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**FILED**

JAN 28 2019

SUSAN Y. SOONG *Sh*  
CLERK, U.S. DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA,  
  
Plaintiff,  
  
v.  
  
PACIFIC GAS AND ELECTRIC  
COMPANY,  
  
Defendant.

3:14-cr-00175-WHA

**CALIFORNIA DEPARTMENT OF  
FORESTRY AND FIRE PROTECTION'S  
SUBMISSION IN RESPONSE TO  
COURT'S JANUARY 9, 2019, REQUEST  
[Dkt. 961]**

1       **CAL FIRE'S INFORMATIONAL RESPONSE TO REQUESTS FOR INFORMATION**  
2       **IN JANUARY 9, 2019, ORDER TO SHOW CAUSE**

3           On January 9, 2019, the Court invited the California Department of Forestry and Fire  
4       Protection (CAL FIRE) to submit information to the Court in this matter. Specifically, the Court  
5       requested input from CAL FIRE concerning (1) "its investigation into the specifics of wildfires  
6       caused by PG&E," and (2) "what operating restrictions going forward might be adopted by the  
7       court as a condition of [PG&E's] probation to maximize the safety of California."

8           CAL FIRE provides this submission in an effort to assist the Court. In making this  
9       submission invited by the Court, as a non-party to this proceeding, CAL FIRE intends to preserve  
10      and does not waive its, or any other State agency's, Eleventh Amendment immunity. Because the  
11      California Constitution creates a structure of divided executive power, each agency of the State  
12      acts on behalf of the State within its own statutory and regulatory authority. *See Marine Forests*  
13      *Soc. v. Cal. Coastal Comm'n*, 36 Cal. 4th 1, 31 (2005); *People ex rel Lockyer v. Superior Court*,  
14      122 Cal. App. 4th 1060, 1078-80 (2004). CAL FIRE's submission is, thus, made solely on its  
15      own behalf, and this submission reflects the views of CAL FIRE alone and not any other state  
16      agency.

17      **I. CAL FIRE'S INVESTIGATIONS INTO THE SPECIFICS OF WILDFIRES CAUSED BY PG&E**

18           **A. CAL FIRE's Role and Attendant Limitations on the Analysis of PG&E-**  
19           **Caused Wildfires in This Submission**

20           CAL FIRE's mission is to serve and safeguard the people and protect the property and  
21      resources of California. It does so through fire suppression activities in State Responsibility  
22      Areas (SRAs), assisting local agencies and property owners in fire safe planning, enforcing state  
23      fire laws, and managing California's forest resources. When a fire originates in a SRA, CAL  
24      FIRE also investigates its origin and cause.

25           CAL FIRE's origin and cause investigations are largely confined to fires that originate in  
26      SRAs. Fire investigations and the conclusions drawn from them may be recorded in a simple  
27      two-page origin and cause form report completed by a company officer on a CAL FIRE engine  
28      dispatched to a wildland fire. Investigations might also result in a more complex report

1 completed by one or more specially trained CAL FIRE investigators. The type of fire  
2 investigation report prepared depends on the size, complexity, and destructiveness of the wildland  
3 fire.

4 In response to the Court's question regarding the specifics of wildfires caused by PG&E,  
5 CAL FIRE reviewed investigation reports from approximately September 2010, the date of the  
6 San Bruno incident, through December 31, 2018, in which PG&E was determined to be a  
7 responsible party.<sup>1</sup> CAL FIRE limited its review to Northern California origin and cause  
8 investigation reports,<sup>2</sup> and therefore this review may not represent an exhaustive analysis of all  
9 wildland fires caused by PG&E during that time period.

#### 10 **B. CAL FIRE's Analysis of PG&E-Caused Wildfires**

11 On average, CAL FIRE addresses approximately 3,000 fires in the SRA each year. While  
12 utility-caused fires are not the most common fire cause, these fires can be significantly more  
13 destructive than more common types of fires because they often ignite in rural or remote locations  
14 with limited fire suppression access that are populated with dry fuels, like grasses and shrubs.  
15 Through its review of electrical fires originating in Northern California between September 2010  
16 and December 2018, CAL FIRE determined that the vast majority of PG&E-caused fires in this  
17 time period fall into three main categories: vegetation/powerline contact, equipment malfunction,  
18 and conductor failures.

19 Approximately one-third of wildland fires caused by PG&E were the result of vegetation  
20 (such as a tree trunk or branch) coming into contact with a powerline. The circumstances that  
21 lead to these types of fires would include trees that grow into powerlines, trees that lean into  
22

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23 <sup>1</sup> CAL FIRE does not maintain its fire investigation reports organized by responsible  
24 party, and as an agency of statewide jurisdiction, its records are voluminous. In order to timely  
25 respond to the Court's January 9, invitation, CAL FIRE limited the search of its records for  
26 PG&E-caused fires to an approximately eight-year period in Northern California only.

27 <sup>2</sup> PG&E's reach is not limited to Northern California, but in an effort to efficiently  
28 respond to the Court's request, CAL FIRE focused its review in Northern California, where  
PG&E's presence is more concentrated. Based on its knowledge of powerline-related, and  
specifically, PG&E-caused fires, CAL FIRE does not believe that a broader review would  
significantly change the general conclusions presented to the Court regarding the three main  
sources of PG&E-caused fires.

1 powerlines, and branches that break off of trees near or overhanging the powerlines.<sup>3</sup> Among  
2 other things, the contact between vegetation and the powerline conductors creates hot and burning  
3 embers, sparks, or hot molten materials, which can ignite the vegetation on the line or fall into a  
4 receptive fuel bed below the line.

5 Equipment malfunction on a PG&E powerline was the second leading cause of PG&E-  
6 caused wildland fires. "Equipment" for these purposes includes any component with a charge,  
7 and this category includes failures of insulators, fuses, transformers, switches, cross arms, clamps,  
8 or reclosers that drop sparks, molten metal or other hot materials onto vegetation, which ignites a  
9 wildland fire.

10 The third major cause of PG&E-related wildland fires was conductor failures. This  
11 includes sagging, swaying, or broken lines, spliced lines, and "line slap." Swaying, sagging, or  
12 broken lines and failed powerline splices allow the energized powerline to break or droop and  
13 come into contact with flammable material underneath or alongside the powerline. Line slap  
14 occurs when the two energized lines either actually touch each other or come close enough to  
15 each other to cause an electrical arc. The arcing then causes hot sparks or molten metal to drop to  
16 the ground. If the sparks or molten metal land in a receptive fuel bed, they can start a wildland  
17 fire.

18 Other causes of PG&E-related fires included animal activity (e.g., animals nesting on wires  
19 or contacting two wires and causing an electrical arc, described above), vehicles (e.g., vehicle  
20 strikes a power pole, which causes the pole to fall), and faulty service drops (an overhead electric  
21 line between the utility pole and a customer). In some instances, the CAL FIRE investigation  
22 report did not pinpoint the precise cause of a PG&E-related fire, leading to an "undetermined"  
23 cause conclusion.

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<sup>3</sup> This mechanism of ignition does not include broken or downed lines that ignite  
vegetation beneath the lines.

1 **II. BACKGROUND INFORMATION FOR THE COURT'S CONSIDERATION IN CRAFTING**  
2 **OPERATING RESTRICTIONS THAT COULD BE ADOPTED BY THE COURT AS A**  
3 **CONDITION OF PG&E'S PROBATION**

4 In addition to seeking information about CAL FIRE's conclusions in its investigations of  
5 PG&E-related fires, the Court asked CAL FIRE to comment "on what operating restrictions  
6 going forward might be adopted by the Court as a condition of probation to maximize the safety  
7 of California." In an effort to aid the Court, CAL FIRE below provides a summary overview of  
8 current California law regulating the operation of utilities to prevent fires and ongoing, state and  
9 regulatory proceedings that impact utilities and seek to mitigate utility-caused wildfires.

10 California regulates the operation of utilities to prevent fires in numerous ways, including  
11 by statute and regulation, as well as by General Orders issued by the California Public Utilities  
12 Commission (CPUC).<sup>4</sup> California's Public Resources Code sets out specific clearance  
13 requirements in SRAs, specifically in Sections 4292 and 4293. Section 4293 details the clearance  
14 requirements for electrical transmission and distribution lines of varying voltages, and describes  
15 the distances that must be maintained between "all vegetation and all conductors which are  
16 carrying electric current." Cal. Pub. Res. Code § 4293. The specific clearance requirements  
17 depend on the voltage of the line. *Id.* Section 4293 also requires that utilities trim or remove all  
18 trees (or portions of trees) that are dead, rotting, weakened by decay or disease, or leaning toward  
19 the line, and that may contact the line by growing or falling into it. *Id.* Section 4292 sets forth  
20 similar clearance requirements for the poles and towers that support electrical transmission and  
21 distribution lines and support various types of electrical equipment. *Id.* § 4292.

22 CAL FIRE's regulations further detail when and where the clearance requirements apply.  
23 *See* Cal. Code Regs. tit. 14, §§ 1250-58. These regulations provide additional detail regarding  
24 how to comply with the clearance requirements of Sections 4292 and 4293. *See id.* §§ 1254-57.  
25 They also specifically point to the Power Line Fire Prevention Field Guide, a publication that

26 <sup>4</sup> CAL FIRE focuses this part of its response on statutes, regulations, and orders that  
27 specifically bear on operation of utilities, and does not address generally applicable statutes  
28 intended to prevent the start and spread of wildfires. *See, e.g.,* Cal. Health & Safety Code §  
13001 (prohibiting placement of any substance which may cause a fire into a place where it could  
start a fire); Cal. Pub. Res. Code § 4421 (a person shall not set fire to the land of another without  
permission).

1 contains additional guidance for utility fire prevention.<sup>5</sup> The Power Line Fire Prevention Field  
 2 Guide describes various conditions warranting special attention including “hazard trees” and the  
 3 condition of roots, trunks and limbs of nearby trees. Similarly, CAL FIRE regularly participates  
 4 in updates to guidance documents that identify wildfire risk priorities, including California’s  
 5 Strategic Fire Plan<sup>6</sup> and the 2018 State Hazard Mitigation Plan.<sup>7</sup>

6 The CPUC has authority under the Public Utilities Code to regulate public utilities,  
 7 including requiring them to construct, maintain, and operate their facilities and equipment in a  
 8 safe and reasonable manner. Cal. Pub. Util. Code §§ 451, 701, 768, 8386; *see also* Cal. Const.  
 9 art. XII. It issued General Order 95 (GO 95) to provide uniform requirements for construction,  
 10 operation, and use of overhead electrical transmission and distribution lines. Rule 35 of GO 95  
 11 indicates that GO 95 requires that utilities conduct vegetation management activities to ensure the  
 12 clearance required under the law. GO 95 describes additional limitations on utility practices and  
 13 details additional fire prevention and mitigation measures that utilities can take.

14 CAL FIRE has historically worked in collaboration with the CPUC in a number of  
 15 processes that relate to wildfire mitigation. In recent years, fires have become increasingly  
 16 destructive due to myriad factors, including climate change and increased development in  
 17 wildland areas. To address this increased risk and facilitate close collaboration, CAL FIRE  
 18 entered into a Memorandum of Understanding (MOU) with the CPUC to enhance cooperation  
 19 between CAL FIRE and the CPUC to develop consistent approaches to forest management,  
 20 wildfire prevention, public safety, and energy programs. An area in which CAL FIRE and the  
 21 CPUC have collaborated is the creation and use of state-wide fire maps that identify areas of  
 22 significant fire hazards based on fuels, terrain, weather, and other relevant factors, including

23 <sup>5</sup> The Power Line Fire Prevention Guide is available online at  
 24 <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf>.

25 <sup>6</sup> The 2018 Strategic Fire Plan (updated August 22, 2018) identifies priorities for CAL  
 26 FIRE including evaluating wildfire risk, working with property owners and local governments to  
 27 plan for and mitigate those risks, and determining resource needs to respond to fire outbreaks. It  
 28 is available online at <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf>.

<sup>7</sup> Chapter 8 of the Office of Emergency Services’ (Cal OES) 2018 State Hazard Mitigation  
 Plan addresses fire hazard risk assessment and mitigation, including a description of the various  
 mitigation efforts developed in recent years as well as progress in implementation. It is available  
 online at [https://www.caloes.ca.gov/HazardMitigationSite/Documents/011-  
 2018%20SHMP\\_FINAL\\_Ch%208.pdf](https://www.caloes.ca.gov/HazardMitigationSite/Documents/011-2018%20SHMP_FINAL_Ch%208.pdf).

1 historical powerline-caused fires. CAL FIRE updates the underlying maps annually to provide  
2 more accurate map zone designations, based on new data, science, and technology, which allows  
3 for implementation of enhanced mitigation strategies in high-risk areas. The CPUC, in turn, used  
4 CAL FIRE's maps to support regulations that require additional maintenance by utilities in the  
5 high-fire-threat zones, including clearance requirements, and enhanced vegetation management  
6 and patrols.

7 Beginning in 2017, utilities were required to prepare and submit wildfire mitigation plans,  
8 and requirements for those plans were made more rigorous through legislation signed into law  
9 last year. On October 25, 2018, the CPUC initiated a proceeding to review the initial plans  
10 submitted by utilities, and to develop standards for future plans to ensure the plans reduce the risk  
11 of wildfires. The CPUC invited all affected stakeholders, including local governments,  
12 landowners, and others, to participate in this process.<sup>8</sup>

13 CAL FIRE has committed to providing long-term substantive input to the CPUC in that  
14 process, including review of the utility-submitted wildfire mitigation plans, and assistance with  
15 developing criteria and standards for utility wildfire mitigation plans and best practices of design  
16 and operation for the purposes of fire mitigation. This input will be consistent with CAL FIRE's  
17 work to implement Governor Newsom's Executive Order N-05-19, which directs CAL FIRE to  
18 work with other agencies to develop recommendations for administrative, regulatory and policy  
19 changes to prevent and mitigate future wildfires. These recommendations will include a  
20 methodology to assess communities that are at greatest risk of wildfires, including consideration  
21 of socioeconomic factors and vulnerable populations, and projects that would reduce this risk.

22 The CPUC adopted guidelines in July 2018 that govern utility power shut-off, or de-  
23 energization, events, including enhanced customer notification requirements and engagement  
24 with local communities to define programs for de-energization events, and is conducting

25 <sup>8</sup>On January 17, 2019, the template wildfire mitigation plan was adopted, and ten California  
26 utilities, including PG&E, will, by February 6, 2019, submit their wildfire mitigation plans based  
27 on the recently approved template. These plans will be reviewed by CAL FIRE and CPUC staff  
28 and likely approved by CPUC by early in the 2019 fire season.

1 workshops to examine potential impacts of de-energization events. Consistent with the purpose  
2 of these guidelines, CAL FIRE, the CPUC, and Cal OES recently partnered to communicate their  
3 expectations of utilities in the event of preemptive power shut-offs in an October 2018 letter to  
4 the State's three major utilities.<sup>9</sup> These expectations include provision of specific information  
5 from the State's major utilities before, during, and after shut-off events, as well as information  
6 relevant to critical impacted customers, such as hospitals, fire stations, police stations,  
7 water/irrigation districts, waste water treatment plants, telecommunication facilities, and schools.  
8 Provision of such information by PG&E, consistent with the foregoing, is important to public  
9 safety.

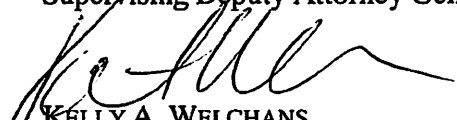
10 **CONCLUSION**

11 As reflected above, the causes and contributors to fires are varied and complex, and  
12 prevention requires cooperation of multiple actors. Processes are currently underway in various  
13 state forums to evaluate the alignment of prevention resources and priorities, particularly those  
14 involving utilities. CAL FIRE will continue to provide its expertise and assistance in those state  
15 forums, and appreciates the Court's invitation to provide information to assist the Court's  
16 evaluation of the issues presented in this matter.

17  
18 Dated: January 25, 2019

Respectfully Submitted,

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20 Attorney General of California  
21 TRACY L. WINSOR  
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26 Fire Protection*

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<sup>9</sup> A copy of the October 26, 2018, joint letter is available online at  
[http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/About\\_Us/10.26.18%20-%20Joint%20Letter%20to%20Utilities%20re%20Public%20Safety%20Power%20Shut-off.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/10.26.18%20-%20Joint%20Letter%20to%20Utilities%20re%20Public%20Safety%20Power%20Shut-off.pdf).



## CERTIFICATE OF SERVICE

Case Name: *United States of America v.  
Pacific Gas and Electric  
Company*

No. *United States District Court,  
Northern District  
No. 3:14-CR-00175-WHA*

I hereby certify that on January 25, 2019, I electronically filed the following documents with the Clerk of the Court by using the CM/ECF system:

**CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION'S  
SUBMISSION IN RESPONSE TO COURT'S JANUARY 9, 2019, REQUEST  
[Dkt. 961]**

Participants in the case who are registered CM/ECF users will be served by the CM/ECF system.

I am employed in the Office of the Attorney General, which is the office of a member of the California State Bar at which member's direction this service is made. I am 18 years of age or older and not a party to this matter. I am familiar with the business practice at the Office of the Attorney General for collection and processing of correspondence for mailing with the United States Postal Service. In accordance with that practice, correspondence placed in the internal mail collection system at the Office of the Attorney General is deposited with the United States Postal Service with postage thereon fully prepaid that same day in the ordinary course of business.

I further certify that some of the participants in the case are not registered CM/ECF users. On January 25, 2019, I have caused to be mailed in the Office of the Attorney General's internal mail system, the foregoing document(s) by First-Class Mail, postage prepaid, or have dispatched it to a third party commercial carrier for delivery within three (3) calendar days to the following non-CM/ECF participants:

Honorable District Judge William H. Alsup  
Phillip Burton Federal Building  
& United States Courthouse  
450 Golden Gate Avenue  
San Francisco, CA 94102

*Courtesy Copy for Judge Alsup*

I declare under penalty of perjury under the laws of the State of California the foregoing is true and correct and that this declaration was executed on January 25, 2019, at Sacramento, California.

Rochelle Uda-Quillen  
Declarant

/s/ Rochelle UdaQuillen  
Signature