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COMPANY

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

v.

PACIFIC GAS AND ELECTRIC COMPANY,

Defendant.

Case No. 14-CR-00175-WHA

**RESPONSE TO QUESTIONS POSED
DURING SEPTEMBER 13, 2021
HEARING**

Judge: Hon. William Alsup

1 Defendant Pacific Gas and Electric Company (“PG&E”) respectfully submits this
2 response to questions posed by the Court during the September 13, 2021 hearing.

3
4 **Question 1:**

5 *The Court requested the “names of all the dispatchers who had anything*
6 *to do with this fire, and transcripts of all of their communications that*
7 *related in any way to this incident.” (9/13/21 Hr’g Tr. at 72:3-5.) The*
8 *Court also asked PG&E “to identify the specific individuals who made*
9 *decisions as to whether or not -- how to respond to this event. For*
10 *example, did anyone specifically consider switching off 941 or remotely*
11 *switching off the reclosers from a distance or asking the people at Rock*
12 *Creek to do the same thing.” (Id. at 72:7-12.)*

13 **PG&E Response:**

14 PG&E has identified several categories of individuals who were involved in the
15 response efforts related to the power outage at Cresta Dam, the reporting of the Dixie Fire, and the
16 opening of switch 941, prior to approximately 5:00 p.m. on July 13, 2021. Those categories of
17 individuals, many of whom have been identified in prior submissions, include roving hydro
18 operators, hydro operators, distribution operators, dispatchers and troublemen. PG&E is continuing
19 its work to identify any other PG&E personnel who may have been involved in the response efforts
20 related to the power outage at Cresta Dam, the reporting of the Dixie Fire, and the opening of
21 switch 941 on the July 13, 2021, prior to approximately 5:00 p.m. The specific individuals in each
22 of these categories that PG&E has identified to date are identified in Exhibit II. Distribution
23 operators have authority to de-energize distribution circuits; hydro operators, roving hydro operators
24 and dispatchers do not.

25 PG&E is attaching transcripts of audio recordings of those communications
26 concerning the outage at the Cresta Dam on July 13, 2021 that PG&E has involving the categories of
27 employees noted above that it has been able to identify and retrieve by the submission deadline.
28 Ex. JJ. PG&E will update its response if it identifies any other responsive audio recordings or
additional employees who were involved in the day-of response efforts.

1 Distribution operators have the decision-making power to de-energize lines, either by
2 requesting a troubleman manually shut off the power by opening a switch, or by shutting off the
3 power to the entire line at the substation remotely. Dispatchers do not have the authority or ability to
4 de-energize power lines. Similarly, hydro operators do not have that authority or ability.

5 PG&E is currently aware of one distribution operator, NDCC Operator #1, who
6 recalls considering prior to approximately 5:00 p.m. on July 13 whether the Bucks Creek 1101 Line
7 should be de-energized on that day. At about 7:21 a.m., NDCC Operator #1 received a call from
8 Hydro Operator #1 reporting the loss of power at the Cresta Dam and explaining that a roving
9 operator had been dispatched to the dam. Ex. JJ-1; see Dkt. 1408 at 3; see *id.* Custodian 2 Decl.
10 (Ex. F) ¶ 7. After learning about the loss of power, NDCC Operator #1 considered whether the line
11 should be de-energized. To make that determination, NDCC Operator #1 reviewed SCADA, saw
12 that the circuit breaker was closed, that the load was good and balanced across all three phases, and
13 that there was no excessive ground current. Further, the Operator knew of no other indication of an
14 emergency—such as an indication of a hazard or fire—that would have caused him to de-energize
15 the line. NDCC Operator #1 concluded that the line did not need to be de-energized. The Operator
16 believes he did not speak with anyone else in making that determination.

17 PG&E is continuing to interview those involved and will update this response if it
18 learns of anyone else who considered whether to switch off the power on the circuit.
19 In the course of reviewing audio recordings from July 13, PG&E has located additional recordings
20 responsive to the Court’s prior request, specifically, several calls the Dixie Troubleman made
21 between 4:55 and 5:16 p.m. on July 13 and discussed in his declarations and live testimony. PG&E
22 has provided a timeline and rough transcripts of those radio calls with this submission. Ex. JJ-14.

23 **Question 2:**

24 *The Court requested “a further declaration from . . . the guy who wrote*
25 *the one about the CPZs”. (9/13/21 Hr’g Tr. at 72:20-22.) The Court*
26 *further stated: “PG&E submitted a declaration to me in which I had*
27 *asked a question about how was this particular line rated. And the answer*
28 *was, well, they rate them according to -- they rate them according to an*
equipment risk and a vegetation risk. And his declaration stated that,

1 according to the previous criteria, this line was rated . . . something like
 2 1300 out of 3300. He did not say, however -- and this is why I want him to
 3 explain himself -- what the current rating was. And elsewhere we have
 4 learned it's rated 11th most dangerous out of 3300. I thought that was
 5 misleading. It's called the Equipment Risk Model, and he goes and on at
 6 length about how it works. And then he says, 'Under an earlier model
 7 used to inform work plans in 2019 and 2020, which used a different
 8 methodology and different vintage of CPZs, the CPZ that encompassed the
 9 span where the tree fell ranked 1,605 out of 3,205.' But he doesn't say
 10 what the current rating is under the model which is currently in use, or the
 11 methodology in use. Or if it's in here, it was so well hidden that I couldn't
 12 find it. So -- but elsewhere the paperwork reveals that it was the 11th
 13 most dangerous circuit. Now, ask yourself, why would somebody want to
 14 conceal that fact? Eleventh most dangerous circuit -- equipment circuit.
 15 So I want that witness -- I won't say his name -- to file a new declaration.
 16 And if it's not satisfactory, we're going to bring him in to explain
 17 himself." (Id. at 72:24-73:25.)

11 PG&E Response:

12 On August 6, 2021, this Court ordered PG&E to identify the "risk ranking" for "the
 13 relevant stretch of the Bucks Circuit." (Dkt. 1415 at 2.) On August 16, 2021, PG&E submitted a
 14 filing to the Court stating that, under PG&E's 2021 Equipment Risk Model, the section of the Bucks
 15 Creek distribution line where the tree fell on the line "was ranked 11 out of 3,635 circuit sections."
 16 (Dkt. 1416 at 9.)¹

17 On August 17, 2021, the Court issued an order asking for additional information
 18 about the #11 ranking that PG&E disclosed in the August 16 filing. In particular, the Court asked
 19 the following question: "The circuit was ranked 11 out of 3,635 circuits with respect to the
 20 Equipment Risk. Please state each reason the circuit received such an elevated risk ranking."

21 On August 25, 2021, PG&E submitted a filing responding to this question.
 22 (Dkt. 1428 at 9-11.) That submission included a declaration from a risk management witness
 23 explaining, in response to the Court's specific question about the ranking of the circuit as 11 out of
 24 3,635, the reasons the circuit had received this elevated Equipment Risk ranking. (Dkt. 1428-8.)

25
 26
 27 ¹ PG&E's submission further stated that the Enhanced Vegetation Tree Weighted Prioritization
 28 Ranking for the relevant section was 568 out of 3,074. *Id.*

1 See Risk Mgmt. Suppl. Decl. ¶ 4. In that declaration, the witness also explained that an earlier risk
 2 model, used in 2019 and 2020, had employed a different methodology and had produced a lower
 3 ranking. Risk Mgmt. Suppl. Decl. ¶ 5.

4 The discussion of the risk ranking under the earlier model was included in the
 5 declaration at PG&E’s suggestion, not the witness’s, and was intended to show how the current
 6 (2021) elevated ranking—which was set forth in the earlier filing and repeated in the Court’s
 7 question—had risen from the ranking the previous year as a result of PG&E’s implementation of
 8 new machine learning models for wildfire risk. *Id.*

9 The inclusion of information on the risk ranking under the earlier model was not
 10 intended to mislead or confuse. PG&E did not view it as necessary to repeat the risk ranking of 11
 11 out of 3,635 in a declaration responding to a question from the Court that already reflected that
 12 ranking based on PG&E’s prior disclosures to the Court. (Dkt. 1428 at 9-11.)

13 **Question 3:**

14 *The Court asked “PG&E to answer that basic question”: “How could you*
 15 *have the 11th most dangerous line in a wildfire district and a fault like this*
 16 *occur and it take so long for somebody to get to the scene to investigate*
 17 *when at least a possibility is that a tree has fallen on the line? Of course,*
 18 *there are innocent explanations, but a possibility, one you could not rule*
 19 *out, was that a tree had fallen on the line and was presenting a fire*
 20 *hazard. So how come it took so long to get somebody there? And once*
 21 *they were there, why wasn’t it the smart thing to do to turn that power off?*
 22 *I believe that the correct answer is it was 2 minutes up the road, not 20.*
 23 *He could have switched that switch off at 941, Switch 941. Now, why*
 24 *wasn’t that done?*

25

26 *“And, in any event, wouldn’t it have been the prudent thing to do to turn*
 27 *that power off in case there was a tree somewhere on the line or some*
 28 *other risk of ignition? It was known there was a fault on the line. You*
 29 *didn’t know what the fault was yet. It was hard to get to in a high-fire-*
 30 *danger area, the 11th most dangerous circuit equipment-wise. And in*
 31 *those circumstances, wouldn’t the prudent thing to have done would be to*
 32 *play it safe, turn the power off until you could find the fault?” (9/13/21*
 33 *Hr’g Tr. at 74:1-14, 74:21-75:5.)*

1 **PG&E Response:**

2 PG&E answers below (a) why it took approximately three hours between when a
3 dispatcher created a tag for the outage at the Cresta Dam and when a troubleman arrived on site at
4 the Dam and (b) PG&E's understanding of why the power was not shut off at that time and whether
5 that was prudent.

6 **Part (a):** PG&E's records show that at 6:48 a.m., the Rock Creek Switching Center
7 ("Control Center") received an automated notification that the power supply was out at the Cresta
8 Dam, but that the stand-by generator was running. Custodian 1 Decl. ¶ 3, Attach. 1 (Ex. E-1).
9 According to his recollection, a roving operator (Roving Operator A) arrived at the Cresta
10 powerhouse at approximately 7:00 a.m., logged in and called the switching center. Roving Operator
11 A spoke with a Rock Creek Hydro Operator, who told him to check the Cresta Dam because the
12 standby generators were running. At 7:21 a.m., the Hydro Operator advised the Control Center that
13 it seemed like the power was lost at the Cresta Dam and that the roving operator had been
14 dispatched. *See* Custodian 2 Decl. (Ex. F) ¶ 7. After Roving Operator A spoke with the Hydro
15 Operator, another roving operator (Roving Operator B) arrived at the Powerhouse, and the two
16 discussed their tasks for the day. Roving Operator A estimates that at approximately 8:30 a.m., the
17 Hydro Operator called the Cresta Powerhouse to confirm whether he had left for Cresta Dam.
18 Roving Operator A confirmed at that time that he was headed for the Cresta Dam and left shortly
19 thereafter. PG&E records indicate that Roving Operator A entered the dam at approximately
20 8:45 a.m. and exited at approximately 8:50 a.m. Roving Operator A has recalled that he looked up
21 the line (without binoculars) for a crew that may have turned off the power, but he did not see
22 anyone or see any sign of fire or smoke.

23 At 8:52 a.m., Roving Operator A reported back to the Hydro Operator that the Bucks
24 Creek 1101 circuit was out, lights were out in the nearby tunnel, and that the Cresta Dam station
25 service was out. *See* Custodian 1 Decl. ¶ 3, Attach. 1 (Ex. E-1). Roving Operator A did not report
26 any safety hazards. At 9:07 a.m., the Hydro Operator reported Roving Operator A's observations to
27 the Control Center. Custodian 2 Decl. (Ex. F) ¶ 8.

1 At 9:36 a.m., a dispatcher created a priority 1, non-emergency, field order, or “tag”,
2 which means it was to be addressed the same day it was assigned under our PG&E’s policies.
3 Custodian 2 Decl. ¶ 3, Attach. 1 (Ex. F-1); Dixie Troubleman Decl. (Ex. A) ¶ 2. (By contrast, a
4 priority 0 response, or “timely emergency response” is for immediate safety issues, such as fire, gas
5 leaks, arcing/bare wires, wire down, and other situations requiring immediate response.) The
6 priority 1 tag was assigned to the troubleman in Quincy, CA at 9:39 a.m. Custodian 2 Decl. ¶ 3,
7 Attach. 1 (Ex. F-1). A few minutes later, at 9:42 a.m., the Quincy troubleman responded that the tag
8 should have been assigned to a troubleman in Chico or Paradise. Custodian 2 Decl. (Ex. F) ¶ 9. The
9 tag was reassigned to the Chico troubleman at 10:47 a.m., who reported at 10:53 a.m. that he was
10 en route. Dixie Troubleman Decl. (Ex. A) ¶ 4; Custodian 2 Decl. ¶ 4 (Ex. F). On the way to the
11 Dam, the troubleman addressed another priority one ticket that he had received at 10:28 a.m. Dixie
12 Troubleman Decl. (Ex. A) ¶¶ 3, 5. He then proceeded to the Dam, arriving there at approximately
13 12:30 p.m. *Id.* ¶ 6.

14 **Part (b):** The troubleman testified that, at the time he was at the Cresta Dam—
15 several hours after the dam first lost power—and observed what he thought was a hanging fuse, he
16 saw no signs of a wire down, vegetation on the line, or smoke or other indications of a fire. In the
17 circumstance of an outage without a known cause, PG&E’s policies do not require distribution lines
18 to be de-energized.

19 The Court has asked whether the prudent thing to do would have been to de-energize
20 the Bucks Creek 1101 circuit downstream of Switch 941 at the time the troubleman was at the Cresta
21 Dam since he knew that it would take a significant amount of time to reach the fuses on the adjacent
22 hill. While the troubleman testified that he could not eliminate the possibility that vegetation was on
23 the line, the fact is that outages in HFTDs are extremely common. Indeed, approximately
24 1,125 transformer level and above outages have occurred in HFTDs in PG&E’s territory between
25 May 10, 2021 and July 12, 2021. During that same time period, PG&E’s records indicate that there
26 have been approximately 53 CPUC-reportable ignitions associated with PG&E’s electrical facilities.
27 Any de-energization of circuits carries with it disruption and potential safety issues for customers,
28

1 and PG&E policies at the time of the Dixie Fire did not require (or suggest) that the troubleman or
2 any other involved PG&E employee should de-energize a portion of the line where there were no
3 visible indications of an imminent safety risk or a Red Flag Warning condition.

4 To be sure, PG&E can adopt policies or practices that require or result in more
5 aggressive de-energization of circuits even when there is no indication of a specific safety risk,
6 recognizing the impact that any such policy or practice will have on the delivery of power to its
7 customers. To that end, following the ignition of the Dixie Fire, PG&E implemented additional
8 safety measures for this wildfire season to help reduce the potential for major wildfires in light of the
9 extreme drought conditions and dry vegetation currently occurring throughout California and the
10 potential that the Dixie Fire was caused by the plausible scenario the Court has described.

11 One step PG&E has taken is to adjust the sensitivity settings of protection devices on
12 certain power lines (“Fast Trip Mitigation”) in HFTDs. Fast Trip Mitigation increases the speed at
13 which protective devices will automatically turn off power in the event of a phase or ground fault
14 exceeding minimum to trip thresholds and thereby reducing the potential energy that is released from
15 an arc that is created as a result of certain faults. In addition to detecting faults more quickly, Fast
16 Trip-enabled circuit breakers and line reclosers are being set to respond to qualifying faults with
17 three-phase protection, *i.e.*, to de-energize all three phases where the fault may not have been
18 sufficient to cause all three fuses to operate. Thus far, PG&E has implemented Fast Trip settings on
19 high risk circuit devices across more than 11,500 miles, or approximately 45% of, HFTDs. There
20 have been a total of 279 unplanned outages on Fast Trip-enabled circuits between July 28, 2021 and
21 September 14, 2021. During that same time, there have been only one CPUC-reportable ignition on
22 those Fast Trip-enabled circuits, with no significant wildfires. PG&E believes this program has
23 already prevented ignitions—in that time period, PG&E recorded a total of 20 CPUC-reportable
24 ignitions in HFTDs (both on circuits that are Fast Trip enabled and on circuits that are not). That is
25 an approximate 62% decline from that time period in 2020 when PG&E recorded 52 CPUC-
26 reportable ignitions and 51% decline from that time period in 2018-2020 when PG&E recorded
27 41 CPUC-reportable ignitions on average. PG&E’s current analysis indicates that, had Fast Trip
28

1 Mitigation been implemented at the time of the Dixie Fire, the 6:48 a.m. fault would have tripped the
2 recloser and de-energized all three phases of the line. To the extent the Dixie Fire was started, as the
3 Court suggests, by the fact that the third phase of the Bucks Creek 1101 remained energized
4 following that initial fault event, Fast Trip Mitigation would have prevented that fire.

5 Prior to the Dixie Fire, this technology was being used in circumstances involving
6 “hot line” work; that is, when linesmen were working with live electrical lines. The Fast Trip setting
7 is used in those scenarios as an employee safety measure to minimize the risk of serious injury in the
8 event of grounded contact. Operating the electric system in this configuration on a sustainable basis,
9 as a wildfire safety measure, is atypical for an operator in the industry in PG&E’s experience.
10 Because this is an entirely new safety measure that PG&E developed less than 2 months ago as an
11 innovation to help address new and changing threats posed by extreme drought conditions and the
12 possible cause of the Dixie fire, it is subject to continuing refinement and improvement. While
13 adjusting the settings can make the system safer and help to reduce wildfires, it can also result in
14 more frequent and longer unexpected outages for customers, which raise their own safety issues.
15 Outages are not only more frequent, they are much longer, as crews must patrol the entire circuit, as
16 well as perform any necessary repairs prior to restoring power. The implementation of Fast Trip
17 Mitigation has, in some instances, caused repeated and extensive outages for customers on particular
18 circuits and has become a significant cause of concern for those impacted individuals and
19 organizations. PG&E is working on solutions that can help mitigate these impacts on its customers
20 while maintaining the safety benefits of this new program.

21 For example, to both help mitigate impacts on customers and to reduce potential
22 wildfire risk, PG&E has been targeting for PG&E personnel to respond to outages safely in Tier 2
23 and Tier 3 HFTDs within a goal of 60 minutes to identify and mitigate public safety hazards beyond
24 the outage and also allow for quicker notification and more efficient resource allocation from public
25 agencies. PG&E is continuing to evaluate potential additional mitigations to facilitate improving
26 response rates to attempt to meet this goal.

1 **Question 4:**

2 *The Court stated that the Troubleman testified that “the railroad was also*
3 *a customer. I want you to prove that, and prove that that line was serving*
4 *the railroad; and if it was, in what way it was serving it. And even if it*
5 *was serving it, was that power off to that station, to that customer?”*
6 *(9/13/21 Hr’g Tr. at 74:15-20.)*

7 **PG&E Response:**

8 PG&E’s Electrical Distribution GIS (“EDGIS”) and Customer Care and Billing
9 (“CC&B”) systems indicate that three metered customer locations on the Bucks Creek 1101 Line are
10 located load side of the Bucks Creek substation but source side of Fuse 17733. Because these three
11 locations are located source side of Fuse 17733, the operation of Fuse 17733 would not be expected
12 to de-energize these locations. PG&E’s CC&B database indicates that the customer for each of
13 these three metered locations is the same railroad company.

14 The EDGIS system indicates that one of these metered locations is load side of
15 Switch 941 (“Meter 1010241169”); in other words, opening Switch 941 would be expected to shut
16 off power from the Bucks Creek substation to Meter 1010241169. The “business activity” field in
17 the CC&B database is listed as “signal lights.”

18 The CC&B database further indicates PG&E has provided electrical service to this
19 metered location since August 1997 and that payment on the account was current as of the Dixie
20 Fire, with PG&E last receiving payment on July 7, 2021 for a bill dated July 1, 2021. Those records
21 show that the meter was read most recently in December 2020, and that for several months before
22 and after that reading, the railroad’s bill was calculated based on estimates (subject to any proper
23 adjustments in light of actual meter readings). The CC&B database further indicates that PG&E has
24 not charged to date for usage at Meter 1010241169 after July 1, 2021 because the location is
25 associated with the Dixie Fire.

26 In response to the Court’s question whether power was turned off to
27 Meter 1010241169, PG&E has not yet been able to locate records that log that location’s electrical
28 use on July 13. PG&E’s records indicate that Switch 941 was opened at the request of CAL FIRE at

1 approximately 2030 PDT on July 13 and that the entire Bucks Creek 1101 Line was de-energized on
2 July 14. PG&E has not located any record of a notification by the railroad of a loss of power at any
3 of any of its locations on the Bucks Creek 1101 Line prior to either of these actions.² While the
4 CC&B database indicates that a new SmartMeter was installed at that location on June 9, 2017,
5 SmartMeters rely on cell service to communicate with PG&E’s network while in the field, and
6 PG&E’s records do not indicate that Meter 1010241169 connected to the PG&E network since it
7 was installed. PG&E has not yet been able to access usage data from the device or to locate any
8 other data showing whether or when Meter 1010241169 was using electricity on July 13, 2021.³

9 A PG&E employee recalls that PG&E and PG&E contractor personnel conducted a
10 field visit with railroad personnel on or around July 29, 2021 to the railroad’s locations on both the
11 Bucks Creek 1101 and 1102 Lines in order to assess damage and the feasibility of restoring power.
12 The PG&E employee further recalls that the railroad representative stated generally that the railroad
13 wanted to reopen the rail to train traffic, PG&E advised that it would expedite mobilization of
14 temporary generation wherever needed, and PG&E and its temporary generation contractor
15 thereafter coordinated with the railroad to transport and install temporary generation equipment at
16 numerous locations. Records provided to PG&E by the PG&E contractor indicate that temporary
17 generation was mobilized to the location served by Meter 1010241169 by August 1, 2021.

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20 ² PG&E’s Salesforce database contains a notation that the PG&E account representative for the
21 railroad at all of its locations contacted a railroad representative on July 16, 2021 “regarding the
22 Dixie Fire.” That entry states that the railroad representative “advised they are not out of power and
they are running water trucks up.” That entry further states the account representative “advised I’ll
have my phone on 24/7 if he needs any support from PG&E.”

23 ³ PG&E has recovered from the field a device that it believes is Meter 1010241169. PG&E has
24 not been able to confirm this to date because the housing is melted, rendering its electric badge
25 number unreadable. PG&E currently believes that it would be necessary to cut open the melted
26 housing in order to determine whether any of the information stored in its memory is readable.
27 PG&E has not attempted to do so to date. It is PG&E’s understanding, in the ordinary course, the
only information it could recover from this non-communicating meter would be total cumulative
usage as of the date the meter lost power—not the power usage on any particular date. PG&E is
continuing to investigate whether there is any potential to recover such detailed usage information.

1 **Question 5:**

2 *The Court stated that PG&E’s “initial submission was completely bogus*
3 *when you explained what the universal coordinated time is. Go back and*
4 *look at your explanation, and you’ll see that you got it exactly reversed.*
5 *Universal coordinated time, the same thing as Greenwich Mean Time.*
6 *This is on the data, which reminds we there’s another thing I want you to*
7 *explain. You know, the SCADA data. You say it’s a key to universal*
8 *coordinated time. That’s fine. That’s okay. But you misdefined what that*
9 *is in your paperwork. You should look at that again and see if you didn’t*
10 *make an error on that.” (9/13/21 Hr’g Tr. at 76:4-17.)*

11 In its initial submission (Dkt. 1408), PG&E advised the Court that “[t]he
12 contemporaneous records reflect that, at approximately 6:48 a.m. on July 13, 2021, a line recloser at
13 the Bucks Creek substation for the Bucks Creek 1101 Line recorded momentary current levels on
14 two of the three phases in excess of the Minimum To Trip (‘MTT’).” (Dkt. 1408 at 2.) PG&E
15 continues to believe that statement is correct. As addressed below, however, the Court is correct that
16 PG&E’s original submission contains an error in the conversion from the recorded time to
17 coordinated universal time (“UTC”) time.

18 In support of this statement, PG&E submitted declarations from Recloser Witnesses
19 1, 2 & 3. (*See id.*; Dkt. 1408-2; Dkt. 1408-3; Dkt. 1408-4.)

20 Recloser Witness 3’s declaration (Dkt. 1408-4) provided various screenshots of the
21 oscillography data recorded by the line recloser. As explained in that declaration, this oscillography
22 data is contained in a file labeled “2021-07-13 05.57.18.414.evt” that was downloaded from the line
23 recloser by Recloser Witness 2. Recloser Witness 3 states that this file name indicates that current in
24 excess of the MTT was detected by the line recloser at 5:57:18:414 on July 13, 2021, as reported by
25 the line recloser’s internal clock. But Recloser Witness 2 found that the internal clock on the
26 recloser was running 50 minutes and 28.3 seconds behind the time on the laptop she used to
27 download recloser data. Adjusting the time reflected in the file name for this fact would make the
28 time when the current exceeded the MTT approximately 6:47:46.714 a.m. on July 13, 2021. *See*
Recloser Witness 3 Decl. (Dkt. 1408-4) ¶¶ 3, 10-11; Recloser Witness 2 Decl. (Dkt. 1408-3) ¶¶ 3-4.

1 PG&E continues to believe that this adjusted time, derived from the name of the
2 event file, is the approximate time of the fault event depicted in the oscillography contained in that
3 file. This approximate time is corroborated by SCADA data. PG&E's RT SCADA system recorded
4 a message identified as from 6:48:02 a.m. on July 13, 2021, indicating that the Buck's Creek 1101
5 line recloser detected current in excess of the MTT. This first message was immediately followed
6 by a second message (also identified as from 6:48:02 a.m.) indicating that the condition had cleared.
7 PG&E's SCADA system also recorded messages identified as from 6:48:17 a.m. on July 13, 2021,
8 indicating that Cresta Dam lost AC power from the distribution line.

9 Separate from the file name, as documented in Recloser Witness 3's declaration, there
10 is also a time stamp that is displayed when the recorded oscillography from the recloser is viewed.
11 *See Recloser Witness 3 Decl. (Dkt. 1408-4) ¶¶ 11-12.* That time stamp indicates that the current in
12 excess of the MTT was detected seven hours earlier than the time indicted in the name of the event
13 file (which, as described above, we believe is the accurate time once adjusted by 50 minutes and
14 28.3 seconds). In analyzing that data in advance of the previous filing with the Court, Recloser
15 Witness 3 used software developed by the vendor of the controller used in the line recloser that
16 purports to convert the recorded time into UTC time. PG&E has now determined that an error in
17 that software produced the 7 hour anomaly noted by the Court, and PG&E agrees with the Court that
18 statement in the declaration of Recloser Witness 3 that UTC "is seven hours behind Pacific Daylight
19 Time" is erroneous. *See, e.g., id. ¶ 12. See also Recloser Witness 1 Decl. (Dkt. 1408-2) at 3:24.*
20 Rather, as the Court correctly pointed out, UTC is seven hours later than Pacific Daylight Time.

21 PG&E asked the vendor of the controller to provide an explanation of why there is a
22 seven hour discrepancy between the time indicated in the event file name and the time displayed
23 when Recloser Witness 3 viewed the recorded oscillography data. The vendor has responded that the
24 software program it created to view the oscillography was designed to convert the time displayed to
25 UTC (consistent with the statements provided to the Court by Recloser Witnesses 3 and 1 that the
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1 oscillography uses UTC⁴). However, due to an error in the vendor's software program for its
 2 viewer, it subtracted seven hours from the time recorded from the recloser's internal clock rather
 3 than adding seven hours.

4 **Question 6:**

5 *The Court stated: "The tree fell on the line. I'm not taking a position yet*
 6 *on whether or not you should have cut that tree or not. That's something*
 7 *we don't have enough evidence on. But the tree fell on the line and blew*
 8 *two of the fuses. But there was a third fuse that didn't blow, and so the*
 9 *power continued to flow down toward the tree. Your own materials, in*
 10 *other context -- wildfire safety plans -- refer to ground faults and explain*
 11 *that a tree on the line is a ground fault and that electricity can flow*
 12 *through that to the ground. We didn't show them here because our*
 13 *equipment didn't work right, but there are plenty of scar marks, burn*
 14 *marks, all over that tree from the power that went through it. If that*
 15 *happens long enough, it catches the tree on fire. So a very plausible*
 16 *scenario here is that when the tree first fell, it cut the power to the two*
 17 *phases, not the third, and the third phase continued to rub against that*
 18 *tree, and there was a fault to ground, a path to ground, and that the power*
 19 *went through the wood and the moisture of that tree and eventually caught*
 20 *it on fire. So that's -- I'm not saying that's what happened. That's what is*
 21 *a plausible explanation here of what occurred, and I want to give you a*
 22 *chance to show me that that's wrong. What evidence do you have that*
 23 *that scenario is wrong?" (9/13/21 Hr'g Tr. at 76:22-77:20.)*

16 **PG&E Response:**

17 Based on the information that PG&E currently has available, PG&E agrees that the
 18 scenario put forward by the Court is plausible, and at this time PG&E is not aware of evidence
 19 indicating that such a scenario is wrong. CAL FIRE has declined to provide PG&E with access to or
 20 receipts for the evidence that CAL FIRE collected from the site, including the Douglas Fir, and
 21 PG&E's investigation remains ongoing. For these reasons, PG&E is unable at this time to reach a
 22 conclusion as to what happened or foreclose alternative scenarios.

23 **Question 7:**

24 *The Court stated: "In the paperwork that you have submitted before, I*
 25 *have asked about the sensor data and what that data showed. I would like*

26 ⁴ See, e.g., Recloser Witness 3 Decl. (Dkt. 1408-4) ¶ 12; Recloser Witness 1 Decl. (Dkt. 1408-2)
 27 at 3:24.

1 *to give you a chance to explain to me whether the sensor data is set, or*
 2 *established, so that it would detect that fault that I just described, if it*
 3 *occurred.” (9/13/21 Hr’g Tr. at 77:21-25.)*

3 **PG&E Response:**

4 On July 13, 2021, the line recloser at the Bucks Creek substation for the Bucks Creek
 5 1101 Line was set to open and de-energize the line if it detected either of two ground fault
 6 conditions: First, the line recloser would open and de-energize the line if it detected a ground fault
 7 with current of 50 amps or more that lasted for a pre-set length of time determined by the selected
 8 time characteristic curve (TCC).⁵ Second, the line recloser would open and de-energize the line if it
 9 detected a ground fault that continuously remained at 20 amps or more for a period of 20 seconds.
 10 The line recloser also was set so that it would create an event file, and would record the associated
 11 oscillography, if it detected a ground fault in excess of either the MTT of 50 amps or the MTT of
 12 20 amps, irrespective of whether that event lasted long enough to cause the recloser to open and de-
 13 energize the line. *See* Recloser Witness 1 Decl. (Dkt. 1408-2) at 2:25-3:12; Recloser Witness 3
 14 Decl. (Dkt. 1408-4) ¶¶ 4-10.

15 The line recloser did not open on July 13, 2021. Nor did the line recloser create an
 16 event file for a ground fault on that date.⁶ *See* Recloser Witness 1 Decl. (Dkt. 1408-2) at 3:8-13;
 17 Recloser Witness 3 Decl. (Dkt. 1408-4) ¶¶ 8-10, 13. This data is not inconsistent with the possibility
 18 that a ground fault drawing current below the MTT of 20 amps could have existed.

19 The line recloser also transmitted a variety of data to the company’s RT SCADA
 20 system at periodic intervals of between approximately 15 and 30 seconds, including the current level
 21 on each phase of the Bucks Creek 1101 Line. The maximum recorded current level on any single
 22 phase of the Bucks Creek 1101 Line transmitted in this manner by the line recloser at any periodic
 23 interval from 6:48 a.m. forward on July 13, 2021, was 2.5 amps. *See* Recloser Witness 1 Decl.
 24

25 ⁵ Under the applicable TCC, the greater the current in excess of the MTT of 50 amps, the shorter
 the period of time required before the recloser would open and de-energize the line.

26 ⁶ The event file discussed in PG&E’s Response to Question No. 5 above recorded a phase to
 27 phase fault, not a ground fault.

1 (Dkt. 1444-5) ¶¶ 4-5 & Attachment 1. That level of amperage was not sufficient to trigger the
2 recording of a ground fault based on the recloser settings at that time. This data is not inconsistent
3 with the possibility that the Court's described low-amperage ground fault could have existed.
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1 Dated: September 17, 2021

Respectfully Submitted,

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