrols prior to October 29 did not indicate a reduction in the assessed risk that would support leaving the lines energized.
- All automatic reclosing was disabled in Tier 2/Tier 3. It was concluded that this action did not provide a sufficient alternative to de-energization.
- Sectionalizing was implemented to the extent possible. This effort successfully reduced the number of customers impacted but did not present an alternative to de-energizing the circuits or portions of circuits at risk under the forecasted weather conditions.

Given the imminent potential for de-energization, readiness of efforts to provide community support and mitigate the negative impacts of de-energization were reviewed.

- Staffing and deployment readiness for over 65³ Community Resource Centers (CRCs) was confirmed.
- Temporary microgrids were ready to be activated for community support and power continuity to customers and key community resources, including:
 - Angwin Resilience Zone
 - Substation Power Continuity for Placerville, Calistoga, and Grass Valley

³ When the OIC approved the decision to de-energize, the total number of CRCs confirmed as staffed and ready for deployment was 65. In total, PG&E ended up establishing 77 CRCs.

EXHIBIT 3

PACIFIC GAS AND ELECTRIC COMPANY
2020 WILDFIRE MITIGATION PLAN REPORT

UPDATED

RULEMAKING 18-10-007

FEBRUARY 28, 2020



5.3.2.1 Advanced Weather Monitoring and Weather Stations

PG&E's Meteorology team currently consists of ten full-time degreed and experienced meteorologists and five degreed contract meteorologists that are industry experts in operational meteorology, utility meteorology, outage prediction, fire science, data science, cloud computing, atmospheric modeling, application development and data systems development. Most members of the team hold advanced degrees and the team has several alumni from the SJSU Fire Weather Research Laboratory (<https://www.fireweather.org/>). The team's responsibilities include monitoring and forecasting weather for utility operations, as well as maintaining, developing and deploying meteorological and decision support models for utility operations.⁸

PG&E utilizes public and proprietary state-of-the-art weather forecast model data and operates an in-house, high-resolution meteorological modeling system to forecast weather conditions, outage potential, and fire potential. PG&E also has a robust history of weather data including over 500,000 images from the North American Regional Reanalysis (NARR), as well as a high-resolution 30-year, hourly climatology of weather and fuels data. These historical datasets are utilized to put forecasts into perspective. PG&E also leverages publicly available forecast information from government agencies such as the National Weather Service (NWS) and GACCs Predictive Services as well as coordinates directly with meteorologists from these agencies on daily interagency conference calls when there is an increased fire potential. PG&E acquires and processes over a terabyte of public and proprietary weather data daily from several sources including, but not limited to:

- European Centre for Medium-Range Weather Forecasts (ECMWF)
- The ECMWF Ensemble Prediction System (EPS)
- Global Forecast System (GFS)
- Global Ensemble Forecast System (GEFS)
- Canadian Meteorological Centre (CMC) Global Model
- North American Mesoscale Model (NAM)
- High Resolution Rapid Refresh (HRRR)
- High Resolution Ensemble Forecast (HREF) model suite
- NanoWeather Uncoupled Surface Layer (USL) model
- Clean Power Research, LLC solar irradiance model
- Desert Research Institute (DRI) California and Nevada Smoke and Air Committee (CANSAC) Weather Research and Forecast (WRF) model

⁸ In 2020 PG&E is equipping a Meteorology Operations Center at an existing facility. The details for the Center are in Table 22, Section 7-2, Other, Meteorology Operations Center.

- PG&E's WRF model; the PG&E Operational Mesoscale Modeling System (POMMS)
- National Center for Environmental Prediction Real-Time Mesoscale Analysis
- Satellite and Fire Detection data from GOES-16, GOES-17, MODIS-AQUA, MODIS-TERRA, and Suomi-NPP
- NOAA Radar data
- Upper air observations from NOAA soundings and various wind profilers
- Lightning Data from the TOA Systems' Global Lightning Network
- Real-time weather station data from several hundred weather stations

PG&E first deployed the high resolution in-house mesoscale forecast model, POMMS, in November of 2014 and continues to improve and build upon the model framework to generate short to medium-term weather, outage, and fire potential forecasts across the PG&E service territory. POMMS is a high-resolution weather forecasting model that generates important fire weather parameters including wind speed, temperature, relative humidity, and precipitation at a 3-kilometer (km) resolution. Outputs from POMMS are used as inputs to the National Fire Danger Rating System, the Nelson Dead Fuel Moisture (DFM) model, and a proprietary Live Fuel Moisture (LFM) model to derive key fire danger indicators such as 1hr, 10hr, 100hr, 1000hr DFM, LFM, and NFDRS outputs such as the Energy Release Component, Burning Index, Spread Component and Ignition Component.

In late 2018 to 2019, PG&E successfully completed one of the largest known high-resolution climatological datasets in the utility industry: a 30-yr, hourly, 3 km spatial resolution dataset consisting of weather, dead and live fuel moistures, NFDRS outputs, and fire weather derivative products such as the Fosberg Fire Weather Index (FFWI). The quantity of data generated at the near-surface was near 80 billion datapoints. With this robust weather and fire parameter dataset, PG&E Meteorology sought to develop outage and fire potential models in 2019 utilizing best-practices deployed in the utility industry, fire science and data science communities.

The probability of a utility-caused fire ignition is related to a power outage from any source (e.g., vegetation failure, equipment failure, animal contact, car-pole). To better understand and forecast the potential of an outage, PG&E developed and then operationally deployed the Outage Producing Wind (OPW) model. The OPW model was built using PG&E outage data from 2008 – 2018 (~300,000 outage events) and PG&E's robust wind climatology, which contains 30 years of hourly wind data at a 3 km spatial resolution (>5 billion wind data points). Each hour of the 30-year climatology was processed to determine wind speeds in the vicinity of each outage. Location-specific distributions of wind and outage data were created from this process, allowing construction of location-specific wind-outage models. Through PG&E's study and experience forecasting outage activity as part of the SOPP model for over a decade, it was understood a single wind-outage model was insufficient to represent the wind-outage relationship across PG&E's entire territory. The OPW model and construction is discussed in more detail later in this section.

In order to evaluate the potential for large fires, PG&E significantly enhanced the FPI model in 2019 building upon utility best-practices. The PG&E FPI model was built and calibrated using a USFS dataset containing fires in the PG&E territory from 1992 – 2018. PG&E built and evaluated over 4,000 combinations of the FPI model using numerous weather components, fire weather indices (Fosberg Fire Weather index, the Hot-Dry-Windy Index, the Santa Ana Wildfire Threat weather index), outputs from NFDRS, Nelson DFM model, a machine-learning derived LFM model, and ‘containment’ and ‘land characteristic’ features such as road density, distance to nearest fire station, land-use type among several others. The PG&E FPI deployed in 2019 combines weather (wind, temperature, and relative humidity) and fuels (10hr dead fuel moisture, live fuel moisture, and fuel type such as grass, shrub/brush, timber) into an index that represents the probability for large fires to occur. The FPI model is run on the same 3-km resolution dataset as the high-resolution weather and OPW model.

In 2019, PG&E surpassed 600-weather stations installed, which is the largest known utility owned and operated weather station network in the world. Each weather station deployed records and reports meteorological data every 10 minutes and all data is made publicly available. This data can be accessed in real-time through the National Weather Service weather and hazards data viewer, Mesowest, the National Center for Environmental Prediction (NCEP) Meteorological Assimilation Data Ingest System (MADIS), or at www.pge.com/weather. In 2019, PG&E meteorologists met with representatives from NWS, CAL FIRE, and others to coordinate on where deployment of weather stations would be useful to not only PG&E, but to other agencies and the public. In 2020 and beyond, PG&E plans to significantly expand this network.

PG&E also developed and deployed a state-of-the-art satellite fire detection system in 2019 that uses remote sensing data from 5 geostationary and polar orbiting spacecraft to detect fires. PG&E partnered with the Space Science and Engineering Center from the University of Wisconsin, which provides PG&E with a customized, granular feed of fire detections from the next-generation GOES satellites. PG&E also obtains polar-orbiting satellite fire detection data from NASA. PG&E developed a proprietary application and algorithms in-house to consolidate fire detections as they arrive from several satellites and disseminate alerts via the internal web application and email. The web application allows PG&E’s analysts in the WSOC, meteorologists and others to track fire detections in near-real time, evaluate the intensity of fires via the Fire Radiative Power (FRP) outputs, as well as track the general spread of fires. This system is used in concert with the weather station network described above, the expansive high-resolution camera network deployed in PG&E’s territory, and several other sources. PG&E is sharing fire detection alerts with the CA National Guard and with county and local fire departments and is open to sharing the data with all interested stakeholders.

EXHIBIT 4

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 19, 2021

Via Email Transmission Only

Kevin Payne
Kevin.Payne@sce.com
President and Chief Executive Officer
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770

Re: *2020 Southern California Edison Company Public Safety Power Shutoff Performance*

Dear Mr. Payne:

I write to express deep concern regarding Southern California Edison Company's (SCE) overall execution of Public Safety Power Shutoff (PSPS) events in 2020. Utilities should execute PSPS events in a manner that places the safety and wellbeing of the people and communities they serve first. Over the course of the PSPS events SCE called in 2020, staff from the California Public Utilities Commission (CPUC), the California Department of Forestry and Fire Protection (CAL FIRE), and the California Office of Emergency Services (Cal OES) observed numerous instances in which SCE's PSPS execution appeared tactless, and in many regards, seemed deficient in meeting the standard its customers deserve.

From May through December 2020, SCE initiated 16 PSPS events, with the majority of the events occurring in November and December, including two PSPS events during major holidays. The loss of power causes major disruptions to businesses, medical facilities, communication carriers and other critical infrastructure. It strains state and local emergency and public safety personnel as they work to ensure public safety. And, if conducted ineffectively, particularly without reliable communication, these events can endanger lives and property, especially for those individuals who are reliant on power for medical reasons.

By way of observations from my counterparts in leadership at CAL FIRE and Cal OES, CPUC safety enforcement staff assessments of SCE PSPS post-event reports, and comments on those reports from stakeholders, the CPUC has identified five major areas where SCE underperformed in its execution of PSPS events: 1) transparency of PSPS the decision-making process, 2) execution of the notification process, 3) coordination and communication with state and local governments, 4) identification and notification of Medical Baseline and Access and Functional Needs customers, and 5) quality of PSPS post-event reports. Greater detail of our concerns is outlined in this letter. In addition, I continue to have concerns with the pace at which SCE is deploying backup power to vulnerable customers through its Critical Care Backup Battery program.

Because safety is the utmost priority to the CPUC, CAL FIRE, and Cal OES, this letter serves as notice to SCE regarding improvements SCE must initiate now with urgency. Nothing in this letter precludes future potential enforcement actions by the CPUC.

In addition, this letter serves to notify you that SCE shall:

Appear at a public meeting of the CPUC, CAL FIRE, and Cal OES on January 26, 2021, at 2 p.m., to answer questions regarding its PSPS execution and describe the company's plan for corrective actions based on the concerns identified in this letter. The following individuals from SCE, at a minimum, are directed to be present and available at this meeting:

- Kevin M. Payne, President and Chief Executive Officer
- Steve D. Powell, Executive Vice President, Operations
- Jill C. Anderson, Senior Vice President, Customer Service
- Phil Herrington, Senior Vice President, Transmission and Distribution
- Erik Takayesu, Vice President, Transmission, Substations and Operations
- Marc L. Ulrich, Vice President, Customer Service Operations

By February 12, 2021, SCE shall submit a corrective action plan to the CPUC with service to the Rulemaking (R.)18-12-005 service list and submit biweekly updates on progress toward the corrective action plan, also served biweekly to the R.18-12-005 service list. SCE shall also provide regular and as-requested updates to CPUC staff of the Safety and Enforcement Division, Safety Policy Division, and Wildfire Safety Division about progress toward the corrective actions.

The many issues identified below have been previously identified in CPUC decisions, including D.19-05-042, D.20-05-051, and ESRB-8, and SCE is expected to comply with the requirements in those decisions and any future decisions. It is critical that SCE learn from the 2020 PSPS events and take steps immediately to ensure mistakes and operational gaps are not repeated.

1. Transparency of the PSPS Decision-making Process

The CPUC acknowledges the complexity of the PSPS decision-making process. It is, however, incumbent upon the utilities to minimize the frequency of events and ensure PSPS is absolutely the last resort. To help demonstrate that SCE is in fact approaching PSPS in this manner, SCE must enhance the transparency of its PSPS decision-making process.

At a minimum, SCE shall:

- Provide improved data analytics and enhanced visibility of its PSPS decision-making process. Particularly:
 - Provide quantitative analysis of all factors that SCE utilizes when considering de-energization.
- Identify and document the authorities of Senior Officer in Charge, or equivalent position, and how all elements of the utility emergency operations are clearly aligned under the command of this position.
- Identify and document all executives with the title of Vice President, or equivalent, and above, with responsibilities in making the decision to call a PSPS event.
- Identify and document all Board members and Board committees with PSPS decision-making oversight.

2. Execution of the Notification Process

A major deficiency in SCE's 2020 PSPS implementation was its execution of notifications to public safety partners and customers during PSPS events. De-energization without any advance notifications should occur only in an extremely rare and justifiable situation. Some examples of SCE's deficiencies include:

- Large variance in number of customers initially notified versus the number actually de-energized.
- De-energizations without any prior customer notifications. For example, phone notification failing to contact customers due to vendor data processing issues.
- Inaccurate and confusing notifications, such as customers being informed they were re-energized when they were not.
- Notifications missing required information such as the defined time intervals for de-energization and the ArcGIS and shapefiles.
- Ineffective notification to communications providers, which made it difficult to distinguish PSPS events from other planned outage events.

Advanced and accurate notifications are vital for customers, critical facilities and public safety partners to prepare for a de-energization, and are required by CPUC regulations. SCE must improve its notification procedures and adhere to the CPUC's PSPS guidelines.

At a minimum, SCE shall:

- Reduce the significant variance between the number of advance customer notifications sent out and the actual number of customers de-energized in a PSPS event.
- Research and document the root cause of any instance in which SCE's notification process failed to notify customers in advance of a PSPS event and implement appropriate corrective actions. If the notification deficiency was due to the weather, establish processes to fully demonstrate the rapidity of the change in weather conditions that led to a de-energization without being able to notify customers in advance. If due to other reasons, such as internal processes, database or vendor issues, SCE should immediately act upon those issues to address the problem.
- Improve SCE's Incident Management Team's processes and protocols to:
 - Ensure notifications follow the timing interval guidelines and include estimated start date, time and duration of the de-energization event, and the estimated time of power restoration.
- Develop a communication and notification strategy in anticipation of the disruption of the traditional communication channels. In doing this, SCE shall coordinate with public safety partners to use in-language public alert system and public radio broadcasts in de-energization impacted areas in situations where internet, cellular, or landline-based communication services are limited.

3. Coordination and Communication with State and Local Governments

Executing a PSPS event requires coordinated efforts across multiple state and local jurisdictions as well as other public safety partners. Nevertheless, the utilities are ultimately responsible and accountable for the safe deployment of PSPS. In 2020, SCE's communications were lacking in numerous areas, which resulted in confusion and expenditure of resources that could have been avoided. Specifically:

- SCE missed and sent late notifications to the California State Warning Center (CSWC), provided incorrect information in the Essential Elements of Information (EEI) submittals, and was slow to resolve problems identified by the CSWC.
- SCE did not abide by the State Operations Guide (SOG) for scheduling Operational Briefings separately from State Executive Calls, which impaired the effectiveness of both meetings for state and county/tribal participants.
- SCE did not clearly communicate about which public safety partners it engaged during the PSPS events, and what information was communicated during the PSPS events.

SCE shall:

- Establish a more effective and efficient communication structure with counties and the State; Conduct after action reviews with counties and state agencies to better understand their information needs; Improve SCE's internal process to ensure timely and accurate information is submitted to CSWC; Take a proactive approach for prompt resolution of problems and establish a timeline to resolve problems during the communication with local and State government agencies.
- Separate the Operational Briefings from State Executive Briefings to ensure each call serves its own purpose.
- Coordinate with counties, tribal governments, and Cal OES to develop and validate a list of public safety partners, including local government agencies and critical facilities.
- Develop a process to ensure public safety partners have the opportunity to adequately engage for each PSPS event. SCE should develop metrics and seek feedback from these organizations after each event to evaluate the effectiveness of the engagement, and to identify specific actions to be taken to address such feedback.
- Host a town hall style meeting or public information dissemination gatherings to report back to the impacted communities by March 31, 2021.

4. Identification and Notification of Medical Baseline and Access and Functional Needs Customers

Ensuring that Medical Baseline and Access and Function Needs customers are sufficiently identified and notified of PSPS events is critical to helping ensure the safety and wellbeing of some of the state's most vulnerable residents. SCE's approach to identifying and notifying Medical Baseline customers of a PSPS event was lacking in a number of areas. Specifically:

- SCE did not confirm that all Medical Baseline customers received a PSPS notification. Rather, SCE confirmed notifications to critical care customers, a subset of Medical Baseline customers. While critical care customers are the most immediately vulnerable during PSPS events, customers with multiple simultaneous needs are also a high priority.
- SCE did not provide state agencies sufficient information to evaluate whether SCE's approach to developing customer care plans for Access and Functional Needs customers identified the appropriate customers or was executed well.
- SCE's Medical Baseline customer enrollment approach appears to result in a proportionally smaller group of Medical Baseline customers enrolled as a subset of its total customer population relative to other utilities' approaches.

SCE shall:

- Develop a process to ensure positive notification of all Medical Baseline customers, not just critical care customers.
- Provide its Access and Functional Needs vulnerability criteria and framework on its public website.
- Develop a plan to review and expand its Medical Baseline notification and enrollment program.

5. Quality of PSPS Post-Event Reports

There were a number of deficiencies with the PSPS post-event reports SCE filed with the CPUC. These issues include:

- Late filing, combining different events into one report, incomplete reporting of complaints, and missing basic required reporting information. For example, SCE did not follow the required categorization for reporting potentially affected customers and did not report the number of actually affected customers by the required categories.

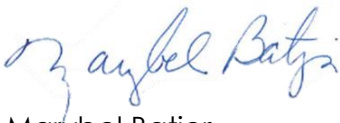
Incomplete reporting limits the CPUC's ability to assess the magnitude and severity of each event. SCE shall:

- Improve its reporting process to ensure the accuracy, completeness and consistency of PSPS post-event reports.
- Ensure future PSPS post-event reports properly reflect the improved practices as identified in items 1-4 of this letter.

We expect SCE leadership to fulfil its responsibility to reach determinations on the use of PSPS only as a last resort, and to execute PSPS safely and with minimal impact for its customers and for all Californians. If SCE requires additional assistance from the State in order to execute this critical mission, SCE should communicate what is needed, and the CPUC will work with our State agency partners to take appropriate steps.

Please contact Anthony Noll at Anthony.Noll@cpuc.ca.gov should you have any questions concerning this letter in preparation for the January 26, 2021 public meeting.

Sincerely,



Marybel Batjer
President
California Public Utilities Commission

cc: Mark Ghilarducci, Director
California Governor's Office of Emergency Services

Thomas Porter, Director
California Department of Forestry and Fire Protection

EXHIBIT 5

**PUBLIC UTILITIES COMMISSION**505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298**FILED**05/26/21
01:58 PM

May 26, 2021

TO PARTIES OF RECORD IN RULEMAKING 18-12-005:

This proceeding was filed on December 13, 2018 and is assigned to Commissioner Batjer and Administrative Law Judge (ALJ) Poirier. This is the decision of the Presiding Officer, ALJ Poirier.

Any party to this adjudicatory proceeding may file and serve an Appeal of the Presiding Officer's Decision within 30 days of the date of issuance (*i.e.*, the date of mailing) of this decision. In addition, any Commissioner may request review of the Presiding Officer's Decision by filing and serving a Request for Review within 30 days of the date of issuance.

Appeals and Requests for Review must set forth specifically the grounds on which the appellant or requestor believes the Presiding Officer's Decision to be unlawful or erroneous. The purpose of an Appeal or Request for Review is to alert the Commission to a potential error, so that the error may be corrected expeditiously by the Commission. Vague assertions as to the record or the law, without citation, may be accorded little weight.

Appeals and Requests for Review must be served on all parties and accompanied by a certificate of service. Any party may file and serve a Response to an Appeal or Request for Review no later than 15 days after the date the Appeal or Request for Review was filed. In cases of multiple Appeals or Requests for Review, the Response may be to all such filings and may be filed 15 days after the last such Appeal or Request for Review was filed. Replies to Responses are not permitted. (*See*, generally, Rule 14.4 of the Commission's Rules of Practice and Procedure at www.cpuc.ca.gov.)

If no Appeal or Request for Review is filed within 30 days of the date of issuance of the Presiding Officer's Decision, the decision shall become the decision of the Commission. In this event, the Commission will designate a decision number and advise the parties by letter that the Presiding Officer's Decision has become the Commission's decision.

/s/ ANNE E. SIMON

Anne E. Simon

Chief Administrative Law Judge

AES:mph

Attachment

ALJ/POD-MPO/mph

Decision PRESIDING OFFICER'S DECISION (Mailed 5/26/2021)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Examine Electric Utility De-
Energization of Power Lines in
Dangerous Conditions.

Rulemaking 18-12-005

**PRESIDING OFFICER'S DECISION ON ALLEGED VIOLATIONS OF
PACIFIC GAS AND ELECTRIC COMPANY WITH RESPECT TO ITS
IMPLEMENTATION OF THE FALL 2019 PUBLIC SAFETY POWER
SHUTOFF EVENTS**

TABLE OF CONTENTS

Title	Page
PRESIDING OFFICER’S DECISION ON ALLEGED VIOLATIONS OF PACIFIC GAS AND ELECTRIC COMPANY WITH RESPECT TO ITS IMPLEMENTATION OF THE FALL 2019 PUBLIC SAFETY POWER SHUTOFF EVENTS	1
Summary	2
1. Background.....	3
2. Issues	5
2.1. Availability and Functionality of PG&E’s Website	5
2.2. Accuracy of Online Maps.....	5
2.3. Accessibility of the Secure Data Transfer Portals	6
2.4. Staffing of Call Centers.....	6
2.5. Advanced Notification of Customers	6
2.6. Advanced Notification of Medical Baseline Customers	6
2.7. Appropriate Sanctions, if Any, for Proven Violations	6
3. Legal Authority	7
4. Discussion.....	8
4.1. Availability and Functionality of PG&E Website	8
4.1.1. Positions of the Parties.....	8
4.1.2. Position of PG&E.....	14
4.1.3. Discussion	15
4.2. Accuracy of Online Outage Maps	18
4.2.1. Positions of the Parties.....	18
4.2.2. Position of PG&E.....	21
4.2.3. Discussion	22
4.3. Accessibility of the Secure Data Transfer Portals	24
4.3.1. Positions of the Parties.....	24
4.3.2. Position of PG&E.....	27
4.3.3. Discussion	27
4.4. Staffing of Call Centers.....	28
4.4.1. Positions of the Parties.....	29
4.4.2. Position of PG&E.....	29
4.4.3. Discussion	30
4.5. Advanced Notification of Customers	30
4.5.1. Positions of the Parties.....	30
4.5.2. Position of PG&E.....	32
4.5.3. Discussion	35

4.6.	Advanced Notification of Medical Baseline Customers	36
4.6.1.	Positions of the Parties	37
4.6.2.	Position of PG&E	39
4.6.3.	Discussion	40
5.	Legal Framework for Fines and Remedies	42
6.	Factors to Consider in Setting the Appropriate Penalties	44
6.1.	Severity of the Violations	44
6.1.1.	Positions of the Parties	45
6.1.2.	Position of PG&E	50
6.1.3.	Discussion	51
6.2.	Conduct of the Utility	53
6.2.1.	Positions of the Parties	53
6.2.2.	Position of PG&E	57
6.2.3.	Discussion	58
6.3.	Financial Resources of the Utility	60
6.3.1.	Position of the Parties.....	61
6.3.2.	Position of PG&E	61
6.3.3.	Discussion	61
6.4.	Totality of the Circumstances	62
6.4.1.	Position of the Parties.....	62
6.4.2.	Position of PG&E	63
6.4.3.	Discussion	64
6.5.	Past Commission Decisions	65
6.5.1.	Position of the Parties.....	66
6.5.2.	Position of PG&E	67
6.5.3.	Discussion	67
7.	Penalties to be Imposed	69
7.1.	Positions of the Parties	69
7.2.	Position of PG&E.....	72
7.3.	Discussion.....	73
8.	Assignment of Proceeding	78
	Findings of Fact.....	78
	Conclusions of Law	81
	ORDER.....	85

**PRESIDING OFFICER'S DECISION ON ALLEGED VIOLATIONS OF
PACIFIC GAS AND ELECTRIC COMPANY WITH RESPECT TO ITS
IMPLEMENTATION OF THE FALL 2019 PUBLIC SAFETY POWER
SHUTOFF EVENTS**

Summary

This decision finds that Pacific Gas and Electric Company (PG&E) violated Public Utilities Code Section 451, the Phase 1 Guidelines adopted in Decision (D.) 19-05-042 and Resolution ESRB-8 based on its implementation of the Fall 2019 Public Safety Power Shutoff (PSPS) events. We find violations with respect to the failure of PG&E's website, which was unavailable or non-functional during the majority of the duration of the PSPS event, inaccuracy of its online outage maps, inaccessibility of its secure data transfer portals to its public safety partners, and PG&E's failure to provide advanced notification of de-energization events to approximately 50,000 customers and 1,100 Medical Baseline customers during the three PSPS events in Fall 2019.

The Commission finds that a penalty of \$106.003 million is appropriate to deter future violations and demand accountability for PG&E's flawed implementation of the Fall 2019 PSPS events. The penalty will be offset by \$86 million based on the bill credits PG&E has already provided to customers. Therefore, the net penalty assessed on PG&E is \$20.003 million.

The penalty includes a PG&E shareholder contribution of \$1.418 million to the PG&E's Disability Disaster Access & Resources Program, which provides qualifying customers access to backup portable batteries through grant, lease-to-own, or low-interest loan options. The penalty also includes a PG&E shareholder funded bill credit of \$12.185 million to the general group of customers in the areas affected by the Fall 2019 PSPS events. Lastly, the penalty

includes a PG&E shareholder funded bill credit of \$6.4 million to the Medical Baseline customers in the areas affected by the Fall 2019 PSPS events.

Rulemaking 18-12-005 remains open.

1. Background

On October 9, 2019, Pacific Gas and Electric Company (PG&E) implemented a Public Safety Power Shutoff (PSPS) event across 35 counties, impacting approximately 729,000 customer accounts. The shutoff lasted until October 12, 2019. PG&E implemented additional PSPS events on October 23-25, 2019, and October 26-November 1, 2019, which, at one point, impacted 38 counties and approximately 975,000 customer accounts. Many of the affected customers were without power for nearly a week.

On October 18, 2019, the California Public Utilities Commission (Commission) convened an emergency meeting regarding the October 9-12, 2019 PSPS event. At the October 18, 2019 meeting, PG&E executives admitted to significant shortcomings in the company's execution of the October 9-12, 2019 PSPS event. Subsequently, in its October 25, 2019, November 8, 2019, and November 18, 2019 compliance reports regarding the October 9-12, 2019, October 23-25, 2019, and October 26-November 1, 2019 PSPS events, PG&E identified multiple areas where it failed to meet the requirements of Public Utilities (Pub. Util.) Code Section 451, Resolution ESRB-8, and the Phase 1 Guidelines adopted in D.19-05-042 (D.19-05-042 Guidelines) with regards to those PSPS events.

On November 12, 2019, the assigned Commissioner and assigned Administrative Law Judge (ALJ) issued a ruling directing PG&E to show cause why it should not be sanctioned by the Commission for violation of Pub. Util. Code Section 451, D.19-05-042 Guidelines, and Resolution ESRB-8 during the

PSPS events during October 9-12, 2019 and October 23-25, 2019, and October 26-November 1, 2019 (Order to Show Cause or OSC). A prehearing conference (PHC) was held on December 4, 2019, to discuss the issues of law and fact and determine the need for hearing and schedule for resolving the matter.

On December 23, 2019, the Commission issued the Assigned Commissioner and Assigned ALJ's Ruling Setting the Scope and Schedule of the Order to Show Cause Against Pacific Gas and Electric Company for Violations Related to the Implementation of the Public Safety Power Shutoffs in October 2019 (December 23, 2019 Ruling).

PG&E served testimony on February 5, 2020. The California Large Energy Consumers Association (CLECA), Center for Accessible Technology (CforAT), City of San José (San José), Joint Local Governments¹, Mussey Grade Road Alliance (MGRA), Small Business Utility Advocates (SBUA), and the Utility Reform Network (TURN) served responsive testimony on February 28, 2020. PG&E, the Commission's Public Advocates Office (Cal Advocates), and the Joint Local Governments served rebuttal testimony on April 7, 2020.

Status conferences were held on July 9, 2020 and August 27, 2020. On September 21, 2020, the Assigned Commissioner and Assigned ALJ issued a ruling determining that evidentiary hearings would not be necessary contingent on PG&E's clarification of outstanding issues, and setting a briefing schedule. PG&E served a document clarifying the outstanding issues identified in the September 21, 2020 ruling on October 5, 2020.

On October 13, 2020, a joint motion to move exhibits into the record was filed by PG&E, CLECA, CforAT, San José, Joint Local Governments, MGRA,

¹ The Joint Local Governments consist of the Counties of Kern, Marin, Mendocino, Napa, Nevada, San Luis Obispo, Santa Barbara and Sonoma and the City of Santa Rosa.

Cal Advocates, SBUA, and TURN. William B. Abrams filed a separate motion to move exhibits into the record on October 13, 2020. PG&E filed a response to the motion of William B. Abrams on October 20, 2020. The assigned ALJ issued a ruling (1) granting the joint motion and (2) granting in part, and denying in part, the motion of William B. Abrams on October 22. On October 27, 2020, William B. Abrams filed a motion for evidentiary hearings, with TURN and PG&E filing timely responses on October 28, 2020 and November 6, 2020. The assigned ALJ issued a ruling denying the motion for evidentiary hearings on November 24, 2020.

CLECA, CforAT, San José, Joint Local Governments, MGRA, Cal Advocates, SBUA, William B. Abrams, TURN and PG&E filed Opening Briefs on October 30, 2020. Reply Briefs were filed by CLECA, CforAT, City of San José, Joint Local Governments, MGRA, Cal Advocates, SBUA, TURN and PG&E on November 17, 2020.

2. Issues

The December 23, 2019 Ruling identified the following issues and allegations as within the scope of this OSC.

2.1. Availability and Functionality of PG&E's Website

As to the October 9-12, 2019 PSPS event, PG&E's website was unavailable or non-functional during the majority of the duration of the PSPS event, with customers and government agencies unable to obtain information on the PSPS event and other important data.

2.2. Accuracy of Online Maps

To the extent PG&E's website was functioning, the online maps were not accurate or were unavailable for some affected areas during the October 9-12, 2019 PSPS event.

2.3. Accessibility of the Secure Data Transfer Portals

PG&E's secure data transfer portals were inaccessible to its Public Safety Partners during portions of the October 9-12, 2019 PSPS event.

2.4. Staffing of Call Centers

PG&E did not have sufficient staffing at its call centers to handle the volume of customer communications during the October 9-12, 2019 PSPS event.

2.5. Advanced Notification of Customers

PG&E failed to provide advanced notice of the de-energization events to customers, including approximately 23,000 customers of the 729,000 customers affected by the October 9-12, 2019 PSPS event, approximately 1,900 of the 177,000 customers affected by the October 23-25, 2019 PSPS event and approximately 28,600 customers of the 941,000 customers affected by the October 26-November 1, 2019 PSPS event.

2.6. Advanced Notification of Medical Baseline Customers

PG&E failed to provide advanced notice of the de-energization events to Medical Baseline customers, including approximately 500 Medical Baseline customers affected by the October 9-12, 2019 PSPS event, approximately 15 Medical Baseline customers affected by the October 23-25, 2019 PSPS event and approximately 700 Medical Baseline customers affected by the October 26-November 1, 2019 PSPS event.

2.7. Appropriate Sanctions, if Any, for Proven Violations

What penalties or sanctions, if any, in the form of fines, remedies, and/or other corrective actions should be imposed for any proven violation(s) found above pursuant to Pub. Util. Code Sections 2107 and 2108.

3. Legal Authority

The Commission has various sources of legal authority to evaluate the implementation of de-energization events by electric investor-owned utilities (IOUs). These include Pub. Util. Code Section 451, Resolution ESRB-8, and the Phase 1 Guidelines adopted in D.19-05-042.

Public Utilities Code Section 451 provides:

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities...as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.

In Phase 1 of R.18-12-005, the Commission issued D.19-05-042, which developed de-energization communication and notification guidelines for the electric IOUs along with updates to the requirements established in Resolution ESRB-8.² The guidelines adopted in D.19-05-042 expanded upon those in Resolution ESRB-8.

Resolution ESRB-8 adopted the rules the Commission set forth for San Diego Gas and Electric Company in D.12-04-024 and made them applicable to all of California's electric IOUs. Resolution ESRB-8 established de-energization guidelines that include public notification, mitigation and reporting requirements. Resolution ESRB-8 went beyond D.12-04-024 by strengthening the reporting and public outreach, notification and mitigation guidelines adopted in 2012.

² D.19-05-042, Appendix A.

4. Discussion

4.1. Availability and Functionality of PG&E Website

PG&E's website is intended to include information about upcoming and current PSPS events outages, answers to frequently asked questions, outage preparation tips, links to a wide variety of PSPS-related and preparedness content, the Address Look-Up Tool, and outage maps.³ PG&E's notifications directed customers to its website "because that's where our customers can receive the most dynamic alerts."⁴ This OSC addresses the allegation that PG&E's website was unavailable or non-functional during the majority of the duration of the October 9-12, 2019 PSPS event, with customers and government agencies unable to obtain information on the PSPS event and other important data.

4.1.1. Positions of the Parties

A number of parties argue that the unavailability and non-functionality of PG&E's website during the October 9-12, 2019 PSPS event constitutes a violation of Pub. Util. Code Section 451, the D.19-05-042 Guidelines, and Resolution ESRB-8.

MGRA alleges that PG&E's failure to maintain the availability and functionality of its website during the October 9-12, 2019 PSPS event violated Pub. Util. Code Section 451, the D.19-05-042 Guidelines, and Resolution ESRB-8. MGRA provides an exhaustive analysis of the unavailability and non-functionality of PG&E's website during the October 19, 2019 PSPS event, including a review of the causes of the failure and the impacts on customers. MGRA asserts that there seems to be no dispute that the PG&E website failed

³ San José Reply Brief, at 7; PG&E Opening Brief, at 19.

⁴ San José Opening Brief, at 7.

and that it was PG&E's responsibility to keep the website available and functional.

MGRA argues that the failure of PG&E's website violates Pub. Util. Code Section 451 because the website "is a *service* providing critical information to PG&E customers, and depends upon the *instrumentalities* of the various servers and systems responsible for the operation of the website, including the static content servers, the Address Lookup Tool, and the availability of maps."⁵

MGRA asserts that the website, particularly prior to and throughout a PSPS event, is a vital part of PG&E's communications with its customers, and necessary to promote: (1) safety, (2) health and (3) comfort and convenience.⁶

In addition, MGRA argues that the website's failure and the consequential failure to provide information regarding the PSPS event directly impacted public safety, particularly of customers "in wildfire areas, such as residents evacuating from the Kincade fire."⁷ MGRA also argues that the unavailability of the website directly affected the safety and health of vulnerable populations and Medical Baseline customers because these groups were "particularly affected by power shutoff and therefore doubly dependent on accurate information from PG&E." MGRA further asserts a violation under Pub. Util. Code Section 451 because the unavailability of the website affected the comfort and convenience of customers. MGRA contends that customers affected by the October 9-12, 2019 PSPS event were "unable to plan their activities because they were not provided up-to-date and accurate information regarding the geographic area affected by and timing"

⁵ Pub. Util. Code Section 451; MGRA Opening Brief, at 24.

⁶ *Ibid.*

⁷ Pub. Util. Code Section 451; MGRA Opening Brief, at 24.

of the PSPS event and this negatively impacted the customers' ability to comfortably endure or avoid the PSPS event.⁸

MGRA further alleges that the failure of PG&E's website constitutes a violation of D.19-05-042. MGRA cites to several requirements in D.19-05-042 Guidelines regarding de-energization events that relate to the IOUs' websites, specifically as to the nature and availability of the information on the websites.⁹ MGRA asserts that due to availability issues with PG&E's website, customers and the public were: (1) not provided with accurate and up-to-date information regarding the boundary of the de-energization event, (2) not able to reach PG&E's dedicated PSPS webpage regarding the de-energization event, and (3) not able to access information regarding the criteria PG&E used to determine its de-energization threshold.¹⁰

Additionally, MGRA argues that the failure of PG&E's website constitutes a violation of Resolution ESRB-8, which requires that an IOU ensure that de-energization policies and procedures are well communicated and made publicly available, with a summary of de-energization policies available on its website.¹¹ MGRA contends that during the time that PG&E's website was unavailable or non-functional, its customers were not able to access to its de-energization policies and procedures.¹²

San José contends that PG&E's conduct with respect to its website during the October 9-12, 2019 PSPS event was inconsistent with the D.19-05-042

⁸ Pub. Util. Code Section 451; MGRA Opening Brief, at 24-25.

⁹ D.19-05-042, at 96 and Appendix A, at A14; MGRA Opening Brief, at 25.

¹⁰ MGRA Opening Brief, at 25.

¹¹ Resolution ESRB-8, at 6; MGRA Opening Brief, at 26.

¹² MGRA Opening Brief, at 26.

Guidelines.¹³ San José notes that PG&E's website crashed several times and even when it was available, "it was slow or would not return any information at all."¹⁴ San José details that due to the unavailability of PG&E's website, it created a public information team to: (1) broadcast relevant information to PG&E's local customers through social and routine media outlets and (2) set up San José's own PSPS webpage and Safety Alerts page to provide information to residents with translations into Spanish and Vietnamese.¹⁵

San José also indicates that the unavailability of the website resulted in an inability of local governments to access the Address Lookup Tool, preventing them from (1) verifying which critical facilities or neighborhood boundaries would be affected by the PSPS event and (2) efficiently deploying their resources.¹⁶ San José emphasizes that the website was intended as the cornerstone of PG&E's PSPS public information effort and that its unavailability and limited functionality deprived local governments as well as customers of vital information, causing real harm.¹⁷

The Joint Local Governments assert that the unavailability and non-functionality of PG&E's website during the majority of the October 9-12, 2019 PSPS event is not in dispute and contends that the cause "was an unanticipated level of traffic, due to the global interest in PG&E's first large-scale de-energization."¹⁸ The Joint Local Governments argue that PG&E failed to meet its

¹³ San José Opening Brief, at 5; D.19-05-042, Appendix A, at A18.

¹⁴ San José Opening Brief, at 7.

¹⁵ San José Opening Brief, at 5; Exh. CSJ-01, at 4-5.

¹⁶ San José Opening Brief, at 6; Exh. CSJ-01, at 6; Exh. JLG-01, at 3.

¹⁷ San José Opening Brief, at 7.

¹⁸ Joint Local Governments Opening Brief, at 10.

standard of care due to the website's failure. The Joint Local Governments identify three primary hardships due to the website's unavailability: (1) an influx of inquiries from the public to joint local governments for information about the de-energization, (2) the unavailability of two of PG&E's primary information-sharing tools and (3) the unavailability of the Address Lookup Tool.¹⁹ The Joint Local Governments emphasize that the inaccessibility of the Address Lookup Tool prevented them from readily determining "which critical facilities might be impacted or know where to deploy resources in response to the anticipated impacts of the de-energization."²⁰

The Joint Local Governments detail how various cities and counties, including Santa Rosa, San José, Marin County, and Nevada County received a large number of telephone calls, emails and social media postings from residents seeking information about the PSPS event because of the issues with PG&E's website.²¹ The Joint Local Governments also indicate that the unavailability of PG&E's website prevented access to: (1) the Weather Awareness webpage and (2) the webpage providing PSPS event maps for local public safety partners and critical facilities.²²

CforAT characterizes the failure of PG&E's website as "catastrophic" and indicates that the website's failure resulted in important information regarding the PSPS event being unavailable to a large number of people with disabilities and other medical vulnerabilities.²³ CforAT further indicates that, even to the

¹⁹ *Id.* at 11.

²⁰ Joint Local Governments Opening Brief, at 10; Exh. JLG-01, at 3-4.

²¹ Joint Local Governments Opening Brief, at 11.

²² Joint Local Governments Opening Brief, at 10; Exh. JLG-01, at 2-3.

²³ CforAT Opening Brief, at 4; CforAT Reply Brief, at 1-2.

extent the website was functional, it was inaccessible to many in this group of customers. Additionally, CforAT cites the general inadequacy of the information regarding the PSPS event on the website, particularly with respect to information in languages other than English.²⁴ CforAT claims that PG&E fails to meet the D.19-05-042 Guidelines that de-energization information is provided (1) in formats that meet web accessibility standards and (2) in-language for customers whose primary language is not English.²⁵

Public Advocates assert that the unavailability and non-functionality of PG&E's website during the October 9-12, 2019 PSPS event compounded PG&E's failure to provide the required notice as set forth in the D.19-05-042 Guidelines because the website issues precluded customers from finding "the essential information that a predictable number of customers would reasonably need during a power shut-off event."²⁶

CLECA also indicates that the issues with the availability and functionality of PG&E's website "are well known and indisputable."²⁷ CLECA cites to evidence describing an industrial customer's inability to access PG&E's website when attempting to determine potential impact to their facilities.²⁸ Since the website was down, critical information was unavailable to that customer.

SBUA asserts that the unavailability and non-functionality of PG&E's website violates Pub. Util. Code Section 451 because basic reasonableness and

²⁴ *Ibid.*

²⁵ CforAT Reply Brief, at 4-6.

²⁶ Cal Advocates Opening Brief, at 9.

²⁷ CLECA Opening Brief, at 7.

²⁸ CLECA Opening Brief, at 7; Exh. CLECA-02, Attachment 1 to Q.2.

prudence “dictate that PG&E maintain a functioning website given that this is a key means of communicating with customers.”²⁹

4.1.2. Position of PG&E

PG&E acknowledges that its website was unavailable or non-functional during the October 9-12, 2019 PSPS event and takes full responsibility for those issues, indicating the issues were not acceptable and cannot happen again in the future.³⁰ However, PG&E contends that it should not be sanctioned for the website issues.

PG&E asserts that it undertook substantial efforts to prepare its website for the 2019 PSPS events and that these efforts would have been sufficient for a PSPS event of approximating the scale it had previously experienced.³¹ PG&E details its efforts, which included a PSPS-focused landing page, various types of customer alerts, an interactive Address Lookup Tool and additional maps.³² PG&E also indicates that it ran simulation programs to evaluate the website, split its servers across two data centers and made improvements related to the Address Lookup Tool.³³ However, PG&E admits its failure to test its Static Content servers in advance of the October 9-12, 2019 PSPS event was a mistake and contributed to the website issues.³⁴

PG&E contends that although it experienced technical issues with its website during the October 9-12, 2019 PSPS event, it was able to recover the

²⁹ SBUA Reply Brief, at 4.

³⁰ PG&E Opening Brief, at 18.

³¹ *Ibid.*

³² PG&E Opening Brief, at 19-20; Exh. PG&E-01, at 4-2 to 4-5.

³³ PG&E Opening Brief, at 20; Exh. PG&E-01, at 4-5 to 4-7.

³⁴ PG&E Opening Brief, at 21.

website quickly. PG&E asserts that the issues were caused by the “unprecedented” level of traffic that was being directed to its website.³⁵ PG&E acknowledges that the majority of this traffic came from PG&E customers, but claims there were a number of external factors that contributed to the level of traffic.³⁶ PG&E details its efforts to restore the functionality and availability of the website, as well as to set up a temporary website with PSPS-related maps and content.³⁷

PG&E asserts that it continued to make changes after the October 9-12, 2019 PSPS event and that those changes enabled the website to withstand larger subsequent PSPS events.³⁸ PG&E details how it improved the stability and capability of its website and back-up systems. PG&E also argues that its efforts to keep its customers informed during the October 9-12, 2019 PSPS event were reasonable and its website’s functionality was reasonable under those circumstances. PG&E emphasizes that it continued to provide information to its customers and the public through other means, including news briefings, interviews, social media and press releases.³⁹

4.1.3. Discussion

We find that the unavailability or non-functionality of PG&E’s website during the October 9-12, 2019 PSPS event was inconsistent with the Commission’s requirements regarding de-energization events and constitutes a violation of Pub. Util. Code Section 451, the D.19-05-042 Guidelines and

³⁵ PG&E Opening Brief, at 22; Exh. PG&E-01, at 4-11.

³⁶ PG&E Opening Brief, at. 22-23.

³⁷ PG&E Opening Brief, at 23; Exh. PG&E-01, at 4-11 to 4-12.

³⁸ PG&E Opening Brief, at 24-25; Exh. PG&E-01, at 4-13.

³⁹ PG&E Opening Brief, at 25-26; Exh. PG&E-01, at 3-20 to 3-12, 4-8 and 4-13.

Resolution ESRB-8. All parties, including PG&E, agree that PG&E's website was unavailable or non-functional during the majority of the duration of the October 9-12, 2019 PSPS event, so there is no dispute as to this issue.

We agree with MGRA and SBUA that the issues with PG&E's website violate Pub. Util. Code Section 451 because the website is "a *service* providing critical information to PG&E customers, and depends upon the *instrumentalities* of the various servers and systems responsible for the operation of the website[.]"⁴⁰ PG&E heralded its website as the core and dynamic source of essential information on the October 9-12, 2019 PSPS event for customers, public safety partners and other members of the public.⁴¹ The issues with PG&E's website during that event deprived its customers, public safety partners and local municipalities of the vital information services provided by the website, exacerbating an already disruptive and stressful event.

The lack of access to information on the PSPS event prevented customers from being able to effectively prepare prior to the event and negatively impacted customers' ability to safely and comfortably endure the PSPS event, particularly customers with disabilities and other medical vulnerabilities.⁴² Various parties have detailed the negative impact of the lack of that information.⁴³ The unavailability or non-functionality of PG&E's website deprived its customers of a

⁴⁰ Pub. Util. Code Section 451; MGRA Opening Brief, at 24.

⁴¹ San José Opening Brief, at 7.

⁴² Pub. Util. Code Section 451; MGRA Opening Brief, at 24-25; CforAT Opening Brief, at 4; CforAT Reply Brief, at 1-2.

⁴³ San José Opening Brief, at 6; Joint Local Governments Opening Brief, at 10; CforAT Opening Brief, at 4; CforAT Reply Brief, at 1-2; CLECA Opening Brief, at 7.

service essential to promote the safety, health, comfort and convenience of its customers and the public.⁴⁴

We find that PG&E's conduct with respect to its website during the October 9-12, 2019 PSPS event was inconsistent with the D.19-05-042 Guidelines.⁴⁵ We agree with MGRA and San José that the failure of PG&E's website is inconsistent with the D.19-05-042 Guidelines' requirements as to the information regarding a de-energization event that must be provided to customers and public safety partners. This includes information that must be provided on an electric IOU's website.⁴⁶ Since customers and public safety partners had no or limited ability to access this information due to the unavailability or non-functionality of PG&E's website during the October 9-12, 2019 PSPS event, PG&E did not meet the requirements of the D.19-05-042 Guidelines.

Lastly, we find that the issues with PG&E's website constitute a violation of Resolution ESRB-8, which requires that an IOU ensure that de-energization policies and procedures are well communicated and made publicly available, with a summary of de-energization policies available on its website.⁴⁷ We agree with MGRA that PG&E's customers were not able to access PG&E's de-energization policies and procedures when the website was unavailable or non-functional.⁴⁸

⁴⁴ Pub. Util. Code Section 451; MGRA Opening Brief, at 24.

⁴⁵ MGRA Opening Brief, at 25; San José Opening Brief, at 5.

⁴⁶ D.19-05-042, at 96, Appendix A, at A14 and A18.

⁴⁷ Resolution ESRB-8, at 6-7.

⁴⁸ MGRA Opening Brief, at 26.

Therefore, we find that the unavailability or non-functionality of PG&E's website during the October 9-12, 2019 PSPS event constitute violations of Pub. Util. Code Section 451, the D.19-05-042 Guidelines and Resolution ESRB-8. We will consider PG&E's conduct prior to and during that event with respect to its website when considering the appropriate sanctions for the violations.

4.2. Accuracy of Online Outage Maps

This OSC addresses an allegation that to the extent PG&E's website was functioning, the online outage maps were not accurate or were unavailable for some affected areas during the October 9-12, 2019 PSPS event. Accurate outage maps are a critical resource for customers, public safety partners and local municipalities to have a clear understanding of the outage boundaries so they can anticipate the impacts of a de-energization event and utilize their resources effectively to address needs during a de-energization event.

4.2.1. Positions of the Parties

The Joint Local Governments argue that the outage maps provided by PG&E during the October 9-12, 2019 PSPS event did not satisfy Commission requirements of the D.19-05-042 Guidelines, which require IOUs to provide public safety partners with Geographic Information System (GIS) shapefiles "depicting the most accurate and specific information possible regarding the boundaries of the area subject to de-energization."⁴⁹ The Joint Local Governments contend that the online outage maps were inconsistent with the Commission's requirements because the maps were buffered and overstated the de-energization boundaries by as much as 20 percent.⁵⁰ Citing a letter to FERC,

⁴⁹ D.19-05-042, at 95, A16-A17.

⁵⁰ Joint Local Governments Opening Brief, at 13; Exh. JLG-01, at 4; Exh. CSJ-01, at 6.

the Joint Local Governments contend that PG&E understood its obligations to provide GIS shapefiles depicting the most accurate and specific information possible about the outage boundaries but chose to provide the buffered outage maps instead.”⁵¹

The Joint Local Governments assert that the imprecise nature of the online outage maps “created significant confusion and frustration for impacted communities and caused local emergency managers to waste time and resources preparing critical facilities in the buffer zone for de-energization that was never scheduled to occur.”⁵² The Joint Local Governments indicate the imprecision of the outage maps rendered them “essentially useless for much of the critical planning and resource deployment necessary during” the October 9-12, 2019 PSPS event, in contravention of the purpose of the Commission’s mapping requirements.⁵³ They also argue that the variable nature of the buffering was also problematic.⁵⁴

The Joint Local Governments further contend that issues regarding the imprecise nature of the online outage maps were exacerbated by PG&E’s failure to notify local municipalities that maps were buffered unless they requested additional information regarding the maps.⁵⁵ The Joint Local Governments also claim PG&E was not forthright about the maps’ imprecision during the October 9-12, 2019 PSPS event.⁵⁶ Additionally, they argue that any PG&E

⁵¹ Joint Local Governments Opening Brief, at 18; Exh. JLG-02, at 4.

⁵² Joint Local Governments Opening Brief, at. 15; Exh. JLG-01, at 6-8.

⁵³ Joint Local Governments Opening Brief, at 18.

⁵⁴ Exh. PG&E-02, at. 6-3.

⁵⁵ Joint Local Governments Opening Brief, at 16; Exh. JLG-02, at 3.

⁵⁶ Joint Local Governments Opening Brief, at 16; Exh. JLG-01, at 6.

warnings regarding the imprecision of the maps caused confusion since “general disclaimers that the outage maps can overstate the outage area, or that the maps did not contain the complete or exact outage area, in no way provide the viewer with anything close to the information necessary to understand the nature of the outage maps or what the maps depict.”⁵⁷

San José also argues that PG&E’s online outage maps did not comply with the Commission’s requirements. San José details how it dealt with outage maps that overestimated the affected outage areas by up to 20 percent.⁵⁸ San José emphasized that the outage maps are critical to understand what parts of their jurisdiction will require resources and the inaccuracy of the outage maps “made local municipalities’ efforts to provide emergency services to their residents very difficult and time-consuming.”⁵⁹

San José also detailed how the inaccuracy of the online outage maps negatively affected critical facilities and the community resource centers, with San José forced to scramble to maintain the functionality of these facilities when the inaccuracy of the maps became apparent.⁶⁰ San José notes that PG&E only indicated that outage maps could overstate the outage area, but did not affirmatively state so and by how much.⁶¹

Both the Joint Local Governments and San José dispute PG&E’s claim that the online outage maps were sufficient because they were consistent with California Governor’s Office of Emergency Services (Cal OES), preferences. They

⁵⁷ Joint Local Governments Opening Brief, at 17; Exh. JLG-01, at 5.

⁵⁸ San José Opening Brief at 9; Exh. CSJ-01, at 6.

⁵⁹ San José Opening Brief at 8.

⁶⁰ San José Opening Brief at 9-10; Exh. CSJ-01, at 6-7.

⁶¹ San José Opening Brief at 9; Exh. JLG-01, at 4.

argue that the maps conformance to Cal OES's specifications is irrelevant as to whether the maps met Commission requirements per the D.19-05-042 Guidelines. The Joint Local Governments assert that the maps should have provided public safety partners and customers with the most accurate and specific information possible about the de-energization event boundaries, but PG&E did not consider whether the maps would be useful to anyone other than Cal OES.⁶²

4.2.2. Position of PG&E

PG&E argues that it should not be sanctioned based on the nature of the online outage maps it provided because they are in accordance with standards requested by Cal OES, with involvement of the CPUC and the California Department of Forestry and Fire Protection (CALFIRE).⁶³ PG&E contends that the outage maps were "accurate reflections of the contours of the outage area" and complied with the directives of Cal OES.⁶⁴

PG&E states that in order to reduce confusion for customers and public safety partners, its public-facing website and secure data transfer portals indicated that the outage maps "provided 'a general outline' of the planned outage area, were 'not address-specific,' and did 'not include the complete and exact area(s) impacted by a PSPS.'"⁶⁵

⁶² Joint Local Governments Opening Brief, at 14-15; Joint Local Governments Reply Brief, at 8; Exh. JLG-02, at 2.

⁶³ PG&E Opening Brief, at 27-28.

⁶⁴ *Id.* at 28.

⁶⁵ PG&E Opening Brief, at 28; Ex. PGE-01, at 4-4; Ex. JLG-01, at 4.

4.2.3. Discussion

We find that PG&E's online outage maps did not comply with the Commission's D.19-05-042 Guidelines or PG&E's obligations under Pub. Util. Code Section 451 and this noncompliance constitutes a violation. The D.19-05-042 Guidelines provide specific requirements as to the accuracy and specificity of information regarding the boundaries of an area subject to a de-energization event.

For the 2019 wildfire season, the electric investor-owned utilities must, at the time of first notification preceding a de-energization event, make available a Geographic Information System shapefile via a secure data transfer process depicting the *most accurate and specific information possible regarding the boundaries of the area subject to de-energization* to all public safety partners whose jurisdictions or service areas will be impacted by the de-energization event.⁶⁶

The online outage maps were buffered and overstated the de-energization boundaries by as much as 20 percent.⁶⁷ The D.19-05-042 Guidelines require that outage maps depict the "most accurate and specific information possible." Outage maps with up to 20 percent buffers are neither "accurate" nor "specific". Furthermore, as indicated by the Joint Local Governments, PG&E had options available to provide outage maps that were the most accurate and specific information possible, but did not utilize those options.⁶⁸

The inaccuracy and non-specificity of the online outage maps detrimentally impacted the efforts of public safety partners, local municipalities

⁶⁶ D.19-05-042, Appendix A, at A16-A17 (emphasis added).

⁶⁷ Joint Local Governments Opening Brief, at 13; Exh. JLG-01, at 4; San José Opening Brief at 9; Exh. CSJ-01, at 6.

⁶⁸ Joint Local Governments Opening Brief, at 20; Exh. JLG-02, at 5.

and customers to prepare for and endure the de-energization events, wasting resources and time that could have been better utilized. Furthermore, the outage maps' inaccuracy and non-specificity subjected customers to unnecessary fear, harm, and expense.⁶⁹

PG&E also has an affirmative duty under Pub. Util. Code Section 451 to "furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, ... as are necessary to promote the safety, health, comfort, and convenience of ... the public." The accuracy and specificity of the outage maps provided by PG&E did not meet these requirements.

PG&E argues that it should not be sanctioned because the outage maps comply with Cal OES preferences. However, we agree with the Joint Local Governments and San José that PG&E's compliance with Cal OES preferences is not relevant or determinative here. The Commission, not Cal OES, has jurisdiction over PG&E with respect to de-energization and established requirements regarding the accuracy and specificity of information as to the boundaries of a de-energization event. The fact that the outage maps may have complied with Cal OES preferences is not determinative. PG&E's online maps did not comply with the Commission's requirements.

The accuracy and specificity of PG&E's online outage maps during the October 9-12, 2019 PSPS event did not comply with the D.19-05-042 Guidelines or PG&E's obligations under Pub. Util. Code Section 451 and therefore, constitute violations of these requirements.

⁶⁹ CforAT Opening Brief, at 15.

4.3. Accessibility of the Secure Data Transfer Portals

PG&E's secure data transfer portals provide key public safety partners such as municipalities and some state agencies private access to important, event-specific data to assist in their de-energization event planning and response efforts. The secure data transfer portals were intended to facilitate cooperation between PG&E and its public safety partners to minimize both the risks and disruption to customers from PSPS events.⁷⁰ This OSC addresses allegations that PG&E's secure data transfer portals were inaccessible to its public safety partners during portions of the October 9-12, 2019 PSPS event.

4.3.1. Positions of the Parties

The Joint Local Governments and San José contend that PG&E's secure data transfer portals were not compliant with the requirements of the D.19-05-042 Guidelines and were constructively inaccessible during the October 9-12, 2019 PSPS event.⁷¹ The Joint Local Governments and San José acknowledge that they were generally able to login to the secure data transfer portals (except for Nevada County, which experienced some difficulties).⁷² However, they contend that although the portals were technically accessible, the portals were *constructively inaccessible* because the information in the portals was missing, inaccurate and untimely.⁷³

San José indicates that when it accessed its secure data transfer portals during the October 9-12, 2019 PSPS event, it did not receive information

⁷⁰ Exh. PG&E-01, at 4-15.

⁷¹ D.19-05-042, Appendix A, at A16-A17; Joint Local Governments Opening Brief, at 21; City of San José Opening Brief, at 12.

⁷² Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 8.

⁷³ Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 8-10; City of San José Opening Brief, at 12.

regarding San José, but rather information regarding the City of Bakersfield.⁷⁴ San José was only able to access the applicable information by the second day of the PSPS event.⁷⁵ The Joint Local Governments further indicate that Marin and Nevada Counties both received files in their respective portals with information for other counties.⁷⁶ The City of Santa Rosa did not receive impacted critical facility information in its portal the morning of October 9, 2019 even though PG&E began notifying potentially impacted local governments of the upcoming PSPS event on October 7, 2019.⁷⁷

The Joint Local Governments and San José assert that the information in their respective secure data transfer portals was inaccurate and untimely. Both received files that were incomplete or out-of-date due to new weather and outage footprint updates issued by PG&E.⁷⁸ The Joint Local Governments also indicate that PG&E did not communicate with its public safety partners regarding changes to the names and locations of the files or the addition of new files in their respective portals.⁷⁹ Additionally, they argue that the information in the portals rarely matched the information provided by PG&E during operational briefing calls with local public safety partners.⁸⁰

⁷⁴ City of San José Opening Brief, at 12; Exh. CSJ-01, at 7.

⁷⁵ *Ibid.*

⁷⁶ Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 6, 8 (Marin County received information on San Luis Obispo and Kern Counties). Exh. CSJ-01, at 7.

⁷⁷ Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 9.

⁷⁸ Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 8; City of San José Opening Brief, at 12.

⁷⁹ Joint Local Governments Opening Brief, at 22; Exh. JLG-01, at 9.

⁸⁰ *Ibid.*

The Joint Local Governments and San José emphasize that cooperation and information sharing between public safety partners and the IOUs in charge of de-energization events is essential to protect public safety due to the significant impacts of such events on customers and critical facilities. They assert that the inaccuracy, untimeliness and, in some cases, complete absence of information in the secure data transfer portals severely hampered their planning and response efforts for the October 9-12, 2019 PSPS event since the portals are their primary source of critical files and information.⁸¹ The Joint Local Governments contend that “a data transfer process is only as effective as the information being transmitted.” The Joint Local Governments and San José argue that due to the state of information on the portals, PG&E’s public safety partners “were about as well informed as if they had not been able to access the portal in the first place” and hurt local governments’ ability to deploy emergency services.⁸²

The Joint Local Governments and San José dispute PG&E’s argument that there was no violation of the Commission’s requirements because local governments were able to log in to the portals, even if the information in the portals was missing, inaccurate or untimely. The Joint Local Governments argue that such an argument elevates form over substance and would lead to an absurd result.⁸³ The Joint Local Governments and San José contend that the portals were non-compliant with the Commission’s requirements because the portals’ lack of

⁸¹ Joint Local Governments Opening Brief, at 23; City of San José Reply Brief, at 10.

⁸² Joint Local Governments Opening Brief, at 24; Joint Local Governments Reply Brief, at 11; City of San José Reply Brief, at 10.

⁸³ Joint Local Governments Opening Brief, at 23; Joint Local Governments Reply Brief, at 11.

utility had the same effect as if the portals were inaccessible and that PG&E “should not avoid responsibility for the frustration and confusion it caused.”⁸⁴

4.3.2. Position of PG&E

PG&E contends that the record evidence is uncontroverted that the secure data transfer portals remained available through the event and that there is no evidence of any portal outage.⁸⁵ PG&E cites to statements by the Joint Local Governments and San José that the secure data transfer portals were generally accessible during the October 9 PSPS event and argues that the concerns of the Joint Local Governments and San José regarding the nature and usefulness of the information in the portals are outside the scope of the OSC and cannot constitute a violation.⁸⁶ PG&E does not substantively address the allegations by the Joint Local Governments and San José that the information in portals was missing, inaccurate and untimely.

4.3.3. Discussion

We find that the inaccessibility of critical information regarding the October 9-12, 2019 PSPS event on PG&E’s secure data transfer portals to some public safety partners did not comply with the requirements of the D.19-05-042 Guidelines and Pub. Util. Code Section 451. This non-compliance constitutes a violation.

We agree with the Joint Local Governments and San José that the question of accessibility goes beyond whether the public safety partners could merely access the portals and that PG&E’s focus on mere accessibility to the portals

⁸⁴ Joint Local Governments Reply Brief, at 11; City of San José Reply Brief, at 10.

⁸⁵ PG&E Opening Brief, at 27; PG&E Reply Brief, at 18; Exh. PGE-01, at 4-15.

⁸⁶ PG&E Reply Brief, at 18.

elevates form over substance.⁸⁷ The D.19-05-042 Guidelines require that specific information regarding a de-energization event must be provided to public safety partners.⁸⁸ This information is critical for public safety partners in their de-energization event planning and response efforts.

While most public safety partners could log in to the portals, there were many instances when the required information was missing from the portals or inaccurate, with information for a different public safety partner provided in the portals.⁸⁹ We agree with the Joint Local Governments and San José that this rendered the portals constructively inaccessible and therefore non-compliant with the Commission's requirements in the D.19-05-042 Guidelines.

We also find that the missing and inaccurate information on the portals is a violation of PG&E's obligations under Pub. Util. Code Section 451. Pub. Util. Code Section 451 provides, in part, that PG&E furnish and maintain service and instrumentalities to promote the safety, health, and comfort of the public. Missing and inaccurate information on the portals severely hampered the efforts of public safety partners to plan and respond to the de-energization, causing hardship for the public.⁹⁰

4.4. Staffing of Call Centers

The OSC alleges that PG&E did not have sufficient staffing at its call centers to handle the volume of customer communications during the October 9-12, 2019 PSPS event.

⁸⁷ Joint Local Governments Opening Brief, at 23; Joint Local Governments Reply Brief, at 11.

⁸⁸ D.19-05-042, Appendix A, at A16-A17;

⁸⁹ Exh. JLG-01, at 6-9; Exh. CSJ-01, at 7.

⁹⁰ Joint Local Governments Opening Brief, at 23; City of San José Reply Brief, at 10.

4.4.1. Positions of the Parties

No party other than PG&E submitted record evidence as to the adequacy of PG&E's call center staffing. However, TURN did recommend crediting customers \$660,000 for four days of call center expense if the Commission found that PG&E's call center staffing was insufficient, arguing that customers should not be required to fund costs for inadequate call center operations.⁹¹

4.4.2. Position of PG&E

PG&E asserts that uncontroverted evidence demonstrates that the staffing of its call centers was sufficient to handle the volume of calls during the October 9-12, 2019 PSPS event.⁹² PG&E indicates that its four call centers are staffed with approximately 900 agents and that it prepared its call centers for potential 2019 PSPS events by forecasting staffing needs, training additional agents, conducting PSPS training, and identifying ways to increase the capacity of the call centers.⁹³ PG&E asserts that it implemented several measures to address call volume that rose to as much as 500 percent of normal call volume during the October 9-12, 2019 event.⁹⁴

PG&E also indicates that it utilized Interactive Voice Response strategies to prioritize PSPS calls over general service calls. According to PG&E, the implemented measures were generally successful and with the average speed of answer to PG&E's call centers being nine seconds on October 9, 2019, five seconds on October 10 and 11, 2019, and ten seconds on October 12, 2019.⁹⁵

⁹¹ TURN Opening Brief, at 12.

⁹² PG&E Opening Brief, at 29.

⁹³ *Ibid.*

⁹⁴ PG&E Opening Brief, at 30.

⁹⁵ *Ibid.*

4.4.3. Discussion

We find that the record supports that PG&E's level of call center staffing during the October 9-12, 2019 PSPS event was sufficient and did not violate the requirements of Pub. Util. Code Section 451, the D.19-05-042 Guidelines, or Resolution ESRB-8. The record indicates that the average speed of answer to customers during the October 9-12, 2019 PSPS event was reasonable and that the level of staffing at PG&E's call center was sufficient. As indicated by PG&E's testimony, the average speed of answer did not exceed ten seconds during any of the days during the October 9-12, 2019 PSPS event.⁹⁶ No other party has provided additional record evidence contradicting PG&E's testimony of average speed of answer. While there may have been occasions when the wait time was longer than average speed of answer cited by PG&E, the average speed of answer seems reasonable under the circumstances.

4.5. Advanced Notification of Customers

This OSC addresses allegations that PG&E failed to provide advanced notice to customers of several de-energization events, including approximately 23,000 customers of the 729,000 customers affected by the October 9-12, 2019 PSPS event, approximately 1,900 of the 177,000 customers affected by the October 23-25, 2019 PSPS event and approximately 28,600 customers of the 941,000 customers affected by the October 26-November 1, 2019 PSPS event. The D.19-05-042 Guidelines contain specific requirements for advanced notification of customers.

4.5.1. Positions of the Parties

Several parties allege that PG&E failed to properly provide advance notification to customers of de-energization events in violation of the

⁹⁶ PG&E Opening Brief, at 30.

Commission's requirements in D.19-05-042 and should be sanctioned for these violations.⁹⁷

TURN argues that PG&E's missed advanced notifications were unreasonable because PG&E was aware in September 2019 that it was missing contact information for up to 5 percent of its customers.⁹⁸ TURN further argues that despite PG&E's knowledge of the missing contact information, it did not provide in-person notification unless these customers were Medical Baseline customers.⁹⁹ TURN also contends that the missed advanced notifications were unreasonable because PG&E did not test its methodology to identify impacted customers prior to implementation, a fact conceded to by PG&E.¹⁰⁰ TURN also asserts that PG&E should have been better prepared to identify impacted customers due to the effect of de-energizing transmission lines on distribution substations because PG&E has previously de-energized transmission lines.¹⁰¹

CLECA asserts that PG&E has "admitted on the record that it 'missed' notifications to 51,000 customers in the Fall 2019 [PSPS events]."¹⁰² CLECA notes that two of its members with industrial facilities in PG&E's service territory were not properly notified by PG&E of the October 9-12, 2019 PSPS event.¹⁰³ CLECA disputes PG&E's claim that one of those members was notified, arguing that PG&E's citation to a single 12 second call is not credible because the length of the

⁹⁷ CLECA Opening Brief, at 5; Cal Advocates Opening Brief, at 14-15; Cal Advocates Reply Brief, at 5-7; TURN Opening Brief, at 5-6; TURN Reply Brief, at 3-4.

⁹⁸ TURN Opening Brief, at 5; Exh. TURN-03, DR TURN-04, Question 1.

⁹⁹ Exh. TURN-03, DR TURN-04, Question 1; Exh. PG&E-04, at 2.

¹⁰⁰ TURN Opening Brief, at 5; Exh. TURN-03, DR TURN-04, Question 2.

¹⁰¹ TURN Opening Brief, at 6; Exh. TURN-03, DR TURN-04, Question 3; Exh. PG&E-02, at 3-5.

¹⁰² CLECA Opening Brief, at 5; Exh. PG&E-03, at 2 (Table 1).

¹⁰³ CLECA Opening Brief, at 5; Exh. CLECA-01, at 2-6

call was insufficient to provide the notification information required by the D.19-05-0421 Guidelines.¹⁰⁴ CLECA also asserts that PG&E did not satisfy requirements that notification occur 1 to 4 hours in advance of an event, and again when de-energization is initiated. CLECA also argues that PG&E did not meet the requirement that the “notification is supposed to include specific information regarding start and stop times, duration, and re-energization.”¹⁰⁵

Cal Advocates, TURN, SBUA and CforAT contest PG&E’s argument that it substantially complied with the advanced notification requirements for customers and PG&E does not justify its non-compliance with clear Commission rules and requirements.¹⁰⁶ These parties contend that PG&E’s argument attempts to minimize the fact that approximately 50,000 customers did not receive advanced notification and the real world impacts due to lack of that advanced notification.¹⁰⁷ Cal Advocates argues that PG&E’s rationale is misleading, emphasizing that the 3 percent of the affected population that were not notified amounts to approximately 50,000 customers and also underestimates the violations related to advanced notification.¹⁰⁸

4.5.2. Position of PG&E

PG&E acknowledges that it failed to provide advanced notification of de-energization events to approximately 50,000 customers, not the

¹⁰⁴ CLECA Opening Brief, at 6; D.19-05-042, Appendix A, A-17.

¹⁰⁵ CLECA Opening Brief, at 7.

¹⁰⁶ Cal Advocates Reply Brief, at 5-7; TURN Reply Brief, at 3; SBUA Reply Brief, at 4; CforAT Reply Brief, at 4.

¹⁰⁷ *Ibid.*

¹⁰⁸ Cal Advocates Reply Brief, at 5-6.

approximately 53,500 indicated in the December 23, 2019 Ruling.¹⁰⁹ PG&E argues that its notification efforts were reasonable, especially due to the large scale of the Fall 2019 PSPS events and that the number of customers not notified was less than 3 percent of the affected population.¹¹⁰ PG&E argues that the Commission's D.19-05-042 Guidelines require advanced notification "whenever possible" and that "[t]here may be times when advanced notification of a de-energization event is not possible."¹¹¹ PG&E asserts that the Commission should not focus on that there were missed notifications, but "whether PG&E's conduct and efforts to notify customers in late 2019 fell below a reasonable standard of care such that sanctions are warranted."¹¹² PG&E contends the Commission should consider: (1) PG&E's efforts to prepare customers for the de-energization events, (2) the reasons for the missed notifications, and (3) PG&E's overall performance in notifying customers during the Fall 2019 de-energization events.¹¹³

PG&E contends that it undertook significant outreach efforts to educate customers about preparing for de-energization events and to collect customer contact information. PG&E indicates that between May and September 2019, it used multiple communication channels to distribute information to help

¹⁰⁹ PG&E contends that correct figures for the number of customers who did not receive advanced notification is approximately: (1) 22,000 customers for the October 9-12, 2019 PSPS event; (2) 2,100 customers for the October 23-25, 2019 PSPS event and (3) 25,900 customers for the October 26-November 1, 2019 PSPS event. (Ex. PGE-03 at 2; Amended PG&E PSPS Report for the October 9-12, 2019 De-Energization Event at 16; Amended PG&E PSPS Report for the October 23-25, 2019 De-Energization Event at 17; Amended PG&E PSPS Report for the October 26 & 29, 2019 De-Energization Event at 14.)

¹¹⁰ PG&E Opening Brief, at 8-9, 12, 17; Exh. PG&E-01, at 3-8.

¹¹¹ PG&E Opening Brief, at 8-9; D.19-05-042, Appendix A, at A7.

¹¹² PG&E Opening Brief, at 8-9.

¹¹³ *Id.* at 9.

customers anticipate and prepare for de-energization events.¹¹⁴ PG&E claims it also undertook particular efforts to obtain current customer contact information via contact center calls, website log-ins, e-mails and mailings.¹¹⁵

PG&E asserts that it acted reasonably in developing and implementing its customer notification processes. PG&E details its process to identify specific electrical facilities that could require de-energization and developing the list of customers impacted by the de-energization of those facilities.¹¹⁶ PG&E further detailed its strategy to notify the identified customers, including transmission customers.¹¹⁷

PG&E claims that a major cause of missed notifications was missing customer contact information, despite its efforts to collect this information.¹¹⁸ PG&E also claims that its efforts to narrow the scope of the Fall 2019 PSPS events and reduce the overall number of customers affected by the events caused missed notifications due to a change in methodology of its de-energization strategy.¹¹⁹ Lastly, PG&E asserts that the continually changing conditions presented challenges to notifying customers because some customers were temporarily assigned to different circuits than the primary circuits that usually provide their electricity.¹²⁰

¹¹⁴ PG&E Opening Brief, at 10; Exh. PG&E-01, at 3-2 to 3-4.

¹¹⁵ PG&E Opening Brief, at 11; Exh. PG&E-01, at 3-4 to 3-6.

¹¹⁶ PG&E Opening Brief, at 12; Exh. PG&E-01, at 3-9.

¹¹⁷ PG&E Opening Brief, at 12-13; Exh. PG&E-01, at 3-7, 3-9, 3-17 to 3-20.

¹¹⁸ PG&E Opening Brief, at 14; Exh. PG&E-01, at 3-12.

¹¹⁹ PG&E Opening Brief, at 15; Exh. PG&E-01, at 3-13.

¹²⁰ PG&E Opening Brief, at 16; Exh. PG&E-01, at 3-15.

4.5.3. Discussion

We find that PG&E's failure to provide advanced notification to approximately 50,000 customers for the three PSPS events in Fall 2019 constitute violations of: (1) the Commission's requirements regarding advanced notification in the D.19-05-042 Guidelines and (2) Pub. Util. Code Section 451. All parties, including PG&E, agree that a substantial number of PG&E customers did not receive advanced notification as required by the Commission.

The D.19-05-042 Guidelines contain specific requirements regarding advanced notification for customers that may be impacted by de-energization events and the information that must be conveyed to these customers.¹²¹ PG&E failed to meet these requirements when it did not provide advanced notification to approximately 50,000 customers. Those customers did not have advanced notification that the PSPS events were going to occur or specific information regarding the event, including the boundaries, start time and date and estimated duration.

Furthermore, Pub. Util. Code Section 451 imposes a requirement that PG&E "furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, ... as are necessary to promote the safety, health, comfort, and convenience of ... the public." Advanced notification is an important service to promote the safety, health, comfort and convenience for potentially impacted customers by providing them with an opportunity to prepare and plan in advance of a de-energization event. The lack of advanced notification had significant health and safety consequences because some customers were unable to prepare for the de-energization events in

¹²¹ D.19-05-042, Appendix A, at A7-A18.

Fall 2019. PG&E's failure to provide advanced notification to the approximately 50,000 customers was a violation of Pub. Util. Code Section 451.

We agree with Cal Advocates and TURN that PG&E's argument inappropriately minimizes the lack of advanced notification to customers.¹²² Over the course of the three PSPS events in late 2019, approximately 50,000 customers did not receive the required advanced notification, with many of these customers not knowing why their power was shut off or when it would be turned back on.¹²³ PG&E is required to adhere to the Commission's requirements for advanced notification for potentially impacted customers. Although the number of customers that did not receive advanced notification may equate to 3 percent of all affected customers, 50,000 is a substantial number of customers and the failure to provide advanced notification to these customers violated Commission requirements. We will consider PG&E's conduct prior to the de-energization events when considering the appropriate sanctions for the violations.

4.6. Advanced Notification of Medical Baseline Customers

This OSC addresses allegations that PG&E failed to provide advanced notice of de-energization events to Medical Baseline customers, including approximately 500 Medical Baseline customers affected by the October 9-12, 2019 PSPS event, approximately 15 Medical Baseline customers affected by the October 23-25, 2019 PSPS event and approximately 700 Medical Baseline customers affected by the October 26-November 1, 2019 PSPS event.

¹²² Cal Advocates Reply Brief, at 6; TURN Reply Brief, at 3.

¹²³ Cal Advocates Reply Brief, at 6; Exh. Cal Advocates-14.

4.6.1. Positions of the Parties

Several parties allege that PG&E failed to properly provide advanced notification to Medical Baseline customers of the de-energization events in violation of requirements in the D.19-05-042 Guidelines.

San José contends that PG&E failed to meet the D.19-05-042 Guidelines for notice to Medical Baseline customers as well as coordination with local jurisdictions and emergency responders during the October 9-12, 2019 PSPS event.¹²⁴ San José asserts that PG&E's "lack of preparation and cooperation with San José before and during the October 9 PSPS [e]vent turned an already difficult situation into a potentially dangerous one."¹²⁵

San José details that despite the readiness of its employees to perform door knocks for Medical Baseline customers that PG&E was unable to contact, it did not learn the identities of the impacted Medical Baseline customers until 30 minutes prior to the PSPS event because PG&E insisted on routing the information through the County of Santa Clara.¹²⁶ San José also indicates that even when it received the data through the County of Santa Clara, PG&E's data was difficult to decipher, complicating San José efforts to understand what Medical Baseline customers it needed to contact.¹²⁷ As to PG&E's notification of Medical Baseline customers of the October 26 to November 1, 2019 PSPS event, San José contends that PG&E's effort to provide information was still

¹²⁴ San José Opening Brief, at 13; D.19-05-042, Appendix A, at A2, A7, A13 and A16.

¹²⁵ San José Opening Brief, at 13.

¹²⁶ San José Opening Brief, at 13; Exh. CSJ-01, at 5.

¹²⁷ *Ibid.*

problematic, with many customers not receiving information about available resources during the PSPS event.¹²⁸

Cal Advocates argues that PG&E failed to provide the required notice to Medical Baseline customers as set forth in ESRB-8 and the D.19-05-042 Guidelines during the PSPS events in October and November 2019.¹²⁹ Cal Advocates asserts that “over 1,500 Medical Baseline customers who rely on electricity for their life-sustaining machines” only received notification from PG&E “when their power was suddenly and unexpectedly shut off.”¹³⁰

CforAT argues that PG&E provided inadequate notice to Medical Baseline customers and notes the inadequacy of notification for customers with medical vulnerabilities, language minorities, and other access and functional needs (AFN) customers.¹³¹

Cal Advocates, TURN, SBUA and CforAT contest PG&E’s argument that it substantially complied with the advanced notification requirements for Medical Baseline customers and PG&E’s non-compliance with clear Commission rules and requirements was not justified.¹³² These parties contend that PG&E’s argument minimizes that approximately 1,100 Medical Baseline customers did not receive advanced notification and the real world impacts on those customers due to the lack of advanced notification.¹³³

¹²⁸ San José Opening Brief, at 15.

¹²⁹ Cal Advocates Opening Brief, at 9-10.

¹³⁰ Cal Advocates Reply Brief, at 6; Exh. Cal Advocates–26, Table 3.

¹³¹ CforAT Opening Brief, at 3.

¹³² Cal Advocates Reply Brief, at 5-7; TURN Reply Brief, at 3; SBUA Reply Brief, at 4; CforAT Reply Brief, at 4.

¹³³ *Ibid.*

4.6.2. Position of PG&E

PG&E acknowledges that it failed to provide advanced notification of the Fall 2019 PSPS events to approximately 1,100 Medical Baseline customers, not the approximately 1,215 indicated in the December 23, 2019 Ruling.¹³⁴ However, PG&E argues that its notification efforts for Medical Baseline customers were reasonable, especially due to the large scale of the Fall 2019 PSPS events.¹³⁵

PG&E contends the Commission should consider: (1) PG&E's significant efforts to prepare customers for the Fall 2019 PSPS events, (2) reasons for the missed notifications, and (3) PG&E's overall performance in notifying customers during the Fall 2019 PSPS events.¹³⁶

PG&E asserts that it made a concerted effort to contact and provide information to its Medical Baseline customers.¹³⁷ PG&E's efforts included: (1) additional and customized messaging and resources to its Medical Baseline customers, (2) a campaign to publicize and increase enrollment in the Medical Baseline program (3) the provision of specific preparedness information designed for customers who rely on power for their medical devices and (4) calls and mailers to request contact information.¹³⁸ PG&E also details its notification efforts that specifically targeted Medical Baseline customers for direct

¹³⁴ PG&E contends that correct figures for the number of Medical Baseline customers who did not receive advanced notification is approximately: (1) 600 for by the October 9-12, 2019 PSPS event; (2) 20 customers for the October 23-25, 2019 PSPS event and (3) 500 for the October 26-November 1, 2019 PSPS event. (Ex. PGE-03 at 2; Amended PG&E PSPS Report for the October 9-12, 2019 De-Energization Event at 16; Amended PG&E PSPS Report for the October 23-25, 2019 De-Energization Event at 17; Amended PG&E PSPS Report for the October 26 & 29, 2019 De-Energization Event at 14.)

¹³⁵ PG&E Opening Brief, at 8-9, 12, 17; Exh. PG&E-01, at 3-8.

¹³⁶ PG&E Opening Brief, at 9; Exh. PG&E-01, at 3-2 to 3-9, 3-17 to 3-20.

¹³⁷ PG&E Opening Brief, at 10-11; Exh. PG&E-01, at 3-4.

¹³⁸ PG&E Opening Brief, at 13; Exh. PGE-01, at 3-19 to 3-20.

notifications, with repeated phone calls and text messages as well as visits to a customer's residence to conduct an in-person notification if the initial contacts were not successful.

4.6.3. Discussion

We find that PG&E's failure to provide advanced notification to approximately 1,100 Medical Baseline customers for the three PSPS events in Fall 2019 constitute violations of the Commission's requirements regarding advanced notification in D.19-05-042 Guidelines and Pub. Util. Code Section 451. There is no dispute amongst the parties, including PG&E, that a substantial number of PG&E's Medical Baseline customers did not receive advanced notification as required by the Commission.

The D.19-05-042 Guidelines mandate that electric IOUs must "provide advance notification to all populations potentially affected by the de-energization event."¹³⁹ As indicated by San José, the Phase 1 Guidelines indicate that access and functional needs population, which includes Medical Baseline customers, may require additional notification streams.¹⁴⁰ By not providing advanced notification to a significant number of these customers, PG&E did not comply with the D.19-05-042 Guidelines.

Although the D.19-05-042 Guidelines do provide some qualification that the notifications must occur "whenever possible", PG&E has not provided sufficient evidence that advanced notification of the de-energization events for the 1,100 uncontacted Medical Baseline customers was not possible.¹⁴¹

Furthermore, many of the causes for the missed notifications cited by PG&E

¹³⁹ D.19-05-042, Appendix A, at A7 (emphasis added).

¹⁴⁰ San José Opening Brief, at 13.; D.19-05-042, Appendix A, at A6-A7.

¹⁴¹ D.19-05-042, Appendix A, at A7.

were attributable to PG&E's lack of effective preparation and coordination with public safety partners and local jurisdictions.¹⁴²

PG&E's failure to provide advanced notification of de-energization events to approximately 1,100 Medical Baseline customers also violates Pub. Util. Code Section 451. Pub. Util. Code Section 451 requires all public utilities to provide and maintain "adequate, efficient, just and reasonable" services and facilities as are necessary for the "safety, health, comfort, and convenience" of its customers and the public. Advanced notification is an important service to promote the safety, health, comfort and convenience for potentially impacted Medical Baseline customers by providing them with an opportunity to prepare and plan in advance of a de-energization event.

As discussed, by CforAT, Medical Baseline customers are a constituency that are severely impacted by de-energization events due to their reliance on electricity for vital medical needs, including medical devices and refrigeration for medications.¹⁴³ Therefore, the lack of advanced notification resulted in especially significant health and safety consequences for these customers.

PG&E's failure to provide advanced notification to approximately 1,100 Medical Baseline customers violated Commission requirements regarding advanced notification for de-energization events. We will consider PG&E's conduct prior to the de-energization events when considering the appropriate sanctions for the violations.

¹⁴² PG&E Opening Brief, at 15; San José Opening Brief, at 13-14.

¹⁴³ CforAT Opening Brief, at 1.

5. Legal Framework for Fines and Remedies

The Commission has statutory authority to impose fines under Pub. Util. Code Sections 2107 and 2108. The Commission's authority to impose fines pursuant to Pub. Util. Code Section 2107 has been affirmed.¹⁴⁴

Section 2107 states:

Any public utility that violates or fails to comply with any provision of the Constitution of this state or of this part, or that fails or neglects to comply with any part or provision of any order, decision, decree, rule, direction, demand, or requirement of the commission, in a case in which a penalty has not otherwise been provided, is subject to a penalty of not less than five hundred dollars (\$500), nor more than one hundred thousand dollars (\$100,000) for each offense.

Section 2108 states:

Every violation of the provisions of this part or of any part of any order, decision, decree, rule, direction, demand, or requirement of the commission, by any corporation or person is a separate and distinct offense, and in case of a continuing violation each day's continuance thereof shall be a separate and distinct offense.

Furthermore, the Commission has authority to fashion other equitable remedies in addition to specific authority to impose fines pursuant to Pub. Util. Code Sections 2107 and 2108 and has done so on many occasions.¹⁴⁵ These remedies include exercising the Commission's ratemaking authority to disallow expenditures that are needed to redress violations found in this proceeding.

¹⁴⁴ See, e.g., *Pacific Bell Wireless, LLC v. Public Utilities Com. (Cingular)* (2006) 140 Cal. at 4th 718.

¹⁴⁵ D.07-09-041, D.15-04-024, D.15-07-014, D.17-09-024, D.18-04-014, D.19-04-041, D.19-09-037, and D.20-02-036.

Pub. Util. Code Section 728 confers ratemaking authority¹⁴⁶ upon the Commission and states:

Whenever the commission, after a hearing, finds that the rates or classifications, demanded, observed, charged, or collected by any public utility for or in connection with any service, product, or commodity, or the rules, practices, or contracts affecting such rates or classifications are insufficient, unlawful, unjust, unreasonable, discriminatory, or preferential, the commission shall determine and fix, by order, the just, reasonable, or sufficient rates, classifications, rules, practices, or contracts to be thereafter observed and in force.

Similarly, Section 761 confers authority on the Commission to require a utility to maintain proper facilities. It provides in part:

Whenever the commission, after a hearing, finds that the rules, practices, equipment, appliances, facilities, or service of any public utility, or the methods of manufacture, distribution, transmission, storage, or supply employed by it, are unjust, unreasonable, unsafe, improper, inadequate, or insufficient, the commission shall determine and, by order or rule, fix the rules, practices, equipment, appliances, facilities, service, or methods to be observed, furnished, constructed, enforced, or employed.

Lastly, the Commission has broad authority under Pub. Util. Code Section 701 to “do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient” in the supervision and regulation

¹⁴⁶ The Commission’s general ratemaking authority comes from Section XII, Article 6 of the California Constitution, which states: “The commission may fix rates, establish rules, examine records, issue subpoenas, administer oaths, take testimony, punish for contempt, and prescribe a uniform system of accounts for all public utilities subject to its jurisdiction.”

of public utilities.¹⁴⁷ The Commission's exercise of these powers and jurisdiction "must be cognate and germane to the regulation of public utilities. . ." ¹⁴⁸ The remedies considered below are to ensure that PG&E's future de-energization events are conducted safely and in a manner consistent with Commission requirements. Therefore, they lie squarely within our jurisdiction.

6. Factors to Consider in Setting the Appropriate Penalties

In determining the penalty to be imposed for violations found above, we are guided by D.98-12-075, which identified the following factors:¹⁴⁹

1. Severity of the offense;
2. Conduct of the utility before, during, and after the offense;
3. Financial resources of the utility;
4. Totality of the circumstances in furtherance of the public interest; and
5. The amount of the fine in relationship to prior Commission decisions.

6.1. Severity of the Violations

The Commission will examine the severity of the violations, "which encompasses four sub-factors: (1) physical harm, (2) economic harm, (3) harm to the regulatory process, and (4) the number and scope of violations,"¹⁵⁰ with violations that cause physical harm to people or property being considered the most severe and violations that threatened such harm closely following.¹⁵¹ The

¹⁴⁷ See, e.g., *Pacific Bell Wireless, LLC v. Public Utilities Com.*, 140 Cal. App. 4th at 736; *Consumers Lobby Against Monopolies v. Public Utilities Com. (CLAM)* (1979) 25 Cal. 3d 891, 905.

¹⁴⁸ *CLAM*, 25 Cal. 3d at 905-906.

¹⁴⁹ D.18-10-020, at 74; see D.98-12-075, at 9, 54-56 (1998 Cal. PUC LEXIS 1016).

¹⁵⁰ D.19-12-001, at 16.

¹⁵¹ D.18-10-020, at 117-18; see D.98-12-075, at 9, 54-56.

severity of a violation increases with the level of costs imposed on the victims of the violation.¹⁵²

6.1.1. Positions of the Parties

CforAT describes PG&E's violations as "expensive, scary, and harmful events for its customers and communities."¹⁵³ CforAT identifies harms experienced by people with disabilities, such as loss of power for medical devices, refrigeration of medication, and adaptive equipment; and disproportionately higher "externalized costs such as replacing lost food and/or medication or evacuating to a location that has power."¹⁵⁴

CforAT also identifies other harms including: (1) inadequate notice to Medical Baseline customers and customers with access and functional needs customers, (2) inadequate posting of information on the PG&E website, (3) outage maps that were inaccessible for users with vision impairments, and (4) mitigation efforts that provided inadequate support.¹⁵⁵

San José cites the economic harm suffered by local governments, with San José itself spending over \$1 million responding to Fall 2019 PSPS events and the equivalent of \$1.2 million in personnel time by deploying employees from "almost every city department" toward de-energization event response efforts.¹⁵⁶ San José asserts that the severity of the offense was higher due to the impact on vulnerable customers and repeat offenses. San José states that the "failure of

¹⁵² D.18-10-020, at 119-20.

¹⁵³ CforAT Opening Brief, at 15.

¹⁵⁴ CforAT Opening Brief, at 1.

¹⁵⁵ CforAT Opening Brief, at 3-4.

¹⁵⁶ San José Opening Brief, at 16.

PG&E to notify a substantial number of customers, particularly Medical Baseline customers who rely on electricity for health reasons, is a severe harm.”¹⁵⁷

San José also argues that “repeat offenses, particularly for failure to notify, should be treated even more severely.”¹⁵⁸ Finally, San José argues that because PG&E continually failed to notify Medical Baseline customers and increased the number of customers who were not notified, PG&E’s violations warrant consideration of serious penalties under Pub. Util. Code Section 2108 for continuing violations.¹⁵⁹

CLECA asserts that PG&E committed serious, egregious failures that endangered customers and the public when the utility failed to follow de-energization guidelines in Resolution ESRB-8 and D.19-05-042.¹⁶⁰ CLECA cites the failure to properly notify two CLECA members with industrial facilities served by PG&E and details the “risks of industrial accidents associated with power interruptions” such as explosions, release of dangerous materials, injuries, and property damage.¹⁶¹ CLECA stresses that although such accidents were avoided during the PSPS events, the risks were “very real,” and noted the actions that were taken by one CLECA member, who shut down operations at its own expense to “avoid a potentially devastating accident.”¹⁶²

The Joint Local Governments assert that customers experienced physical harm because “PG&E did not go into the fire season with a well-designed de-

¹⁵⁷ *Id.* at 17.

¹⁵⁸ *Id.* at 18.

¹⁵⁹ *Ibid.*

¹⁶⁰ See CLECA Opening Brief, at 3-7.

¹⁶¹ CLECA Opening Brief, at 5-8.

¹⁶² *Id.* at 8.

energization program and did not execute the events well.”¹⁶³ The Joint Local Governments contend the physical harm was loss of utility service, which has been previously determined by the Commission as a physical harm “because utility service is a necessity of modern life and that discontinuance for even short periods of time can threaten health and safety.”¹⁶⁴ The Joint Local Governments also claim that PG&E’s conduct led to economic harm, including general losses such as revenue, income, refrigerators full of food, refrigerated medication, travel and lodging costs, interruption of care for medically vulnerable people, tourism and tax revenue, and response costs.¹⁶⁵

The Joint Local Governments assert that PG&E’s failure to adequately plan for and execute the 2019 events exacerbated costs inherent to any de-energization event and cite the following economic harm:

- Nevada County: \$263,000 per day during a de-energization event;
- Santa Rosa: approximately \$485,000 for the October 9 event and \$1.802 million total for all of the 2019 de-energization events;
- Marin County: \$850,000 through the end of October 2019;
- Sonoma County: \$1.6 million for all of the 2019 de-energization events; and
- City of San José: more than \$1 million.¹⁶⁶

The Joint Local Governments also contend that PG&E’s conduct harmed the integrity of the regulatory process because it was entrusted with

¹⁶³ Joint Local Governments Opening Brief, at 25.

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ Joint Local Governments Opening Brief, at 25-26.

implementing the Commission's de-energization guidelines "in an effective and well-considered manner," but "fail[ed] to meet its obligations."¹⁶⁷

Cal Advocates asserts that "PG&E put the lives of many vulnerable customers at risk, and either failed in or disregarded, its obligations to public safety partners, local agencies, and essential service workers."¹⁶⁸ Cal Advocates claims that PG&E's behavior caused significant disruption to customer's lives and customers were forced to bear unnecessary costs.¹⁶⁹ Cal Advocates further characterizes the harm caused by PG&E as increasing in severity due to customers experiencing de-energization without advance notice multiple times, and continuing violations as many customers were without power for multiple days during each PSPS event.¹⁷⁰ Cal Advocates highlights the risk of failing to notify public safety partners in time for them to make alternative plans for critical facilities that were de-energized with "an instance where two hospitals were de-energized in all three October de-energization events."¹⁷¹

Noting that "de-energization to a Medical Baseline customer is a potentially life-threatening risk," Cal Advocates states that there "is no justification for PG&E putting these vulnerable customers at such risk by failing to give them the required notice."¹⁷² Cal Advocates states that "no amount of

¹⁶⁷ *Id.* at 26.

¹⁶⁸ Cal Advocates Opening Brief, at 7.

¹⁶⁹ *Id.* at 8.

¹⁷⁰ *Id.* at 17.

¹⁷¹ *Id.* at 19-20.

¹⁷² *Id.* at 20.

avoidable public safety risk is acceptable as collateral, regardless of the size of the [utility's] operations or the number of customers it serves."¹⁷³

SBUA asserts that "[s]mall businesses were impacted immensely by the late-2019 PSPS events."¹⁷⁴ According to SBUA, 160,300 small and medium business customers lost power, many of them repeatedly,¹⁷⁵ but they were not compensated by PG&E.¹⁷⁶ SBUA further indicates that, as of September 20, 2020, "[c]ommercial customers filed 367 claims, totaling \$6,118,237.87 for food loss, property damage and economic loss due to the October PSPS events. The median claim was for approximately \$2,700."¹⁷⁷

TURN asserts that PG&E's violations caused physical harm, economic harm, and harm to the integrity of the regulatory process. Customers were physically harmed due to termination of utility service and suffered "abundant economic harm as a result of PG&E's violations."¹⁷⁸ TURN asserts that "local governments strained their resources, lost their emergency notification networks, and incurred millions of dollars in response costs that were not in the budget and could not be recovered."¹⁷⁹ Lastly, TURN contends that there was harm to the integrity of the regulatory process because PG&E's violations of "Public Utilities

¹⁷³ *Id.* at 2.

¹⁷⁴ SBUA Opening Brief, at 1.

¹⁷⁵ *Id.* at 1-2.

¹⁷⁶ *Id.* at 7.

¹⁷⁷ *Id.* at 6-7.

¹⁷⁸ TURN Opening Brief, at 4.

¹⁷⁹ *Id.* at 15.

Code Section 451, D.19-05-042, and Resolution ESRB-8...could endanger public health and safety.”¹⁸⁰

6.1.2. Position of PG&E

PG&E argues that its failures were fewer than alleged in the OSC, and that there is no evidence of actual harm. PG&E claims that “[t]he evidence in the record shows that the actual number of customers who did not receive notification was lower than the numbers included in the OSC.¹⁸¹ PG&E contends that the actual numbers are:

- Approximately 22,000 customers (3.0 percent) (including approximately 600 Medical Baseline customers) out of approximately 735,400 customers affected by the October 9-12 PSPS, 2019 event.
- Approximately 2,100 customers (1.2 percent) (including approximately 20 Medical Baseline customers) out of approximately 178,800 customers affected by the October 23-25, 2019 PSPS event.
- Approximately 25,900 customers (2.7 percent) (including approximately 500 Medical Baseline customers) out of approximately 967,700 customers affected by the October 26-November 1, 2019 PSPS event.

PG&E also asserts that there is no evidence of actual harm. According to PG&E, “Cal Advocates does not provide any evidence that any customer actually suffered any harm due to the lack of notice – or even that customers were in fact unaware of the pending de-energization.”¹⁸²

¹⁸⁰ *Id.* at 4.

¹⁸¹ PG&E Opening Brief, at 8.

¹⁸² PG&E Reply Brief, at 9.

6.1.3. Discussion

We find that the severity of the violations by PG&E during the Fall 2019 PSPS events is high. The violations caused significant physical and economic harm, while also harming the regulatory process. Furthermore, the high number of violations, as well as their broad scope and repeating nature add to the severity of the violations.

The proceeding record is replete with evidence of physical harm caused by PG&E's violations. PG&E's violations put the health of many customers at risk and made an already stressful and fraught situation significantly worse. Many customers struggled to prepare for and endure the de-energization events due to often inaccurate, unavailable and confusing information from PG&E. Numerous Medical Baseline as well as access and functional needs customers lost power necessary for essential medical devices, adaptive equipment and refrigeration of medications. For many of these customers, the loss of power occurred without advanced notification and the difficulties in accessing and understanding the information regarding the de-energization events due to issues with PG&E's website and online information imposed additional burdens. Furthermore, these customers had to suffer these harms several times over long periods.

There is also extensive evidence in the record as to the economic harm suffered due to PG&E's violations.¹⁸³ Customers were burdened with costs due to spoiled food and medications, as well as costs for generators to mitigate the loss of power. Many customers had to bear the costs of travel and lodging to avoid the impacts of the loss of power.

¹⁸³ Joint Local Governments Opening Brief, at 25; CLECA Opening Brief, at 8; SBUA Opening Brief, at 6-7.

Businesses and their employees also suffered extensive economic harm. Approximately 160,000 small and medium businesses were impacted by lost revenue, spoiled supplies and increased response costs for items such as generators. Some large businesses had to shut down to avoid the serious safety risks posed by power interruptions. Local governments absorbed millions of dollars in response costs. Additionally, local government employees devoted extensive hours to responding to the Fall 2019 PSPS events. These costs and employee hours could have been avoided if PG&E had adequately prepared for and implemented the PSPS events.

We also find that there was substantial harm to the regulatory process. The Commission and the California Legislature have established requirements and obligations for PG&E as to how it conducts de-energization events and its duty to ensure public health and safety. PG&E's failure to abide by these requirements and obligations in implementing the de-energization events undermined the regulatory process.

Lastly, we find that the number and scope of PG&E's violations were high. Hundreds of thousands of customers across broad swaths of California were harmed by PG&E's violations. Various groups of customers, including Medical Baseline, access and functional needs, business, and local governments, were harmed. Many public safety partners were hampered in their efforts to plan for and respond to the de-energization events. The violations occurred over a significant period of time, with many customers affected for multiple days. Additionally, the violations as to advanced notification continued to occur in the subsequent two Fall 2019 PSPS events.

6.2. Conduct of the Utility

The Commission will assess the “utility’s conduct in: (1) preventing the violation, (2) detecting the violation, and (3) disclosing and rectifying the violation.”¹⁸⁴ Prevention includes “becoming familiar with applicable laws and regulations, and most critically, the utility regularly reviewing its own operations to ensure full compliance.”¹⁸⁵ Detection includes diligent monitoring.¹⁸⁶ Disclosure and rectification includes prompt reporting and correction of a violation.

6.2.1. Positions of the Parties

CforAT asserts that “PG&E knew or should have known the risks of harm from its shutoff activities” and that PG&E was on sufficient notice of the risks as early as 2009.¹⁸⁷ CforAT states that PG&E’s “actions taken after the disastrous events of 2019 do not make up for the fear, risk and harm suffered by customers during those events.”¹⁸⁸ CforAT argues that “PG&E’s ability to make rapid improvements after experiencing failures shows that the same improvements could have been put in place in advance of any shutoff activity if PG&E had appropriately prioritized its efforts.”¹⁸⁹

San José contends that PG&E’s conduct prior to the PSPS events in preventing the violations was lacking, observing that PG&E’s May 17, 2019 PSPS workshop was “so general in nature that [San José’s] Office of Emergency

¹⁸⁴ D.98-12-075, at 56.

¹⁸⁵ *Id.* at 57.

¹⁸⁶ *Id.* at 57-58.

¹⁸⁷ CforAT Opening Brief, at 6-10.

¹⁸⁸ *Id.* at 2.

¹⁸⁹ CforAT Reply Brief, at 6.

Management pulled together its own team to plan and prepare for PSPS events, including plans for deploying generators, creating its own PSPS webpages in three languages, and formulating a Communications Plan.”¹⁹⁰ San José also cites PG&E’s failure to prepare accurate outage maps, which hindered San José’s ability to refuel critical facilities on time and set up community resource centers (CRCs) in the correct locations.

CLECA suggests that PG&E’s failure to notify was potentially due to “a failure of PG&E’s mapping process, a lack of understanding of the relationship between the transmission and distribution systems, a lack of appreciation of the potentially dangerous consequences of interrupting large (particularly industrial) customers without notice, or from some other cause.”¹⁹¹ Furthermore, CLECA states that “no information is provided on when [mapping automation] will be completed, or what steps will be taken to assure its accuracy.”¹⁹²

The Joint Local Governments emphasize that PG&E’s violations “could have been prevented, or at least mitigated, by proper pre-fire-season emergency management training and by engaging in the coordination with local governments that the Commission had mandated.”¹⁹³ The Joint Local Governments further contend that PG&E failed to ensure that its Emergency Operations Center (EOC) staff had emergency management training and failed to design its de-energization program in accordance with emergency management frameworks. The Joint Local Governments observe that PG&E failed to “anticipate peak customer web traffic” that disrupted PG&E’s customer facing

¹⁹⁰ San José Opening Brief, at 4.

¹⁹¹ CLECA Opening Brief, at 5; Exh. CLECA-01, at 2.

¹⁹² CLECA Opening Brief, at 5.

¹⁹³ Joint Local Governments Opening Brief, at 27.

website, created outage maps that were inaccurate due to a buffer of up to 20 percent, provided “untimely and inaccurate” information in the secure data portal that made the portal “constructively unavailable.”¹⁹⁴

MGRA asserts that PG&E’s website failure was avoidable had PG&E: (1) made sufficient effort to understand customer usage during PSPS events, (2) paid attention to warning signals, if it had adequately tested its servers, and (3) taken remedial action based on the shortcomings it would have found based on the above actions.¹⁹⁵ MGRA asserts that PG&E should have anticipated that customers waiting for the power shutoff would have to repeatedly visit its website to obtain updates and news sites and other third-party sites would redirect web traffic to PG&E’s website.¹⁹⁶ MGRA also contends that the spike in PG&E’s web traffic during the September 23, 2019 PSPS event should have put PG&E on notice that CPU limits would be reached on key servers.¹⁹⁷

MGRA further states that “the PG&E website failure can be attributed largely to a lack of “customer empathy” and the “failure to understand how customers would act in the situation that PG&E had placed them.”¹⁹⁸ Lastly, MGRA finds it “disturbing” and a demonstration of a “lack of due diligence” that PG&E “did not know the number of customers that were to be experiencing a PSPS event.”¹⁹⁹ MGRA references PG&E’s rapid response as both an

¹⁹⁴ Joint Local Governments Reply Brief, at 8, 10-11.

¹⁹⁵ MGRA Opening Brief, at 7.

¹⁹⁶ *Id.* at 7-8.

¹⁹⁷ *Id.* at 7-8.

¹⁹⁸ *Id.* at 12.

¹⁹⁹ *Id.* at 15.

achievement and a demonstration of PG&E's ability to have prevented the website outages had they acted sooner.²⁰⁰

Cal Advocates asserts that PG&E was on notice of PSPS related risks with "more than a decade of studies, examinations, expert and stakeholder consultations, modeling, discoveries, workshops and Commission proceedings."²⁰¹ Cal Advocates argues that "[n]otwithstanding, this decade of learning and effort, PG&E's October 9-12, 2019 and October 23, 2019 and November 1, 2019 PSPS events were a major public safety failure."²⁰²

SBUA highlights several actions that were not taken prior to the PSPS events."²⁰³ SBUA focuses on PG&E's decision to omit PSPS events within its risk register because "they have been considered as a measure to mitigate wildfire risks and not as a driver of risk."²⁰⁴ SBUA argues that because PG&E does not classify PSPS events as a risk, "[a]n obvious conclusion is that failing to accept responsibility for and consider the risks posed by PSPS events are root contributing causes to PG&E's deficient notification of customers in advance of the late-2019 PSPS events."²⁰⁵ SBUA also observes that PG&E was on notice of the limited public awareness of the PSPS program through its surveys of residential customers in May and August 2019.²⁰⁶

²⁰⁰ MGRA Opening Brief, at 8.

²⁰¹ Cal Advocates Opening Brief, at 7.

²⁰² *Ibid.*

²⁰³ SBUA Opening Brief, at 3.

²⁰⁴ *Id.* at 4.

²⁰⁵ *Id.* at 5.

²⁰⁶ *Id.* at 5.

TURN asserts that PG&E did not demonstrate that it reasonably prevented the violations from occurring, arguing that PG&E should have reasonably foreseen the increased web traffic since it notified more than 700,000 customers and directed them to visit the website for more information.²⁰⁷ TURN contends PG&E “continued to violate the notice requirements in each PSPS event it implemented in 2019,” and remedial actions “were obviously unsuccessful.”²⁰⁸

For the up to 5 percent of PG&E’s customers whose contact information was missing, TURN argues that “PG&E knew that it had no way to provide notice to [non-Medical Baseline] customers unless it conduct[ed] in-person notification, yet it chose not to notify these customers prior to shutting off their power.”²⁰⁹ TURN also notes that PG&E also conceded that “it did not test its methodology prior to implementation, which led to missed customer notifications.”²¹⁰

6.2.2. Position of PG&E

PG&E contends that it made efforts to reach as many customers as possible, target Medical Baseline customers, and obtain customers’ phone and email contact information. PG&E argues that it acted reasonably in developing and implementing its notification process and describes it in detail.²¹¹ PG&E also discusses in detail its efforts to prepare its website for potential PSPS events and

²⁰⁷ TURN Opening Brief, at 11.

²⁰⁸ *Id.* at 4, 7.

²⁰⁹ *Id.* at 5.

²¹⁰ TURN Reply Brief, at 4.

²¹¹ PG&E Opening Brief, at 12-13.

quickly recovering its website after its website outage.²¹² PG&E describes its strengthening and testing of its website as acting in “good faith.”²¹³

Notably, PG&E admits that it failed to test its Static Content Servers because of no prior performance issues and did not anticipate that the servers could not handle the level of website traffic during the October 9-12, 2019 PSPS event. However, PG&E argues that it “did not and could not know precisely how many customers [it] should be benchmarking for future events” even after the September 25, 2019 PSPS event, and further, “[n]o one anticipated how worldwide interest...national and international interest, and automated web traffic would strain PG&E’s servers.”²¹⁴

Despite the above contentions, PG&E did agree to the following stipulations with MGRA.

- PG&E believes and acknowledges that most of the website traffic was generated by PG&E customers;
- PG&E would have known that customer traffic patterns would be different during a power shutoff than during other types of customer outages; and
- Before the October 9-12, 2019 de-energization event, PG&E did not adequately anticipate peak website traffic during a de-energization event.²¹⁵

6.2.3. Discussion

We find that PG&E’s conduct in preventing, detecting and rectifying the violations was severely flawed. While we recognize the scale of the PSPS events presented challenges, we find that many of the issues with the Fall 2019 PSPS

²¹² PG&E Opening Brief, at 19-25.

²¹³ PG&E Reply Brief, at 16.

²¹⁴ *Id.* at 14.

²¹⁵ MGRA Opening Brief, at 11.

events could have been prevented with better preparation, testing and coordination by PG&E. PG&E used the de-energization process and therefore, should have prepared for the de-energization events to the best of its ability. The record demonstrates that this was not the case with respect to the Fall 2019 PSPS events.

As argued by various parties and acknowledged by PG&E itself, PG&E did not take sufficient steps to prevent the failure of its website.²¹⁶ PG&E did not sufficiently test the functionality of its website in light of expected web traffic based on the large scale of the October 9-12, 2019 PSPS events and the levels of web traffic during the September 25, 2019 PSPS event. Although PG&E was able to restore the functionality of the website in a relatively short time, we agree with CforAT and other parties that PG&E's ability to rapidly restore the website's functionality demonstrates that the issue could have been prevented "if PG&E had appropriately prioritized its efforts."²¹⁷

We also find PG&E could have prevented the violations due to the inaccuracy of the online maps and accessibility of the secure data transfer portals by better preparation and coordination with local municipalities that would rely on these resources. In many instances, these local municipalities stepped into the voids resulting from PG&E's inadequate preparation to ensure the health and safety of their constituents. The negative impacts of the Fall 2019 PSPS events could have been worse absent the efforts of these local municipalities. PG&E's lack of preparation and foresight as to potential problems caused by issues with online maps and the accessibility of the secure data transfer portals hindered the

²¹⁶ MGRA Opening Brief, at 7, 11; Joint Local Governments Reply Brief, at 8, 10-11. CLECA Opening Brief, at 5; Exh. CLECA-01, at 2; San José Opening Brief, at 4; CforAT Reply Brief, at 6.

²¹⁷ CforAT Reply Brief, at 6.

abilities of these local municipalities to prepare for and respond to the Fall 2019 PSPS events.

Lastly, we find that PG&E did not adequately act to prevent the failure to provide advanced notification of the de-energization events to a substantial number of customers, including Medical Baseline customers, and to rectify these notification issues in subsequent PSPS events. PG&E could have done more to acquire contact information for its customers, particularly Medical Baseline customers, a group of customers that experience especially adverse impacts from the loss of power.

It is also troubling that despite the notification issues with the October 9-12, 2019 PSPS event, PG&E again had notification issues during the October 23-25, 2019 and October 26-November 1, 2019 PSPS events, with approximately 520 Medical Baseline customers and 28,000 customers overall, not receiving advanced notification of the de-energization events. Given the serious impacts of the failure to provide advanced notification to approximately 600 Medical Baseline customers and 22,000 customers during the October 9-12, 2019 PSPS event, PG&E had notice of the notification issues and should have done more to prevent any such further issues.

6.3. Financial Resources of the Utility

The Commission will consider the financial resources of the utility to ensure that the degree of wrongdoing comports with the amount of the fine and is relative to the utility's financial resources such that the amount will be an effective deterrence for that utility while not exceeding the constitutional limits on excessive fines.²¹⁸

²¹⁸ D.18-10-020, at 117; *see* D.98-12-075, at 59.

6.3.1. Position of the Parties

The Joint Local Governments suggest that PG&E will have adequate financial resources to bear the fine. The Joint Local Governments “recommend a likely maximum of \$19.6 million in local government bill credits,” because they are “de minimis compared to PG&E’s annual authorized revenues.”²¹⁹ TURN asserts that PG&E will have sufficient resources to pay TURN’s recommended penalty under the financial resources of the utility factor. Both the Joint Local Governments and TURN note that PG&E’s 2019 revenue requirement was \$18.184 billion.²²⁰ TURN characterizes its proposed penalties as “de minimis,”²²¹ “would have virtually no impact on PG&E’s financial resources,”²²² and “would represent less than 0.4% of its annual authorized revenue.”²²³

6.3.2. Position of PG&E

PG&E did not make any assertions regarding its financial resources.

6.3.3. Discussion

We find that PG&E has the financial resources to pay the proposed fines and remedies. We agree with the Joint Local Governments and TURN that the proposed remedies would have minimal impact on PG&E’s financial resources. PG&E should be able to pay a penalty of amounts proposed without harming ratepayers or its ability to raise the equity needed for revenue-producing investments required to provide adequate and safe service.

²¹⁹ Joint Local Government Opening Brief, at 28.

²²⁰ Joint Local Governments Opening Brief, at 28; TURN Opening Brief, at 7.

²²¹ TURN Opening Brief, at 8.

²²² *Ibid.*

²²³ *Ibid.*

6.4. Totality of the Circumstances

This factor takes into consideration facts that may mitigate or exacerbate the degree of wrongdoing. In all cases, the harm will be evaluated from the perspective of the public interest.²²⁴

6.4.1. Position of the Parties

San José recommends that the Commission consider the costs borne by local governments to address PG&E's deficiencies.²²⁵ According to San José, "it is not in the public interest to have these costs borne by the local governments when the Commission required PG&E to plan and pay for these PSPS harm mitigation efforts."²²⁶

The Joint Local Governments argue that the weight of the facts and harm go against the public interest. According to the Joint Local Governments:

Rational and well-executed de-energization events go to the heart of the public interest, both in terms of the utilities' obligation to provide safe and reliable utility service and in terms of their obligation to ensure that de-energization events are only used as a last resort...PG&E went into the 2019 de-energization events unprepared and, as a result, the impacted communities and customers were harmed to a greater degree than they might otherwise have been."²²⁷

²²⁴ D.98-12-075, at 59.

²²⁵ San José Opening Brief, at 16.

²²⁶ San José Opening Brief, at 17.

²²⁷ Joint Local Governments Opening Brief, at 28.

Cal Advocates argues that “penalties are necessary to preserve the effectiveness of the PSPS Guidelines as a deterrent to PSPS abuses by the utilities and to mitigate public safety risks.”²²⁸ Furthermore, Cal Advocates states that “PG&E’s failure to accept full responsibility undermines transparency and safety culture values.”²²⁹

TURN argues that a penalty would send a strong signal to PG&E that it must comply with all the Commission’s requirements when conducting a de-energization event. TURN contends this would further the public interest by deterring future noncompliance by PG&E or other utilities.”²³⁰ TURN also states:

Given the devastating effect that PSPS events have on customers’ lives, the Commission should ensure that PSPS guidelines are strictly followed, and it is important for the Commission to establish a penalty precedent in this proceeding to deter future noncompliance with requirements for conducting a PSPS, whether it be ESRB-8, D.19-05-042, or future decisions.²³¹

CLECA argues that “[m]onetary sanctions must be imposed to impress upon PG&E the gravity of its violations and, hopefully, lead to real reform.”²³²

6.4.2. Position of PG&E

PG&E argues that “[t]he October 2019 events – the notifications, the website, and the other issues – should be considered as a whole and in context.”²³³ Specifically, PG&E states that the Commission should consider

²²⁸ Cal Advocates Reply Brief, at 9.

²²⁹ Cal Advocates Reply Brief, at 11.

²³⁰ TURN Opening Brief, at 8.

²³¹ TURN Opening Brief, at 9.

²³² CLECA Reply Brief, at 5.

²³³ PG&E Opening Brief, at 7.

“PG&E’s efforts to prepare customers for PSPS events and to comply with Phase One Guidelines, the reasons for the missed notifications, and PG&E’s overall performance in notifying customers during the October 2019 PSPS events.”²³⁴ Noting that the PSPS events were the largest in California history,²³⁵ PG&E believes that “[a] fair assessment of the facts demonstrates that PG&E’s efforts and outcomes were within the realm of the Phase One Guidelines’ requirements, and that penalties for missed notifications are neither necessary nor appropriate.”²³⁶

PG&E claims that over 20,000 customer accounts and over 40% of the missed notifications during the Fall 2019 PSPS event was due to a lack of contact information for some customers. PG&E argues that because not all customers responded to its efforts to gather their contact information, PG&E “should not be penalized for failing to provide advance notice to those customers who decline to provide a way to contact them.”²³⁷ PG&E also discusses the impact of changed conditions and its efforts to recover the website quickly.²³⁸ Lastly, PG&E argues that the Commission should consider the fact that “PG&E had already credited customers over \$86 million for these issues.”²³⁹

6.4.3. Discussion

In determining the appropriate penalty, we must consider the gravity and severity of the violations presented in this OSC, PG&E’s obligations under Pub.

²³⁴ *Id.* at 9.

²³⁵ *Id.* at 1.

²³⁶ *Id.* at 9.

²³⁷ *Id.* at 14-15.

²³⁸ *Id.* at 16-18.

²³⁹ *Id.* at 31.

Util. Code Section 451, the D.19-05-042 Guidelines and Resolution ESRB-8, and the serious impact of PG&E's shortfalls in implementing the Fall 2019 PSPS events on its customers. We must also consider the Commission's and the public's interest in ensuring that if and when de-energization events occur, they are implemented in a safe and effective manner, with fully functional information resources and required notification to all of the affected customers.

We agree with the Joint Local Governments that PG&E's poor preparation for the Fall 2019 PSPS events resulted in greater impacts to customers and communities than would have occurred had there been appropriate preparation and coordination.²⁴⁰ Although PG&E was able to correct issues with its website, significant issues with advanced notification persisted in subsequent Fall 2019 PSPS events. We also agree with TURN and Cal Advocates that a penalty would serve the public interest by sending a strong signal to PG&E to comply with the Commission's de-energization requirements.²⁴¹ Therefore, based on our discussion in connection with the other factors, we find that a severe penalty is warranted for the violations.

6.5. Past Commission Decisions

The Commission will consider the "amount of the fine in the context of prior Commission decisions."²⁴² This factor takes into consideration the proposed outcome compared with "previously issued decisions which involve

²⁴⁰ Joint Local Governments Opening Brief, at 28.

²⁴¹ TURN Opening Brief, at 8; Cal Advocates Reply Brief, at 9.

²⁴² D.18-10-020, at 117.

the most reasonably comparable factual circumstances and explain any substantial differences in outcome.”²⁴³

6.5.1. Position of the Parties

San José argues that “the Commission should follow its precedent and (1) require PG&E’s shareholders to pay for these remedies and (2) formulate penalties either to fund improvements for how PG&E handles its PSPS Events or to compensate customers and local governments.”²⁴⁴ Citing D.15-04-024, where the Commission required PG&E shareholders to provide future pipeline safety enhancements in the San Bruno pipeline investigation,²⁴⁵ San José argues that having shareholders pay for improvements will further the goal of safer de-energization events than paying penalties into the General Fund.²⁴⁶

The Joint Local Governments lists prior decisions that have permitted shareholder-funded reparations,²⁴⁷ bill credits to affected customers,²⁴⁸ reduced revenue requirements,²⁴⁹ and shareholder-funded corrective actions.²⁵⁰ The Joint Local Governments claim that “Commission precedent supports imposing financial penalties.”²⁵¹

²⁴³ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. ATU.C. 2d at 190.

²⁴⁴ San José Opening Brief, at 18.

²⁴⁵ See D.15-04-024, at 90.

²⁴⁶ San José Opening Brief, at 19.

²⁴⁷ See D.07-09-041; D.19-09-037.

²⁴⁸ See D.15-04-024.

²⁴⁹ See D.15-04-024; D.15-07-014; D.18-04-014.

²⁵⁰ See D.15-07-014; D.17-09-024; D.20-02-036.

²⁵¹ Joint Local Governments Opening Brief, at 29.

TURN cites D.07-09-041, D.15-04-024, D.15-07-014, D.17-09-024, D.18-04-014, D.19-04-041, D.19-09-037, and D.20-02-036 as examples of various forms of penalties or remedies that the Commission has found as appropriate.²⁵² TURN indicates that these decisions include “shareholder-funded reparations, compensation to harmed customers, reduced revenue requirements that would otherwise be collected from ratepayers, or shareholder-funded corrective actions.”²⁵³

6.5.2. Position of PG&E

PG&E did not discuss past Commission decisions.

6.5.3. Discussion

Although the current proceeding presents a relatively novel enforcement proceeding, we agree with San José, the Joint Local Governments and TURN that there are prior Commission decisions that are reasonably comparable with this proceeding, especially as to examples of the forms of penalties or remedies that the Commission has found appropriate. We discuss each of those decisions below.

D.07-09-041 and D.19-04-041 concern enforcement proceedings where the Commission found that utilities violated several of their tariffs due to various billing activities by the utilities. The Commission ordered several types of penalties and remedies, including refunds, fines and bill credits at shareholder expense. Although D.07-09-041 and D.19-04-041 involved different enforcement circumstances, they do provide precedent as to appropriate remedies for PG&E’s violations.

²⁵² TURN Opening Brief, at 8.

²⁵³ *Id.* at 8.

In D.15-04-024, the Commission imposed fines and remedies on PG&E for specific violations in connection with the operation and practices of its natural gas transmission system. The Commission imposed various penalties and remedies, including bill credits, fines, reduced revenue requirements and shareholder-funded gas infrastructure improvements. The underlying facts of that enforcement proceeding are distinguishable from this proceeding, but the form of the penalties and remedies are relevant and comparable to the remedies proposed by the parties to further the goal of safer de-energization events.²⁵⁴

D.15-07-014, D.18-04-014 and D.20-02-036 concern the Commission's approval of settlements. The facts of those underlying proceedings are distinguishable from the instant proceeding, but the imposed remedies of reduced revenue requirements, restitution, shareholder-funded system improvements and fines are relevant and comparable to the remedies proposed by parties in this proceeding.

In D.19-09-024, the Commission approved a settlement regarding a Commission investigation of PG&E's disconnection of approximately 6,000 customers due to non-payment without the required 24-hour notice. The situation resolved by D.19-09-024 bears some similarity to this proceeding in that it concerned a failure to provide required advanced notification and included remedies such as bill credits and shareholder funding of a customer program.

In D.17-09-024, the Commission approved a settlement regarding an investigation of power outages originating with Southern California Edison Company's (SCE) system in Long Beach in 2015. The settlement approved by D.17-09-024 required SCE to pay a penalty of \$4 million to the General Fund and

²⁵⁴ San José Opening Brief, at 19.

to perform \$11 million worth of specific system enhancements at shareholder expense. The proceeding concerned electrical system outages linked to problems with SCE's maintenance, inspection, and management of the system in Long Beach. The Commission also found problems with SCE's emergency response and communications during the outages. D.17-09-024 is relatively comparable to this proceeding in that it involved an electrical outage, emergency communication issues and similar types of harm. It is also comparable to this proceeding because it approved penalties and remedies including shareholder-funded system improvements and fines.

7. Penalties to be Imposed

7.1. Positions of the Parties

The Joint Local Governments propose a fine that would provide bill credits to each affected local government.²⁵⁵ According to Joint Local Governments, “[a] flat refund of \$100,000 per local government that activated its [Emergency Operation Center] during the 2019 de-energization events would reflect...the significant burden PG&E placed on local Offices of Emergency Management in 2019.”²⁵⁶ The Joint Local Governments estimates that “196 local governments (38 counties and 158 cities)” were de-energized during the October 26 event, so the proposed penalty total would be \$19.6 million.²⁵⁷ San José proposes that any imposed remedy be used to fund improvements or compensate customers and local governments instead of paying into the General Fund.²⁵⁸

²⁵⁵ See Joint Local Governments Opening Brief, at 24, 28, 31.

²⁵⁶ *Id.* at 31.

²⁵⁷ *Id.* at 31.

²⁵⁸ San José Opening Brief, at 18.

Cal Advocates asserts that the “Commission must impose adequate penalties and financial remedies to incent PG&E to act reasonably to mitigate the impact of its PSPS events and take the necessary steps to ensure that it does not unreasonably place customers’ lives and wherewithal at risk.”²⁵⁹ Cal Advocates recommends a penalty of \$165.74 million “against PG&E for violations of Public Utilities Code [Section] 451, arising from PG&E’s compromise of public health and safety during the 2019 PSPS events.”²⁶⁰ This amount is based on Cal Advocates’ estimated financial impacts of the PSPS events to customers. Cal Advocates’ proposed penalty of \$165.74 million consists of:

- \$15.3 million or \$100,000 per public safety partner “for power backup investment for electricity resilience;”
- \$24.1 million, or \$400/customer for a refund above the \$100 already issued by PG&E;
- \$7.57 million or \$5,000 per Medical Baseline customer to fund electricity resilience;
- \$102.2 million for sectionalization devices; and
- a fine of \$16.6 million to be paid to the General Fund.²⁶¹

TURN recommends a total penalty of \$21.7 million to be paid to impacted customers and local governments.²⁶² The penalty is the sum of the Joint Local Governments’ proposed \$19.6 million penalty and the following: (1) \$1.12 million as a direct credit to customers paid via shareholder funds or disallowance for

²⁵⁹ Cal Advocates Opening Brief, at 8.

²⁶⁰ Cal Advocates Opening Brief, at 2, 12, 15, Attachment A.

²⁶¹ Cal Advocates Opening Brief, at 22, Attachment A.

²⁶² TURN Opening Brief, at 1-2.

PG&E's failure to maintain its website, secure transfer portal, and call center; and (2) \$985,000 as a credit to customers for lost sales due to lack of notice.²⁶³

SBUA requests that "the Commission impose meaningful remedies to address core causes of PG&E's poor PSPS notification performance and require direct compensation to customers who did not receive notification and suffered losses during the covered PSPS events."²⁶⁴

SBUA also proposes the following corrective actions:

- PG&E include PSPS events as a risk on its formal risk register;
- PG&E implement a reporting process for cataloging adverse events caused by PSPS de-energization;
- PG&E commission a study of past and future public safety consequences and economic costs of PSPS de-energization; and
- PG&E formally accept that it is substantially responsible for public safety consequences of PSPS event[s].²⁶⁵

CLECA recommends corrective actions that improve the mapping of PG&E's transmission and distribution system and communications with transmission-level customers. CLECA proposes that PG&E demonstrate full and accurate mapping of its system, and completion of "its automation process to identify which transmission customer facilities are served by what system assets."²⁶⁶ CLECA also recommends that PG&E "[c]reate a dedicated communication bridge in Emergency Operations Center," for transmission-level customers during PSPS events, and institute a notifications system that follow

²⁶³ *Id.* at 1.

²⁶⁴ SBUA Opening Brief, at 8.

²⁶⁵ *Id.* at 5.

²⁶⁶ CLECA Opening Brief, at 9.

the timeframes and information required under Resolution ESRB-8 and other current guidelines.²⁶⁷

7.2. Position of PG&E

PG&E believes that no penalty is appropriate.²⁶⁸ PG&E asserts that among the five issues in the Scoping Memo, three of the issues reveal “no significant showing of non-compliance,” while the remaining two issues do not merit penalties.²⁶⁹ The three issues that PG&E suggests are undisputed and “show no violations”²⁷⁰ are:

- The availability of PG&E’s secure data transfer portal during the October 9-12, 2019 event;
- The accuracy of PG&E’s online maps; and
- The sufficiency of staffing at PG&E’s contact centers during the October 9-12, 2019 event.²⁷¹

PG&E argues that because the evidence for these issues is undisputed, “the issues do not present grounds for a violation or penalty.”²⁷²

Regarding the other issues of missed notifications to customers and unavailability of PG&E’s website,²⁷³ PG&E claims that no penalty should be issued because utilities “should not be penalized for failing to achieve

²⁶⁷ *Ibid.*

²⁶⁸ PG&E Opening Brief, at 2.

²⁶⁹ *Id.* at 2-4.

²⁷⁰ *Id.* at 7.

²⁷¹ *Id.* at 2.

²⁷² PG&E Reply Brief, at 18.

²⁷³ PG&E Opening Brief, at 31.

perfection,” and “PG&E responded appropriately” during the October 9-12, 2019 event.²⁷⁴

PG&E indicates that the penalty endorsed by TURN “would not be outside the range of reasonableness.”²⁷⁵ PG&E rejects Cal Advocates’ penalty proposal for lack of methodology or rationale, claims that it is out-of-step, and argues that it should be rejected.²⁷⁶ Lastly, PG&E argues that Joint Local Governments’ and SBUA’s penalty proposals are out of scope and therefore cannot be imposed.²⁷⁷

7.3. Discussion

We have considered: (1) the severity of the violations, (2) the conduct of PG&E before, during, and after the violations, (3) the financial resources of PG&E, (4) totality of the circumstances in furtherance of the public interest, (5) the amount of the fine in relationship to prior Commission decisions, and (6) mitigating factors. Based on these factors, we find that a penalty of \$106.003 million for PG&E violations during the Fall 2019 PSPS events is appropriate.

As noted above, PG&E previously provided \$86 million in bill credits to affected customers after strong exhortation by California Governor Gavin Newsome for PG&E to address the hardships imposed on residential and small business customers by the de-energization events. Due to that previous bill credit, we will offset the penalty by \$86 million based on the bill credits PG&E has already provided to customers. Therefore, the net penalty is \$20.003 million. This overall penalty amount is consistent with many parties’ proposed penalties.

²⁷⁴ *Id.* at 31.

²⁷⁵ PG&E Reply Brief, at 17.

²⁷⁶ *Id.* at 17, footnote 84.

²⁷⁷ *Id.* at 21-23.

We discuss the breakdown of the penalties with respect to the different violations below.

As to the violations for the unavailability and non-functionality of PG&E's website over the four days of the October 9-12, 2019 PSPS event, we will count each day as a separate violation. Although the number of customers, local governments and members of the public that could not access the website or had issues with its functionality could conservatively run into the hundreds of thousands, we find that treating each day as a separate violation is appropriate. We will impose the maximum penalty of \$100,000 per violation, for a total penalty of \$400,000 (4 days X \$100,000) for PG&E's website issues. We also find that TURN's recommendation of a refund for the website and related IT function costs from PG&E's revenue requirement is reasonable and add that \$518,000 to the penalty for the website violations.²⁷⁸ However, we will order that the \$518,000 is instead included in the remedy that is discussed below for the violations as to the website, online maps and secure data transfer portals. In summary, the total penalty for the website violations is \$918,000.

As to the violations for the inaccuracy of the online maps during the October 9-12, 2019 PSPS event, we will count each day as a separate violation. The number of violations could run much higher depending on the number of public safety partners and local governments that had to deal with inaccurate online maps. However, we find that treating each day as a separate violation is appropriate. We will impose the maximum penalty of \$100,000 per violation, for

²⁷⁸ TURN's estimate of \$518,000 is the pro rata share of four days of the estimated \$47.3 million infrastructure and operation cost of the website and related IT functions for 2019. TURN Opening Brief, at 12; Ex. TURN-02, at 10.

a total penalty of \$400,000 (4 days X \$100,000) for the inaccuracy of PG&E's online maps.

As to the violations due to the inaccessibility of PG&E's secure data transfer portals to its public safety partners during the October 9-12, 2019 PSPS event, we find four violations. These four violations are based on the issues that the City of San José, the City of Santa Rosa, Marin County and Nevada County had accessing the appropriate information on PG&E's secure data transfer portals.²⁷⁹ We will impose a penalty of \$25,000 per violation, for a total penalty of \$100,000 (4 X \$25,000) for the inaccessibility of PG&E's secure data transfer portals.

The penalties described above for violations related to the website, online maps and secure data transfer portals total \$1.418 million. PG&E shall contribute \$1.418 million in shareholder funds to PG&E's Disability Disaster Access & Resources Program, which provides qualifying customers access to backup portable batteries through grant, lease-to-own, or low-interest loan options.

For PG&E's failure to provide advanced notification of de-energization events to approximately 50,000 customers in Fall 2019, we will treat each instance of a customer not receiving advanced notification as a separate penalty. We impose a penalty of \$97.2 million, consisting of \$13.2 million (22,000 customers X \$600) for the October 9-12, 2019 PSPS and \$84 million (28,000 customers X \$3,000) for the October 23-25, 2019 and October 26-November 1, 2019 PSPS events.²⁸⁰ The penalty amount is higher for the latter two PSPS events because

²⁷⁹ City of San José Opening Brief, at 12; Exh. CSJ-01, at 7; Joint Local Governments Opening Brief, at 21; Exh. JLG-01, at 6, 8, 9.

²⁸⁰ Ex. PGE-03, at 2; Amended PG&E PSPS Report for the October 9-12, 2019 De-Energization Event, at 16; Amended PG&E PSPS Report for the October 23-25, 2019 De-Energization Event, at 17; Amended PG&E PSPS Report for the October 26 & 29, 2019 De-Energization Event, at 12.

PG&E was on notice concerning its effectiveness in providing the advanced notification to customers, yet continued to have issues notifying a significant number of these customers.

We also find reasonable TURN's recommendation that the Commission direct PG&E to credit, with shareholder funds, \$985,000 for lost sales associated with customers that did not receive proper notice.²⁸¹ We note that the Commission may also take further actions with regards to the issue of lower volumetric sales during a PSPS in the Energy Resource Recovery Account (ERRA) proceeding or other appropriate proceedings.

Therefore, we impose a total penalty of \$98.185 million for the violations for failure to provide advanced notification of de-energization events to the approximately 50,000 customers. However, we will offset this penalty by the \$86 million PG&E has already credited to customers.²⁸² Therefore, the net penalty for failure to provide advanced notification to approximately 50,000 customers is \$12.185 million. This \$12.185 million shall be paid as an additional bill credit to customers in the areas affected by the Fall 2019 PSPS events. The bill credit shall be paid by PG&E shareholders.

For PG&E's failure to provide advanced notification of the de-energization events to approximately 1,120 Medical Baseline customers, we will treat each instance of a Medical Baseline customer not receiving advanced notification as a separate penalty. We impose a penalty of \$6.4 million, consisting of \$1.2 million

²⁸¹ TURN's recommended \$985,000 credit is based on an average October daily cost of \$3.23 applied to the 14 PSPS days (10/9-12/2019, 10/23-25/2019, 10/26-11/1/2019) and multiplied by the number of customers who did not receive proper notice, the resulting estimate is approximately \$985,000 of lost sales for these customers. (TURN Opening Brief, at 14; Ex. TURN-02, at 12.)

²⁸² Ex. TURN-04 (PG&E's Responses to TURN-PGE-05 (All Questions)) at 1-2.

(600 Medical Baseline customers X \$2,000) for the October 9-12, 2019 PSPS and \$5.2 million (520 Medical Baseline customers X \$10,000) for the October 23-25, 2019 and October 26-November 1, 2019 PSPS events.²⁸³ The penalty amount is higher for the latter two PSPS events because PG&E was on notice concerning issues with the advanced notification to Medical Baseline customers, yet continued to have issues notifying a significant number of these customers.

Furthermore, the level of per violation penalty is warranted because PG&E is well aware of the heightened risk to Medical Baseline customers from the unexpected loss of power and the record shows that these customers suffered particularly egregious harm due to the PSPS events. The penalty amount is consistent with the amount recommended by Cal Advocates.²⁸⁴ PG&E shareholders shall pay for this penalty via a bill credit to Medical Baseline customers in the areas affected by the Fall 2019 PSPS events.

We decline to adopt the \$19.6 million Joint Local Governments' proposed penalty of \$100,000 per local government that activated its Emergency Operation Center during the Fall 2019 PSPS. While we recognize the significant burden PG&E placed on local municipalities during the Fall 2019 PSPS events and appreciate the efforts of these local municipalities, we find that the record does not demonstrate a sufficient nexus between the violations determined in this OSC and the penalty proposed by the Joint Local Governments.

We also decline to implement Cal Advocates' recommendation regarding sectionalization devices. We do not reach any decision on the merit of such

²⁸³ Ex. PGE-03, at 2; Amended PG&E PSPS Report for the October 9-12, 2019 De-Energization Event, at 16; Amended PG&E PSPS Report for the October 23-25, 2019 De-Energization Event, at 17; Amended PG&E PSPS Report for the October 26 & 29, 2019 De-Energization Event, at 12.

²⁸⁴ Cal Advocates Opening Brief, at 22.

devices, but find that the issue is more appropriately considered in PG&E's General Rate Case.

We decline to adopt the recommendations by CLECA and SBUA at this time. While these recommendations may have merit, we find they are better addressed in: (1) the quasi-legislative portion of this proceeding because they affect de-energization requirements that could apply to other electric IOUs besides PG&E or (2) other appropriate proceedings such as PG&E's Risk Assessment Mitigation Phase (RAMP) proceeding.

8. Assignment of Proceeding

Marybel Batjer is the assigned Commissioner and Marcelo L. Poirier is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. On October 9, 2019, PG&E shut off the power across 35 counties, impacting approximately 729,000 customer accounts. The shutoff lasted until October 12, 2019.
2. Between October 23, 2019 and November 1, 2019, PG&E initiated additional PSPS events that, at one point, impacted 38 counties and approximately 975,000 customer accounts, with many of the affected customers without power for nearly a week.
3. At the October 18, 2019 Commission meeting, PG&E executives admitted to significant shortcomings in the company's execution of the October 9-12, 2019 PPS event.
4. PG&E identified multiple areas where it failed to meet the requirements of Pub. Util. Code Section 451, Resolution ESRB-8, and D.19-05-042 with regards to those PPS events in its October 25, 2019, November 8, 2019, and

November 18, 2019 compliance reports regarding the October 9-12, 2019 and October 23-November 1, 2019 PSPS events.

5. PG&E's website was unavailable or non-functional during a significant portion of the October 9-12, 2019 PSPS event, with customers and government agencies unable to obtain information on the PSPS event and other important data.

6. PG&E's website has information about upcoming and current PSPS events, outages, answers to frequently asked questions, outage preparation tips, links to a wide variety of PSPS-related and preparedness content, the Address Look-Up Tool, and outage maps.

7. PG&E's notifications on the October 9-12, 2019 PSPS event directed customers to its website because that was the location for the most dynamic alerts on that event.

8. PG&E acknowledges that its website was unavailable during portions of the October 9-12, 2019 PSPS event.

9. The online outage maps on PG&E's website were not accurate or were unavailable for some affected areas during the October 9-12, 2019 PSPS event.

10. PG&E's online outage maps were buffered and overstated the de-energization boundaries by as much as 20 percent.

11. PG&E's secure data transfer portals were constructively inaccessible to its Public Safety Partners during portions of the October 9-12, 2019 PSPS event, with portions of the data missing or incorrect.

12. The City of San José, the City of Santa Rosa, Marin County and Nevada County had issues accessing the appropriate information on PG&E's secure data transfer portals.

13. PG&E had sufficient staffing at its call centers to handle the volume of customer communications during the October 9-12, 2019 PSPS event.

14. PG&E failed to provide advanced notice of de-energization events to approximately 50,000 customers during the three Fall 2019 PSPS events (October 9-12, 2019, October 23-25, 2019 and October 26-November 1, 2019).

15. PG&E failed to provide advanced notice of de-energization events to approximately 1,100 Medical Baseline customers during the three Fall 2019 PSPS events (October 9-12, 2019, October 23-25, 2019, and October 26-November 1, 2019).

16. PG&E acknowledges its failure to provide advanced notification of de-energization events to approximately 50,000 customers and 1,100 Medical Baseline customers during the Fall 2019 PSPS events.

17. D.98-12-075 identified five factors to be considered in determining the level of penalties to be imposed.

18. Cal Advocates, TURN, and the Joint Local Governments propose penalties consisting of fines, disallowances and other remedies that range from approximately \$21 million to \$165 million.

19. The high number of affected customers, the totality of the circumstances in this case, including the conduct of the utility, severity of the violations, harm to customers, harm to the regulatory system, and the financial resources of the utility, support a significant and deterring penalty in the amount of \$106.003 million for the violations associated with the Fall 2019 PSPS events.

20. PG&E has already issued \$86 million in bill credits in relation to the Fall 2019 PSPS events and it is reasonable to offset the penalty for failure to provide advanced notification to customers by that amount.

21. PG&E has the ability to raise equity to cover penalties and remedies in the amount of \$20.003 million, without harming ratepayers or its ability to raise the equity needed for revenue-producing investments required to provide adequate and safe service.

Conclusions of Law

1. Each violation of a regulation or statute is considered a separate offense, even if it is the result of the same underlying actions.

2. Pub. Util. Code Section 451 requires all public utilities to provide and maintain “adequate, efficient, just and reasonable” services and facilities as are necessary for the “safety, health, comfort, and convenience” of its customers and the public.

3. Pub. Util. Code Section 451 serves as a separate and individual basis for finding safety violations.

4. In Phase 1 of R.18-12-005, the Commission issued D.19-05-042, which developed de-energization communication and notification guidelines for the electric IOUs along with updates to the requirements established in Resolution ESRB-8. The guidelines adopted by D.19-05-042 expanded upon those in Resolution ESRB-8.

5. Resolution ESRB-8 adopted the rules the Commission set forth for San Diego Gas & Electric Company in D.12-04-024 and made them applicable to all of California’s electric IOUs. Resolution ESRB-8 established de-energization guidelines that include public notification, mitigation and reporting requirements.

6. PG&E violated Pub. Util. Code Section 451, Resolution ESRB-8, and D.19-05-042 due to the unavailability and non-functionality of its website during the October 9-12, 2019 PSPS event.

7. PG&E violated Pub. Util. Code Section 451 and D.19-05-042 due to the inaccuracy of its online maps during the October 9-12, 2019 PSPS event.

8. PG&E violated Pub. Util. Code Section 451 and D.19-05-042 because the secure data transfer portals were constructively inaccessible to its Public Safety Partners during portions of the October 9-12, 2019 PSPS event.

9. PG&E did not violate Pub. Util. Code Section 451, Resolution ESRB-8, and D.19-05-042 due to the staffing of its call centers during the October 9-12, 2019 PSPS event.

10. PG&E violated Pub. Util. Code Section 451 and D.19-05-042 due to its failure to provide advanced notification to approximately 50,000 customers for the three Fall 2019 PSPS events (October 9-12, 2019, October 23-25, 2019 and October 26-November 1, 2019).

11. PG&E violated Pub. Util. Code Section 451 and D.19-05-042 due to its failure to provide advanced notification to approximately 1,100 Medical Baseline customers for the three Fall 2019 PSPS events (October 9-12, 2019, October 23-25, 2019 and October 26-November 1, 2019).

12. The Commission may impose fines for violation of laws and regulations pursuant to Pub. Util. Code Sections 2107 and 2108.

13. The California Constitution, along with Pub. Util. Code Section 701, confers broad authority on the Commission to regulate public utilities.

14. The Commission has the authority to fashion equitable remedies pursuant to the California Constitution and Pub. Util. Code Sections 701, 728 and 761.

15. The Commission may order refunds or bill credits as an equitable remedy pursuant to the California Constitution and Pub. Util. Code Sections 701 and 728.

16. The penalties imposed by this decision are not excessive and are necessary to deter future violations.

17. Violations that result in physical or economic harm and the failure to comply with statutes or Commission directions are considered severe violations.

18. The Commission should impose penalties on PG&E because PG&E's website was unavailable or non-functional during the October 9-12, 2019 PSPS event.

19. The Commission should impose penalties on PG&E due the inaccuracy of PG&E's online maps during the October 9-12, 2019 PSPS event.

20. The Commission should impose penalties on PG&E due to the inaccessibility of PG&E's secure data transfer portal during the October 9-12, 2019 PSPS event.

21. The Commission should not impose penalties on PG&E due to its staffing levels at its call centers during the October 9-12, 2019 PSPS event.

22. The Commission should impose penalties on PG&E due to PG&E's failure to provide advanced notification of de-energization events to approximately 50,000 customers for the Fall 2019 PSPS events.

23. The Commission should impose penalties due to PG&E's failure to provide advanced notification of de-energization events to approximately 1,100 Medical Baseline customers for October 9-12, 2019, the October 23-25, 2019 and the October 26-November 1, 2019 PSPS events.

24. The purpose of a penalty is to deter future violations by the company and others.

25. Based on the totality of the circumstances, PG&E's statutory obligation to provide safe and reliable electric service, the broad nature and impacts of PG&E's shortfalls during the Fall 2019 PSPS events, and the Commission's and the public interest in ensuring safe and reliable electric service and de-energization events, a severe penalty is warranted.

26. For the combined violations, the Commission should impose a total penalty of \$106,003,000 pursuant to Pub. Util. Code Sections 2107 and 2108.

27. The Commission should impose a penalty of \$918,000 for the violations related to PG&E's website.

28. The Commission should impose a penalty of \$400,000 for the violations related to PG&E's online maps.

29. The Commission should impose a penalty of \$100,000 for the violations related to PG&E's secure data transfer portals.

30. PG&E shareholders should deposit the \$1.418 million in penalties associated with PG&E's violations as to its website, online maps and secure data transfer portals in the account for the Disability Disaster Access & Resources Program.

31. The Commission should impose a penalty of \$98.185 million for the violations related to PG&E's advanced notifications to customers.

32. The Commission should offset the \$98.185 million penalty for violations related to PG&E's advanced notifications to customers by \$86 million due to a previous bill credit provided by PG&E.

33. PG&E should be ordered to issue one-time bill credits totaling \$12.185 million to its electric customers in the areas affected by the Fall 2019 PSPS events.

34. The Commission should impose a penalty of \$6.4 million for the violations related to PG&E's advanced notifications to Medical Baseline customers.

35. PG&E should be ordered to issue one-time bill credits totaling \$6.4 million to its electric Medical Baseline customers in the areas affected by the Fall 2019 PSPS events.

36. The \$18.585 million in total bill credits and the \$1.418 million contribution to the Disability Disaster Access & Resources Program are equitable remedies for PG&E's violations as to the Fall 2019 PSPS events.

37. All penalties should be paid for by PG&E shareholders.

38. There should be no adjustment to the bill credit or other remedies adopted in this decision to account for any tax benefits PG&E may receive.

39. PG&E should file a Tier 2 Advice Letter within 45 days after the effective date of this decision to implement the bill credit mechanism adopted in this decision as well as the deposit to the Disability Disaster Access & Resources Program. This Advice Letter should also provide proposed bill language that will be used to explain the bill credit to customers.

40. Evidentiary hearings are not required in this phase of the proceeding.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company has violated Public Utilities Code Section 451, Resolution ESRB-8, and Decision 19-05-042 due to its conduct during the October 9-12, 2019, the October 23-25, 2019 and the October 26-November 1, 2019 Public Safety Power Shutoff events.

2. Pacific Gas and Electric Company shall deposit \$1.418 million of shareholder funds in its Disability Disaster Access & Resources Program account.

3. Pacific Gas and Electric Company shall issue one-time bill credits totaling \$12.185 million to its electric customers located in the geographic areas affected by the Fall 2019 PSPS events.

4. Pacific Gas and Electric Company shall issue one-time bill credits totaling \$6.7 million to its electric Medical Baseline customers located in the geographic areas affected by the Fall 2019 PSPS events.

5. Pacific Gas and Electric Company shall submit Tier 2 Advice Letters to implement the remedies adopted in Ordering Paragraphs 2, 3 and 4, including proposed customer bill language, within 45 days of the effective date of this decision.

6. Rulemaking 18-12-005 remains open.

This order is effective today.

Dated _____, 2021, at San Francisco, California.

EXHIBIT 6



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CPUC To Hold Public Briefings on Utility Readiness for 2021 Public Safety Power Shutoffs

July 15, 2021 - The California Public Utilities Commission (CPUC), in ongoing efforts to hold utilities accountable for safely implementing Public Safety Power Shutoff (PSPS) events, has called on the state’s investor-owned utilities to provide public briefings on their readiness for PSPS events in 2021. The electric utilities are to utilize PSPS events as a tool of last resort to mitigate the risk of wildfire and are to execute such events safely.

The CPUC will be joined on the virtual dais by leaders from the California Governor’s Office of Emergency Services (Cal OES) and the California Department of Fire and Forestry Protection (CAL FIRE). At the briefings, the utilities will provide information about all aspects of their preparation for PSPS events and answer questions from the CPUC, Cal OES, and CALFIRE. There will also be opportunity for public comment.

The CPUC oversees the utilities’ execution of PSPS events and has been driving improvements in the following areas as the utilities prepare for 2021 PSPS events: notifications; support to medical baseline/access and functional needs; community resource centers; coordination with tribal communities; and steps to minimize the scope of PSPS events.

WHAT: Briefings to provide the CPUC, Cal OES, CALFIRE, and the public thorough information about the utilities’ work to prepare for PSPS in 2021.

WHEN:

- Monday, August 2, 2021, 2 - 5 p.m.: San Diego Gas & Electric (SDG&E)
- Tuesday, August 3, 2021, 9 a.m. - noon: Southern California Edison (SCE)
- Tuesday, August 3, 2021, 1 - 4 p.m.: Pacific Gas and Electric Company (PG&E)
- Wednesday, August 4, 2021, 9 a.m.- noon: Small Multi-Jurisdictional Utilities (Bear Valley Electric Service, Liberty Utilities, and PacifiCorp)

WHERE: Access each briefing virtually via webcast or phone, as follows:

- Live webcast with English or Spanish captions: www.adminmonitor.com/ca/cpuc
 - Participants who choose to participate via webcast only will have audio and video, but will not be able to make verbal comment. If you would like to make comments during the meeting, refer to the phone-in information below.
 - For captions, after clicking on the name of the workshop, click the green button below the video for captions. Then select captions by clicking on the white icon next to the word “live” at the bottom of the video.
 - It will be recorded and archived for future viewing.
- Phone: 800-857-1917, passcode: 7218384#
 - Participants will have audio (in English) and will be able to make comments or ask questions.

While a quorum of Commissioners and/or their staff may attend these briefings, no official action will be taken.

FOR MORE INFORMATION, PLEASE CONTACT

News and Outreach Office
 California Public Utilities Commission
 505 Van Ness Avenue
 San Francisco, CA 94102

(415) 703-1366
news@cpuc.ca.gov

RELATED TOPICS

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- [Wildfires](#)

If specialized accommodations are needed to attend remotely, such as non-English or sign language interpreters, please contact the CPUC's Public Advisor's Office at public.advisor@cpuc.ca.gov or toll free at 866-849-8390 at least three days in advance of the briefings.

For more information on PSPS, please visit www.cpuc.ca.gov/consumer-support/pmps.

The CPUC regulates services and utilities, protects consumers, safeguards the environment, and assures Californians' access to safe and reliable utility infrastructure and services. For more information on the CPUC, please visit www.cpuc.ca.gov.

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EXHIBIT 7

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Wildfire Safety Division

Resolution WSD-020
August 19, 2021

R E S O L U T I O N

RESOLUTION WSD-020 Resolution Ratifying Action of the Office of Energy Infrastructure Safety on Southern California Edison Company's 2021 Wildfire Mitigation Plan Update Pursuant to Public Utilities Code Section 8386.

This Resolution ratifies the attached Action Statement (Appendix A) of the Office of Energy Infrastructure Safety (Energy Safety)¹ approving Southern California Edison Company's (SCE, or electrical corporation) 2021 Wildfire Mitigation Plan (WMP) Update (2021 WMP Update) pursuant to Public Utilities Code Section 8386.

Ensuring the safety of Californians is a central responsibility of the California Public Utilities Commission (Commission) and Energy Safety. Since several catastrophic wildfires in the San Diego area in 2007, the equipment of large electric utilities the Commission regulates has been implicated in the most devastating wildfires in our state's history. The California Legislature enacted several measures requiring electrical corporations to submit, and Energy Safety to review, approve, or otherwise act on, WMPs designed to reduce the risk of utility-related catastrophic wildfire. Key among the legislative measures are Senate Bill 901 (2018), Assembly Bill 1054 (2019), and Assembly Bill 111 (2019), discussed in detail below.

This Resolution acts on SCE's WMP Update and Update Revision submitted on February 5, 2021 and June 4, 2021, respectively. SCE's WMP, submitted in 2020, responds to a list of 22 requirements set forth in

¹ Because the Wildfire Safety Division (WSD) transitioned to the Office of Energy Infrastructure Safety (Energy Safety) on July 1, 2021, any references herein to WSD actions that post-date this transition should be interpreted as actions taken by Energy Safety. WSD is used to describe the work of the WSD prior to July 1, 2021. Energy Safety is used to describe the work of Energy Safety beginning on July 1, 2021. Any references to WSD action post July 1, 2021 or to Energy Safety action prior to July 1, 2021 are inadvertent and should be interpreted as the actions of WSD or Energy Safety as appropriate. Section 10 of this Resolution provides further detail on the transition of the WSD to Energy Safety.

Public Utilities Code 8386. The WMP covered the three-year period of 2020-2022 and focused on measures the electrical corporation will take to reduce the risk of, and impact from, a catastrophic wildfire related to its electrical infrastructure and equipment. SCE's 2021 WMP Update provides information on SCE's progress over the past year as well as updates to its 2021 and 2022 projections. In addition, the 2021 WMP Update responds to additional requirements and metrics approved by the Commission in Resolution WSD-011.

In ratifying SCE's 2021 WMP Update, the Commission acts on Energy Safety's Action Statement and its analysis in terms of the extent to which SCE's wildfire mitigation efforts objectively reduce wildfire risk and drive improvement and based on the comments from the Wildfire Safety Advisory Board, the public and other stakeholders.

THE PROPOSED OUTCOME:

- Ratifies the attached action of Energy Safety to approve the 2021 WMP Update of SCE.
- Evaluates the maturity of SCE's 2021 WMP Update using the Energy Safety's Utility Wildfire Mitigation Assessment, as represented in the Utility Wildfire Mitigation Maturity Model. Final Maturity Model outputs should be viewed as levels or thresholds—they are not absolute scores.
- Requires SCE to submit an update to its WMP in 2022 according to a forthcoming schedule to be released by Energy Safety.
- Does not approve costs attributable to WMPs, as statute requires electrical corporations to seek and prove the legitimacy of all expenditures at a future time in their General Rate Cases (GRC) or application for cost recovery. Nothing in this Resolution or Energy Safety's Action Statement should be construed as approval of any WMP-related costs.
- Does not establish a defense to any enforcement action for a violation of a Commission decision, order, or rule.

SAFETY CONSIDERATIONS:

Mitigation of catastrophic wildfires in California is among the most important safety challenges the Commission-regulated electrical corporations face. Comprehensive WMPs are essential to safety because:

- WMPs articulate an electrical corporation's understanding of its utility-related wildfire risk and the proposed actions to reduce that risk and prevent catastrophic wildfires caused by utility infrastructure and equipment. By implementing measures such as vegetation management, system hardening (such as insulating overhead lines and removing or upgrading equipment most likely to cause fire ignition), grid topology improvements (such as installation and operation of electrical equipment to sectionalize or island portions of the grid), improving asset inspection and maintenance, situational awareness (such as cameras, weather stations, and use of data to predict areas of highest fire threat), improving community engagement and awareness, and other measures, utility-related catastrophic wildfire risk should be reduced over time.
- The substantive and procedural changes enacted by Energy Safety and the Commission in the evaluation of the electrical corporations' 2021 WMP Updates will enhance California's ability to mitigate utility-related catastrophic wildfire risk. Below is a summary of the key new requirements in the 2021 process required of all utilities submitting a WMP Update. In 2021, WMP Updates were required to:
 - Include a checklist of the 22 Public Utilities Code Section 8386(c) requirements to assist Energy Safety staff in locating the sections that meet these requirements.
 - Be more granular overall to help Energy Safety staff better understand resource allocation, local community conditions and other detailed information previously requested at a more aggregated level.
 - Provide more details showing how utilities are mitigating the impact of wildfires and PSPS on vulnerable, marginalized, and at-risk communities.
 - Report the utility's methodology for calculating the increase costs to ratepayers.
 - Report the details of the utility's methods for modeling ignition probability.

- Report the utility's process for calculating specific metrics including Red Flag Warning and High Wind Warning overhead circuit mile days, the Access and Functional Needs population, the wildland urban interface (WUI) territory, and highly rural, rural, and urban territories.
- Include a narrative explaining the qualifications of certain utility workers in roles related to wildfire & PSPS mitigation.
- Include more granular geospatial data to provide metrics at a local level.
- Include more refinement in progress and outcome metrics (e.g., inspection effectiveness, risk events).
- Include an explanation wherever the utility could not disaggregate financial spend activities.
- Include citations to relevant state and federal statutes, orders, and proceedings.

ESTIMATED COST:

- Costs are not considered in this Resolution, as Public Utilities Code Section 8386.4(b) provides for Commission cost review in a utility General Rate Case or, in some cases, a separate application. Nothing in this Resolution should be construed as approval of the costs associated with the WMP mitigation efforts.
- For illustrative purposes, Table 1, below, contains SCE's actual costs for 2020 and its projected costs for the implementation of wildfire mitigation efforts in its 2021 WMP Update.
- SCE may not record the same costs more than once or in more than one place, seek duplicative recovery of costs, or record or seek to recover costs in the memorandum account already recovered separately. All electrical corporations should ensure they carefully document their expenditures in these memorandum accounts by category and be prepared for Commission review and audit of the accounts at any time.

Table 1: SCE's WMP Costs

Proposed 2020 costs (as reported in the 2020 WMP)	\$1,308,269,000
Actual 2020 costs (as reported in the 2021 WMP Update)	\$1,356,922,000
Difference between 2020 proposed/actual costs (+/-)	+\$48,653,000
Proposed 2021 costs	\$1,704,298,000
Proposed 2022 costs	\$1,783,476,000
Proposed total costs 2020-2022	\$4,844,696,000

1. Summary

This Resolution ratifies the attached Office of Energy Infrastructure Safety (Energy Safety) Action Statement approving the 2021 Wildfire Mitigation Plan (WMP) Update submitted by Southern California Edison Company (SCE) on February 5, 2021 (Attachment A), and augmented by the June 4, 2021 WMP Update Revision.² The Commission finds that SCE is in compliance with the requirements for WMPs set forth in Assembly Bill (AB) 1054,³ codified at Public Utilities Code (Pub. Util. Code) Section 8386(c), and the WMP Guidelines issued by the Commission to electrical corporations in Resolution WSD-011.⁴ Pub. Util. Code Section 8386(c) requires that electrical corporations' WMPs contain 22 elements; the full list of elements appears in Section 6.1 in this Resolution. Energy Safety's approval and the Commission's ratification do not relieve the electrical corporation from any and all otherwise applicable permitting, ratemaking, or other legal and regulatory obligations.

2. Background, Procedural Background and Legal Authority

Catastrophic wildfires in 2017-19 led the California Legislature to pass Senate Bill (SB) 901⁵ in 2018 and its successor AB 1054, as well as AB 111 in 2019.⁶ AB 111 established a new division, the Wildfire Safety Division (WSD), within the Commission. Pursuant to Pub. Util. Code Section 326(b), on July 1, 2021, the Wildfire Safety Division transitioned

² SCE's Revised 2021 WMP Update can be found at <https://energysafety.ca.gov/what-we-do/wildfire-mitigation-and-safety/wildfire-mitigation-plans/2021-wmp/>

³ Stats of 2019, Ch. 79.

⁴ The Commission adopted Resolution WSD-011 on November 19, 2020.

⁵ Stats of 2019, Ch 626.

⁶ Stats of 2019, Ch 81.

from the Commission into the Office of Energy Infrastructure Safety (Energy Safety) under the California Natural Resources Agency. SB 901 and AB 1054 contain detailed requirements for electrical corporations' WMPs and provide Energy Safety three months to review the WMPs. The duties of Energy Safety are contained in Pub. Util. Code Section 326(a) and include the requirement to evaluate, oversee, and enforce electrical corporations' compliance with wildfire safety requirements and develop and recommend to the Commission performance metrics to achieve maximum feasible wildfire risk reduction.

SB 901 requires electrical corporations to annually prepare and submit a WMP to the Commission for review; the Commission reviewed the 2019 WMPs in Rulemaking (R.) 18-10-007. After the Commission issued its WMP decisions on May 30, 2019,⁷ the Legislature enacted AB 1054. AB 1054 contains similar WMP requirements to SB 901 but allows WMPs a three-year rather than one-year duration. AB 1054 requires Energy Safety to review and approve or deny electrical corporations' WMPs, with Commission ratification of any approval to follow thereafter. AB 1054 establishes a Wildfire Safety Advisory Board (WSAB) with appointees from the California Governor and Legislature to provide comment on the WMPs and develop and make recommendations related to the metrics used to evaluate WMPs in 2021 and beyond.⁸

Building on lessons learned from the WMP review process in 2019, the WSD developed and required all electrical corporations to conform their WMPs to a set of new WMP Guidelines starting in 2020.⁹ In 2020 electrical corporations submitted comprehensive WMPs covering a three-year period from 2020-2022. The WSD evaluated each electrical corporation's WMP and issued dispositions, ratified by the Commission, in Resolutions WSD-002 through WSD-010.

For 2021, the WMP Guidelines as adopted in Resolution WSD-011 build on the detail, data, and other supporting information provided in the 2020 WMPs and enable the electrical corporation to provide updated information for the 2020-2022 cycle period. The 2021 WMP Guidelines are designed to (1) increase standardization of information collected on electrical corporations' wildfire risk exposure, (2) enable systematic and uniform review of information each electrical corporation submits, and (3) move electrical corporations toward an effective long-term wildfire mitigation strategy with systematic tracking of improvements over time. The WSD designed the 2021 WMP Guidelines to require that each electric corporation have a WMP that contains all elements required by AB 1054. For example, every WMP must contain plans for

⁷ Decisions 19-05-036, -037, -038, -039, -040, and -041 (May 30, 2019).

⁸ Pub. Util. Code Section 8386.3 (Wildfire Safety Division), § 326.1 (Wildfire Safety Advisory Board).

⁹ A ruling issued on December 19, 2019, in proceeding R.18-10-007 described and attached all of the materials electrical corporations were required to use in submitting their 2020 WMPs.

vegetation management, system hardening, inspections of assets and vegetation, situational awareness, reduction and management of Public Safety Power Shutoff (PSPS) events, customer and first responder outreach and coordination, risk analysis, and geographic information system (GIS) data, as well as a short- and long-term vision, an ignition cause analysis, and many other elements.

In addition to adopting guidelines for the review of 2021 WMPs, Resolution WSD-011 set forth the process for the WSD's and the Commission's review of the electrical corporations' 2021 WMP submissions. The resolution called for Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E) (the large electrical corporations) to submit their 2021 WMP Updates on February 5, 2021. The resolution called for PacifiCorp, Bear Valley Electric Service, Inc. (BVES), and Liberty Utilities (the small and multijurisdictional electrical corporations, or SMJUs), and the Trans Bay Cable, LLC, Horizon West Transmission, LLC (the independent transmission operators or ITOs) to submit their WMP Updates on March 5, 2021. SCE timely submitted its 2021 WMP Update.

Shortly after electrical corporations submitted their WMP Updates, the WSD held technical workshops on February 22 and 23, 2021, for the large electrical corporations and March 23, 2021 for the SMJUs and ITOs. The workshops covered topics such as risk management, system design and grid hardening, and efforts to reduce the scale, scope, and frequency of PSPS events.¹⁰ Stakeholders submitted comments on the large electrical corporations' 2021 WMP Updates by March 29, 2021, with replies by April 13, 2021. The WSD accepted comments on the SMJU/ITO 2021 WMP updates until April 14, 2021, with replies by April 21, 2021.

Additionally, WSD required SCE to provide a Revision to its 2021 WMP Update, which it did on June 4, 2021. Comments were accepted on this Revision on June 10, 2021 and June 16, 2021.

Notice

In accordance with Pub. Util. Code Section 8386(d), notice of SCE's 2021 WMP Update was given by posting the WMP Update on Energy Safety's web page at <https://energysafety.ca.gov/what-we-do/wildfire-mitigation-and-safety/wildfire-mitigation-plans/>. Further, the electrical corporation served its 2021 WMP Update on the Commission's R.18-10-007 service list, as Resolution WSD-001 requires. Resolution WSD-001 also requires an electrical corporation to post all data request responses and any document referenced in its WMP on its own websites. It additionally requires an

¹⁰ Details of the workshops appear on the Office of Energy Infrastructure Safety's website, located at <https://energysafety.ca.gov/events-and-meetings/workshops/>.

electrical corporation to notify the R.18-10-007 service list about its website updates on a weekly basis.

3. Energy Safety Analysis of WMP Updates

To reach a conclusion about each WMP, Energy Safety reviews each electrical corporation's WMP (including tabular and GIS data), as well as input and comments from WSAB, California Department of Forestry and Fire Protection (CAL FIRE) and stakeholders, responses to data requests, responses to the Maturity Model survey questions, and responses to ongoing reporting required in the 2020 WMP decisions and follow-on submissions.

For 2021, Energy Safety amended its review process such that it will no longer issue conditional approvals. Instead, where Energy Safety found critical issues with 2021 submissions, Energy Safety issued a Revision Notice requiring the electrical corporation to remedy such issues prior to completion of the 2021 WMP Update evaluation. Upon receipt of the electrical corporation's response to the Revision Notice, Energy Safety determined whether the response was sufficient to warrant approval of the WMP Update, or the response was deemed insufficient such that denial of the WMP Update was warranted.

Energy Safety evaluated 2021 WMP Updates according to the following factors:

- Completeness: The WMP Update is complete and comprehensively responds to the WMP statutory requirements and WMP Guidelines.
- Technical feasibility and effectiveness: Initiatives proposed in the WMP Update are technically feasible and are effective in addressing the risks that exist in the electrical corporation's service territory.
- Resource use efficiency: Initiatives are an efficient use of resources and focus on achieving the greatest risk reduction at the lowest cost.
- Year-over-year progress: The electrical corporation has demonstrated sufficient progress on objectives and program targets reported in the prior annual WMP.
- Forward-looking growth: The electrical corporation demonstrates a clear action plan to continue reducing utility-related wildfires and the scale, scope, and frequency of PSPS events. In addition, the electrical corporation is sufficiently focused on long-term strategies to build the overall maturity of its wildfire mitigation capabilities while reducing reliance on shorter-term strategies such as PSPS and vegetation management.

4. Wildfire Safety Advisory Board Input

The WSAB provided recommendations on the WMP Updates of PG&E, SCE, and SDG&E on April 16, 2021. The WSAB provided recommendations on the WMP Updates of PacifiCorp, BVES, and Liberty Utilities on May 13, 2021. Energy Safety considered the WSAB's recommendations, and the attached Action Statement incorporates the WSAB's input throughout.

5. Public and Stakeholder Comment

The following individuals and organizations submitted comments by March 29, 2021, and reply comments by April 13, 2021, on SCE's 2021 WMP Update, as well as comments by June 10, 2021 on SCE's 2021 WMP Update Revision:

- Acton Town Council (ATC)
- Public Advocates Office at the California Public Utilities Commission (Cal Advocates)
- Green Power Institute (GPI)
- Kevin Collins
- Los Angeles County
- Mussey Grade Road Alliance (MGRA)
- Rural County Representatives of California (RCRC)
- Small Business Utility Advocates (SBUA)
- The Utility Reform Network (TURN)
- William B. Abrams

A summary of comments incorporated into Energy Safety's disposition of SCE's WMP Update can be found in the attached Action Statement.

6. Discussion

The Commission has reviewed Energy Safety's approval of SCE's 2021 WMP Update through the Action Statement issued by Energy Safety pursuant to Pub. Util. Code Section 8386.3, based on the recommendations of the WSAB, stakeholder comments served on the R.18-10-007 service list, and other public input. The Commission ratifies Energy Safety's action approving SCE's 2021 WMP Update.

The attached Action Statement discusses in detail SCE's 2021 WMP Update and provides Energy Safety's analysis. In particular, Energy Safety focuses its analysis on progress over the past year, key areas for improvement SCE must focus on in the coming

year (including ongoing reporting requirements), and additional issues where progress is needed to improve SCE's maturity over time.

6.1 Requirements of Pub. Util. Code Section 8386(c)

Below is a summary of where SCE has met each requirement pursuant to Pub. Util. Code Section 8386(c). The Commission ratifies Energy Safety's finding that SCE's 2021 WMP Update satisfies the requirements of Pub. Util. Code Section 8386(c). Discussion of how SCE has met the statutory guidelines is included in the Action Statement.

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
1. An accounting of the responsibilities of the responsible person(s) executing the plan	Met fully	Chapter 1
2. The objectives of the plan	Met fully	Section 5.2
3. A description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks	Met fully	Sections 4.2, 5.2, 7.1, 7.3
4. A description of the metrics the electrical corporation plans to use to evaluate the WMP's performance and the assumptions that underlie the use of those metrics	Met fully	Chapter 6
5. A discussion of how the application of previously identified metrics to previous plan performances has informed the WMP	Met fully	Section 4.1
6. Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols	Met but areas for improvement identified	Section 8.1.3

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
related to mitigating the public safety impacts of those protocols, including impacts on: critical first responders, health and communication infrastructure, customers with access and functional needs, and those with financial concerns.		
7. Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential PSPS for a given event.	Met fully	Sections 8.2, 8.4
8. Plans for vegetation management	Met fully	Sections 5.2, 5.4, 7.1, 7.2, 7.3.5
9. Plans for inspections of the electrical corporation's electrical infrastructure	Met fully	Sections 5.2, 5.4, 7.1, 7.2, 7.3.4
10. PSPS protocols associated with the electrical corporation's transmission infrastructure, for instances when the PSPS may impact customers who, or entities that, are dependent upon the infrastructure	Met but areas for improvement identified	Section 8.1.3, Chapter 7
11. A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the electrical corporation's service territory, including all relevant	Met but areas for improvement identified	Section 4.3

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
wildfire risk and risk mitigation information that is part of Safety Model Assessment Proceeding (SMAP) and Risk Assessment Mitigation Phase (RAMP) filings		
12. A description of how the WMP accounts for the wildfire risk identified in the electrical corporation's RAMP filing	Met fully	Section 4.3
13. A description of the actions the electrical corporation will take to ensure its system will achieve the highest level of safety, reliability, and resiliency, and to ensure that its system is prepared for a major event, including hardening and modernizing its infrastructure with improved engineering, system design, standards, equipment, and facilities, such as undergrounding, insulating of distribution wires, and replacing poles	Met fully	Sections 5.2, 5.4, 7.1, 7.2, 7.3.3
14. A description of where and how the electrical corporation considered undergrounding electrical distribution lines within those areas of its service territory identified to have the highest wildfire risk in a commission fire threat map	Met but areas for improvement identified	Section 7.3.3.16
15. A showing that the electrical corporation has an adequately sized and trained workforce to promptly restore service after a major event, taking into account employees of other utilities pursuant to mutual aid agreements and employees of	Met fully	Sections 7.3.9.1, 7.3.10.1

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
<p>entities that have entered into contracts with the electrical corporation</p>		
<p>16. Identification of any geographic area in the electrical corporation's service territory that is a higher wildfire threat than is currently identified in a Commission fire threat map, and where the Commission should consider expanding the high fire threat district based on new information or changes in the environment</p>	<p>Met fully</p>	<p>Section 4.2.2</p>
<p>17. A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk that is consistent with the methodology used by other electrical corporations unless the Commission determines otherwise</p>	<p>Met fully</p>	<p>Sections 4.3, 4.5</p>
<p>18. A description of how the plan is consistent with the electrical corporation's disaster and emergency preparedness plan prepared pursuant to Section 768.6, including both of the following:</p> <p>(A) Plans to prepare for, and to restore service after, a wildfire, including workforce mobilization and prepositioning equipment and employees</p> <p>(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</p>	<p>Met fully</p>	<p>Section 7.3.9.4</p>

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
languages used in the state other than English or Spanish, as determined by the Commission based on the United States Census data.		
19. A statement of how the electrical corporation will restore service after a wildfire.	Met fully	Section 7.3.9.5
20. Protocols for compliance with requirements adopted by the Commission regarding activities to support customers during and after a wildfire, outage reporting, support for low-income customers, billing adjustments, deposit waivers, extended payment plans, suspension of disconnection and nonpayment fees, repair processing and timing, access to utility representatives, and emergency communications	Met fully	Section 8.4
21. A description of the processes and procedures the electrical corporation will use to do all of the following: (A) Monitor and audit the implementation of the plan (B) Identify any deficiencies in the plan or the plan's implementation and correct those deficiencies (C) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, carried out under the	Met fully	Section 7.2

Requirement	Requirement status in WMP Update	Reference to where in WMP Update requirement is met
plan and other applicable statutes and commission rules		
22. Any other information that the Wildfire Safety Division may require	Met but areas for improvement identified	

6.2 Areas of Significant Progress

In the attached Action Statement, Energy Safety highlights areas of significant progress over the past year and areas where the electrical corporation has matured its mitigation strategies. Examples of SCE’s progress are set forth below. Energy Safety evaluated SCE’s progress over the past year and the Commission ratifies Energy Safety’s findings that SCE’s progress is sufficient to warrant approval.

- In 2020 SCE transitioned to its Wildfire Risk Reduction Model (WRRM) which provides consequence modeling and allows larger data sets and finer granularity to support mitigation initiatives. While the WRRM uses the same software technology as the risk models used by PG&E and SDG&E, SCE’s version includes a component to calculate the risk of PSPS based on probability and consequence of PSPS events at the circuit level.
- SCE exceeded its 2020 WMP program targets for covered conductor installation, for replacing existing poles with fire resistant poles, and indicates it is moving to a circuit segment basis for covered conductor deployment in order to raise thresholds for PSPS. SCE is transitioning to using PSPS risk as a criterion when installing covered conductor, thereby targeting select areas of the grid expected to be frequently impacted by PSPS.
- SCE is broadening the scope of its Hazard Tree Mitigation Program (HTMP) which includes increasing the number of contracted tree assessors and has instituted specific remediation protocols for palm species.
- In 2020 SCE updated its System Operating Bulletin (SOB) 322 to make reclosures non-automated and instead apply fast curve settings by fire

- climate zone. This allows SCE to identify certain fire climate zones where wildfire risk is especially high and alter the recloser operations.¹¹
- SCE made improvements in its asset-specific machine learning models to quantify the probability of ignition (POI) caused by equipment and facility failure (EFF) and contact with foreign objects (CFO).
 - In 2020, SCE staffed an Incident Management Team (IMT), with a portion of this team dedicated specifically for customer support. In 2021, SCE intends to fully dedicate this team to PSPS. SCE is launching a new public safety partner portal in June 2021 to improve situational awareness during PSPS events for first responders and operators of critical facilities and communications systems.
 - In 2020 and continuing in 2021, SCE is developing programs¹² for areas impacted frequently by PSPS events. It is making changes in its notification cadence, content, and process to improve the timing and clarity of information to its customers.

6.3 Key Areas for Improvement and Additional Issues

Energy Safety reviewed SCE's 2021 WMP Update across ten categories of mitigation initiatives, including: (1) risk assessment and mapping, (2) situational awareness and forecasting, (3) grid design and system hardening, (4) asset management and inspections, (5) vegetation management and inspections, (6) grid operations and protocols, (7) data governance, (8) resource allocation methodology, (9) emergency planning and preparedness, and (10) stakeholder cooperation and community engagement. In addition, in a change from 2020, Energy Safety evaluated the utility's progress on reducing the scale, scope, and frequency of PSPS events in a separate section in recognition that PSPS is not a preferred mitigation measure because it introduces significant risk to customers and should be used as a measure of last resort.¹³

Energy Safety identified areas for improvement for SCE over the next year (set forth below): key areas and additional issues. Key areas for improvement are areas where

¹¹ SCE's 2021 WMP Update Revision - Redlined, p. 288.

¹² Southern California Edison 2021 Wildfire Mitigation Plan Update, p. 292, February 5, 2021 - The Resiliency Zones program allows customers to have temporary generation during PSPS events by providing in-front-of-the-meter temporary generation during PSPS events or financial incentive towards the installation cost of a microgrid control system at customer sites willing to provide temporary shelter to surrounding communities.

¹³ The Commission recognizes that prevailing weather conditions primarily impact the need for PSPS and has found that Pub. Util. Code sections 451 and 399.2(a) authorize the utilities to shut off power in order to protect public safety, as a measure of last resort. (Resolution ESRB-8; Phase 1 Overarching PSPS Guidelines contained in D.19-05-042.) The decision to shut off power may be reviewed by the Commission pursuant to its broad jurisdiction over public safety and utility operations. (ESRB-8.)

Energy Safety finds that an electrical corporation must focus attention to achieve the greatest reduction in utility-related wildfire risk. Additional issues are areas where Energy Safety would also like to see improvement over time.

Energy Safety expects SCE to take action to address these key areas and report on progress made over the year in a Progress Report due by 5:00 p.m. on November 1, 2021, and in its 2022 WMP Update. Energy Safety will closely monitor progress in each of these areas over the coming year.

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Utility-#	Issue title	Issue description	Remedies required and alternative timeline if applicable
SCE-21-01	RSE estimates not provided for all PSPS-related mitigation initiatives	SCE justifies its lack of RSE estimates for PSPS-related initiatives by quoting Resolution WSD-002, "... electrical corporations shall not use RSE as a means of justifying or evaluating the efficacy of PSPS as a mitigation measure." However, the WSD guidance is clear that the prohibition of RSE calculation is directed at PSPS as a mitigation activity only and does not extend to PSPS-related activities. RSE estimates enable the quantitative comparison of cost-effectiveness between various mitigation initiatives, and brings rigor to the decision-making process.	SCE must provide RSE estimates for PSPS-related activities ^{14,15} and include a clear description to explain how these were developed and what assumptions were used. If the RSE estimates are zero or unattainable, SCE must explain why and provide qualitative and quantitative information to demonstrate how the PSPS-related activities inform PSPS decision-making.
SCE-21-02	RSE values vary across utilities	Energy Safety is concerned by the stark variances in RSE estimates, sometimes on several orders of magnitude, for the same initiatives calculated by different utilities. For example, PGE's RSE for covered conductor installation was 4.08, ¹⁶ SDGE's RSE was 76.73, ¹⁷ and SCE's RSE was 4,192. ¹⁸ These	The utilities ¹⁹ must collaborate through a working group facilitated by Energy Safety ²⁰ to develop a more standardized approach to the inputs and assumptions used for RSE calculations. After Energy Safety completes its evaluation of the 2021 WMP Updates, it will provide additional detail

		drastic differences reveal that there are significant discrepancies between the utilities’ inputs and assumptions, which further support the need for exploration and alignment of these calculations.	on the specifics of this working group. This working group will focus on addressing the inconsistencies between the inputs and assumptions used by the utilities for their RSE calculations, which will allow for: 1. Collaboration among utilities; 2. Stakeholder and academic expert input; and 3. Increased transparency.
SCE-21-03	Lack of consistency in	The utilities do not have a consistent approach to	The utilities ²¹ must collaborate through a

¹⁴ Here, PSPS-related activities are defined as mitigation initiatives that “supports the analysis and decision-making process that informs whether or not to call a PSPS event.” SCE’s 2021 WMP Update Revision – Redlined, p. 574.

¹⁵ A comprehensive list of PSPS-related activities can be found in SCE’s 2021 Wildfire Mitigation Plan Update Revision - Redlined, June 3, 2021, Table 9.8-1, Category B, p. 570.

¹⁶ Value from PG&E’s Errata (dated March 17, 2021, accessed May 19, 2021): https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2021-Wildfire-Safety-Plan-Errata.pdf

¹⁷ Value from Table 12 of SDGE’s 2021 WMP Update submissions under the “Estimated RSE for HFTD Tier 3” column for “Covered Conductor Installation”.

¹⁸ Value from Table 12 of SCE’s 2021 WMP Update submissions under the “Estimated RSE for HFTD Tier 3” column for “Covered Conductor Installation”.

¹⁹ Here “utilities” refers to SDG&E, Pacific Gas and Electric Company (PG&E), and Southern California Edison Company (SCE); although this may not be the case every time “utilities” is used through the document.

²⁰ The WSD transitioned to the Office of Energy Infrastructure Safety (Energy Safety) on July 1, 2021.

²¹ Here “utilities” refers to SDG&E and PG&E, SCE, PacifiCorp, Bear Valley Electric Service, Inc. (BVES), and Liberty Utilities; although this may not be the case every time “utilities” is used through the document.

	<p>approach to wildfire risk modeling across utilities</p>	<p>wildfire risk modeling. For example, in their wildfire risk models, utilities use different types of data, use their individual data sets in different ways, and use different third-party vendors. Energy Safety recognizes that the utilities have differing service territory characteristics, differing data availability, and are at different stages in developing their wildfire risk models. However, the utilities face similar enough circumstances that there should be some level of consistency in statewide approaches to wildfire risk modeling.</p>	<p>working group facilitated by Energy Safety to develop a more consistent statewide approach to wildfire risk modeling. After Energy Safety completes its evaluation of all the utilities’ 2021 WMP Updates, it will provide additional detail on the specifics of this working group.</p> <p>A working group to address wildfire risk modeling will allow for:</p> <ol style="list-style-type: none"> 1. Collaboration among the utilities; 2. Stakeholder and academic expert input; and 3. Increased transparency.
<p>SCE-21-04</p>	<p>Limited evidence to support the effectiveness of covered conductor</p>	<p>The rationale to support the selection of covered conductor as a preferred initiative to mitigate wildfire risk lacks consistency among the utilities, leading some utilities to potentially expedite covered conductor deployment without first demonstrating a full understanding of its long-term risk reduction and cost-effectiveness. The utilities’ current covered</p>	<p>The utilities²³ must coordinate to develop a consistent approach to evaluating the long-term risk reduction and cost-effectiveness of covered conductor deployment, including:</p> <ol style="list-style-type: none"> 1. The effectiveness of covered conductor in the field in comparison to alternative initiatives. 2. How covered conductor installation compares to other

²³ Here “utilities” refers to SDG&E and PG&E, SCE, PacifiCorp, BVES, and Liberty Utilities; although this may not be the case every time “utilities” is used through the document.

		<p>conductor pilot efforts are limited in scope²² and therefore fail to provide a full basis for understanding how covered conductor will perform in the field. Additionally, utilities justify covered conductor installation by alluding to reduced PSPS risk but fail to provide adequate comparison to other initiatives' ability to reduce PSPS risk.</p>	<p>initiatives in its potential to reduce PSPS risk.</p>
<p>SCE-21-05</p>	<p>Out-dated risk assessment used to justify the selection and scope of covered conductor as a mitigation initiative</p>	<p>SCE provides a risk buydown curve based on its old modeling efforts to justify the need for covered conductor. SCE acknowledges that its current models provide different and more accurate results but does not provide an updated risk buydown curve. SCE should not use outdated information to justify its covered conductor program scope. Additionally, if an updated risk buydown curve shows historic catastrophic ignitions on the low end of the curve, it raises doubts regarding</p>	<p>SCE must:</p> <ol style="list-style-type: none"> 1. Provide an updated Figure 9.01-1 based on SCE's latest risk modeling assessment, including the ignitions shown. 2. Provide the cause of the nine ignitions shown in Figure 9.01-1. 3. For each of the nine ignitions shown, provide an assessment of the likelihood that covered conductor installation would have prevented the ignition. 4. Provide a similar risk buydown curve for all cumulative circuit miles, including historic

²² Limited in terms of mileage installed, time elapsed since initial installation, or both. For example, SDG&E's pilot consisted of installing 1.9 miles of covered conductor, which has only been in place for one year.

		<p>the accuracy of SCE’s wildfire risk models.</p>	<p>ignitions and ignition size.</p> <p>5. If the updated risk buydown curves provided in response to the above continue to show historic catastrophic ignitions on the low end of the risk buy down curve, then provide the calculated accuracy of SCE’s current risk model.</p>
<p>SCE-21-06</p>	<p>Inadequate justification for scope and pace of its covered conductor program</p>	<p>As described in Sections 1.1, 5.1, and 5.8, SCE does not provide adequate justification for the scope and pace of its covered conductor program. This is a recurring issue that was discussed in the WSD Action Statement for SCE’s 2020 WMP and in the WSD Revision Notice for SCE’s 2021 WMP Update. SCE’s justification is not based on up-to-date circuit segment prioritization and risk calculations. Additionally, in SCE’s justification for its covered conductor program, it does not discuss evaluating individual circuit segments to determine the most appropriate mitigation measure for that segment. Instead SCE proposes to deploy covered conductor</p>	<p>SCE must:</p> <ol style="list-style-type: none"> 1. Re-evaluate the scope, and pace of its future covered conductor program using the outputs of its updated Wildfire Risk Models with an emphasis on: <ol style="list-style-type: none"> i) The explicit consideration of all possible alternative mitigation initiatives along with a justification for why the preferred mitigation initiative was selected over and above the alternatives considered; ii) Reduction of catastrophic wildfire risk; iii) Reduction of PSPS events; iv) Selecting mitigation initiatives for individual circuit segments based on the specific location,

		regardless of the location, circumstances, and risk of catastrophic wildfire for that circuit segment.	circumstances, and risk of catastrophic wildfire. 2. Re-evaluate the scope of SCE’s covered conductor program based on the re-evaluation in part (1) as well as following remedies for other key issues identified within the Action Statement to specifically and effectively target risk of catastrophic wildfire and PSPS.
SCE-21-07	Inadequate joint plan to study the effectiveness of enhanced clearances	RCP Action-SCE-18 (Class A) ²⁴ required SCE, PG&E, and SDG&E to “submit a joint, unified plan” to begin a study of the effectiveness of extended vegetation clearances. ²⁵ SCE, PG&E, and SDG&E presented the “joint, unified” plan to the WSD on February 18, 2021. While it was apparent the three large utilities had	SCE, PG&E, and SDG&E will participate in a multi-year vegetation clearance study. Energy Safety will confirm the details of this study in due course. The objectives of this study are to: 1. Establish uniform data collection standards. 2. Create a cross-utility database of tree-caused risk events (i.e., outages

²⁴ A note about the numbered conditions referenced in this document: “RCP Action-SCE-[#]” here refers to one of the actions required by the WSD in its evaluation of SCE’s Remedial Compliance Plan of 2020, issued Dec. 30, 2020. The WSD issued 20 such orders (RCP Action-SCE-1 through RCP Action-SCE-20). There are two other related sets of references in this document: “SCE-[#]” refers to one of the actions required by the WSD in its evaluation of SCE’s 2020 WMP issued June 11, 2020 (SCE-1 through SCE-22). “QR Action-SCE-[#]” refers to one of the actions required by the WSD in its evaluation of SCE’s first quarterly report issued Jan. 8, 2021 (QR Action-SCE-1 through Action-SCE-28). Additionally, there are conditions that may be referenced by “Guidance-[#]”, which refer to the requirements made of PG&E, SCE, SDG&E, Bear Valley Electric Service, Liberty Utilities, and PacifiCorp, addressing key areas of weakness across all six WMPs in Resolution WSD-002 “Guidance Resolution on 2020 Wildfire Mitigation Plans” issued June 19, 2020 (Guidance-1 through Guidance-12).

²⁵ Wildfire Safety Division Evaluation of Southern California Edison’s Remedial Compliance Plan, December 30, 2020, p. 10.

		<p>discussed a unified approach, each utility presented differing analyses that would be performed to measure the effectiveness of enhanced clearances. This presentation’s content was not included in the February 26, 2021 Supplemental Filing. Instead, SCE submitted its own plan to study the effectiveness of extended vegetation clearance as part of its February 26, 2021 Supplemental Filing.</p> <p>Energy Safety acknowledges the complexity of this issue; any study performed assessing the effectiveness of enhanced clearances will take years of data collection and rigorous analysis.</p>	<p>and ignitions caused by vegetation contact).</p> <p>3. Incorporate biotic and abiotic factors²⁶ into the determination of outage and ignition risk caused by vegetation contact.</p> <p>4. Assess the effectiveness of enhanced clearances.</p> <p>In preparation for this study and the eventual analysis, SCE must collect the relevant data; the required data are currently defined by the WSD Geographic Information System (GIS Data Reporting Standard for California Electrical Corporations - V2). Table 2 outlines the feature classes which Energy Safety believes will be most relevant to the study. Energy Safety will also be updating the GIS Reporting Standards in 2021, which may include additional data attributes for vegetation-related risk events.</p>
SCE-21-08	Incomplete identification of vegetation	SCE needs to ensure proper identification of trees to the species level.	SCE must: 1. Use scientific names in its reporting (as opposed

²⁶ Biotic factors include all living things (e.g., an animal or plant) that influence or affect an ecosystem and the organisms in it; abiotic factors include all nonliving conditions or things (e.g., climate or habitat) that influence or affect an ecosystem and the organisms in it.

	<p>species and record keeping</p>	<p>In response to RCP Action-SCE-20, SCE submitted “Action SCE-20 SRVP.xlsx”: a list of all remediations required from the 2020 Canyon Patrols and Summer Readiness inspections.²⁷ Under the column labeled “tree_species,” values include oak, pine, maple, etc. However, these are not tree species, but tree genera.</p>	<p>to common names). This change will be reflected in the upcoming updates to the WSD GIS Reporting Standard.</p> <ol style="list-style-type: none"> 2. Add genus and species designation input capabilities into its systems which track vegetation (e.g., vegetation inventory system and vegetation-caused outage reports). 3. Identify the genus and species of a tree that has caused an outage²⁸ or ignition²⁹ in the Quarterly Data Reports (QDRs) (in these cases, an unknown “sp.” designation is not acceptable). 4. If the tree’s species designation is unknown (i.e., if the inspector knows the tree as “Quercus” but is unsure whether the tree is, for example, Quercus kelloggii, Quercus lobata, or Quercus agrifolia), it must be recorded as such. Instead of simply “Quercus,” use “Quercus sp.” If referencing multiple species within a
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²⁷ SCE’s 2021 WMP Update Revision – Clean, p. 517.

²⁸ WSD GIS Data Reporting Standard Version 2, Transmission Vegetation Caused Unplanned Outage (Feature Class), Section 3.4.5 & Distribution Vegetation Caused Unplanned Outage (Feature Class), Section 3.4.7.

²⁹ WSD GIS Data Reporting Standard Version 2, Ignition (Feature Class), Section 3.4.3.

			<p>genus use “spp.” (e.g., Quercus spp.).³⁰</p> <p>5. Teach tree species identification skills in its VM personnel training programs, both in initial and continuing education.</p> <p>6. Encourage all VM personnel identify trees to species in all VM activities and reporting, where possible.</p>
SCE-21-09	Need for quantified vegetation management (VM) compliance targets	In Table 12, SCE only defines quantitative targets for eight of 20 VM initiatives. Energy Safety is statutorily required to audit SCE when a “substantial portion” of SCE’s VM work is complete; ³¹ without quantifiable targets in the WMP and subsequent reporting on those targets in the Quarterly Data Report (QDR) and Quarterly Initiative Update (QIU), Energy Safety cannot fully realize its statutory obligations.	SCE must define quantitative targets for all VM initiatives in Table 12. If quantitative targets are not applicable to an initiative, SCE must fully justify this, define goals within that initiative, and include a timeline in which it expects to achieve those goals.
SCE-21-10	Inadequate transparency in accounting	SCE’s justification for high levels of covered conductor deployment is	SCE must fully explain:

³⁰ Jenks, Matthew A. (undated, from 2012 archived copy), “Plant Nomenclature,” Department of Horticulture and Landscape Architecture, Purdue University, accessed May 18, 2021: <https://archive.ph/20121211140110/http://www.hort.purdue.edu/hort/courses/hort217/Nomenclature/description.htm>.

³¹ Public Utilities Code Section 8386.3(c)(5)(A).

	<p>for ignition sources in risk modeling and mitigation selection</p>	<p>partially due to the high number of ignitions due to contact. However, many of such ignitions are from third-party contact, and do not necessarily occur in the High Fire-Threat District (HFTD) and/or during wildfire season. Additionally, SCE does not provide sufficient detail as to how it accounts for third-party ignition sources in its risk models.</p>	<ol style="list-style-type: none"> 1. How third-party ignition sources feed into SCE’s risk models; and 2. How ignition sources impact SCE’s mitigation selection process, including: <ol style="list-style-type: none"> a. How SCE prioritizes ignition sources; b. If SCE treats third-party ignition sources that are not under SCE’s direct control differently than other ignition sources, and if so, how; c. How SCE targets its mitigations efforts to reduce ignitions that are more likely to result in catastrophic wildfire conditions.
<p>SCE-21-11</p>	<p>Unclear how SCE’s ignition models account for correlations in wind speeds, ignitions, and consequence</p>	<p>Despite an observed correlation between some ignition causes and high wind speed, SCE states that it “does not have enough wind-driven outage data at the circuit level to make determinations about correlations between wind speeds and outage rates.”³² It is unclear how SCE accounts for this correlation between wind speed and ignitions in its</p>	<p>SCE must:</p> <ol style="list-style-type: none"> 1. Fully demonstrate that its probability of ignition models accurately account for the correlation between wind speed, ignition, and consequence; and 2. Explain: <ol style="list-style-type: none"> a. Why SCE finds that is does not have enough “wind driven outage data at the circuit level,” b. Specify the data required “to make

³² SCE Data Request Response MGRA-SCE-006-Q005.

		<p>probability of ignition models.</p>	<p>determinations about correlations between wind speeds and outage rates,” and</p> <p>c. Explain how and when SCE plans to obtain such data moving forward.</p>
<p>SCE-21-12</p>	<p>Insufficient evidence of effective covered conductor maintenance program.</p>	<p>SCE does not have a separate covered conductor maintenance program. On-going covered conductor inspection and maintenance is included in HFRI inspections and remediations and follow the same approach, schedule, and prioritization. Given SCE’s plan for rapid deployment of covered conductor, it is particularly important that SCE has a comprehensive and effective plan for maintaining its covered conductor once installed. Additionally, SCE did not initially include vibration dampeners in its covered conductor installations, and states that it is now retrofitting its existing covered conductor with vibration dampeners.</p>	<p>SCE shall provide all supporting material to demonstrate that its maintenance programs effectively maintain its covered conductor, including the following information:</p> <ul style="list-style-type: none"> • Pace and quantity of scheduled maintenance; • Pace and quantity of inspections; and • Pace and quantity of vibration dampener installations. <p>If SCE finds that its existing maintenance programs do not provide effective maintenance for covered conductor, SCE shall:</p> <ol style="list-style-type: none"> 1. Enhance its current operations to provide such maintenance; and 2. Detail the enhancements to its existing programs; 3. Provide all supporting material for the

			enhancements to its existing program, including the information listed above.
SCE-21-13	Lack of specificity regarding how increased grid hardening will change system operations and reduce the risk of PSPS events.	SCE states that it is “transitioning to using PSPS risk as a criterion when installing covered conductor” instead of focusing on ignition risk but does not commit to changes in its PSPS thresholds apart from increasing wind speed thresholds. ³³ Outside of covered conductor, SCE does not include any analysis on how initiatives will reduce PSPS events.	For each mitigation alternative, including pilot program initiatives, SCE must provide quantitative analysis on: <ol style="list-style-type: none"> 1. Changes in system operations; 2. Changes in PSPS thresholds; and 3. Estimated changes in the frequency, duration, and number of customers impacted by PSPS events.
SCE-21-14	Equivocating language used to describe RSE calculation improvements	SCE reports “[c]alculating RSE for all potential initiatives” ³⁴ as a potential future focus between 2023-2030, but does not provide any measurable, quantifiable, and verifiable commitments.	SCE must make measurable, quantifiable, and verifiable commitments to calculate RSE estimates for all potential initiatives in Non-HFTD, Zone 1, HFTD Tier 2, and HFTD Tier 3 territory.

³³ SCE states that it will be raising wind thresholds for fully hardened circuit segments from 31 mph sustained wind speed and 46 mph gust wind speed, stated in SCE’s 2021 WMP Update on p. 341, to 40 mph sustained winds and 58 mph gusts, provided in SCE’s response to CalAdvocates-SCE-2021WMP-08 Q005, provided on March 3, 2021. However, in SCE’s response to WSD-SCE-004 Q019, provided on March 17, 2021, SCE states that “[there] is no one point in time for completing this work because the process to determine whether circuits or circuit-segments that have been covered are fully hardened is a continuous effort.

³⁴ Table 7.1.2.3.3.3 of SCE’s 2021 WMP Update Revision, p. 172.

6.4 Wildfire Mitigation Costs

Pursuant to statute, an electrical corporation's costs associated with wildfire mitigation activities are not approved as part of its WMP; rather, costs are evaluated in each electrical corporation's General Rate Case or other application for rate recovery.

In SCE's 2021 WMP Update, actual 2020 mitigation costs were higher than projected costs for 2020 (the 2020 projected costs were approximately \$1.308 billion; 2020 actual costs were \$1.357 billion) in the HFTD, a 4% increase. In the 2021 WMP Update, projected 2021-2022 HFTD costs were higher than projected in the 2020 WMP (the 2020 projected costs for 2021-2022 were \$2.515 billion; the 2021 projected costs for 2021-2022 were \$3.490 billion). Over the entire three-year mitigation cycle, SCE's 2021 HFTD wildfire mitigation costs projected in its 2021 WMP Update increased to \$4.8 billion from \$3.8 billion projected in its 2020 WMP, a 27% increase.

Energy Safety analyzed these projected wildfire mitigation cost increases and made the following findings:

1. The territory covered by the costs did not change: no additional territory was included (e.g., no territory was reclassified as HFTD). Reporting in the 2020 WMP was HFTD only. Reporting in the 2021 WMP Update was Territory-wide and HFTD.
2. The difference as projected in its 2021 WMP Update compared to 2020 WMP projections relates to costs from more investment in vegetation management & inspections, an increase of \$646 million (from 11% to 22% of total spending), grid design & system hardening, an increase of \$184 million (minimal 2020-2021 change in percent of total), and asset management & inspections, with an increase of \$115 million (minimal 2020-2021 change in percent of total).
3. Ninety percent (90%) of SCE's grid hardening expenditure allocation in the HFTD is on covered conductor, compared to less than 20% of PGE's or SDGE's grid hardening spending in the HFTD. SCE indicates the lowest cost for covered conductor among the utilities.
4. SCE projects in its 2021 WMP Update spending 60% of its total three-year budget (\$2.273 billion) in grid design and system hardening, consistent with other large utilities which project spending between 55-65% of their budgets in this mitigation initiative category.
5. SCE's projects in its 2021 WMP Update planned expenditure allocation across 3 years in the same top three mitigation categories as the other large utilities: grid design and system hardening (\$4.097 billion or 61% of its total spending), vegetation management and inspections (\$1.127

billion or 17% of total spending), and asset management and inspections (\$1.044 billion or 15% of total spending).

7. Maturity Evaluation

In 2020, WSD introduced a new Utility Wildfire Mitigation Maturity Model (the Maturity Model) to establish a baseline understanding of an electrical corporation's current and projected capabilities and assess whether each electrical corporation is progressing sufficiently to improve its ability to mitigate wildfire risk effectively. The Maturity Model also serves as an objective means of comparing measurements of progress across electrical corporations and provides a framework for driving progress in wildfire risk mitigation over time. To identify an electrical corporation's progress within the Maturity Model, the WSD required each electrical corporation to complete a survey in which it answered questions addressing its maturity regarding 52 wildfire mitigation-related capabilities at the time of submission and its projections of its maturity at the end of the three-year plan horizon. The 52 capabilities are mapped to the same ten categories identified for mitigation initiatives.

The Maturity Model will continue to evolve over time to reflect best practices and lessons learned. In 2021 the maturity model was updated to clarify definitions while remaining consistent with the 2020 model to enable year-over-year progress tracking. It is essential that the maturity levels are understood within the context of the qualitative detail supporting each level. The model results require context and should not be interpreted as the final word on an electrical corporation's wildfire mitigation capabilities without an understanding of the scoring process described in Action Statement Appendix 11.1. As such, the final Maturity Model outputs should be viewed as levels or thresholds—they are not absolute scores.

The Commission ratifies Energy Safety's findings that SCE has made sufficient progress toward maturity in the past year. The Commission and Energy Safety expect SCE to continue to improve its maturity in all areas in order to reduce utility-related wildfire risk.

Summary of SCE Maturity Evaluation

- Over the three-year mitigation cycle SCE reports moderate maturity growth, greater than PG&E and less than SDG&E, with gradual increases through 2022. According to its maturity model survey responses, SCE is also in the middle of the three large utilities in current level of maturity, averaging (two out of possible maturity four) in its overall progress (across nine of ten mitigation initiative categories).
- In its maturity model self-assessment rating, SCE is ahead of PG&E in seven mitigation initiative categories (grid design and system hardening, asset management and inspections, vegetation management and inspections, data governance, resource allocation methodology,

- emergency planning and preparedness, and stakeholder cooperation and community engagement) and behind SDG&E in five categories (grid design and system hardening, situational awareness and forecasting, data governance, emergency planning and preparedness, and stakeholder cooperation and community engagement).
- SCE projects the most maturity growth from 2021 until early 2023 in data governance (1.9 to 3.0), situational awareness and forecasting (1.6 to 2.4), and risk assessment and mapping (1.4 to 2.2).
 - It projects the highest maturity levels at the end of the three-year cycle in emergency planning and preparedness (3.6), vegetation management and inspections (3.0), and data governance (3.0).
 - SCE's expenditure allocation in the HFTD and reported maturity model survey are inconsistent across two mitigation initiative categories:
 - Asset management and inspections, HFTD spending increases 157%, as reported in 2020 vs. 2021 (from \$407M to \$1,049M), but only slight projected increase in maturity.
 - Stakeholder cooperation and community engagement, HFTD spending increases 58%, as reported in 2020 vs. 2021 (from \$32M to \$51M), with no projected increase in maturity.

SCE's maturity evaluation is further detailed in the attached Action Statement (see Action Statement Appendix 11.1 for a summary of SCE's 2021 Maturity Survey output).

8. Next Steps

In its Action Statement, Energy Safety sets forth the next steps SCE must take following Energy Safety's approval of its 2021 WMP Update. This includes a process for significantly modifying (i.e., reducing, increasing, or ending) mitigation measures in the WMP.

Upon ratification of this resolution, Energy Safety discontinues the ongoing Quarterly Report established in the 2020 WMP, except for the Quarterly Data Reports pursuant to Guidance-10 from Resolution WSD-002.

Upon ratification of this resolution, SCE is required to provide a Progress Report by 5:00 p.m. on November 1, 2021, including the following:

1. Progress on remedies associated with key areas for improvement listed in section 6.3 of this Resolution and section 1.3 of the attached Action Statement. Further details on remedies can be found in the Action Statement.

2. Additional requirements explicitly set by Energy Safety, including additional items that require ongoing progress updates, pursuant to future guidance.

We note that Energy Safety may change reporting requirements and processes through its own public notice process.

The Commission expects the electrical corporation to adhere to all ongoing requirements set forth in the Action Statement.

9. Consultation with CAL FIRE

Pub. Util. Code Section 8386.3(a) requires Energy Safety to consult with CAL FIRE in reviewing electrical corporations' 2021 WMP Updates. The Commission and CAL FIRE have a memorandum of understanding in place to facilitate this consultation (Pub. Util. Code Section 8386.5). The Commission and Energy Safety have met these requirements, but this Resolution does not purport to speak for CAL FIRE.

10. Office of Energy Infrastructure Safety

Pursuant to Public Utilities Code Section 326(b), on July 1, 2021, the Wildfire Safety Division (WSD) transitioned from the Commission into the Office of Energy Infrastructure Safety (Energy Safety) under the California Natural Resources Agency. Energy Safety "is the successor to" and "is vested with all of the duties, powers, and responsibilities of the Wildfire Safety Division,"³⁵ including, but not limited to, jurisdiction for evaluating and approving or denying electrical corporations' WMPs and evaluating compliance with regulations related to the WMPs. The Commission and the newly formed Energy Safety will adhere to all statutory requirements pertaining to the WMP process.

WSD is used to describe the work of the WSD prior to July 1, 2021. Energy Safety is used to describe the work of Energy Safety beginning on July 1, 2021. Any references to WSD action post July 1, 2021 or to Energy Safety action prior to July 1, 2021 are inadvertent and should be interpreted as the actions of WSD or Energy Safety as appropriate.

11. Impact of COVID-19 Pandemic

On March 19, 2020, California Governor Gavin Newsom signed Executive Order N-33-20 requiring Californians to stay at home to combat the spread of the COVID-19 virus. Specifically, Governor Newsom required Californians to heed the order of the California State Public Health Officer and the Director of the California Department of Public Health that all individuals living in California stay home or at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure

³⁵ Government Code Section 15475.

sectors in order to address the public health emergency presented by the COVID-19 disease (stay-at-home order).³⁶

As articulated in the March 27, 2020, joint letters³⁷ of the WSD, CAL FIRE, and the California Governor's Office of Emergency Services regarding essential wildfire and PSPS mitigation work during COVID-19 sent to each electrical corporation, electrical corporations are expected to continue to prioritize essential safety work.

Since issuance of this letter, the WSD has expected the electrical corporations to make every effort to keep WMP implementation progress on track, including necessary coordination with local jurisdictions. Such effort is essential to ensuring 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.

Throughout 2021, Energy Safety expects the electrical corporations to continue to make meaningful progress on wildfire mitigation goals and efforts to reduce the scale, scope, and frequency of PSPS events while continuing to abide by COVID-19 public health guidelines.

12. Conclusion

- SCE's 2021 Wildfire Mitigation Plan Update contains all of the elements required by AB 1054, Pub. Util. Code Section 8386(c) and all elements required by the WMP Guidelines.
- The Commission ratifies the Energy Safety's Action Statement approving SCE's 2021 WMP Update subject to any requirements contained therein.

13. Comments

Pub. Util. Code Section 311(g)(1) provides that resolutions must be served to all parties and subject to at least 30 days public review. However, given that this Resolution is issued outside of a formal proceeding, interested stakeholders need not have party status in R.18-10-007 in order to submit comments. Comments were due on August 5, 2021, 20 days from the mailing of the draft of this Resolution. Reply comments were not accepted.

³⁶ Executive Order N-30-20, see <http://covid19.ca.gov/img/Executive-Order-N-30-20.pdf>.

³⁷ Letters to each electrical corporation are found at <https://energysafety.ca.gov/what-we-do/wildfire-mitigation-and-safety/wildfire-mitigation-plans/2020-wmp/>

On July 16, 2021, this draft Resolution was served on the service list of R.18-10-007 and posted on Commission's website, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M393/K109/393109784.PDF>.

On August 5, 2021, SCE, Green Power Institute (GPI), and Cal Advocates timely submitted comments on the draft SCE Resolution and Action Statement and Energy Safety addressed those comments.

SCE's comments indicate support and a willingness to participate and provide information on a number of required remedies, but expresses several concerns on Energy Safety's draft evaluation findings. In relation to Grid Design and System Hardening, SCE states that a number of Energy Safety's findings related to the scope and pace of its covered conductor program are incorrect or should be modified or removed from the Action Statement.³⁸ For example, SCE comments on the Energy Safety finding that, "SCE does not provide enough information to adequately demonstrate the need for covered conductor for circuits ranked as lower risk by SCE's own risk ranking."³⁹ SCE asserts that it has appropriately demonstrated this need in both its 2021 WMP Update and subsequent Revision Notice Response.⁴⁰ However, Energy Safety's Action Statement finds that SCE has not provided adequate justification for the scope of its covered conductor program outside of SCE's self-identified high-risk circuits and this is described in some detail in Section 5.3. SCE must address the requirements in SCE-21-02, SCE-21-04, SCE-21-05, SCE-21-06, SCE-21-10, and SCE-21-13 to further provide justification or potentially re-scope its covered conductor program based on the evaluations performed.

SCE also comments on SCE-21-06, which requires SCE to re-scope its covered conductor program. SCE notes that it plans to insert newly-identified high risk circuit segments into its scope once its risk models are updated. SCE then provides alternatives to re-scoping the entirety of its covered conductor program by adding any additional miles identified to the current scope.⁴¹ In response, Energy Safety made changes to the Action Statement to provide better clarification of Energy Safety's expectations,⁴² as well as further clarity on the mileage covered by SCE's 2021 WMP Update to be included as part of the re-evaluation.⁴³

³⁸ SCE's Comments on Draft Resolution WSD-020, pp. 2-3, 5-6.

³⁹ SCE's Comments on Draft Resolution WSD-020, p. 3.

⁴⁰ Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, p. 112.

⁴¹ Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, p. 113.

⁴² Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, p. 113.

⁴³ Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, p. 114.

SCE further comments on Vegetation Management and Inspections findings, SCE’s current process for inspecting, inventorying, and replacing C-hooks,⁴⁴ findings relating to the inclusion of vibration dampeners in SCE’s covered conductor installations, an Issue and Remedy in the Situational Awareness and Forecasting category which requires SCE to discuss how the present and future effects of climate change are potentially informing weather station outputs and placement,⁴⁵ and the Change Order process set out in Section 7 of the Action Statement. Energy Safety responded to SCE’s comments providing clarifications and in certain instances revised or removed requirements in response to SCE’s concerns.

GPI’s comments generally support Energy Safety’s identified Key Areas for Improvement and associated Remedies, as well as many of the Additional Issues and Remedies. GPI requested an additional requirement of SCE to undergo a vetting process of its modeling efforts similar to PG&E as part of its WMP Revision,⁴⁶ and renewed its recommendation that all utilities’ risk models be subject to verification, Energy Safety has responded to GPI’s comments in the final Action Statement.⁴⁷

We also note that Cal Advocates’ comments provided support for the draft Action Statement, including several remedies proposed by Energy Safety. Specifically, Cal Advocates supports the requirement for SCE to coordinate with other utilities in developing more consistent approaches to risk modeling and risk-spend efficiency (RSE).⁴⁸ Additionally, Cal Advocates supports several “additional issue” remedies that align with its earlier comments on SCE’s 2021 WMP Update.⁴⁹

Findings

1. AB 1054 and Commission Resolution WSD-001 require SCE to submit a WMP Update for 2022 that conforms with Pub. Util. Code Section 8386(c) and guidance adopted in Resolution WSD-011.
2. The 2021 WMP Update was reviewed and acted upon with due consideration given to comments received from governmental agencies (including CAL FIRE), the WSAB, members of the public, and all other relevant stakeholders.

⁴⁴ SCE’s Comments on Draft Resolution WSD-020, p. 10.

⁴⁵ Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, p. 115.

⁴⁶ Comments of the Green Power Institute on Draft Resolution WSD-020, p. 2.

⁴⁷ Final Action Statement on 2021 Wildfire Mitigation Plan Update - Southern California Edison, pp. 115-16.

⁴⁸ The Public Advocates Office’s Comments on Draft Resolution WSD-020, pp. 3-4.

⁴⁹ The Public Advocates Office’s Comments on Draft Resolution WSD-020, p. 4.

3. The 2021 WMP Update was reviewed and acted upon in compliance with all relevant requirements of state law.
4. SCE's 2021 WMP Update contains all the elements required by Pub. Util. Code Section 8386(c) and SCE has satisfied the requirements of Pub. Util. Code Section 8386(c) and the 2021 WMP Guidelines.

THEREFORE, IT IS ORDERED THAT:

1. Energy Safety's Action Statement approving Southern California Edison Company's 2021 Wildfire Mitigation Plan Update is ratified.
2. Southern California Edison Company shall meet all commitments in its 2021 WMP Update.
3. Southern California Edison Company shall provide a Progress Report to the Commission and the Office of Energy Infrastructure Safety by 5:00 p.m. November 1, 2021, or as otherwise directed by the Office of Energy Infrastructure Safety.
4. Southern California Edison Company shall submit any reports previously required to be submitted to Wildfire Safety Division, including Quarterly Data Reports, to the Office of Energy Infrastructure Safety according to forthcoming guidance.
5. Southern California Edison Company shall submit an update to its Wildfire Mitigation Plan in 2022 according to the forthcoming guidance and schedule issued by the Office of Energy Infrastructure Safety.
6. Southern California Edison Company shall submit a new comprehensive three-year Wildfire Mitigation Plan in 2023, or as otherwise directed by Office of Energy Infrastructure Safety.
7. Southern California Edison Company must adhere to all requirements set forth in Energy Safety's Action Statement.
8. Nothing in this Resolution should be construed as approval of the costs associated with Southern California Edison Company's Wildfire Mitigation Plan mitigation efforts.
9. In accordance with Public Utilities Code Section 8386.4, Southern California Edison Company may track the costs associated with its Wildfire Mitigation Plan in a memorandum account by category of costs and shall be prepared for Commission review and audit of the accounts at any time.
10. Nothing in this Resolution should be construed as a defense to any enforcement action for a violation of a Commission decision, order, or rule.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted at a conference of the Public Utilities Commission of the State of California held on August 19, 2021; the following Commissioners voting favorably thereon:

/s/ RACHEL PETERSON

RACHEL PETERSON
Executive Director

MARYBEL BATJER

President

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

DARCIE L. HOUCK

Commissioners

APPENDIX A
Action Statement

(see attached)

APPENDIX B
Public Utilities Code Section 8386

Public Utilities Code Section 8386

From Public Utilities Code (PUC) Division 4.1. Provisions Applicable to Privately Owned and Publicly Owned Public Utilities [8301 - 8390].

Chapter 6. Wildfire Mitigation [8385 - 8389]

8386.

(a) Each electrical corporation shall 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.

(b) Each electrical corporation shall annually prepare and submit a wildfire mitigation plan to the Wildfire Safety Division for review and approval. In calendar year 2020, and thereafter, the plan shall cover at least a three-year period. The division shall establish a schedule for the submission of subsequent comprehensive wildfire mitigation plans, which may allow for the staggering of compliance periods for each electrical corporation. In its discretion, the division may allow the annual submissions to be updates to the last approved comprehensive wildfire mitigation plan; provided, that each electrical corporation shall submit a comprehensive wildfire mitigation plan at least once every three years.

(c) The wildfire mitigation plan shall include all of the following:

(1) An accounting of the responsibilities of persons responsible for executing the plan.

(2) The objectives of the plan.

(3) A description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.

(4) A description of the metrics the electrical corporation plans to use to evaluate the plan's performance and the assumptions that underlie the use of those metrics.

(5) A discussion of how the application of previously identified metrics to previous plan performances has informed the plan.

(6) Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety. As part of these

protocols, each electrical corporation shall include protocols related to mitigating the public safety impacts of disabling reclosers and deenergizing portions of the electrical distribution system that consider the impacts on all of the following:

(A) Critical first responders.

(B) Health and communication infrastructure.

(C) Customers who receive medical baseline allowances pursuant to subdivision (c) of Section 739. The electrical corporation may deploy backup electrical resources or provide financial assistance for backup electrical resources to a customer receiving a medical baseline allowance for a customer who meets all of the following requirements:

(i) The customer relies on life-support equipment that operates on electricity to sustain life.

(ii) The customer demonstrates financial need, including through enrollment in the California Alternate Rates for Energy program created pursuant to Section 739.1.

(iii) The customer is not eligible for backup electrical resources provided through medical services, medical insurance, or community resources.

(D) Subparagraph (C) shall not be construed as preventing an electrical corporation from deploying backup electrical resources or providing financial assistance for backup electrical resources under any other authority.

(7) Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines, including procedures for those customers receiving medical baseline allowances as described in paragraph (6). The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.

(8) Plans for vegetation management.

(9) Plans for inspections of the electrical corporation's electrical infrastructure.

(10) Protocols for the deenergization of the electrical corporation's transmission infrastructure, for instances when the deenergization may impact customers who, or entities that, are dependent upon the infrastructure.

(11) A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the electrical corporation's service territory, including all relevant

wildfire risk and risk mitigation information that is part of the commission's Safety Model Assessment Proceeding (A.15-05-002, et al.) and the Risk Assessment Mitigation Phase filings. The list shall include, but not be limited to, both of the following:

(A) Risks and risk drivers associated with design, construction, operations, and maintenance of the electrical corporation's equipment and facilities.

(B) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the electrical corporation's service territory.

(12) A description of how the plan accounts for the wildfire risk identified in the electrical corporation's Risk Assessment Mitigation Phase filing.

(13) A description of the actions the electrical corporation will take to ensure its system will achieve the highest level of safety, reliability, and resiliency, and to ensure that its system is prepared for a major event, including hardening and modernizing its infrastructure with improved engineering, system design, standards, equipment, and facilities, such as undergrounding, insulating of distribution wires, and replacing poles.

(14) A description of where and how the electrical corporation considered undergrounding electrical distribution lines within those areas of its service territory identified to have the highest wildfire risk in a commission fire threat map.

(15) A showing that the electrical corporation has an adequately sized and trained workforce to promptly restore service after a major event, taking into account employees of other utilities pursuant to mutual aid agreements and employees of entities that have entered into contracts with the electrical corporation.

(16) Identification of any geographic area in the electrical corporation's service territory that is a higher wildfire threat than is currently identified in a commission fire threat map, and where the commission should consider expanding the high fire threat district based on new information or changes in the environment.

(17) A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk that is consistent with the methodology used by other electrical corporations unless the commission determines otherwise.

(18) A description of how the plan is consistent with the electrical corporation's disaster and emergency preparedness plan prepared pursuant to Section 768.6, including both of the following:

(A) Plans to prepare for, and to restore service after, a wildfire, including workforce mobilization and repositioning equipment and employees.

(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 Spanish, as determined by the commission based on the United States Census data.

(19) A statement of how the electrical corporation will restore service after a wildfire.

(20) Protocols for compliance with requirements adopted by the commission regarding activities to support customers during and after a wildfire, outage reporting, support for low-income customers, billing adjustments, deposit waivers, extended payment plans, suspension of disconnection and nonpayment fees, repair processing and timing, access to electrical corporation representatives, and emergency communications.

(21) A description of the processes and procedures the electrical corporation will use to do all of the following:

(A) Monitor and audit the implementation of the plan.

(B) Identify any deficiencies in the plan or the plan's implementation and correct those deficiencies.

(C) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, carried out under the plan and other applicable statutes and commission rules.

(22) Any other information that the Wildfire Safety Division may require.

(d) The Wildfire Safety Division shall post all wildfire mitigation plans and annual updates on the commission's internet website for no less than two months before the division's decision regarding approval of the plan. The division shall accept comments on each plan from the public, other local and state agencies, and interested parties, and verify that the plan complies with all applicable rules, regulations, and standards, as appropriate.

(Amended by Stats. 2020, Ch. 370, Sec. 256. [SB 1371] Effective January 1, 2021.)

EXHIBIT 8

2022 Wildfire Mitigation Plan Update



*Pacific Gas and
Electric Company*

February 25, 2022

3. Actuals and Planned Spending for Mitigation Plan

3.1 Summary of Wildfire Mitigation Plan Initiative Expenditures

Table 3.1-1 summarizes the projected costs (thousands of dollars) per year over the 3-year Wildfire Mitigation Plan (WMP) cycle, including actual expenditures for past years. In Table 3.1-2, break out projected costs per category of mitigations, over the 3-year WMP plan cycle. In reporting “planned” expenditure, use data from the corresponding year’s WMP or WMP Update (i.e., 2020 planned expenditure must use 2020 WMP data). The financials represented in the summary tables below equal the aggregate spending listed in the mitigations financial tables reported quarterly. Nothing in this document is required to be construed as a statement that costs listed are approved or deemed reasonable if the WMP is approved, denied, or otherwise acted upon.

**TABLE 3.1-1:
SUMMARY OF WMP EXPENDITURES – TOTAL
(THOUSANDS OF DOLLARS)**

Year	Spend in thousands of \$USD
2020 Planned	\$3,224,295
2020 Actual	\$4,461,564
2020 Difference	\$(1,237,269)
2021 Planned	\$4,898,624
2021 Actual	\$4,797,380
2021 Difference	\$101,245
2022 Planned	\$5,963,795
2020-22 Planned (With 2020 and 2021 Actual)	\$15,222,739

7.1.C. Major Investments and Implementation of Wildfire Mitigation Initiatives

C. Include a summary of achievements of major investments and implementation of wildfire mitigation initiatives over the past year, lessons learned, changed circumstances during the 2020-2022 WMP plan cycle, and corresponding adjustment in priorities for the current year. Organize summaries of initiatives by the wildfire mitigation categories listed in [Section 7.3](#).

Lessons learned in 2021 are addressed in [Section 4.1](#).

With regards to changed circumstances in 2021, several events occurred during the year that impacted our wildfire mitigation programs. First, PG&E instituted a new ignition investigation process for CPUC-reportable ignitions in HFTD areas to better identify failure modes and trends related to ignitions in high-consequence areas (please refer to [Section 7.3.7.3](#) for details). This process allowed for a more complete and accurate understanding of PG&E's historical ignition record and provided increased insight on ignitions of consequence.

Second, as a result of the drought and increased climate-driven wildfire activity, in 2021, we announced a program to underground 10,000 miles of distribution lines and implemented EPSS. The undergrounding program and EPSS represent our evolving, data-driven approach to addressing the dynamic wildfire risks that we are facing in Northern and Central California. Our undergrounding program is described in more detail in [Section 7.3.3.16](#) and EPSS is described in more detail in [Section 7.3.6.8](#).

As a result of these changed circumstances and our continuous learning from updated data and analytics, we have adopted the 2022 WMP Initiative Targets found in Tables PG&E-5.3-1(A), and PG&E-5.3-1(B).

Table PG&E-7.1.C-1 below summarizes the achievements of major investment and implementation of wildfire mitigation initiatives in 2021.

**TABLE PG&E-7.1.C-1:
SUMMARY OF ACHIEVEMENTS OF MAJOR INVESTMENTS AND IMPLEMENTATION OF WILDFIRE
MITIGATION INITIATIVES FOR 2021**

Category	Summary of Achievements of Major Investments and Implementation of Wildfire Mitigation Initiatives in 2021
Risk Assessment & Mapping	<p>Improved our Transmission Risk Modeling to provide more standardized wildfire risk mapping and ranking between the various controls and mitigations;</p> <p>Incorporated 2020 data to improve PG&E's Vegetation Probability of Ignition and Equipment Probability of Ignition Models;</p> <p>Improved Distribution Risk Modeling to include: (1) the ability to compare wildfire risks for different risk drivers; (2) the ability to measure the risk reduction of specific mitigations; and (3) wildfire risk values for distribution line locations across all of PG&E's distribution lines;</p> <p>Enhanced the wildfire spread project in 2021 by expanding the forecast horizon from three days to four;</p> <p>Updated the fuel model layers (Technosylva) to include modeling for new vegetation growth in recently burned areas and to account for recent fire disturbances;</p> <p>Created a preliminary version of a circuit isolation zone model; and,</p> <p>Developed an initial PSPS Consequence Model at the circuit level.</p>
Situational Awareness and Forecasting	<p>Made enhancements to numerical weather prediction program including: (1) expanded the historical weather climatology at 2 x 2 km resolution to back-fill all of 2020; (2) explored a methodology to back-fill the climatological data each quarter moving forward; (3) evaluated extending the deterministic forecast to provide another 24 hours of forecast data (from 105 hours currently to 129 hours); and (4) evaluated if the POMMS-EPS ensemble mean is more or less accurate than the deterministic POMMS model;</p> <p>Enhanced our Fuel Moisture Sampling and Modeling efforts by expanding the historical Dead Fuel Moisture (DFM) and Live Fuel Moisture (LFM) climatology at 2 x 2 km resolution to back-fill all of 2020;</p> <p>Evaluated extending the deterministic DFM and LFM forecast to provide another 24 hours of forecast data;</p> <p>Installed 308 weather stations;</p> <p>Developed a weather-station specific wind gust model, with particular emphasis on Diablo winds;</p> <p>Installed 153 high-definition cameras;</p> <p>Adjusted the public 7-day forecast to provide more granularity and clarity around the potential for a PSPS event, possibly by county;</p> <p>Expanded SmartMeter Phase 1 for single phase meters to an additional 415,911 meters, covering all 4.5 million single phase meters in our service areas in both HFTD and non-HFTD areas;</p> <p>Implemented SmartMeters Phase 2 to expand coverage of Partial Voltage Detection capabilities to the three phase meters;</p>

**TABLE PG&E-7.1.C-1:
SUMMARY OF ACHIEVEMENTS OF MAJOR INVESTMENTS AND IMPLEMENTATION OF WILDFIRE
MITIGATION INITIATIVES FOR 2021
(CONTINUED)**

Category	Summary of Achievements of Major Investments and Implementation of Wildfire Mitigation Initiatives in 2021
	<p>Deployed Sensor IQ (SIQ) functionality on 500,000 SmartMeters;</p> <p>Completed a 6-month minimum analytic stage capturing all events on the Half Moon Bay 1103 circuit to inform the Distribution Arcing Fault Signature Library project;</p> <p>Maintained staffing levels to meet the SIPT goal of maintaining 40 crews;</p> <p>Finalized the HAWC process to include weather, fires, geosciences, electric and gas operations, as well as generation; and,</p> <p>Expanded the current Active Incidents Dashboard for additional stability, to incorporate new data streams, and to expand the number of viewers.</p>
Grid Design & System Hardening	<p>Launched a plan to underground 10,000 miles or overhead distribution lines in HFTD areas;</p> <p>Replaced 1,429 non-exempt fuses;</p> <p>Installed and SCADA-commissioned 269 new PSPS sectionalizing devices;</p> <p>Installed 41 T-Line SCADA switches benefitting PSPS operations;</p> <p>Replaced 50 MSO devices with new SCADA devices: 44 were replaced with reclosers and were SCADA-commissioned, two were replaced with SCADAMATE-SD switches and SCADA-commissioned, and four MSOs were replaced that did not require SCADA-commissioning;</p> <p>Replaced all remaining distribution line legacy 4C controllers in Tier 2 and Tier 3 HFTD areas;</p> <p>Installed 71 single phase recloser units;</p> <p>Operationalized nine PIH substations to receive temporary generation for 2021 PSPS mitigation;</p> <p>Developed five additional distribution microgrid Pre-installed Interconnection Hubs (PIH);</p> <p>Prepared a total of 37 (five in 2020, and 32 in 2021) Service Centers with permanent or temporary generation;</p> <p>Hardened 210 distribution miles and 104 transmission miles;</p> <p>Replaced 15,465 non-exempt surge arresters;</p> <p>Completed a Rapid Earth Fault Current Limiter (REFCL) Pilot;</p> <p>Began operations of the first Remote Grid site; and,</p> <p>Completed 23.64 trench miles (31.5 circuit miles) of undergrounding as part of Butte County Rebuild program.</p>

**TABLE PG&E-7.1.C-1:
SUMMARY OF ACHIEVEMENTS OF MAJOR INVESTMENTS AND IMPLEMENTATION OF WILDFIRE
MITIGATION INITIATIVES FOR 2021
(CONTINUED)**

Category	Summary of Achievements of Major Investments and Implementation of Wildfire Mitigation Initiatives in 2021
Asset Management and Inspections	<p>Completed enhanced detailed inspections on 480,746 distribution poles in HFTD areas and non-HFTD HFRA;</p> <p>Completed enhanced detailed inspections on 26,826 transmission structures in HFTD areas and non-HFTD HFRA.;</p> <p>Completed infrared inspections on 10,093 miles of distribution lines;</p> <p>Completed infrared inspections on 4,211 HFTD miles (7,587 miles systemwide) of transmission lines;</p> <p>Completed supplemental inspections of 71 distribution substations, 33 transmission substations, and 38 hydro substations; and,</p> <p>Upgraded the intrusive pole inspection program’s field hardware and software to enhance recordkeeping and data system integrations.</p>
Vegetation Management and Inspections	<p>Developed the framework for, and began to execute on, the enhanced customer engagement strategy incorporating customer outreach through postcards, door hangers, and automated calls to provide up to five outreach touchpoints;</p> <p>Completed Transmission ROWX on 288.6 miles in HFTD areas, and 25.2 miles in non-HFTD areas; and,</p> <p>Completed 1,983 miles of EVM work, 98% of which was focused on the highest 20% or risk-ranked Circuit Protection Zones.</p>
Grid Operations and Protocols	<p>Implemented the EPSS Program on approximately 11,500 miles of distribution circuits in HFTD areas (45% of the circuits);</p> <p>Disabled automatic reclosers in HFTD areas prior to fire season, and for the duration of the entire fire season;</p> <p>Utilized the Safety and Infrastructure Protection Team (SIPT) to support fire prevention and mitigation activities as well as “on call” status during the summer preparedness period, and utilized our Public Safety Specialists (PSS) to help inform our wildfire mitigation efforts; and,</p> <p>Improved the PSPS re-energization protocols by implementing “all clear zones” and refining external communications and customer notifications processes.</p>
Data Governance	<p>Initiated over 35 different information technology (IT) projects to assist PG&E in wildfire mitigation work;</p> <p>Increased the accuracy and comprehensiveness of data captured for risk events in five critical areas: (1) ignition incident data; (2) equipment failure-caused wire down data; (3) equipment failure-caused outage data; (4) vegetation-caused outage data; and (5) near miss data;</p> <p>Increased the capacity to deliver new, high-quality data objects into Foundry; and,</p> <p>Developed eight new wildfire-related analytic and situational intelligence products.</p>
Resource Allocation Methodology	<p>Expanded RSE scores to more to an additional 232 risk mitigation and control programs; and,</p> <p>Engaged with a third party technical advising group that is performing an assessment of RSE methodologies used in the 2021 WMP.</p>

**TABLE PG&E-7.1.C-1:
SUMMARY OF ACHIEVEMENTS OF MAJOR INVESTMENTS AND IMPLEMENTATION OF WILDFIRE
MITIGATION INITIATIVES FOR 2021
(CONTINUED)**

Category	Summary of Achievements of Major Investments and Implementation of Wildfire Mitigation Initiatives in 2021
Emergency Planning and Preparedness	Hired 41 Linemen and 123 Apprentice Linemen; and, Completed identified trainings for all required personnel to improve PSPS event execution (including Standardized Emergency Management System (SEMS), Access and Functional Needs (AFN), and other critical trainings).
Stakeholder Cooperation and Community Engagement	Engaged with 70 new CBOs, and established 40 new informational CBO partnerships and 18 new resource CBO partnerships; Established an agreement with California network of 211s to provide customers in the AFN community with a single source of information and connection to available resources in their communities; Engaged community stakeholders through offering: (1) Wildfire Safety Working Sessions; (2) workshops that review PG&E's PSPS Policies and Procedures document; (3) listening sessions; and (4) Energy and Communications Providers Coordination Group meetings; Held 39 safety town halls through webinar (due to COVID-19); Completed 87 informational mailings; and, Completed 4 informational videos.

7.3.9.5 Preparedness and Planning for Service Restoration

OEIS Initiative Definition: Development of plans to prepare the utility to restore service after emergencies, such as developing employee and staff trainings, and to conduct inspections and remediation necessary to re-energize lines and restore service to customers.

1) Risk to be mitigated/problem to be addressed

Primary Risk: Ignition Risk – Equipment – Conductor

Secondary Risk: Reliability Impacts – PSPS

PG&E's electric system is a complex set of assets, including transmission lines and distribution circuits, which connect to both internal facilities and external utilities and deliver energy to millions of customers. Qualified and skilled personnel that are properly trained in restoring power after emergencies are essential to eliminate wildfire ignitions, minimize public safety concerns, injuries to employees and damage to public and Company assets.

PG&E provides responding personnel with in-depth training so that electric service is consistently restored to our customers after emergencies in a safe, efficient, and timely manner. This is essential given the size and complexity of our electric system. Responding personnel utilize formal PG&E processes and procedures to ensure that service is restored properly. There are no acceptable alternatives for ensuring procedural compliance while meeting PG&E's key objective of restoring power safely, efficiently, and in a timely manner.

2) Initiative selection (“why” engage in initiative) – include reference to and description of a risk informed analysis and/or risk model on empirical (or projected) impact of initiative in comparison to alternatives and demonstrate that outcomes of risk model are being prioritized

Primary Benefits of Initiative:

- Reduce frequency of all types of ignition events – Reduce potential of ignition following a PSPS weather event by patrolling Transmission and Distribution overhead assets that were identified as “event specific assets at risk” for a given event. See [Section 7.3.6.4](#) for associated protocols.
- Reduce duration of events (PSPS/EPSS) – Reduce duration of PSPS events by utilizing consistent processes for well-trained employees to use for safe and efficient restoration following PSPS events. See [Section 7.3.6.4](#) for associated protocols.

Relation to and Impact on Other Initiatives:

- Ignition Components – Utilize PSPS and associated restoration procedures to mitigate any ignition hazards due to Ignition Probability Weather Model (IPW Model).
- PSPS – Safe and efficient restoration of customers following PSPS events.

3) *Region prioritization (“where” to engage initiative) – include reference to a risk informed analysis in allocation of initiative (e.g., veg clearance is done for trees tagged as “high-risk”) and demonstrate that high-risk areas are being prioritized*

Prioritization of Work within Initiative: The roll out of the policies and procedures to personnel associated with service restoration in conjunction with wildfire mitigation and/or PSPS efforts are completed on a service territory-wide approach, rather than by region or area. This is because over half of the PG&E service territory consists of Tier 2 and Tier 3 HFTD as defined by the CPUC, so all personnel need to be informed and trained concurrently.

Risk Models Used or Other Considerations for Prioritization:

- IPW Model – PSPS Restoration activities are based upon the risk models that led to the execution of a specific PSPS event.
- Challenges and compliance considerations include:
 - Employee safety;
 - Access;
 - Aerial patrols impacted by weather or visibility;
 - Found hazards and damages;
 - Communications coverage during PSPS; and
 - CPUC requirement to restore customers within 24 hours after the “all clear zones” has been provided, as long as it is safe to do so.

4) *Progress on initiative since the last WMP submission and plans, targets, and/or goals for the current year*

Actual Progress (2021):

In 2021, both field and control center personnel involved in PSPS events completed training on updated restoration protocols identified in [Section 7.3.6.4](#). In addition, two PSPS Full Scale Exercises were conducted to provide opportunity to utilize the updated restoration protocols. PSPS Segment Guides were also updated to reflect any new remote controlled (Supervisory Control and Data Acquisition) devices that had been installed.

To further reduce wildfire ignition risk during the PSPS restoration process, implemented a new “Customer Owned Line” process that requires customers who own Transmission or Primary voltage level Distribution Overhead facilities impacted during PSPS events to confirm with PG&E that their facilities are both safe and ready to be energized following the weather all clear. The aircraft complement of 65 helicopters as well as two fixed-wing aircraft equipped with MX-15 cameras and capable of night flying were secured for the 2021 season. As with 2020, helicopter assets were made

available for Distribution circuit pre-flights as needed for both training (including familiarization) and to update patrol methodology (i.e., air only, ground only or either) on accompanying PSPS Distribution circuit maps.

Impacts:

Previously provided preparedness and planning activities, combined with the process improvements based upon feedback, lessons learned and event reviews resulted in:

- Field personnel being properly trained to utilize the updated restoration protocols (i.e., “all clear zones”, “all clear forecasts”, etc.) to support restoration activities both safely and more rapidly.
- Applied updated patrol method and mileage to PSPS restoration maps as needed.
- Reduced wildfire ignition risk by requiring customers with customer-owned lines to notify PG&E that their facilities are both safe and ready to be energized following the weather all clear. See [Section 7.3.6.4](#) for full details
- These aircraft were utilized as needed during PSPS events to expedite patrols and restoration activities and supported emergent wildfire events and other activities as they occurred.

Lessons Learned:

- Develop and communicate change management activities incrementally as process improvements are identified; and
- Ensure change management communications includes all level of coworkers involved with PSPS restoration activities.

Current Year Activities (2022):

While we have not set specific targets for this Initiative and will not provide ongoing reporting each quarter on it, we are still doing the work as part of our overall plan.

We will continue to train employees on the 2022 restoration protocols, conduct field exercises for all impacted divisions, and support pre-flight requests as deemed necessary by field organizations.

5) *Future improvements to initiative – include known future plans (beyond the current year) and new/novel strategies the utility may implement in the next five years (e.g., references to and strategies from pilot projects and research detailed in [Section 4.4](#))*

Short-term Improvements (2023-2028): Electronic PSPS Maps to field: Provide field groups with enhanced situational awareness of the event footprint via visualization. Ability to develop, update and provide more real-time oriented maps electronically rather than the current paper maps. Supports field validation efforts and would include delineation of patrol boundaries along with addition of other layers deemed necessary (i.e., aerial/access hazards, critical infrastructure, active fires, etc.).

Unmanned Aerial Vehicles (UAV) for PSPS patrols: Supplement existing aerial fleet, considerable safety implications by using unmanned aerial vehicles (rather than the helicopters typically utilized currently).

Advanced Distribution Management System (ADMS) automated switching solution for PSPS activities: Consolidate PSPS activities onto a single platform for dissemination to distribution control center and field personnel. Provides for common and consistent data exchange between distribution control center and field personnel. Examples minimally could include providing existing circuit segment guides, switching logs and maps on this single platform rather than using separate programs.

8.2.3.2 PSPS Protocols Overview

The PSPS Protocols include enhancements to our IPW Model, FPI Model, and the integration of Technosylva Fire modeling into our PSPS Protocols. In addition to the model enhancements described below, the PSPS Protocols also incorporate tree overstrike and high-risk vegetation and asset tags.

FPI Model Enhancements:

Our FPI Model has been significantly enhanced with Machine Learning capabilities, environmental and fire occurrence datasets, new model features, and an enhanced fire occurrence dataset. The FPI Model features, methodology and validation is discussed at length in [Section 4.5.1\(f\)](#). A short summary is provided below.

The FPI Model combines fire weather parameters (wind speed, temperature, and vapor pressure deficit), dead and live fuel moisture data, topography, and fuel type data to predict the probability of large and/or catastrophic fires. The FPI Model was developed and trained on an enhanced fire occurrence dataset developed by Sonoma Technology Inc. that combines agency fire information with sub-daily growth data from satellite fire detections. This was an important development as we can correlate fire growth in sub-daily timeframes to environmental data. Data scientists, meteorologists, and fire scientists tested dozens of new model features for the FPI Model and various model configurations and types, including logistic regression and multiple machine-learning models. These model results were tested using a train-test split ratio of 70 percent-30 percent; this involved training the model with 70 percent of the input data and testing predictions with the remaining 30 percent of fires. We ultimately chose a Balanced Random Forest Classification Machine Learning model for the FPI Model based on model performance.

IPW Model Enhancements:

The IPW Model represents the next generation of distribution outage and ignition probability models building on the 2020 OPW Model. The IPW Model features, methodology and validation is discussed at length in [Section 4.5.1\(g\)](#). A short summary is provided below.

The core model is a new multi-classification machine learning outage model, that provides hourly forecasts of outage probability by specific outage pathways, called classes. The probability of outage output for each class is then transformed to an ignition probability using known outage to ignition rates by each class.

The 2021 IPW model is a multi-classification Cat Boost Machine Learning model. It is a state-of-the-art model based on decision trees with advanced categorical feature support. The IPW model outputs the probability of 5 outage classes for each 2 x 2 km grid cell based on weather variables, tree overstrike per 2 x 2 km grid cell from aerial LiDAR, and a local “node” categorical variable. The model was tested by first training on every hour and grid cell from 2008-2019 and evaluating performance against 2020.

In addition, we built the model to adapt to the weather-outage response overtime in localized areas. We apply a time-weighted approach to weight current years more heavily in the final model output. This time-weighted approach allows changes in local

areas to be learned (both negative - increased tree mortality, asset degradation, etc.; and positive – conductor and pole replacement, vegetation management etc.).

Utilizing the IPW Model further helps PG&E pinpoint the areas where the probability of specific types of outages and ignitions are greatest. In addition, we incorporated tree overstrike risk directly into the IPW Model to further inform vegetation-based outage risk and increase the model's efficacy.

The IPW model is combined with the FPI model in space and time to evaluate the probability of utility caused ignitions, and the probability of a catastrophic fire should an ignition occur.

Integration of Technosylva Fire Spread Modeling:

After testing fire spread simulations across historical and forecast time horizons, we added Technosylva fire spread outputs into the PSPS Protocols. Utilizing Technosylva Fire Spread Modeling allows us to review millions of simulated ignitions to identify the areas where the risk of an ignition growing into a catastrophic wildfire is greatest. In addition, bringing in a third-party vendor to help produce PG&E's PSPS scope allows us to highlight areas where the models do and do not overlap for forecast corroboration and additional insights.

Incorporation of Hardening:

To date, PG&E has installed approximately 700 miles of hardened infrastructure within the approximately 25,500 miles of overhead line miles in the HFTD with strong poles, covered power lines, targeted undergrounding, removal, and remote grids to reduce the wildfire risk and to support PSPS to reduce the wildfire risk and to support PSPS mitigation in PG&E's service area.

To account for the hardening work performed, our Machine-Learning IPW framework accounts for positive and negative changes in grid performance and reliability year-over-year as we apply a time-weighted approach to weight more recent years of learned performance more heavily in the final model output. The model learns the performance of local grid areas hour-by-hour based on the wind speed observed at that hour and if outages or ignitions occur or not. The IPW Model compiles information from 13 models trained on each year separately from 2008-2020. This exponential weighting allows the model to organically account for positive changes in performance from system hardening as well as potentially negative changes due to the current drought and other exogenous factors.

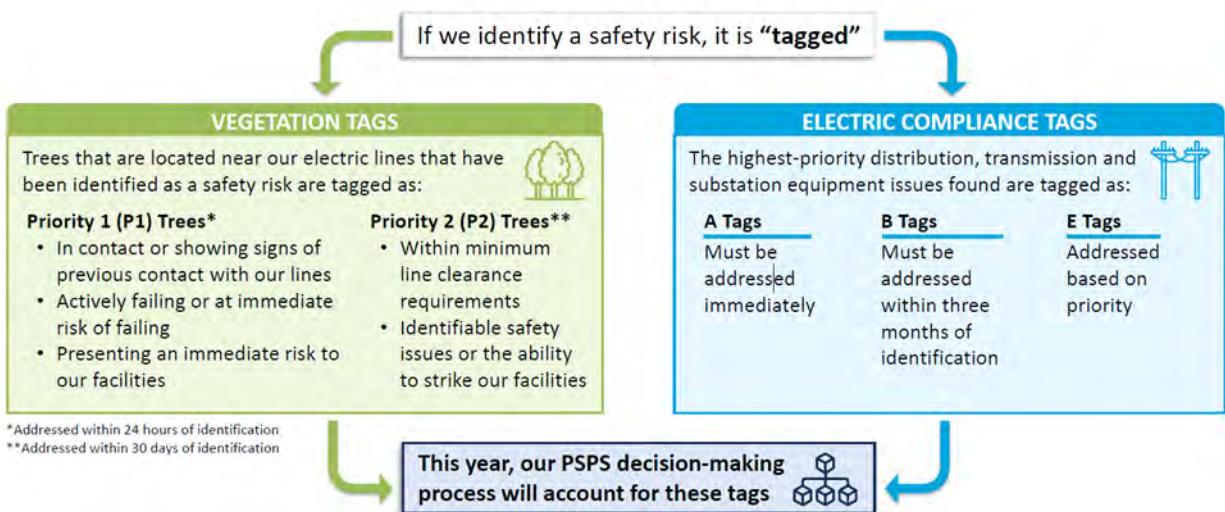
Incorporation of Tree Overstrike:

Our PSPS Protocols (Distribution) utilize a machine learning model to integrate overstrike directly into our IPW Model. Using a machine learning model helps us more accurately incorporate the risk by analyzing risk posed by the several million trees that are capable of striking our lines with approximately 150 million feet of overstrike in PG&E's service territory. The individual tree data were aggregated to a 2 x 2 km grid to help train the core outage model. Not surprisingly, the probability of vegetation caused outages correlates well with the volume of tree overstrike risk.

Incorporation of High-Risk Vegetation and Asset Tags:

Our PSPS Protocols (Distribution) have continued to incorporate any Priority 1 or Priority 2 tree tags¹⁸² that meet our Minimum Fire Potential Conditions (mFPC). In addition to Priority Tags, we are also including any circuits with high-risk compliance tags that meet our mFPCs as part of our PSPS. Figure PG&E-8.2-3 below shows a schematic of our current Vegetation and Asset Hazard Considerations. In addition, in early 2021, PG&E evaluated how to incorporate the presence of high-risk vegetation conditions into our PSPS Protocols. As a result, in 2021 PG&E revised our PSPS Protocols to include consideration of Tree Overstrike Potential and Priority 1 and Priority 2 tags.¹⁸³

**FIGURE PG&E-8.2-3:
VEGETATION AND ASSET HAZARD CONSIDERATIONS**



182 "Priority 1" and "Priority 2" vegetation tags are created when trained vegetation inspectors identify trees or limbs that currently present elevated risk and must be worked on an expedited basis. Inspectors use Priority 1 tags for vegetation: (1) in contact or showing signs of previous contact with a primary conductor; (2) actively failing or at immediate risk of failing and which could strike PG&E's facilities; or (3) presenting an immediate risk to PG&E's facilities. Inspectors use Priority 2 tags for vegetation that does not rise to the level of Priority 1 but has encroached within the PG&E minimum clearance requirements or has an identifiable potential safety issue requiring expedited work.

183 Res.M-4856. Ratifies the Executive Director's Letter to PG&E Directing PG&E to Comply with Certain Requirements Pertaining to PG&E's Implementation of Tree Overstrike Criteria in its PSPS De-Energization Decision-Making.

In the following part of this section, we describe our PSPS Protocols (Distribution) and PSPS Protocols (Transmission) followed by our PSPS process once the Distribution and Transmission event scope has been defined.

8.2.3.3 PSPS Protocols (Distribution)

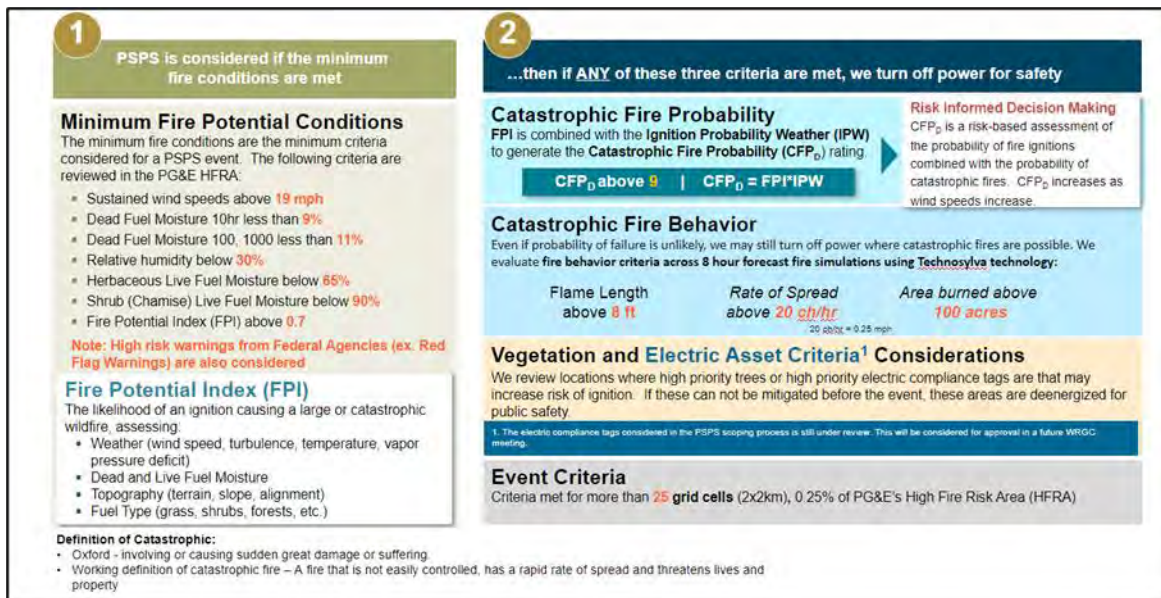
This section describes the PSPS Protocols for the distribution system. To be in-scope for distribution PSPS, grid cells must meet BOTH the mFPCs and at least ONE of the other three factors:

- 1) mFPC
- 2) At least one of the following:
 - Catastrophic Fire Probability (CFP_D) comprised of the following:
 - IPW
 - Utility FPI
 - Catastrophic Fire Behavior (CFB) (via fire spread simulations from Technosylva)
 - Consideration of known high-risk vegetation and electric compliance tags

In addition to the meteorological models, we also evaluate the impacts of de-energization against the risk of wildfire should de-energization not occur. This information is reviewed at key decision points in the PSPS process and informs the ultimate decision to de-energize our customers and our communities.

Figure PG&E-8.2-4 below provides a quantitative summary of our PSPS Protocols (Distribution).

**FIGURE PG&E-8.2-4:
PSPS PROTOCOLS (DISTRIBUTION)**



The mFPC are the minimum weather and fuels filter based on relative humidity values, wind speed, and fuel moisture values that must be exceeded for a PSPS event to be considered.

The machine learning IPW and FPI Models are combined in both space and time to form CFP_D output at a 2 x 2 km resolution. CFP_D provides hourly outputs and highlights locations that have concurrence of an increased probability for large fires and increased probability of wind-related ignitions on the distribution system. Additionally, the CFB criteria are used to identify locations that may have a lower probability of ignition but could result in fires that are not easily suppressed and have potentially high consequences.

Below, we describe the three steps in the PSPS Protocols (Distribution).

Step 1: Evaluation of mFPCs and FPI

The first step of determining the scope of a PSPS event for distribution is evaluating the mFPCs. These conditions serve as a first review of weather conditions for a PSPS event to be considered. A PSPS event will only be evaluated if the following mFPCs are true in a HFRA:¹⁸⁴

- Sustained wind speeds above 19 mph;
- Dead fuel moisture 10-hr less than 9 percent;¹⁸⁵
- Dead fuel moisture 100-hr, 1000-hr less than 11 percent;¹⁸⁶
- Relative Humidity below 30 percent;
- Herbaceous live fuel moisture below 65 percent;
- Shrub (Chamise) Live Fuel Moisture below 90 percent; and
- FPI above 0.7.

These values were established from an examination of historical fire occurrence in the PG&E service area, PSPS sensitivity studies using historical data viewed through the lens of both customer impacts and wildfire risk mitigated, as well as information published by federal agencies regarding fire behavior and criteria used to issue warnings to the public.

Step 2: In-depth review of fire risk

¹⁸⁴ Revised 2021 WMP, pp. 85-89.

¹⁸⁵ 10-hr. dead fuel moisture represents the modeled moisture content in dead fuels in the 0.25 to 1-inch diameter class and the layer of the forest floor about one inch below the surface.

¹⁸⁶ 100-hr. Dead Fuel Moisture represents the modeled moisture content of dead fuels in the 1-to-3-inch diameter class.

If all the mFPCs in Step 1 are met, we conduct an in-depth review of fire risk using three separate measures. If the criteria for any of these measures are met, then PG&E may need to turn off power for safety:

1. CFP_D – PG&E uses machine learning to assess the likelihood of equipment failure during a given weather event and the subsequent risk of catastrophic wildfires if a failure occurs. This model uses a combination of the IPW and FPI Models. It is a risk-based assessment that evaluates the probability of an ignition (IPW) and the probability of catastrophic fires should an ignition occur FPI. The CFP_D model accounts for changes over time based on actual performance data. Thus, the model will address positive and negative trends in grid performance and reliability year-over-year, incorporating grid improvements such as system hardening, and enhanced vegetation management based on their performance at mitigating outages over time.
2. CFB – PG&E may de-energize customers where the consequence of a potential wildfire starting would be extreme, even if probability of a power line or equipment failure is low.
3. Vegetation and Electric Asset Criteria Considerations – PG&E reviews locations from recent inspections where high-priority tree or electric compliance issues are present that may increase the risk of ignition.

Step 3: Determining the outage area

If weather forecasts indicate a high likelihood of severe fire risk (Step 2), PG&E first identifies the meteorological footprint of severe fire weather and then identifies the distribution lines and other assets within that footprint. Power is turned off if any of the criteria listed on Step 2 above are met over a certain geographic area. This happens if the criteria also meet an area coverage criterion of more than 25 2x2 km grid cells, or 0.25 percent of PG&E's HFRA.

For distribution lines, the PG&E team determines which circuits are impacted and evaluates the ability to sectionalize circuits to limit the de-energization scope and resulting customer impact.

8.2.3.4 PSPS Protocols (Transmission)

This section describes the PSPS Protocols for the transmission system. In addition to analyzing distribution circuits that may need to be de-energized for safety, we also review transmission lines and individual structures for risk of igniting a catastrophic wildfire. Like the PSPS Protocols (Distribution), there is no single factor or threshold that will require shutting off power to a transmission circuit.

The Transmission PSPS decision-making process follows a similar framework as the distribution process but utilizes transmission-specific models. In order to be in-scope for PSPS, transmission structures must meet BOTH the mFPCs and at least one of the other four factors:

- 1) mFPC
- 2) At least one of the following:
 - CFP_D from Asset Failures (CFP_T - Asset) comprised of the following:
 - Transmission Operability Assessment (OA)
 - Utility FPI
 - CFP_D from Vegetation (CFPT - Veg) comprised of the following:
 - Transmission Vegetation Risk Model
 - Utility FPI
 - CFB (via Fire Spread Simulations from Technosylva)
 - Consideration of known high risk vegetation and electric compliance tags

Figure PG&E-8.2-5 below provides a quantitative summary of our PSPS Protocols (Transmission).

**FIGURE PG&E-8.2-5:
PSPS PROTOCOLS (TRANSMISSION)**



Step 1: mFPCs

The first step of determining the scope of a PSPS event on the transmission system is evaluating the mFPCs at the transmission structure level. The same criteria used for the distribution system also apply to the transmission system. These conditions serve as a first review of the weather conditions necessary for a PSPS event to be considered. Once the mFPCs are met, an in-depth review of risk models and other factors is performed.

Step 2: In-depth review of fire risk

If all the mFPCs in Step 1 are met, we conduct an in-depth review of fire risk using three separate measures. If the criteria for any of the measures are met, then PG&E may need to turn off power for public safety:

1. CFP_D - Asset – PG&E uses machine learning to assess the likelihood of equipment failure during a given weather event, and the subsequent risk of catastrophic wildfires if a failure occurs. This model uses a combination of the Operational Assessment (OA) and FPI Models, both in time and space, at every transmission structure to form the Transmission CFP_D model for asset failures. (CFP_T - Asset). The OA Model combines historical wind speeds for each structure, historical outage activity, Bayesian updating, and the condition of assets based on inspection programs to help understand the wind-related failure probability of each structure. The OA Model can be driven with forecast wind speeds to output the probability of failure at the structure level.
2. CFP_D - Vegetation – The transmission-specific vegetation risk model was derived by a collaborative effort between PG&E vegetation management and external contractors such as NV5 and Formation Environmental. This model leverages aerial LiDAR data to map the location and attributes of trees near transmission

lines. The transmission vegetation risk model is based on several factors such as overstrike, the amount of unobstructed fall paths to a wire, the slope between tree and conductor, and tree exposure. The transmission vegetation risk model is combined with the FPI Model in space and time to form CFPT – Veg.

3. CFB – PG&E may de-energize customers where the consequence of a potential wildfire ignition would be extreme, even if the probability of a power line or equipment failure is low.
4. Vegetation and Electric Asset Criteria Considerations – PG&E reviews locations from recent inspections where high-priority trees or electric compliance issues are present that may increase the risk of ignition.

Step 3: Determining the outage area

Based on the criteria above, transmission lines meeting the criteria pass to the next stage of review for PSPS. PG&E conducts a Power Flow Analysis on the in-scope transmission lines (if applicable) to analyze any potential downstream impacts of load shedding, coordinates this effort with the CAISO, and confirms solution feasibility with Transmission System Protection. The de-energization of transmission lines may result in some downstream impacts on substations, transmission lines, and distribution lines that may also lose their source.

8.2.4 Re-Energization Strategy

Strategy to provide for safe and effective re energization of any area that is de- energized due to PSPS protocol.

When restoring customers during PSPS events, PG&E's main objective is to re-energize our electric facilities safely and in a timely manner. When possible, PG&E prioritizes re-energizing critical infrastructure and transmission lines.

Once PG&E's meteorology team has determined the weather event has passed, PG&E's OIC provides the "all-clear zones" approval. This provides the field team with approval to begin the steps listed below on the impacted assets within the PSPS footprint:

- Preparation for re-energization
- Patrol
- Mitigate hazards/make repairs

Preparation for Re-Energization:

When PG&E opens our EOC for a PSPS event, the restoration team (including Control Centers and Field personnel) conducts the following activities leading up to re-energization:

- Prepare an event-specific restoration plan based on the weather data;
- Identify restoration resources needed, including helicopters, fixed wing aircraft, company personnel, contractors, and mutual aid;
- Provide distribution circuit segment guides to field personnel listing the devices used to segment circuits for patrolling;
- Print distribution circuit segment maps, with a circuit map and individual maps for each segment that needs to be patrolled;
- Distribute switching logs to the field for the de-energization operations; and
- Following de-energization, segment impacted distribution circuits into sections, which are prioritized based on the critical nature of the infrastructure and the number of affected customers.
- Determine if any Customer Owned Lines identified as being at risk are within the event footprint (both transmission and distribution) as detailed in [Section 7.3.6.4](#). These are then isolated either during segmenting activities or during patrols, but in either case, prior to re-energization.

Patrols:

Per PG&E's PSPS-1000P-01 (*Utility Procedure: Public Safety Power Shutoff for Electric Transmission and Distribution*), all impacted transmission and distribution

overhead lines that are identified as “event-specific assets at risk” in HFRA, as directed by the EOC, must be patrolled in their entirety. Additionally, all hazards must be cleared and/or damages repaired prior to re-energization. Hazards include tree branches entangled in the conductor; damages include fallen lines or poles.

Note: for distribution circuits, patrols occur on all impacted primary and secondary that extends beyond primary overhead lines identified with “event-specific assets at risk” in HFRA as directed by the EOC. Secondary does not include service drops.

Patrols are accomplished by a combination of the following methods:

- Ground Patrols – conducted by Journeyman Lineworkers (JL) from PG&E, contractors, and mutual aid utilities (may be accompanied by a non-JL driver).
- Aerial Patrols – distribution and transmission patrols performed by Journeyman Line workers typically using helicopters (or potentially fixed wing aircraft on transmission) during flyable weather/daylight hours.
 - Night Aerial Patrols – These can be completed using InfraRed (IR) technology on aircraft. Night Aerial patrols are currently considered only on transmission lines.

Following the “all clear”, a distribution circuit segment is patrolled and re-energized starting at the source side, then systematically patrolled and re-energized out towards the end of the circuits. Equipment that requires repair is isolated. The field patrol hierarchy typically consists of the following for a given distribution circuit:

- Task Force Lead – The single point-of-contact (SPOC) for a given PSPS impacted distribution circuit(s) who is responsible for ensuring PSPS patrols on their assigned circuit(s) are completed and who works with the Control Center to safely re-energize distribution circuit segment(s). This SPOC methodology promotes increased safety and efficiency due to more focused attention of patrol personnel (both aerial and ground) engaged in the PSPS restoration process. This ensures the Control Center is only providing/receiving direction to/from one person
- Segment Lead – Personnel responsible for oversight of assigned patrol personnel (both aerial and ground) on given segment(s) of a distribution circuit, reports to their assigned Task Force Lead
- Patroller – Individuals (internal, contract and mutual aid) responsible for patrolling assigned portions of a distribution circuit, reports to their assigned Segment Lead.

The transmission line patrol prioritization strategy is driven by electrical system stability. This includes ensuring adequate transmission facilities are in service to support the overall grid and accompanying local loads, ensuring the system protection component is addressed and reviewing customer impacts associated with each line impacted in the event.

When both transmission and distribution assets (including substations) are involved, and it is operationally feasible, PG&E conducts patrols during the re-energization process on all types of assets simultaneously. In some cases, re-energization of the

transmission line is prioritized to ensure that system stability (including the system protection component) is accounted for and to provide a source for substations and associated distribution circuits that could be impacted.

Mitigate Hazards/Repair Damages:

Due to severe weather events, PG&E may find hazards or damages to our facilities during patrols. Prior to restoring power, these hazards need to be removed and damages need to be repaired in order to mitigate the following risks:

- Arcing or sparks being created from damaged equipment when re-energized
- The public getting too close to, or needing access around, damaged equipment
- Electrocutation or shock from damaged or unsecured equipment
- Additional equipment damage if circuit is re-energized while faulted
- Increasing the size or duration of the outage if damage is not isolated or repaired prior to re-energizing

For reference, examples of hazards and damages found during the 2021 PSPS events include:

- Damaged cross-arms on poles
- Damaged insulators and wire connectors
- Damaged splices or sections of conductors
- Vegetation intertwined with the electrical lines
- Trees falling onto assets
- Broken poles

If damage is found in an individual segment due to a weather event, PG&E may be able to adjust the restoration order to allow for the overall restoration process to continue while repairs to the affected segment are initiated. This is supported with the visibility provided by the custom distribution circuit maps detailing both the circuit's individual segment(s) and overall circuit connectivity.

Some hazards, like a small tree limb found resting across the conductors, can be removed by the JL performing the patrol using appropriate high voltage tools and Personal Protective Equipment.

Re-Energization:

PG&E's Control Centers coordinate with other centers and field resources to manage all the information related to re-energizing the facilities and then direct the re-energization processes concisely. Many of the customer updates are automatically created by the computer applications being used by the Control Centers while re-energizing. The

Control Centers can also operate remote control devices SCADA to re-energize once the segment or transmission line has been patrolled and released for re-energization.

If no issues or concerns are found, or repairs are completed, the Task Force Lead will coordinate with the Control Center to re-energize a segment up to the next open device (segment boundary). This restoration sequencing is based on the “step restoration” methodology which allows for re-energizing customers in a safe, controlled, and efficient manner, rather than waiting to patrol the entire circuit and then re-energizing. This process typically follows the pre-identified segmenting alphabetical sequence (i.e., A-B-C-D, etc.).

Re-energization information (i.e., segment guides, switching logs, customer owned lines and maps) is provided to both the field and control center personnel prior to executing the PSPS restoration activities.

Customer Owned Lines (as detailed in [Section 7.3.6.4](#)) are only re-energized once the customer has confirmed to PG&E that their equipment is both safe and ready to be energized once PG&E has provided the “all clear” and a source is available.

To support the re-energizing activities, resource needs are identified for the scale and scope of the event footprint during the event pre-planning. Resources typically include helicopters, company personnel, contractors and mutual aid. These resources are then provided to the impacted areas and staged to support the event.

2022 Restoration Goal:

For 2022, our restoration goal is to restore all customers as soon as possible and within 24 hours from the “all clear”, unless it is unsafe to do so. For any circuits that require more than 24 hours for restoration, we will provide an explanation in our post event reports.

Typical safety exclusions based on past PSPS events have been (but not limited to):

- No access due to:
 - Police activity (i.e., security)
 - Fire activity (i.e., fire agency requests not to re-energize)
 - Road closure (i.e., public/private roadway closed/blocked and requires agency/customer response)

Some additional reasons why circuits may require more than 24 hours to restore include:

- Inability to utilize planned helicopter resources for aerial patrols due to smoke/fog/other visibility concerns
- Resource constraints impacting ability to patrol the impacted event specific overhead assets that were de-energized (historically driven by inability to conduct aerial patrols as noted above or sheer magnitude of event)

- Restoration delayed due to repairs of PSPS hazards or damages required on assets prior to being restored
- Customer equipment damaged (i.e., requires customer repairs prior to energizing) or lack of confirmation from customer (in instances of customer owned lines) that their equipment is safe and ready to be energized.

To further enhance PG&E's restoration efforts and support our overall goal of reducing customer outage durations, key areas have been identified for improvements during the planning and execution phases of the PSPS restoration process. Examples include (but not limited to):

- Developing aviation flight forecasts that identify flying conditions that could affect helicopter availability for patrolling (i.e., wildfire smoke, fog, storm, etc.)
- Developing a field compatible mobile platform to provide an electronic map of the event-specific footprint. This would replace the current non-specific event paper maps in order to provide for enhanced situational awareness for field personnel in addition to identifying event-specific patrol boundary opportunities. These opportunities typically consist of portions of distribution circuits de-energized during a PSPS event (due to connectivity) that are not in the defined event weather boundary "event-specific assets at risk" area, and as such may not require a patrol in order to be re-energized.
- Improving the overall development and communication processes for providing and cascading the Restoration Playbooks to the field operations teams and minimize delays with more process automation and coordination

For more information on PG&E's 2022 plans related to standards, trainings and circuit guides and maps, please see [Section 7.3.9.5](#).

EXHIBIT 9



Search example: How can I reduce my bill?

SEARCH

[Home](#) › [News and Updates](#) › [All News and Updates](#) › [CPUC Staff Propose Utility Penalties for Poor Execution of Certain 2020 PSPS Events](#)

CPUC Staff Propose Utility Penalties for Poor Execution of Certain 2020 PSPS Events

June 15, 2022 - The California Public Utilities Commission (CPUC), in ongoing efforts to hold utilities accountable for safely implementing Public Safety Power Shutoff (PSPS) events, today issued proposed Orders imposing corrective actions and more than \$22 million in fines to be paid by the shareholders of Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) for violations related to 2020 PSPS events.

The Administrative Enforcement Orders penalize PG&E \$12 million, SCE \$10 million, and SDG&E \$24,000. All three utilities, as well as PacifiCorp, have been directed to take specific corrective actions to ensure that future PSPS events comply with CPUC public safety and notification requirements.

The proposed Administrative Enforcement Orders are issued under the CPUC's [Enforcement Policy](#), which was adopted in November 2020 to better serve Californians through expeditious and efficient enforcement actions that can be taken by CPUC staff. Today's action marks the first time the CPUC has used an Administrative Enforcement Order.

Under the Administrative Enforcement Orders, the utilities have 30 days to pay the fine to the State's General Fund and make the corrective actions, or request a hearing.

The 2020 PSPS season consisted of 26 separate PSPS events across the service areas of all four utilities. The CPUC's Safety and Enforcement Division conducts analysis of utility PSPS events to ensure utilities are complying with CPUC guidelines. The Safety and Enforcement Division's analysis of the 2020 PSPS events uncovered multiple violations of CPUC PSPS guidelines. The Administrative Enforcement Orders issued today address these violations through fines and corrective actions.

The Administrative Enforcement Orders issued today and related documents are available at www.cpuc.ca.gov/regulatory-services/enforcement-and-citations.

The CPUC has taken a number of actions to ensure utilities continue to reduce the scope and duration of PSPS events and prioritize customer safety, including:

- [Ordered](#) utilities to forgo collection of revenues from customers that are associated with electricity not sold during future PSPS events until it can be demonstrated that utilities have made improvements in identifying, evaluating, weighing, and reporting public harm when determining whether to initiate a PSPS event.
- In 2019 and throughout 2020 [required PG&E implement a series of actions](#) to correct deficiencies in 2019 PSPS events.
- In May 2020, adopted refinements and [improvements to existing PSPS guidelines](#) and requirements in advance of the 2020 wildfire season.
- In early 2021, held public meetings for the utilities to report on lessons learned and to hear from impacted communities and access and functional needs communities on 2020 PSPS events. Additional public meetings were held in late 2021 for the utilities to report on their preparedness for the 2021 PSPS season.
- In early 2021, [required Southern California Edison to implement a series of actions](#) to correct deficiencies in 2020 PSPS events.
- In May 2021, [adopted](#) a decision penalizing PG&E \$106 million for violating guidelines during Fall 2019 PSPS events.
- In early 2022, held public meetings for the utilities to report on their 2021 PSPS performance and lessons learned.
- Directed the utilities to hold numerous public, internal, and collaborative meetings in order to improve their preparation and execution of PSPS events.

The CPUC regulates services and utilities, protects consumers, safeguards the environment, and assures Californians' access to safe and reliable utility infrastructure and services. For more information on the CPUC, please visit www.cpuc.ca.gov.

###

[Press Release](#)

HOW CAN WE HELP?

Emergency? **Call 911**

File a Complaint

Late Bill Assistance

Power Outage Map

Are you in a high fire-threat area?

Financial Assistance

Consumer Programs and Services

Electric Rate Comparison Website

Website Feedback

MORE INFORMATION

Consumer Support

Regulatory Services

Industries and Topics

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EXHIBIT 10

Public Safety Power Shutoff (PSPS)

CALIFORNIA PUBLIC UTILITIES COMMISSION PUBLIC BRIEFING

August 2, 2022





Topics for Discussion

- 1 PSPS Preparedness**
- 2 PSPS Decision-Making Criteria and Modeling**
- 3 Public Safety Partner Coordination**
- 4 Customer Support and Resources**
- 5 Enhanced Powerline Safety Settings (EPSS)**

PG&E Presenters

Mark Quinlan

Vice President, Electric System Operations

Susie Martinez

Director, Liaison and Regulatory Operations and Engagement

Scott Strenfel

Director, Meteorology and Fire Science

Tracy Maratukulam

Director of Customer Engagement, Strategy and Programs

Eric Lamoureux

Deputy Director, Enhanced Powerline Safety Settings Program

PSPS Preparedness



Each year, we improve our PSPS Program to:

- Further refine our ability to identify and mitigate catastrophic wildfire risk
- More precisely target PSPS through infrastructure and meteorological advancements
- Further reduce customer impacts through expanded resources and support
- Provide backup power to Community Resource Centers and critical facilities and install temporary generation microgrids to maintain service to our customers

**We are building on improvements from previous years
and continuing to make our system safer and more resilient.**



Year-Over-Year PSPS Comparison

PSPS impacts have declined significantly through new, advanced technologies and improvements to the electric system infrastructure.

Event Details	2019	2020	2021	2021 Comparison to 2020
PSPS Events	7	6	5	17% fewer outages
Customers Impacted	2,014,000	653,000	80,400	88% fewer customers impacted
Average Number of Counties Impacted	17	17	10	41% fewer counties impacted
Average Outage Duration (hours)	43	35	31	11% less time without power
Average Outage Restoration Time (hours)	17	10	12	20% increase in restoration time
Damage/Hazards	722	257	442	(13% decrease in restoration time when excluding January PSPS event)
Peak Wind Gusts	102 MPH	89 MPH	102 MPH	
Potential Impacted Acreage Prevented	3.5M	912K	691K	
Potential Damaged Structures Prevented	280K	196K	86K	

97% notification accuracy

98% Medical Baseline notification accuracy

Address Alerts launched SMS text in 16 languages for customers and non-customers

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.



Continuing to Expand Short- and Long-term Mitigation Efforts

PROGRAM	COMPLETED THROUGH 2021	PLANNED IN 2022	COMPLETED IN 2022
> Undergrounding Our Lines Undergrounding powerlines to reduce wildfires caused by equipment	120 Miles	175 Miles	75 Miles
> Overhead System Hardening Installing stronger poles and covered powerlines and conducting line removals	741 Miles	470 Miles	282 Miles
> Enhanced Powerline Safety Settings Enhanced safety settings detect powerline faults and help prevent wildfires	~11,500 Miles*	~44,300 Miles*	~43,500 Miles*
> Weather Stations Better predicting and responding to severe weather threats	1,313 Stations	100 Stations	43 Stations
> High-Definition Cameras Monitoring and responding to wildfires through increased visibility	502 Cameras	98 Cameras	53 Cameras
> Enhanced Vegetation Management Addressing vegetation that poses a higher potential for wildfire risk	6,359 Miles	1,800 Miles	1,066 Miles
> Sectionalizing Devices and Transmission Switches Separating the grid into smaller sections and narrowing the scope of PSPS	1,209 Devices/Switches	115 Devices/Switches	38 Devices/Switches
> Temporary Distribution Microgrids Keeping customers energized during a Public Safety Power Shutoff	8 Sites	5 Sites	13 Sites**

Data as of 07/23/2022

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

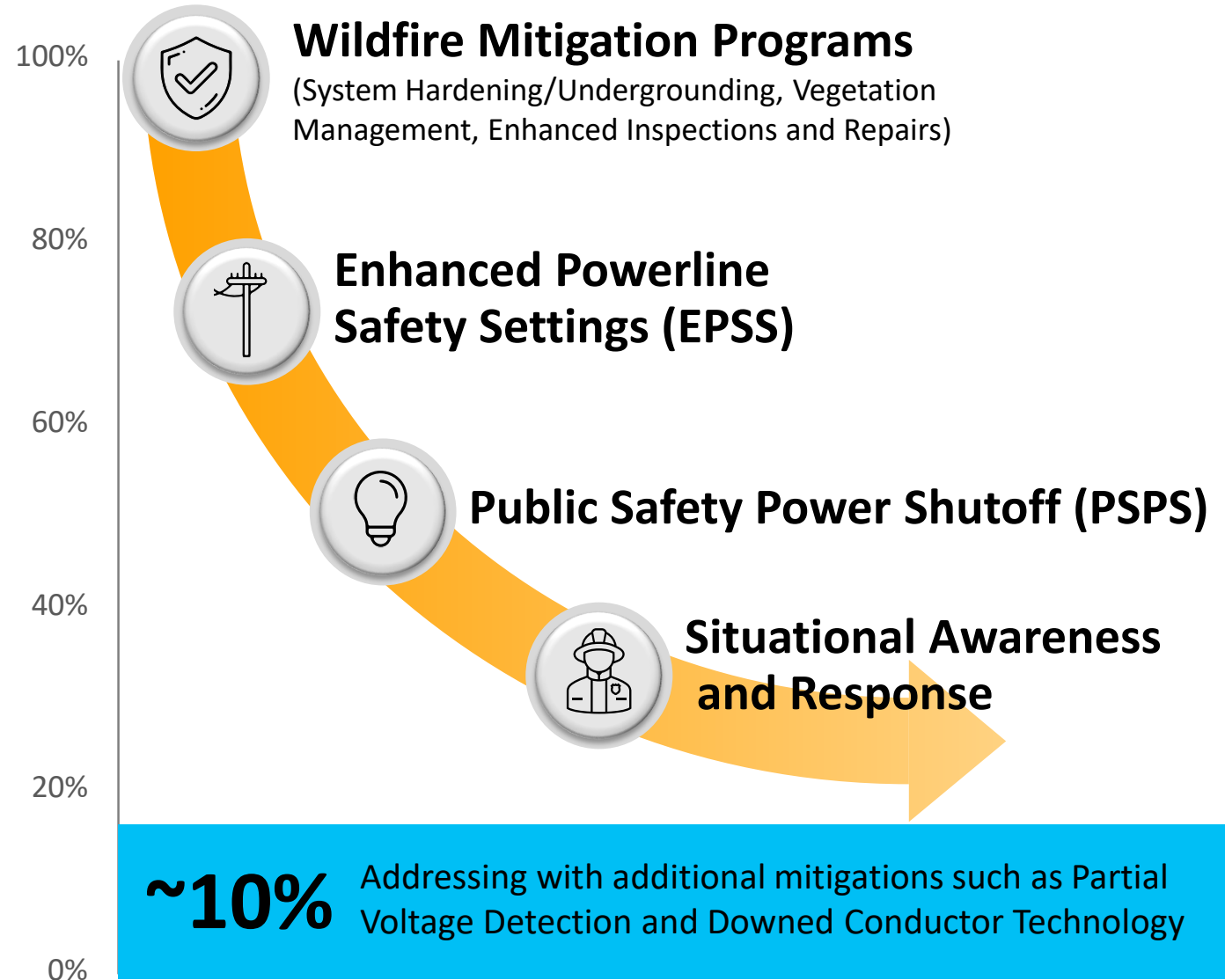
*Circuit-capable miles

**Planned for readiness by Oct. 1



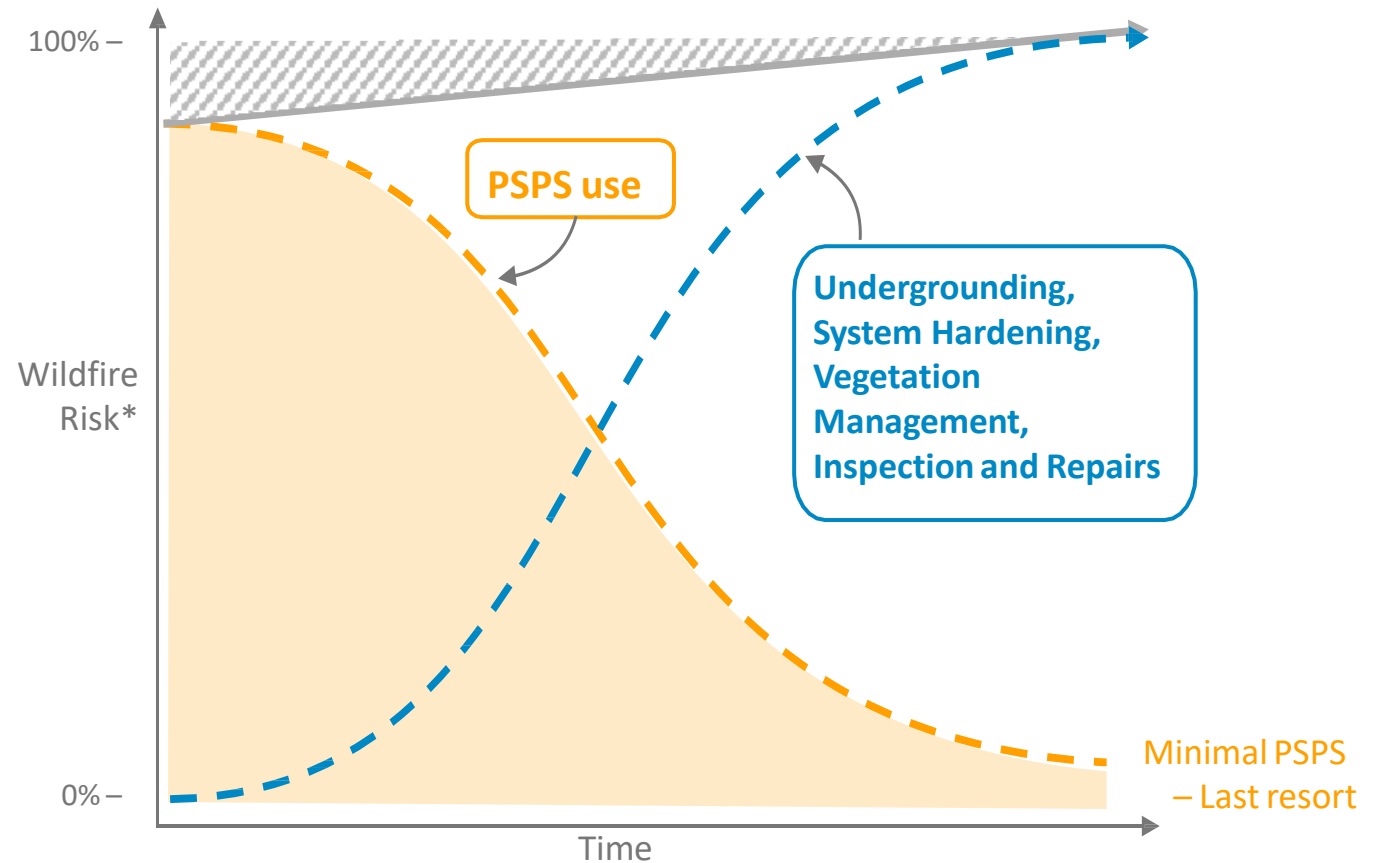
Layers of Protection...

PG&E actions
have mitigated
~90%
of wildfire risk



...Mitigating Ninety Percent of Risk Today 246

With efforts like undergrounding and system hardening, **PSPS as a measure of last resort will continue to decline.**



PSPS Decision-Making and Criteria



What Conditions Could Lead to a PSPS?



Low humidity levels 30% and below



Forecasted high winds above 19 mph and gusts above 30-40 mph



A Red Flag Warning issued by the National Weather Service



Condition of dry material on the ground and low moisture content of vegetation



On-the-ground, real-time observations

Transmission-Level PSPS Decision-Making Process

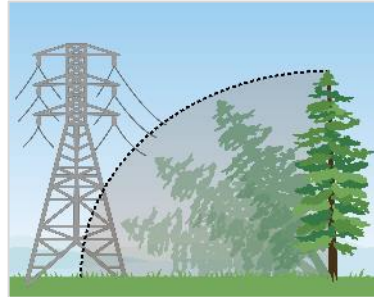
We also review the transmission lines that traverse those areas where meteorology has identified severe weather conditions.



Asset Health & Vegetation Risk



Induction Assessment



Enhanced Tree Strike Model



Wind Speed Threshold



CAISO Coordination



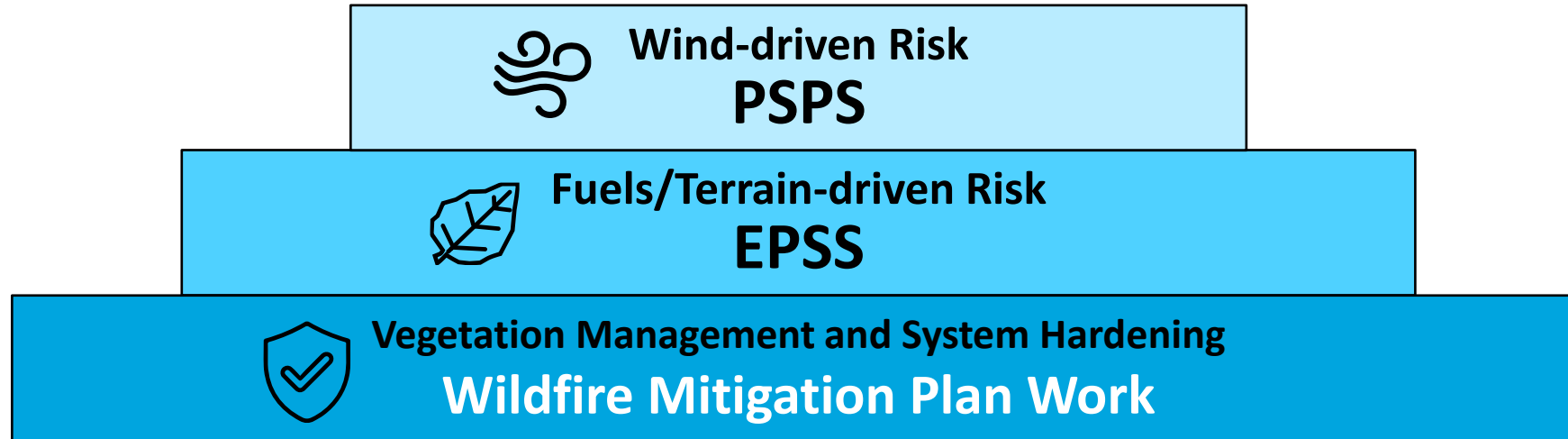
Public Safety Impact

Safety Shutoff Decision is made on a transmission structure level that intersects within a weather footprint

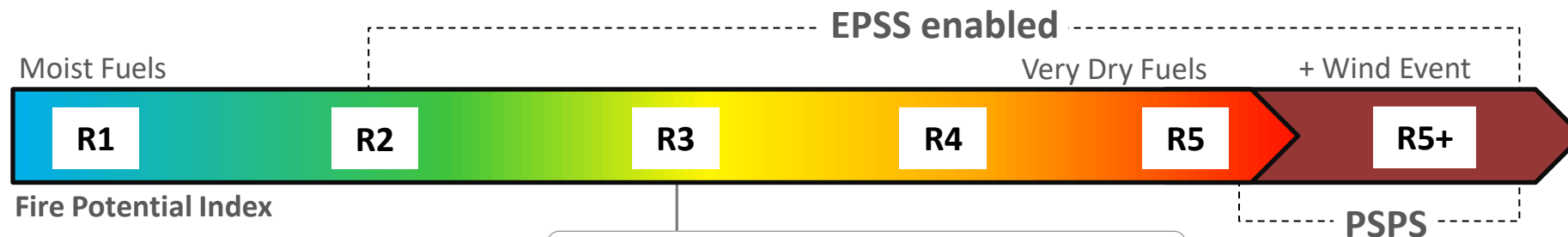


An Adaptive, Systematic, Risk Mitigation Approach...

PG&E has continued to adapt to California's changing wildfire risk profile.



EPSS and PSPS address a significant portion of the wildfire risk



In 2012-2020, 95% of acres burned and 100% of structures burned occurred under R3 or greater conditions.

Public Safety Partner Coordination





Public Safety Partner Outreach and Engagement

2022 TARGETED ENGAGEMENTS

	COMPLETED IN 2022
> CWSP Advisory Committee Expanded to focus on all CWSP initiatives	2
> Regional Working Groups Continuing to provide a forum for regional and tribal stakeholders to discuss PSPS and wildfire safety work	10 of 20
> Local Government Forums Individualized meetings with cities and counties to discuss PSPS and local issues of importance	105
> PSPS Exercises and Seminar Conducting a PSPS-focused seminar and continuing exercises to simulate a PSPS with external partners	5
> Tribal CWSP Webinar Hosted with all tribes in our service area to gather feedback and discuss PSPS and wildfire safety	1
> Public Safety Partner Webinars Hosting segment-specific meetings to gather feedback and discuss PSPS and wildfire safety	3 of 5
> Additional PSPS Briefings & Workshops Continuing to host ad hoc meetings and workshops to improve our PSPS Program	121

In-Event Communications

- **Texts, emails and phone calls** throughout the event
- **Situation reports, outage maps, customer lists** via the Portal
- **State Executive Briefing** with state agencies
- **Systemwide Cooperators Calls**
- **Cooperators Communications** with counties and tribes
- **Agency Representative** assigned to each county/tribe in scope; embedded support is also offered
- **Third-party representative** may request to observe PG&E's virtual EOC
- **Notifying Public Safety Answering Points (PSAP)**
- **Critical Infrastructure Lead** single point of contact in the EOC

**First/emergency responders at the local, state, tribal and federal level, water, wastewater and communication service providers, affected community choice aggregators, publicly-owned utilities/electrical cooperatives, the CPUC and the Cal OES and CALFIRE*

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.



Enhancing Our PSPS Agency Portal

2022 Refinements and Updates

- **Automating** data uploads
- **Reducing** data refresh times
- **Improving performance** for routine maintenance activities
- **Increasing stability** and computing speeds through use of cloud-based environment
- **Reducing time** to notify users that new geospatial information is available
- **Increasing our ability** to update outage maps with changes to event scope or customer impacts

Education and Preparedness

- **Training sessions** planned for August through October
- **The portal** was utilized during the PSPS full-scale exercise to test new developments and end-to-end processes

Critical Customers and Facilities

- Engaged with **~2,600 critical customers, counties and tribes**
- **Conducted resiliency collaborative meetings** with telecommunications providers
- **Dedicated PG&E contact** for telecommunications providers to address real-time issues
- **Targeted outreach** to small water agencies
- **Weekly collaboration** with the California Hospital Association and Hospital Council
- **Hosting segment-specific preparedness webinars:**
 - Community-choice aggregators
 - Telecommunications providers
 - Water agencies
 - Transmission customers
 - Hospital and healthcare providers
- **Ongoing coordination** with the Association of California Water Agencies, Hospital Council of Northern and Central California, and the California Hospital Association
- **Meetings with 12 hospitals** at higher risk of PSPS to discuss permanent resiliency solutions

Customer Support and Resources





Customer Outreach and Engagement

- ✓ **60M+** Digital and social media impressions
- ✓ **7,784** Radio and television ads (4,461 broadcast and cable; 3,323 radio)
- ✓ **141** Social media posts, **reaching 1.3M customers**
- ✓ **71** Emails & Direct mail items
- ✓ **37** Collateral and fact sheets
- ✓ **20** Customer webinars completed (22 planned)
- ✓ **1** Bill insert

During a PSPS Outage, we will share updated information to help customers prepare and plan through:

- Press conferences
- Social media posts
- Email, phone call and text message
- Address alerts via phone and text
- Our website
- Media briefings

Data as of 6/30/2022

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.



Expanding Access and Enhancing Customer Support

PROGRAM

2022 IMPROVEMENTS

> Community-Based Organization Partnerships

Support and resources for all interested vulnerable customers

- Expanded network of 78 community-based organization partnerships in all counties
- Partnering with accessible transportation agencies on transportation options
- Additional resources identified by AFN Collaborative Planning team (CRC improvements, additional CBO training, battery solutions for medications)

> Food Resource Partnerships

Resources to replace food lost during PSPS

- Partnering with ~50 organizations serving all counties potentially impacted by PSPS (26 Meals on Wheels partnerships in 22 counties, 23 food bank partnerships in 37 counties)

> Portable Batteries

Batteries available to all interested/qualified Medical Baseline and electricity-dependent AFN HFTD customers

- Distributing ~6,000 batteries to Medical Baseline and electricity dependent AFN customers (~14,470 total distributed to date; goal of ~19,000 by 2022 year-end)
- Expanded eligibility to non-income qualified Medical Baseline customers in HFTDs (total scope of ~29,000 customers)

> Generator and Battery Rebate Program

Rebates available for all PSPS/EPSS impacted customers in HFTDs

- Adjusted tiered rebate amounts to support ~1,300 customers with rebates (853 provided to date in 2022, 2,076 since program inception)
- Expanded eligibility to all customers in HFTDs or served by an EPSS circuit AND have experienced 2 or more PSPS events.
- Backup Power Transfer Meter pilot to cover costs for ~1,500 customers (64 to date in 2022)

> Multi-Solution Partnerships

Service-area wide, full-service solutions for individuals with Access and Functional Needs

- Building awareness through radio and direct to customer outreach and launching 2-1-1's proactive care coordinator program



Medical Baseline Marketing and Outreach Activities

PG&E is encouraging customers to participate and enroll in the Medical Baseline Program using targeted outreach.

Activities	Channel(s)	Target Audience	Timing
MBL Digital Media Ads	Google, Facebook, Nextdoor	Adults age 45+	March-Oct
MBL Acquisition Campaign	Email & direct mail	Customers most likely eligible for MBL based on PG&E's proprietary MBL propensity model	Apr - Jul
MBL Acquisition Residential Bill Inserts	Bill inserts	All residential customers	June
MBL Radio Ads	Radio	Adults age 45+	June-Oct
MBL TV Ads	Pilot campaign in Spanish with Univision	Pilot campaign in Spanish with Univision targeting Sacramento, Stockton, Modesto, Chico, and Redding	June-Oct

Medical Baseline Campaign Statistics

	2021 COMPLETE	2022 PROGRESS
Total Channel Count	23	14
Direct Mail Customers Reached	2,463,629	2,130,464
Email Customers Reached	2,317,955	4,129,053
Bill Insert Customers Reached	11,016,000	3,000,000
Digital Media Total Impressions	128,745,568	15,449,348
Digital Media Total Conversions (Clicks)	317,645	40,686

Data as of July 22, 2022

What We're Doing In 2022

- **Providing specialized materials, mailers and phone calls** to customers eligible for our Medical Baseline program
- **Updating contact information for Medical Baseline Customers**
- **Conducting ADA accessible webinars** (with closed captioning available in Spanish, Chinese and English)
- **Hosting webinars for organizations** that serve persons with disabilities and/or access and functional needs
- **Partnering with over 200 CBO Informational Partners** to amplify preparedness messaging and awareness of resiliency resources
- **Providing program material** in sixteen languages and Braille and developing videos in American Sign Language
- **Encouraging customers to self-identify as AFN**
- **Developing targeted radio and social media** to highlight applicable programs/resources
- **Issuing AFN specific PSAs** before and during PSPS
- **Partnering with leaders** from mandated minimum parties named in Phase 3 with responsibility for access and functional needs populations



Enhancing Our PSPS Emergency Website

What's New in 2022

- **Pop-up notice** directing customers with a slower internet connection to our low-bandwidth tools
- **Power restored message** shown by address up to 48 hours after power is restored
- **Increased ability to zoom** in and out on our outage map

What's Upcoming in 2022

- **New PSPS landing page** with a focus on Access and Functional Needs (AFN) resources, including 2-1-1
- **Updated Resource Center (CRC) page**
- **Phase tracker** by address to let customers know where they are in the restoration process
- **Streamlined navigation** to get customers to PSPS resources more quickly
- **Aligned content** with customer vs. partner needs

Current Outage Status:

Power is off !
Current As Of: 05/19/2022, 5:05pm PST

[Get Notifications](#)
[Stay Safe During Outages](#)
[Find Charging, Wifi, & Ice](#)

! **Inspections are underway to ensure it is safe to restore power.** [Close](#)

Start time	May 19 9:00 AM - 11:00 AM
Estimated Restoration	May 20 11:00 PM

Customers Affected 16

Due to high winds and dry conditions, power in your area has been turned off to help prevent a wildfire. Once weather has improved, we will begin inspecting power lines and equipment for possible damage. Power will be restored as soon as it is safe to do so.

- Power Shutoff
Your power is shut off for wildfire safety.
- Inspections and Repairs**
Inspections and repairs are currently being done to ensure safety.
- Power Restored
Your power is now restored.

We are improving our notifications based on feedback received from customers.

2022 IMPROVEMENTS

- **Enhancing notification tools** to improve the accuracy of notifications
- **Improving our processes to confirm resources** are in place two hours ahead of the planned de-energization time
- **Updating our “courtesy policy” notification approach**
- **Updating notification language** to be more specific and highlight 2-1-1 customer resource
- **Refining our outage alert notification tool** to provide more precise updates



2022 CRC Improvements

- **Partnering with accessible transportation agencies** on expanding transportation options to and from CRCs
- **Piloting process for customers to leave medical devices at CRCs** for charging during operating hours
- **Driving increased awareness of CRCs** through pre-season marketing, social media and local radio ads
- **Providing printed materials in large print** in addition to 16 languages and Braille
- **Increasing customer service staff training** to serve visitors with access and functional needs

✓ **112** Indoor Sites

✓ **281** Outdoor Sites

How We Gather Feedback

Solicited feedback on CRC sites from tribes and counties in our service territory

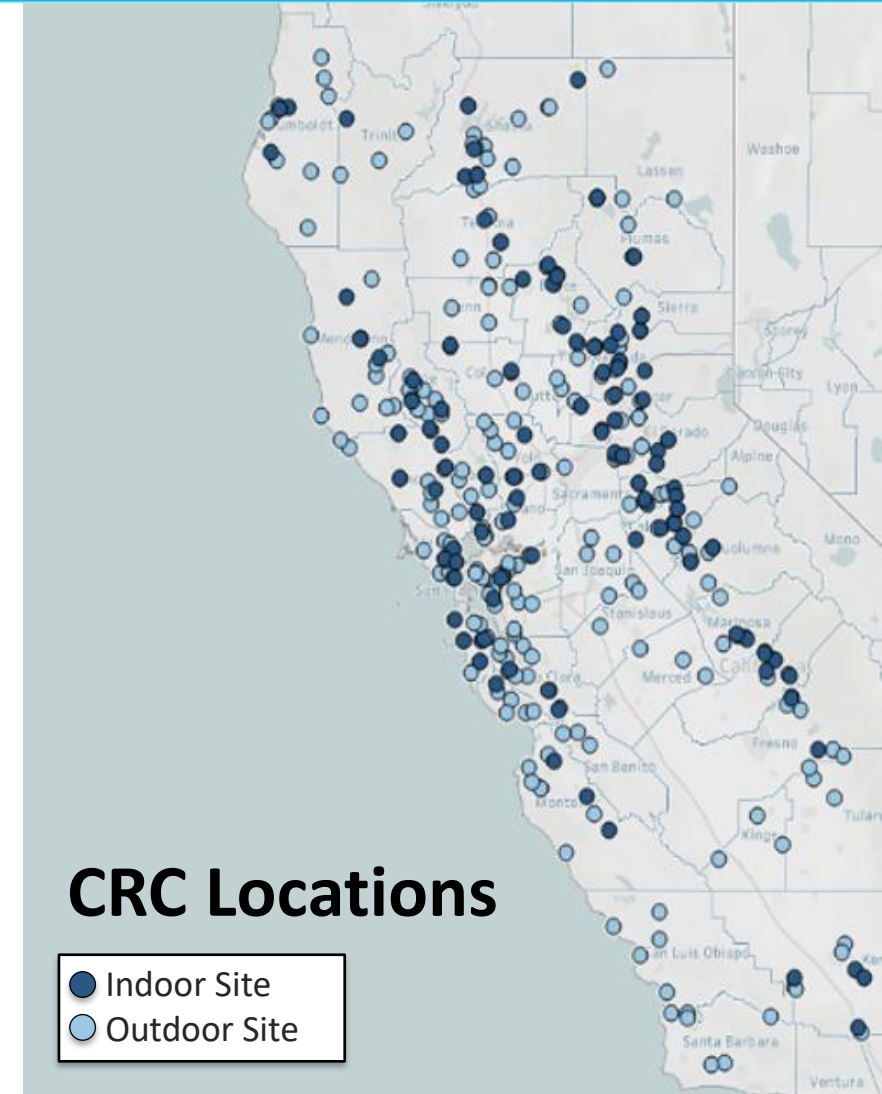
Reviewed portfolio of sites for gaps and opportunities for improvement based on PSPS modeling

CRC Locations and Resources

Details/Resources	Indoor Indoor site (i.e. library, school)	Outdoor Open air tents at outdoor site
COVID-19 Health and Safety Measures	✓	✓
ADA-Accessible Restroom	✓	✓
Heating and Cooling	✓	
Device Charging*	✓	✓
Wi-Fi Service	✓	✓
Bottled Water	✓	✓
Non-Perishable Snacks	✓	✓
“Grab-and-go” resource offerings**	✓	✓
Tables and Chairs	✓	✓
Bagged Ice	✓	
Blankets	✓	✓
Security Personnel	✓	✓
Cellular Coverage	✓	✓
Customer Service Staff	✓	✓
Wind/Weather-Resistant	✓	
Privacy Screens	✓	

* Medical device charging will be prioritized in times of high demand

** Grab-and-go bag contains device charger, water, snack, blanket and info card



Standard operating hours at all CRCs: **8 AM - 10 PM**

Enhanced Powerline Safety Settings





EPSS Year-To-Date Progress

CUSTOMERS PROTECTED	MILES PROTECTED	CIRCUITS PROTECTED	DAYS OF PROTECTION	OUTAGES RESTORED	AVG. OUTAGE LENGTH	CUSTOMERS ON AVG. IMPACTED PER OUTAGE	UNIQUE CUSTOMERS IMPACTED
1.8M+ Customers	~44.3K Miles	1,015 Circuits	148 Days YTD	861 Outages	~3.2 HRS Average (52% better than 2021)	~873 Customers	~466K Customers

CIRCUITS EXPERIENCING:	0 outages: 607 (60%)	1 outage: 206 (20%)	2 outages: 91 (9%)	3 or more outages: 111 (11%)
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Data as of July 21, 2022

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Thank You



Appendix



Lessons Learned from the full-scale exercise on 6/13 – 6/17

What Worked Well

> System-Wide Event

- 40 counties
- 18 PG&E Divisions
- 400K+ customers

> Partnership: External partner engagement including 48 external contributors from 14 partner agencies. Partners included

- Cal OES
- California Department of Water Resources
- SCE
- 194 external observers

> Complexity: Addition of a wildfire incident overlying the PSPS to add realistic stress and challenge to the response

Education and Preparedness

> Enhancing the ability of the PSPS viewer

> Refining the restoration playbook

> Improving pre-and in-exercise communications



Expanding Resource Partnerships for Vulnerable Customers

We have expanded our support for customers with Access and Functional Needs, with more partnerships and resources.

PROGRAM	PLACES/SERVICES INCLUDED	COUNTIES SERVED
> California Foundation for Independent Living Centers (CFILC)	16 Centers	48 Served
> Meals on Wheels	26 Organizations	22 Served
> Food Banks	22 Organizations	37 Served
> Portable Battery Program Providers	6 Providers	42 Served
> In-Language and Additional Partnerships	12 Services	21 Served



Providing More Support For Vulnerable Customers During a PSPS

Medical Baseline Program (MBL)

Assists residential customers who rely on power for certain medical needs.

If customers don't qualify for MBL

Vulnerable Customer Status (VCS)

Customers that have an individual in the household with a serious illness or condition that could become life threatening if service is disconnected can self-certify.

If customers don't qualify for VCS

Electricity Dependent

Customers who are at an increased risk of harm to their health, safety and independence during a PSPS, can self-identify.

Additional PSPS notifications and doorbell rings

Medical Baseline Healthcare Outreach

PG&E recognizes that ongoing engagement with healthcare practitioners, medical associations, and medical device suppliers is a key opportunity to increase enrollment in the Medical Baseline Program.

- PG&E, SCE, SDG&E and SoCalGas provided an **Annual MBL Training to In Home Support Services Providers (IHSS)** and provided online MBL resources
- PG&E, SCE, and SDG&E presented a **webinar to the Hospital Association** which included information on PSPS, MBL and other resources
- PG&E also engaged with the following **healthcare industry and durable medical equipment partners**:
 - Plumas District Hospital
 - California Association of Health Facilities (CAHF)
 - Marysville Medical Clinic
 - CA Physicians' Assistant Board
 - Owens HealthCare and Durable Medical Equipment Company
 - We Care Home Assistants LLC



EXHIBIT 11



Search example: How can I reduce my bill? SEARCH

[Home](#) > [Consumer Support](#) > [Power Shutoff Planning](#)

Utility Public Safety Power Shutoff Plans (De-Energization)

Utilities may temporarily turn off power to specific areas to reduce the risk of fires caused by electric infrastructure. This action is called a Public Safety Power Shutoff (PSPS) or “de-energization.”

i Looking for information on power outages? Visit our [Power Outage Maps](#) page.

POWER SHUTOFF PLANNING

[Consumer Protections and Resources for Wildfire Victims](#)

[Evolution of PSPS Guidelines](#)

[Potential Impacts on Telephone Service during De-Energization](#)

[Public Safety Power Shutoff PSPS FAQs](#)

[Technosylva 2019 PSPS Event Wildfire Risk Analysis Reports](#)

[Utility Company PSPS Reports: Post-Event, Post-Season and Pre-Season](#)

PUBLIC ADVISOR'S OFFICE

public.advisor@cpuc.ca.gov

CPUC, Public Advisor's Office

505 Van Ness Ave.

San Francisco, CA 94102

PSPS RESOURCES

[The Power of Being Prepared](#)

[CAL FIRE - Ready for Wildfire](#)

[Cal OES - Governor's Office of Emergency Services](#)

[Info on the Self-Generation Incentive Program](#)

UPCOMING EVENTS ^

Public Briefings on Utility Preparedness for 2022 Public Safety Power Shutoffs

The California Public Utilities Commission (CPUC), in ongoing efforts to hold utilities accountable for executing safe and appropriate Public Safety Power Shutoff (PSPS) events, is requiring the state’s electric utilities to publicly present on their preparedness for PSPS events in 2022 at two virtual briefings, as follows:

WHEN:

- **August 1, 2022, 1- 5 p.m.:** Southern California Edison (SCE), San Diego Gas & Electric (SDG&E), and Bear Valley Electric Service
- **August 2, 2022, 9 a.m.- 1 p.m.:** Pacific Gas and Electric Company (PG&E), PacifiCorp, and Liberty Utilities

WHAT: The electric utilities will provide updates on the status of preparation efforts and coordination with public safety partners, critical infrastructure and facilities, and customers, including those most vulnerable or with access and functional needs. The utilities will present on efforts to mitigate customer impacts and will identify changes to processes or operations in 2022 based on lessons learned.

WHY: The CPUC is requiring the electric utilities to publicly present on their preparedness for PSPS events in 2022. The CPUC oversees the utilities’ preparation for and execution of PSPS events and has been driving the utilities to improve in response to lessons learned from previous PSPS events. The electric utilities submitted [2022 PSPS Pre-Season reports](#) to the CPUC on July 1, 2022. The reports included specific plans for Community Resource Centers, critical facilities, PSPS exercises, education and outreach-related surveys and accessibility efforts, notifications, highest risk circuits, and identified lessons learned from 2021.

WHERE: Access each briefing virtually via webcast or phone, as follows:

- Live video broadcast with English or Spanish captions via webcast: www.adminmonitor.com/ca/cpuc
 - Participants who choose to view via webcast will have audio and video, but will not be able to make verbal comment. If you would like to make comments during the briefings, refer to the phone-in information below.

- For captions, after clicking on the name of the briefing, click the green button below the video for captions. Then select captions by clicking on the white icon next to the word “live” at the bottom of the video.
- The briefings will be recorded and archived for future viewing.
- Phone (English): 800-857-1917, passcode: 6032788#
 - Participants will have audio (in English) and will be able to make comments.

Meeting Documents

- [Media Advisory](#)
- [Agenda - Day 1](#)
 - [Bear Valley Electric Service Presentation](#)
 - [SCE Presentation](#)
 - [SDG&E Presentation](#)
- [Agenda - Day 2](#)
 - [Liberty Utilities Presentation](#)
 - [PacifiCorp Presentation](#)
 - [PG&E Presentation](#)

Electric Utility 2022 Staff Briefings for Public Safety Power Shutoffs (PSPS) Preparation

Utilities presented Staff Briefings to CPUC staff in July 2022 on their preparedness for PSPS events. The six electric utilities that provide power in California presented their preparation plans to CPUC staff. These Staff Briefings will inform the utilities' Public Briefings on August 1 and August 2, 2022.

SCE Preparations for PSPS

[Staff Briefing Presentation](#)

PG&E Preparations for PSPS

[Staff Briefing Presentation](#)

SDG&E Preparations for PSPS

[Staff Briefing Presentation](#)

SMJU (PacifiCorp, Liberty, Bear Valley) Preparations for PSPS

[Staff Briefing Presentation – PacifiCorp](#)

[Staff Briefing Presentation- Liberty Utilities](#)

[Staff Briefing Presentation- Bear Valley](#)

PAST EVENTS 

PSPS PREPARATION

Electric Utility 2021 Staff Briefings for Public Safety Power Shutoffs (PSPS) Preparation

Utilities presented Staff Briefings to CPUC staff in June/July 2021 on their preparedness for PSPS events. Six electric utilities provide power in California. Five of the six utilities presented their plans to the CPUC staff in Staff Briefing #1. Following that briefing, utilities responded to staff data requests in Staff Briefing #2.

PG&E Preparations for PSPS

[Staff Briefing #1](#)

[Staff Briefing #2](#)

SDG&E Preparations for PSPS

[Staff Briefing #1](#)

[Staff Briefing #2](#)

SMJU (PacifiCorp, Liberty, Bear Valley) Preparations for PSPS

[Staff Briefing #1](#)

[Staff Briefing #2](#)

Electric Utility 2020 Planning for Public Safety Power Shutoffs (PSPS)

Pacific Gas and Electric Company (PG&E)'s biweekly reports on PSPS preparation as ordered by President Batjer in a January 30, 2020 [ruling](#) are filed in the Commission's rulemaking addressing de-energization for all electric utilities. Visit the [Docket Card \(R.18-12-005\)](#) to view PG&E's biweekly reports (and other proceeding documents) and make comment on the proceeding.

- [Pacific Gas and Electric Public Safety Power Shutoffs Webpage](#)
 - [Updates](#)
- [Southern California Edison Public Safety Power Shutoffs Webpage](#)
 - [2020 PSPS Preparation Presentation](#)
- [San Diego Gas & Electric Public Safety Power Shutoffs Webpage](#)
 - [2020 PSPS Preparation Presentation](#)
- [Bear Valley Electric Service Public Safety Power Shutoffs Webpage](#)
 - [2020 PSPS Preparation Presentation](#)
- [Liberty Utilities Wildfire Mitigation Page](#)
 - [2020 PSPS Preparation Presentation](#)
- [PacifiCorp California Public Safety Power Shutoffs Webpage](#)
 - [California 2020 PSPS Preparation Presentation](#)

History and Background

Over the last decade, California has experienced increased, intense, and record-breaking wildfires in Northern and Southern California. These fires have resulted in a devastating loss of life and billions of dollars in property and infrastructure damage. Electric utility infrastructure has historically been responsible for less than 10% of reported wildfires. However, fires attributed to power lines consist of roughly half of California history's most destructive fires. With the continuing threat of wildfire, utilities may proactively cut power to electrical lines that may fail in certain weather conditions. Such power cuts reduce the risk of their infrastructure to cause or contribute to a wildfire. This effort is called a Public Safety Power Shutoff (PSPS). However, a PSPS can leave communities and essential facilities without power, which brings its own risks and hardships, particularly for vulnerable communities and individuals. From 2013 to the end of 2019, California experienced over 57,000 wildfires (averaging 8,000 per year), and the three large energy companies conducted 33 PSPS de-energizations.

In 2012, we ruled that California Public Utilities Code Sections 451 and 399.2(a) give electric utilities authority to shut off the electric power to protect public safety. This allows the energy companies (SDG&E, PG&E, SCE, Liberty, Bear Valley, and PacifiCorp) to shut off power to prevent fires when strong winds, heat events, and related conditions are present.

In 2017, fires raged in Santa Rosa, Los Angeles, and Ventura, making it one of California's most devastating wildfire seasons. In response to the 2017 wildfires and Senate Bill (SB) 901, we revised earlier guidelines on the de-energization of power lines and adopted the most current set of PSPS guidelines on June 24, 2021 in Decision [\(D.\) 21-06-034](#).

RELATED INFORMATION

August 31, 2021: President Batjer's letter to [PG&E, SCE, and SDG&E](#) and [SMJUs](#) re: August 2021 Public Safety Power Shutoff Public Briefings

- September 16, 2021: [PG&E's Response Letter](#)
- September 16, 2021: [SCE's Response Letter](#)
- September 16, 2021: [SDG&E's Response Letter](#)
- September 16, 2021: [BVES's Response Letter](#)
- September 16, 2021: [Liberty Utilities Response Letter](#)
- September 16, 2021: [Pacific Power's Response Letter](#)

June 25, 2021: [Executive Director's Letter to PG&E](#) re: Implementation of Tree Overstrike Criteria

PRIOR ACTIONS

[Jun. 28, 2021: CPUC Executive Director letter to PG&E on Tree Overstrike](#)

[Jun. 24, 2021: CPUC Issues Additional Guidelines and Rules in Continual Improvements to Utility Execution of Public Safety Power Shutoffs](#)

[Feb. 12, 2021: SCE's Correction Action Plan](#)

[Feb. 19, 2021: CPUC Proposes Additional Guidelines for Utilities To Minimize the Impact of Public Safety Power Shutoffs](#)

[Jan. 22, 2021: SCE Reply Letter to President Batjer](#)

[Jan. 19, 2021: CPUC To Hold Meeting on Jan. 26 To Hear From SCE About Execution of Recent PSPS Events](#)

[Jan. 19, 2021: CPUC President Marybel Batjer letter to SCE re: 2020 PSPS Events](#)

[Jan. 14, 2021: CPUC Adopts Strategies To Help Facilitate Commercialization of Microgrids Statewide](#)

[Sept. 8, 2020: PG&E Response Letter Appendix - Community Resource Centers and Supplemental Information](#)

[Sept. 8, 2020: PG&E Response Letter](#)

[Sept. 8, 2020: SCE Response Letter](#)

[Sept. 8, 2020: SDG&E Response Letter](#)

[Aug. 27, 2020: President Batjer Follow-Up Letter to PG&E, SCE, and SDG&E on Utility PPS Public Briefings](#)

[Apr. 30, 2020: SED served a copy of its Public Report on the Late 2019 PPS Events to the service list of I.19-11-013](#)

[Nov. 1, 2019: Consumer Protections and Resources for Wildfire Victims](#)

HOW CAN WE HELP?

Emergency? **Call 911**

File a Complaint

MORE INFORMATION

Consumer Support

Regulatory Services

Industries and Topics

CALIFORNIA STATE CAMPAIGNS

Register to Vote

Save our Water

Flex Alert

[Late Bill Assistance](#)

[Power Outage Map](#)

[Are you in a high fire-threat area?](#)

[Financial Assistance](#)

[Consumer Programs and Services](#)

[Electric Rate Comparison Website](#)

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Case Name: **GANTNER v. PG&E
CORPORATION**

Case Number: **S273340**

Lower Court Case Number:

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2. My email address used to e-serve: **onasab@cravath.com**
3. I served by email a copy of the following document(s) indicated below:

Title(s) of papers e-served:

Filing Type	Document Title
MOTION	2022.08.31 - PGE Mot. for Judicial Notice

Service Recipients:

Person Served	Email Address	Type	Date / Time
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Kyle O'malley Phillips Erlewine Given & Carlin, LLP 330184	kpo@phillaw.com	e-Serve	8/31/2022 3:48:04 PM
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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

8/31/2022

Date

/s/Robert Zwillich

Signature

Nasab, Omid (4499356)

Last Name, First Name (PNum)

Cravath, Swaine & Moore LLP

Law Firm