

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA



**FILED**  
10/17/19  
10:44 AM

ADMINISTRATIVE LAW JUDGES RAFAEL L. LIRAG and  
ELAINE LAU, co-presiding

	)	EVIDENTIARY
	)	HEARING
	)	
Application of Pacific Gas and	)	
Electric Company for Authority,	)	
Among Other Things, to Increase	)	Application
Rates and Charges for Electric and	)	18-12-009
Gas Service Effective on January 1,	)	
2020. (U39M)	)	
	)	

REPORTER'S TRANSCRIPT  
San Francisco, California  
October 10, 2019  
Pages 2219 - 2343  
Volume - 20

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1 SAN FRANCISCO, CALIFORNIA  
2 OCTOBER 10, 2019 - 9:28 a.m.

3 \* \* \* \* \*

4 ADMINISTRATIVE LAW JUDGES RAFAEL L.  
5 LIRAG and ELAINE LAU: All right. Let's go  
6 on the record. Good morning, everyone. We  
7 are resuming the evidentiary hearings in  
8 A.18-12-009. This is PG&E's Test Year 2020  
9 General Rate Case.

10 Welcome back, everyone, after our  
11 -- this was a two-day break. So we'll  
12 continue today with cross-examination for Ms.  
13 Greenwell.

14 Good morning, Ms. Greenwell.

15 THE WITNESS: Good morning.

16 ALJ LIRAG: Mr. Lambert, Mr.  
17 Middlekauff, Ms. Lee, and I guess we'll  
18 welcome back Mr. Calvert.

19 So, it looks like a shorter day  
20 today. We'll try to wrap things up by the  
21 lunch break, even if we have to extend a  
22 little bit into the lunch break. Today,  
23 though, we'll start by taking up the first 15  
24 to 20 minutes addressing some of the pending  
25 issues that we have.

26 Also, since I talked about the  
27 schedule, the morning break will probably  
28 vary or will depend on what's going on with

1 the Commission meeting. We'll give a chance  
2 for Marianne here to receive her employee  
3 recognition award. So congratulations  
4 Marianne. Please see our congratulations  
5 from ALJ Lau and I. It will be on -- I  
6 believe it will be on Volume 20 of the  
7 transcript. So you can read it when it comes  
8 out.

9 All right. We're going to address  
10 several pending issues. Some of it pertains  
11 to motions. I'm glad Cal Advocates, TURN,  
12 PG&E, and also Ms. Liotta are all here.

13 First up is the July 23 motion by  
14 TURN to accommodate the events in PG&E's  
15 bankruptcy case. And, also, the request  
16 includes a holding of a second PHC to address  
17 matters pertaining to PG&E's bankruptcy. So  
18 our ruling, Mr. Long, is to deny TURN's  
19 motion at this point without prejudice to  
20 raising the same motion or issues if events  
21 in PG&E's bankruptcy become more concrete.

22 We are viewing the reorganization  
23 plan that was served on the service list as  
24 more of a preliminary document. So at this  
25 point, we are not requiring PG&E to file the  
26 document. But as events in the bankruptcy  
27 matter unfold, and also with the OIR -- the  
28 bankruptcy OIR that was recently opened by

1 the Commission -- we'll keep abreast of  
2 events going on in those two areas. And so  
3 we might go in a different direction as  
4 things become more concrete.

5 All right. Any questions, Mr. Long?

6 MR. LONG: None right now. Thank you,  
7 your Honor.

8 ALJ LIRAG: Any questions, PG&E?

9 MS. GANDESBERY: No, your Honor. Thank  
10 you.

11 ALJ LIRAG: All right. Next up, I'll  
12 turn it over to ALJ Lau.

13 ALJ LAU: So next we will address  
14 Motion of Pacific Gas and Electric Company to  
15 strike the revised testimony of TURN dated  
16 October 7th, 2019. So that motion is denied  
17 and we would like to ask PG&E to confer on a  
18 date to serve surrebuttal testimony. And is  
19 there a date that PG&E has in mind, or do you  
20 still need to confer?

21 MR. OUBORG: Yes, your Honor, there is.  
22 If we have the opportunity to file  
23 surrebuttal, we would request that we have  
24 the opportunity to provide it on Wednesday,  
25 next week. I don't know what date that is  
26 exactly. I think it's the 16th.

27 And then I would request that TURN's  
28 witness on this matter be made available

1 instead of Monday, as she's currently  
2 scheduled, on Friday. And we would make our  
3 witness available on Friday, as well, the  
4 witness sponsoring the surrebuttal. It's  
5 very cramped and condensed, but this is an  
6 attempt to try to wrap this up by the close  
7 of hearings.

8 ALJ LAU: Mr. Long, TURN, do you have  
9 my objections to those dates?

10 MR. LONG: I don't think so, subject to  
11 confirmation with my witness. I did check on  
12 her availability yesterday. And she said  
13 Monday through Thursday were the best days  
14 for her. She could probably make Friday, so  
15 I just want to confirm that. But I would  
16 say, barring anything you hear from me, that  
17 that should work.

18 ALJ LAU: Okay. So, for now, the  
19 ruling is then for PG&E to serve the  
20 surrebuttal testimony on Wednesday,  
21 October 16th. And the witnesses for those  
22 testimonies the should be available on  
23 October 18th if Mr. Long doesn't raise  
24 another objection.

25 MR. OUBORG: Thank you, your Honor.

26 ALJ LAU: Thank you.

27 ALJ LIRAG: Let's have Mr. Long and  
28 PG&E confer regarding the witnesses' specific

1 schedule. And then just keep us updated, if  
2 not today, then via e-mail for tomorrow's  
3 hearing.

4 MR. LONG: Certainly, your Honor.

5 ALJ LIRAG: All right.

6 Anything else, ALJ Lau?

7 ALJ LAU: That is it for that motion.

8 ALJ LIRAG: All right.

9 Next up is the AB 1054 proposal by  
10 Mr. Thomason. And, also, the objection by  
11 the Joint CCA's, as well as TURN's proposal  
12 on this matter. This issue particularly  
13 pertains to Code Section 8386.3, if I'm not  
14 mistaken, concerning the removal of the first  
15 5 billion of wildfire mitigation capital  
16 expenditures from equity rate base. I  
17 believe PG&E's portion for that is probably  
18 around 62 percent of that.

19 So we conferred with the assigned  
20 office. And they -- right now, they are  
21 leaning towards addressing this 1504  
22 requirement in the GRC. So I'll direct this  
23 question to PG&E:

24 Do you believe that briefs are  
25 necessary to try and, perhaps, establish that  
26 Mr. Thomason approach is the correct one? Or  
27 would that just -- would that not lead to a  
28 different result?



1           Do you feel comfortable with where  
2 we are leaning? Or do you feel that you want  
3 the opportunity to submit briefs to try and  
4 tell us otherwise?

5           MS. GANDESBERY: Your Honor, can you be  
6 anymore specific about what you're proposing  
7 -- what the Commission is proposing for this  
8 proceeding?

9           ALJ LIRAG: All right. So the  
10 Commission is proposing to address this issue  
11 in the General Rate Case. And so if that  
12 happens, we are looking towards requiring  
13 that PG&E submit briefing in order to present  
14 how it will do its calculations and how it  
15 would address this in the GRC. And so when  
16 that happens, the briefing will be in time  
17 for parties, all parties, to comment on  
18 during the time the regular briefs are due.

19           MS. GANDESBERY: We would be happy to  
20 submit a brief on this, your Honor.

21           ALJ LIRAG: All right. So let's forgo  
22 the brief regarding trying to convince the  
23 Commission that this should be addressed in a  
24 separate proceeding. Let's proceed directly  
25 with the briefing on how PG&E will plan to  
26 address this matter. So we won't be  
27 requiring testimony, we won't be requiring a  
28 witness. We'll just go directly into a

1 briefing proposal from PG&E.

2 And then we are thinking that this  
3 would be due at the same time the updated  
4 testimony is filed. So that is November 1st.

5 Is that enough time for this?

6 MS. GANDESBERY: Yes, your Honor.

7 ALJ LIRAG: All right. So, November 1  
8 this briefing regarding addressing the AB  
9 1054 requirement will be due from PG&E. And  
10 then this briefing will not be subject to  
11 comments anymore. All the other parties can  
12 comment on this briefing during our regular  
13 GRC briefing.

14 Any questions?

15 Mr. Long.

16 MR. LONG: Yes, your Honor.

17 Just to confirm, PG&E will file  
18 their brief on this issue on November 1st,  
19 and then it will be a matter that can be  
20 address by all parties in their opening and  
21 reply briefs?

22 ALJ LIRAG: Correct.

23 MR. LONG: Okay. Thank you.

24 ALJ LIRAG: So you're given two cracks  
25 to comment on it; one in the opening brief  
26 and one in the rely brief.

27 MR. LONG: All right. Thank you.

28 ALJ LIRAG: All right. Let's move on

1 to the next item.

2 ALJ Lau.

3 ALJ LAU: So the next item is the  
4 motion by the City and County of San  
5 Francisco filed on October 8th, 2019, to  
6 enter into evidence the declaration of  
7 Douglas Lips (phonetic) in response to PG&E  
8 testimony's testimony cross bore work in San  
9 Francisco.

10 Does PG&E have any objections to  
11 entering Douglas Lips' testimony into  
12 evidence?

13 MR. OUBORG: Yes, your Honor, we do.

14 And, I mean, our view is that San  
15 Francisco has been a party to this proceeding  
16 from the start. They have been active. They  
17 have served discovery on other areas. And  
18 it's frankly not credible, in our view, that  
19 they have waited until now to be aware that  
20 PG&E has laid out a cross bore inspection  
21 plan, has identified the number of UTAs --  
22 this was in our opening testimony -- we have  
23 workpapers on how we derived those numbers.

24 And to bring this at this point with  
25 all our testimony submitted, all our  
26 witnesses crossed, just seems unduly  
27 prejudicial. And on top of that, there's no  
28 time left to have kind of process around this

1 item.

2           The other thing I would mention is  
3 that, as the declaration self-admits, PG&E  
4 and San Francisco are actively engaged right  
5 now on negotiating the amendment to -- which,  
6 although San Francisco says it's in  
7 agreement, it's actually not executed by them  
8 and the declaration says that. And we're  
9 actively engaged in that.

10           It seems to us that the issues for  
11 the Commission in the GRC are PG&E's  
12 forecast, PG&E's unit costs for the 2020 GRC  
13 period. The issues for the parties, San  
14 Francisco and the City, are to work out the  
15 nuts and bolts of how we get these UTAs done,  
16 how we identify them, who does what, cost  
17 sharing, and things like that. And those are  
18 the kinds of things that are in this that  
19 discussion.

20           So our view is, this doesn't add  
21 anything. It's too late. And, you know,  
22 it's prejudicial of PG&E to let it in at this  
23 point.

24           ALJ LIRAG: Mr. Long.

25           MR. LONG: Your Honor, if I could speak  
26 to the motion.

27           Unfortunately, the City is not here.  
28 But based on their motion, the reason that

1 they state in their motion for the timing is  
2 because they were responding to the  
3 transcript of the cross-examination that I  
4 did of PG&E's cross bore deferred work panel.  
5 And they were -- that transcript when they  
6 saw it, which wasn't available until I  
7 believe the end of September or early  
8 October, was what caused them to submit the  
9 declaration. So that's the explanation for  
10 the timing.

11 And just from TURN's perspective, we  
12 think it's important to have percipient  
13 witness testimony on this issue. PG&E  
14 presented a witness who does not directly  
15 work on the cross bore program and who has  
16 hearsay knowledge, at best, of what's going  
17 on with the City of San Francisco. And,  
18 therefore, we believe for the completeness of  
19 record it would be very important to have  
20 this declaration in the record.

21 ALJ LAU: All right. How about we have  
22 PG&E officially file a reply. But let's not  
23 make it too long of a reply period.

24 When is a reasonable period for PG&E  
25 to file an official reply?

26 ALJ LIRAG: So we'll let the normal  
27 comment process run. But maybe what ALJ Lau  
28 is looking at is probably a little shortened

1 period if the other parties also agree. So  
2 instead of a 15-day response period, we are  
3 looking at -- is 10 days going to be enough  
4 do you think? Or do you prefer the full  
5 15-day response period?

6 MR. OUBORG: Your Honor, I think  
7 actually 10 days is longer than we need. I  
8 think we could file something early next week  
9 in response. I mean, we are conscious of the  
10 schedule. And we're doing our best to  
11 expedite our response to the motion. So I  
12 believe we could commit to having the  
13 response by Tuesday.

14 ALJ LIRAG: Well, lest have it due by  
15 Wednesday at the same time the other response  
16 is due.

17 ALJ LAU: The surrebuttal.

18 ALJ LIRAG: At the same time the  
19 rebuttal is due. So, how about filed by  
20 Wednesday?

21 MR. OUBORG: That's fine, your Honor.

22 ALJ LIRAG: Any objections, Mr. Long?

23 MR. LONG: No objection.

24 ALJ LIRAG: Because you might want to  
25 file your own comments?

26 MR. LONG: Yeah. TURN would intend to  
27 file comments along the lines of what I just  
28 said as well.

1           I do agree with Mr. Ouborg that time  
2 is of the essence here. And so in the event  
3 that PG&E is -- that the outcome is for PG&E  
4 to submit rebuttal to that or some sort of  
5 testimony to that, which TURN would not  
6 object to in the interest of the complete  
7 record, it would be good to have all this  
8 done, you know, sooner rather than later.  
9 I'll just make that comment.

10           ALJ LIRAG: All right. Well, we are  
11 respecting time PG&E will require to file its  
12 response, as well as giving other parties  
13 enough time to respond. The motion was only  
14 filed on the 8th. We do have 11/6 as an open  
15 date for a possible hearing. That is the  
16 hearing date reserved for the update  
17 testimony. So that's something to consider  
18 in case we go in that direction. So we have  
19 that in our back pocket, so to speak.

20           MR. LONG: Thank you, your Honor.

21           ALJ LIRAG: All right.

22           So no objections to Wednesday for  
23 filing of comments?

24           MS. GANDESBERY: Your Honor, for  
25 clarification, this would be our opposition  
26 to the motion that would be --

27           ALJ LIRAG: Correct. Correct.

28           Other parties can file responses

1 supporting the motion as well.

2 ALJ LAU: Yeah. So it's in response to  
3 the motion.

4 MS. GANDESBERY: Thank you.

5 ALJ LAU: Yeah.

6 ALJ LIRAG: All right. Anything else,  
7 ALJ Lau?

8 ALJ LAU: I believe that's all.

9 ALJ LIRAG: All right. Let's take up a  
10 couple of pending issues with some exhibits.  
11 So the joint CCAs are not here but this  
12 direction is directed towards PG&E.

13 Do you still have an objection to  
14 Exhibit 110?

15 MS. GANDESBERY: Yes, your Honor. The  
16 -- we provided our comments to the JCCAs.  
17 And our comments were that there were errors  
18 in the document. And they have acknowledged  
19 that there are errors in the document. They  
20 have replaced it with another document that's  
21 a new analysis. And there isn't any  
22 foundation for the new analysis. The witness  
23 is gone, and it's really just new analysis  
24 that they have done.

25 ALJ LIRAG: All right. So for  
26 Exhibit 110, the ruling would be that the  
27 objection is partially granted. So we'll  
28 strike out the portion that was written in by



1 the Joint CCAs. This pertains to the two  
2 right-hand columns that say "calculation."  
3 So we'll cross that out. And I believe all  
4 the other columns pertain to information that  
5 was derived from PG&E's workpapers and  
6 testimony.

7 MS. GANDESBERY: The trending calls for  
8 customer, the box -- that's wrong.

9 ALJ LIRAG: Okay. So the diagram we'll  
10 also delete --

11 MS. GANDESBERY: Yes.

12 ALJ LIRAG: So the first one, two,  
13 three, four, five, six columns right before  
14 the "calculation." We can confer on what the  
15 exhibit actually looks like.

16 So let's go off the record.

17 (Off the record.)

18 ALJ LIRAG: Let's go back on the  
19 record. While we were off the record, we  
20 were conferring about the exhibit. So it  
21 appears that there's also an error on the  
22 addition on one of the columns. So we'll set  
23 aside ruling on Exhibit 110 for now. We'll  
24 follow up based on the discussion we just  
25 had.

26 Next is Exhibit 117. I believe  
27 Mr. Gallo stepped out. So let's take this up  
28 a little later. And this pertains to an

1 exhibit -- cross exhibit submitted by Ms.  
2 Shek. So I'll require Ms. Shek and Mr. Gallo  
3 to be here. So let's address this later in  
4 the day.

5 All right. Sorry for making you  
6 wait --

7 MS. GANDESBERY: Mr. Gallo is here,  
8 actually.

9 MS. LIOTTA: And, your Honor, for that  
10 cross exhibit, we actually still have  
11 Mr. Calvert who we will be crossing further  
12 on --

13 (Crosstalk.)

14 ALJ LIRAG: Okay. So let's hold off on  
15 this exhibit then.

16 MS. LIOTTA: Thank you.

17 ALJ LIRAG: All right. Sorry, I didn't  
18 see you Mr. Gallo.

19 All right. Welcome, Ms. Greenwell.

20 THE WITNESS: Thank you.

21 ALJ LIRAG: ALJ Lau will take over, I  
22 guess.

23 ALJ LAU: So we have Ms. Greenwell on  
24 the stand. Ms. Greenwell, can you raise your  
25 right hand?

26 BEATRIX GREENWELL, called as a  
27 witness by Pacific Gas and Electric  
28 Company, having been sworn, testified  
as follows:

1 THE WITNESS: Yes, I do.

2 ALJ LAU: Can you speak into street  
3 microphone?

4 THE WITNESS: Yes, I do.

5 ALJ LAU: You can lower your right hand  
6 now.

7 Can you give us your name, spelling  
8 your last name, and also provide us with your  
9 business address?

10 THE WITNESS: Beatrix Greenwell,  
11 G-r-e-e-n-w-e-l-l. My business address is 77  
12 Beale Street, 7th Floor, San Francisco,  
13 California 94105.

14 ALJ LAU: All right.

15 PG&E, you may proceed with the  
16 direct.

17 MS. GANDESBERY: Thank you, your Honor.

18 DIRECT EXAMINATION

19 BY MS. GANDESBERY:

20 Q Good morning, Ms. Greenwell.

21 A Good morning.

22 Q I would like to confirm the  
23 testimony you're sponsoring in this  
24 proceeding.

25 In what's been marked for  
26 identification as Exhibit PG&E 10, which is  
27 Hearing Exhibit 8, are you sponsoring all of  
28 Chapter 10, Depreciation, Reserve, and

1 Expense and the Workpapers for Chapter 10  
2 presented in Exhibit 10 Workpaper 10?

3 A Yes, I am.

4 Q In what's been marked as PG&E-24,  
5 which is Hearing Exhibit 72, are you  
6 sponsoring all of Chapter 10, rebuttal  
7 testimony, on depreciation, reserve, and  
8 expense, a portion of Chapter 17 and  
9 Attachments A and B rebuttal testimony and  
10 the documents in Appendix A that relate to  
11 your testimony, your sponsored exhibit  
12 PG&E-24, Hearing Exhibit 72, Chapter 17  
13 Rebuttal Testimony?

14 A Yes, I am.

15 Q And what's been marked as  
16 Exhibit 14, Hearing Exhibit 26, PG&E's  
17 Errata, are you sponsoring pages 14 to 365  
18 (sic), to 14-375?

19 A Yes, I am.

20 Q And, finally, in PG&E Exhibit 27,  
21 which is hearing Exhibit 52, are you  
22 sponsoring your statement of qualifications?

23 A Yes, I am.

24 Q And were these materials prepared  
25 by you or under your supervision?

26 A Yes, they were.

27 Q And do you have any changes,  
28 corrections, or additions to make at this

1 time?

2 A Yes. I have one correction to my  
3 Direct Testimony, Exhibit 10, Chapter 10. On  
4 page 10-4, line 13, I would like to --

5 Q Let's wait. I think -- let the  
6 Judge get there.

7

8 A Okay.

9 ALJ LAU: 10-4?

10 THE WITNESS: Page 10-4 of the Direct  
11 Testimony.

12 ALJ LAU: Okay.

13 THE WITNESS: On line 13, I would like  
14 to remove the word "fossil."

15 BY MS. GANDESBERY:

16 Q Do you have any other corrections  
17 to make?

18 A No, not at this time.

19 Q Are the facts contained in these  
20 exhibits true and correct to the best of your  
21 knowledge?

22 A Yes, they are.

23 Q And do the opinions expressed  
24 therein represent your best professional  
25 judgment?

26 A Yes, they do.

27 Q Thank you.

28 MS. GANDESBERY: Your Honor, Ms.

1 Greenwell is available for cross-examination.  
2 ALJ LAU: Ms. Liotta.  
3 CROSS-EXAMINATION  
4 BY MS. LIOTTA:  
5 Q Good morning, Ms. Greenwell, I'm  
6 Rita Liotta with FEA.  
7 A Good morning.  
8 Q I'm just going to refer you to  
9 your rebuttal testimony, specifically,  
10 page 9?  
11 ALJ LAU: Ms. Liotta, is that chapter  
12 -- what chapter is that?  
13 MS. LIOTTA: Chapter 10.  
14 ALJ LAU: Okay.  
15 MS. LIOTTA: I believe it's hearing  
16 Exhibit 72.  
17 ALJ LAU: Thank you.  
18 THE WITNESS: Page 10-9?  
19 BY MS. LIOTTA:  
20 Q Yes. Beginning on line 20.  
21 You state:  
22 Both FEA and JCCA have  
23 incorporated solar  
24 decommissioning but have  
25 proposed arbitrary  
26 reductions to the solar  
27 decommissioning expense.  
28 So I was going to ask you, how did

1 you determine that FEA's adjustment was  
2 arbitrary?

3 A Well, it appears from FEA's  
4 testimony that they are relying on  
5 information that is not site-specific to  
6 PG&E. And it feels like our site-specific  
7 studies are, perhaps, the best estimate and  
8 -- compared to those.

9 Q Okay. Is it accurate to say that  
10 the year the decommissioning will begin is  
11 not known at this time?

12 A For -- are you referring to solar?

13 Q Yes.

14 A The original estimate was that the  
15 solar plants would last 25 years. So I  
16 believe the decommissioning is based on that  
17 life.

18 Q And the cost of the  
19 decommissioning, is that known?

20 A We have an estimate.

21 Q And that estimate is?

22 A I'm sorry -- the question --

23 Q Do you know what that estimate is?

24 A The question of the estimate for  
25 solar --

26 ALJ LAU: Let's go off the record.

27 (Off the record.)

28 ALJ LAU: On the record.

1 BY MS. LIOTTA:

2 Q And do you know what the estimate  
3 is for the solar decommissioning?

4 A The annual amount of solar  
5 decommissioning that PG&E proposes to include  
6 in its revenue requirement is \$5.929 million.

7 Q Is it correct to say that the  
8 company has utilized the amounts of \$420 and  
9 \$397 per kilowatt in calculating the  
10 decommissioning amounts?

11 A That's not in my testimony. So I  
12 -- would you like me to confirm by looking at  
13 someone else's testimony? Or --

14 MS. GANDESBERY: Do you have a  
15 reference, Counsel?

16 MS. LIOTTA: Actually, I do not. I was  
17 just asking if she was aware of that.

18 THE WITNESS: It sounds correct. But I  
19 would have to check to be sure.

20 BY MS. LIOTTA:

21 Q Okay. And are you -- I'm not sure  
22 if you've seen FEA's -- Mr. Smith's direct  
23 testimony. I know he discusses this.

24 Are you aware that in other  
25 jurisdictions, solar decommissioning rates  
26 under \$200 per kilowatt have been used? --  
27 just if you're aware?

28 A I did read Mr. Smith's testimony.



1 So I'm aware, to the extent that he has said  
2 that.

3 Q Are you, though, aware that other  
4 jurisdictions have used a lower rate? Or are  
5 you just aware because of reading Mr. Smith's  
6 testimony?

7 A I'm not aware that any  
8 utility-scale solar has been decommissioned.  
9 So if other people are using different  
10 estimates, then I'm sure they are.

11 Q Thank you, Ms. Greenwell.

12 MS. LIOTTA: I have no further  
13 questions for this witness.

14 ALJ LAU: Ms. Gandesbery?

15 Let's go off the record.

16 (Off the record.)

17 ALJ LAU: Back on the record.

18 Ms. Gandesbery, do you have any  
19 redirect?

20 MS. GANDESBERY: No, I don't, your  
21 Honor.

22 ALJ LAU: All right. Ms. Greenwell,  
23 you are now excused --

24 ALJ LIRAG: Not yet, Ms. Greenwell. I  
25 have a question.

26 ALJ LAU: Oh, sorry.

27 THE WITNESS: Yes.

28 ALJ LIRAG: You're not responsible for

1 the depreciation study; right? Mr. Allis --

2 THE WITNESS: Mr. Allis prepared the  
3 depreciation study.

4 ALJ LIRAG: And Mr. Finkelstein was  
5 supposed to cross Mr. Allis before, was that  
6 correct?

7 MS. GANDESBERY: He originally had  
8 scheduled cross for them. And then,  
9 subsequently, he waived cross.

10 ALJ LIRAG: All right.

11 Mr. Long, could you confirm? So  
12 cross had been waived for Mr. Allis?

13 MR. LONG: That's my understanding,  
14 your Honor, is that TURN has waived its cross  
15 to Mr. Allis. And, in lieu of that, we I  
16 think have agreed to the admission of -- or  
17 to present certain exhibits that would be  
18 responses to data requests.

19 ALJ LIRAG: All right. I'll just  
20 review those exhibits then.

21 All right. ALJ Lau?

22 Or, I guess, I'll excuse you, Ms.  
23 Greenwell. Thank you.

24 Let's go off the record.

25 (Off the record.)

26 ALJ LAU: Let's go back on the record.]

27 Next we have on the witness stand is  
28 Mr. Middlekauff.

1                   Mr. Middlekauff, can you raise your  
2 right hand.

3                   CHARLES MIDDLEKAUFF, called as a  
4 witness by Pacific Gas and Electric  
5 Company, having been sworn, testified  
6 as follows:

7                   THE WITNESS: Yes, your Honor.

8                   ALJ LAU: Can you turn on the  
9 microphone and speak to the microphone.

10                  THE WITNESS: Yes, your Honor.

11                  ALJ LAU: Can you provide us with your  
12 full name, spelling your last name and your  
13 business address.

14                  THE WITNESS: My name is Charles  
15 Middlekauff, M-I-D-D-L-E-K-A-U-F-F. And my  
16 business address is 77 Beale Street, San  
17 Francisco, California 94105.

18                  ALJ LAU: We will now identify several  
19 exhibits. We have Exhibit 157. That is  
20 PG&E's prepared testimony on administrative  
21 and general expenses formally labeled as  
22 PG&E-09.

23                         (Exhibit No. 157 was marked for  
24 identification.)

25                  ALJ LAU: Next we have Exhibit 158,  
26 which is PG&E's testimony on A&G with  
27 workpapers supporting Chapters 1 to 9.

28                         (Exhibit No. 158 was marked for  
identification.)

1 ALJ LAU: Last we have Exhibit 159.  
2 That is the rebuttal testimony on  
3 administrative and general expenses from  
4 PG&E.

5 (Exhibit No. 159 was marked for  
6 identification.)

7 ALJ LAU: Last we have Exhibit 160.  
8 That is PG&E's rebuttal testimony on  
9 administrative and general expenses with  
10 workpapers supporting Chapter 2.

11 (Exhibit No. 160 was marked for  
12 identification.)

13 ALJ LAU: All right. Ms. Gandesbery,  
14 or PG&E, you may begin your direct.

15 MR. KLOTZ: Thank you, your Honor.

16 DIRECT EXAMINATION

17 BY MR. KLOTZ:

18 Q Good morning, Mr. Middlekauff.

19 A Good morning, Mr. Klotz.

20 Q I'd like to confirm the testimony  
21 that you're sponsoring in this proceeding in  
22 what's been previously marked for  
23 identification as Exhibit PG&E-09 marked as  
24 Exhibit -- Hearing Room Exhibit 157. Are you  
25 sponsoring all of Chapter 6 and Attachment A,  
26 law organization, and what's been previously  
27 marked as workpapers for Chapter 6 now marked  
28 as Hearing Room Exhibit 157? Are you also

1 sponsoring the workpapers for Chapter 6  
2 presented in Exhibit PG&E-09?

3 A Yes.

4 Q In what has been previously marked  
5 as Exhibit PG&E-23, now marked as Hearing  
6 Room Exhibit 159, are you sponsoring all of  
7 Chapter 6, rebuttal testimony on law  
8 organization and the documents in Appendix A  
9 that relate to your sponsored Exhibit  
10 PG&E-23, rebuttal testimony?

11 A Yes.

12 Q And finally, in what's been  
13 previously marked as Exhibit PG&E-13, Hearing  
14 Room Exhibit 51, are you sponsoring your  
15 statement of qualifications?

16 A Yes.

17 Q Were these materials prepared by  
18 you or under your supervision?

19 A Yes.

20 Q Do you have any changes,  
21 corrections or additions to make at this  
22 time?

23 A I do. In the rebuttal testimony,  
24 Exhibit 159, page 6-6, on line 2, I'd like to  
25 change the date "2013" to "2014." It was a  
26 typographical error.

27 Q Thank you. Is that the extent to  
28 the changes to your testimony today?

1           A    Yes.

2           Q    Are the facts contained in these  
3 exhibits true and correct to the best of your  
4 knowledge?

5           A    Yes, they are.

6           Q    Do the opinions expressed therein  
7 represent your best professional judgment?

8           A    Yes, they do.

9           Q    Thank you.

10          MR. KLOTZ: Your Honor, Mr. Middlekauff  
11 is now available for cross-examination.

12          ALJ LAU: Let's go off the record.

13               (Off the record.)

14          ALJ LAU: Back on the record.

15               We have an additional exhibit we'd  
16 like to identify. That is Exhibit 161, and  
17 that is a cross-examination exhibit from  
18 TURN, The Utility Reform Network, titled PG&E  
19 Responses to Various TURN Data Requests  
20 Regarding Settlements, Judgments and Claims.

21               (Exhibit No. 161 was marked for  
22 identification.)

23          ALJ LAU: And that is it. So now we  
24 are ready for cross.

25               Ms. Liotta.

26                       CROSS-EXAMINATION

27 BY MS. LIOTTA:

28           Q    Good morning, Mr. Middlekauff. I'm

1 Rita Liotta with FEA.

2 A Good morning.

3 Q I'm just going to have you refer to  
4 your rebuttal, page 6, that you were just  
5 looking at.

6 A Okay.

7 Q Actually, I was going to refer you  
8 to lines 1 to 3, and I was going to ask you  
9 if in your opinion the use of a four-year  
10 average of the years 2015 through 2018, would  
11 you consider that less accurate than using  
12 the 2014 through 2017 time frame?

13 A Yes, I would.

14 Q All else being equal, would you  
15 say, though, that more recent years are  
16 generally preferable for projecting costs?

17 A I don't know the difference of the  
18 years makes a difference in the accuracy of  
19 the projecting the costs.

20 Q Does the company generally use the  
21 most recent year available in its projections  
22 unless there's a specific reason not to?

23 A We did use the most recent years in  
24 our projections here, yes, because 2017  
25 was -- when we filed this in December of  
26 2018, 2017 was the last complete year we had.  
27 So we did use the most recent information.

28 Q Right. So I was going to ask they

1 weren't randomly picked? That was the most  
2 recent years available at the time PG&E filed  
3 its application?

4 A That's correct.

5 MS. LIOTTA: I have no further  
6 questions for this witness.

7 Thank you, Mr. Middlekauff.

8 WITNESS MIDDLEKAUFF: Thank you.

9 ALJ LAU: PG&E? Mr. Klotz?

10 MR. KLOTZ: No redirect, your Honor.

11 ALJ LAU: All right. Judge Lirag, do  
12 you have any questions?

13 ALJ LIRAG: No. But are the exhibits  
14 ready, or are there witnesses sponsoring some  
15 of these?

16 MR. KLOTZ: Can we go off the record  
17 for one second?

18 ALJ LIRAG: Off the record.

19 (Off the record.)

20 ALJ LAU: Back on the record.

21 Is there a motion to move Exhibit  
22 161 into the record?

23 MR. LONG: Yes, your Honor. In lieu of  
24 cross-examination, TURN offers Exhibit 161,  
25 which, as you stated, is responses to various  
26 TURN data requests. We move that into the  
27 record.

28 ALJ LAU: Are there any objections?



1 MR. KLOTZ: None from PG&E, your Honor.

2 ALJ LAU: Hearing none, Exhibit 161 is  
3 entered into the record.

4 (Exhibit No. 161 was received into  
5 evidence.)

6 ALJ LAU: Mr. Middlekauff, you may be  
7 excused.

8 WITNESS MIDDLEKAUFF: Thank you, your  
9 Honor.

10 ALJ LAU: Off the record.

11 (Off the record.)

12 ALJ LAU: Let's go back on the record.

13 Right now we have Mr. Lambert --

14 Chris Lambert on the witness stand. Mr.

15 Lambert, can you raise your right hand.

16 CHRISTIAN LAMBERT, called as a  
17 witness by Public Advocates Office,  
18 having been sworn, testified as  
19 follows:

19 THE WITNESS: I do.

20 ALJ LAU: Now you may lower your right  
21 hand. Can you please state for the record  
22 your full name and spell your last name and  
23 also give us your business address.

24 THE WITNESS: Christian Lambert,  
25 L-A-M-B-E-R-T. My business address is 505  
26 Van Ness, San Francisco.

27 ALJ LAU: All right. Let's go off the  
28 record.

1 (Off the record.)

2 ALJ LAU: Back on the record.

3 Ms. Shek, can you begin your direct?

4 MS. SHEK: Yes. Thank you, your Honor.

5 DIRECT EXAMINATION

6 BY MS. SHEK:

7 Q Good morning, Mr. Lambert.

8 Mr. Lambert, did you prepare  
9 Exhibits 162, 163 and 164 and 165, which are  
10 your reports on depreciation?

11 ALJ LAU: Actually. I believe we  
12 haven't identified the exhibits. So let us  
13 identify the exhibits first. So let's  
14 identify the exhibits. We have first for  
15 identification Exhibit 162, which is Cal  
16 Advocates' testimony on mobile home park  
17 utility upgrade program.

18 (Exhibit No. 162 was marked for  
19 identification.)

20 ALJ LIRAG: So the testimony sponsored  
21 by Mr. Lambert.

22 ALJ LAU: Right. Exhibit 163, Cal  
23 Advocates' testimony sponsored by Chris  
24 Lambert on depreciation.

25 (Exhibit No. 163 was marked for  
identification.)

26 ALJ LAU: Exhibit 164 is Cal Advocates'  
27 workpapers supporting Mr. Lambert's testimony  
28 on the mobile home park utility upgrade

1 program.

2 (Exhibit No. 164 was marked for  
3 identification.)

4 ALJ LAU: Exhibit 165 is the Cal  
5 Advocates' workpapers supporting Chris  
6 Lambert's testimony on depreciation.

7 (Exhibit No. 165 was marked for  
8 identification.)

9 ALJ LAU: And Exhibit 166 is Cal  
10 Advocates' errata to various witness'  
11 testimony.

12 (Exhibit No. 166 was marked for  
13 identification.)

14 ALJ LAU: Sorry, Ms. Shek. You may  
15 begin your redirect -- I mean, your direct  
16 again.

17 MS. SHEK: Thank you, your Honor.

18 Q Mr. Lambert, is it correct that you  
19 prepared Exhibits 162 through 166?

20 A 166 was prepared by multiple  
21 witnesses, but the others were prepared  
22 specifically by me.

23 Q Thank you, Mr. Lambert. Do you  
24 have any additions or corrections to make to  
25 your testimony in these exhibits?

26 A Yes. Then I'll make reference to  
27 Exhibit 16, the errata exhibit. On page 15  
28 of the errata, which also has Numeral 7,

1 referring to page No. 7, of my depreciation  
2 testimony, you'll see in line 10 the figure  
3 that was originally the 91.2 million, the  
4 errata here, that should be 53.1 million.

5 Q Thank you, Mr. Lambert. Are there  
6 any other corrections that you've made in the  
7 errata that you've listed here?

8 A No.

9 Q Thank you. Are the facts and  
10 opinions set forth in these exhibits true and  
11 correct to the best of your knowledge?

12 A Yes.

13 MS. SHEK: Your Honor, we have no  
14 further direct for Mr. Lambert. He is  
15 available for cross-examination.

16 ALJ LAU: We're ready with cross.

17 Ms. Liotta, are you ready?

18 CROSS-EXAMINATION

19 BY MS. LIOTTA:

20 Q Good morning, Mr. Lambert. I'm  
21 Rita Liotta with FEA.

22 I'm just going to have you refer to  
23 page 17 of your testimony on depreciation. I  
24 believe that's been marked as Hearing Exhibit  
25 163 on line 10 where you discuss PG&E's  
26 forecast including the following assumptions.

27 MS. SHEK: Ms. Liotta, can you  
28 reference what page number again.

1 MS. LIOTTA: Yes. Page 17 on Mr.  
2 Lambert's report on depreciation.

3 MS. GANDESBERY: Is this 164?

4 MS. LIOTTA: This is dated June 28. Is  
5 that Hearing Exhibit --

6 ALJ LAU: That was Exhibit 163.

7 MS. GANDESBERY: 163.

8 BY MS. LIOTTA:

9 Q I'm sorry. Are you there on page  
10 17, line -- beginning on line 10?

11 A Yes, I am.

12 Q So you state that PG&E argues that  
13 it relied on input from internal experts but  
14 defends it's forecast in response to a data  
15 request by clarifying that it searched for  
16 the simplest way of developing the high-level  
17 estimate for the decommissioning accrual.

18 Without going into any level of  
19 detail with technical staff around what might  
20 ultimately be required in decommissioning, in  
21 your opinion, would you say that the company  
22 has not adequately supported the cost  
23 requested for hydro decommissioning?

24 A I would say this is -- provided  
25 more detail in my testimony that they did not  
26 meet the burden for the full request as  
27 originally proposed but that, nonetheless,  
28 the logic does support beginning an accrual

1 for hydro decommissioning.

2 Q So if the company's full request  
3 for hydro decommissioning is allowed, in your  
4 opinion, is overcollection of funds from  
5 ratepayers a possibility?

6 A Yes.

7 MS. LIOTTA: I actually have no further  
8 questions for Mr. Lambert. Thank you.

9 ALJ LAU: Ms. Gandesbery, do you have  
10 any cross?

11 MS. GANDESBERY: Yes. I'd just like to  
12 ask a follow-up question to that.

13 CROSS-EXAMINATION

14 BY MS. GANDESBERY:

15 Q Good morning, Mr. Lambert. What  
16 would be the ratemaking impact if PG&E, as  
17 previously stated, overcollected for hydro  
18 decommissioning?

19 A Based on the timing of PG&E's  
20 estimates, as provided in the workpapers, to  
21 what PG&E had originally had premarked as  
22 exhibit -- I'm sorry that I can't tell you  
23 what hearing exhibit that corresponds to --  
24 PG&E would likely hold the accumulated  
25 decommissioning funds as a reduction to  
26 ratebase until those funds would be available  
27 for the last of its forecasted  
28 hydrofacilities to undergo decommissioning,

1 but that would not occur, I believe, until  
2 the 2070s.

3 Q In that way, would customers be  
4 made whole? If there was an overcollection,  
5 it would be returned to customers later?

6 A This is a question of  
7 intergenerational equity. So if it was  
8 returned and it would be returned subsequent  
9 to the exhaustion of decommissioning  
10 possibilities for all of the forecasted  
11 hydrofacilities and if that was not to occur  
12 until the 2070s or later, this implies that  
13 many customers who will be paying these funds  
14 will not necessarily see the decommissioning  
15 benefits of those funds.

16 MS. GANDESBERY: Thank you. I don't  
17 have anything further.

18 ALJ LAU: Ms. Shek, do you have -- hold  
19 on. Judge Lirag.

20 ALJ LIRAG: Let Ms. Shek go first.

21 ALJ LAU: Ms. Shek, do you have any  
22 redirect?

23 MS. SHEK: No, your Honor.

24 ALJ LAU: Judge Lirag.

25 ALJ LIRAG: Just one question, Mr.  
26 Lambert. On Exhibit 163, your depreciation  
27 testimony page 8, line 9, what do you mean --  
28 what is meant by an edge case?

1           A    An edge case is -- actually, can we  
2 go off the record. I can look.

3           ALJ LIRAG: All right. Let's go off  
4 the record.

5                   (Off the record.)

6           ALJ LIRAG: Let's go back on the  
7 record.

8                   So the question was in line 9, page  
9 8 of Exhibit 163 what is meant by an edge  
10 case.

11           A    In general, an edge case would be a  
12 situation where parameters that may be  
13 reasonable under middle assumptions, given a  
14 certain range, become no longer reasonable  
15 when the extremes of that variable are  
16 reached.

17                   So, here, the account in question,  
18 so specific gesture of this account, the edge  
19 case is that the company has not been able to  
20 provide capital additions to this account  
21 sufficient to maintain typical mass property  
22 characteristics.

23           ALJ LIRAG: Okay. Thank you.

24           ALJ LAU: Any further questions, Ms.  
25 Shek?

26           MS. SHEK: No, your Honor.

27           ALJ LAU: All right, Mr. Lambert --  
28 hold on. Is there a move to admit Exhibit



1 162 to 166 into the record?

2 MS. SHEK: Yes, your Honor. Thank you.

3 ALJ LAU: Are there any objections?

4 MS. GANDESBERY: No objections, your  
5 Honor.

6 ALJ LAU: All right. Exhibit 162 to  
7 166 are admitted into the record.

8 (Exhibit Nos. 162 to 166 were  
9 received into evidence.)

10 ALJ LAU: Mr. Lambert, you are excused.  
11 Off the record.

12 (Off the record.)

13 ALJ LAU: Let's go back on the record.

14 We'd like to identify another  
15 exhibit. During break, an exhibit was  
16 distributed that is -- this will be  
17 Exhibit 167. That is the testimony of Curt  
18 Volkmann on behalf of the Solar Energy  
19 Industries Association and Vote Solar.

20 Is there a motion to move this into  
21 the record?

22 MS. ARMSTRONG: Yes. Jeanne Armstrong  
23 for SEIA.

24 Motion to move the testimony into  
25 the record.

26 ALJ LAU: Are there any objections?

27 MS. GANDESBERY: No objection, your  
28 Honor.

1 ALJ LAU: Hearing none, Exhibit 167 is  
2 moved into the record.

3 (Exhibit No. 167 was marked for  
4 identification.)

5 ALJ LAU: Let's go off the record.  
6 (Off the record.)

7 ALJ LAU: Let's go back on the record.  
8 We have on the witness stand Mr.  
9 Kelly Lee from Cal Advocates.

10 Mr. Lee, can you raise your right  
11 hand.

12 KELLY LEE, called as a witness by  
13 Public Advocates Office, having been  
sworn, testified as follows:

14 THE WITNESS: I do.

15 ALJ LAU: Thank you. Can you, for the  
16 record, state your full name spelling your  
17 last name and give us your business address.

18 THE WITNESS: Okay. My name is Kelly  
19 Lee. My last name is spelled L-E-E, and my  
20 business address is 505 Van Ness Avenue, San  
21 Francisco 94102.

22 ALJ LAU: Thank you, Mr. Lee. We have  
23 several exhibits we'd like to identify.  
24 First is Exhibit 168. That is Cal Advocates'  
25 testimony from Mr. Kelly Lee on gas  
26 distribution capital expenditures.

27 (Exhibit No. 168 was marked for  
28 identification.)

1 ALJ LAU: Exhibit 169 are Cal  
2 Advocates' workpapers to Mr. Kelly Lee's  
3 testimony on gas distribution capital  
4 expenditures.

5 (Exhibit No. 169 was marked for  
6 identification.)

7 ALJ LAU: And Exhibit 170 is a  
8 cross-examination exhibit by PG&E titled Cal  
9 Advocates' Response to PG&E-PUBADV002.

10 (Exhibit No. 170 was marked for  
11 identification.)

12 ALJ LAU: Ms. Shek, you may begin your  
13 direct.

14 MS. SHEK: Thank you, your Honor.

15 DIRECT EXAMINATION

16 BY MS. SHEK:

17 Q Good morning, Mr. Lee.

18 A Good morning.

19 Q Mr. Lee, did you prepare all of  
20 Exhibits 168 and 169, your report and  
21 workpapers?

22 A Yes.

23 Q And did you prepare sections of  
24 Exhibit 166, the Public Advocates Office's  
25 errata?

26 A Yes.

27 Q Can you direct us to the changes  
28 that you have for your testimony?

1           A    This would be on page 10 of  
2 Exhibit 166 and line 8.  Instead of "more  
3 than 12 million," it should read "almost 25  
4 million."

5           Q    Thank you.  Are there any other  
6 corrections that you've made?

7           A    No.

8           Q    Thank you.  Are the facts and  
9 opinions set forth in your Exhibits 168 and  
10 169 true and correct to the best of your  
11 knowledge?

12          A    Yes.

13          Q    Thank you, Mr. Lee.

14          MS. SHEK:  Your Honors, we have no  
15 further direct for Mr. Lee.  He is available  
16 for cross-examination.

17          ALJ LIRAG:  Let's go off the record.

18                (Off the record.)

19          ALJ LIRAG:  Back on the record.

20          ALJ LAU:  PG&E, would you like to begin  
21 your cross?

22          MR. OUBORG:  Yes.  Thank you, your  
23 Honor.

24                       CROSS-EXAMINATION

25          BY MR. OUBORG:

26           Q    Good morning, Mr. Lee.

27           A    Good morning.

28           Q    I'm Peter Ouborg, in-house counsel

1 to PG&E. I want to ask you some questions  
2 today about PG&E's gas distribution  
3 overpressure protection program, or the OPP  
4 program. In particular, I'll focus on the  
5 capital portion of that program, which I  
6 believe you addressed in your testimony.

7 First I'd like to go over what your  
8 understanding is of the scope of the proposed  
9 program, and I refer you to your testimony,  
10 which, I believe, is Exhibit 168, page 8.  
11 And on line 9 --

12 Are you there, Mr. Lee?

13 A Yes, I am.

14 Q On line 9, you summarize PG&E's  
15 proposal by saying, "This work involves the  
16 installation of slam-shut devices at the  
17 pilot operated distribution regulator  
18 stations to reduce the risk of large  
19 overpressure events."

20 ALJ LAU: Mr. Ouborg, I think -- can  
21 you check if your microphone is on. ]

22 BY MR. OUBORG:

23 Q And then in a second sentence on  
24 line 11, you define an OP event by saying:

25 A large OP event is  
26 generally defined as a  
27 pressure excursions ten  
28 percent greater than the

1 maximum allowable operating  
2 pressure.

3 So is it your understanding,  
4 Mr. Lee, that these pilot operated district  
5 regulator stations where PG&E intends to  
6 install slam-shut devices are on PG&E's  
7 high-pressure gas distribution system?

8 A Yes.

9 Q And is it your understanding that a  
10 pilot operated district regulator station  
11 consists of a regulator and a monitor?

12 A Yes.

13 ALJ LAU: Mr. Lee, I think you need to  
14 turn on your microphone.

15 THE WITNESS: Is that --

16 ALJ LAU: Yeah.

17 THE WITNESS: Thanks.

18 BY MR. OUBORG:

19 Q Thank you.

20 And if the regulator -- so the  
21 regulator reduces the pressure of the gas  
22 before it flows downstream to the  
23 distribution system. If the regulator fails  
24 to operate, it's your understanding that  
25 normally the monitor would operate to control  
26 the pressure of gas as a backup?

27 A Yes.

28 Q However, if both the regulator and

1 the monitor failed together, then there's  
2 device to control the gas pressure at that  
3 point; would that be correct?

4 A Well, my understanding is that PG&E  
5 has a primary OPP to relieve the pressure,  
6 assuming it's working.

7 Q Right. But assuming that regulator  
8 does not work, and the monitor also which  
9 normally would be the backup fails at the  
10 same time, I'm just confirming that then  
11 there would be no further control of the  
12 pressure?

13 A Right. Except that the primary  
14 system relief should be able to, you know,  
15 relieve the higher pressure if it's working  
16 properly.

17 Q Right. But my question was if  
18 neither one is working properly,  
19 simultaneously, then there's no further  
20 control on the pressure of gas. I'm asking  
21 you to assume they are both not working at  
22 the same time.

23 A Do you mean the regulator and the  
24 monitor?

25 Q Yes. And if they both don't  
26 operate, then --

27 A Yes. Then you would have high  
28 pressure going through and then the primary

1 system should be able to relieve the  
2 pressure.

3 Q So I -- I'm not understanding it.

4 If both the regulator and the  
5 monitor don't operate to control the pressure  
6 and that pressure spike migrates downstream,  
7 what are you talking -- when you say  
8 "primary" system will come into effect, what  
9 are you referring to?

10 A Well, you know -- I mean, you know,  
11 PG&E is proposing the slam-shut valve as a  
12 secondary system. So, the assumption there  
13 is you would have a working primary system.  
14 Then the primary system should work first.  
15 And if it doesn't work, then the secondary  
16 system would come in.

17 Q Right. But PG&E's proposal is to  
18 install that secondary system. If there is  
19 no secondary system, if we do not install the  
20 slam-shut --

21 A Right. Then you do not have a  
22 secondary system. Right.

23 Q Okay --

24 A But, you know, you should have a  
25 primary system.

26 Q Right.

27 And is it your understanding that  
28 the simultaneous failure of both the



1 regulator and monitor is referred to in the  
2 industry as a common mode failure? That's  
3 the term applied to that.

4           It's not -- common doesn't refer to  
5 the frequency of the event. It refers to the  
6 fact that both these things fail together.

7           Is that your understanding of the  
8 that term?

9           A    I have seen that term used.

10          Q    Okay. And perhaps covering ground  
11 we've already covered, is it your  
12 understanding the intent of installing the  
13 slam-shut devices at these regulator stations  
14 is to guard against the failure of that  
15 primary system when both the regulator and  
16 monitor do not operate as they are supposed  
17 to? -- that's the intent of PG&E's proposal?

18          A    Or in the bypass valve or the  
19 relief valve.

20          Q    And if the regulator and the  
21 monitor both fail and the slam-shut device is  
22 installed, then the way it would be intended  
23 to operate would be to close and stop the  
24 flow of gas down into the gas stream to that  
25 point; right?

26          A    Yes.

27          Q    Okay. So would you agree with this  
28 summary of what we just talked about, PG&E's

1 proposal is intend to protect against an  
2 overpressure event in the distribution system  
3 when all other measures and controls fail?

4 MS. SHEK: Your Honor, objection.

5 Mr. Lee cannot comment on what the  
6 intent is of the project PG&E is requesting,  
7 unless it's been included in his testimony.

8 MR. OUBORG: I can rephrase the  
9 question, your Honor.

10 ALJ LAU: Please.

11 BY MR. OUBORG:

12 Q Mr. Lee, based on the answers  
13 you've given to the previous questions, would  
14 you agree that installing slam-shut devices  
15 would protect against an overpressure event  
16 in the distribution system when all other  
17 measures and of controls fail to control the  
18 pressure?

19 A That's a correct general statement,  
20 yes.

21 Q Thank you.

22 So let's turn now to Cal Advocates'  
23 position and talk about what that is. Let's  
24 refer to your testimony at page 9, line 20.

25 Are you there Mr. Lee?

26 A Yes.

27 Q Sorry. I'm not there yet.

28 Okay. So on line 20, there on

1 page 9, you state your position, which  
2 generally is that you believe at this time  
3 PG&E should not install slam-shut devices on  
4 this pilot-operated regulator stations. Is  
5 that --

6 A Sure.

7 Q Okay. And on page 10, on line 2,  
8 you state as one reason for your  
9 recommendation that PG&E should review the  
10 effectiveness of filters before committing to  
11 the capital program. And just by way of  
12 background, when you refer to "filters"  
13 there, you refer to PG&E's expense program  
14 that it's proposing in this GRC to install  
15 filtration on these pilot-operated regulator  
16 stations; is that correct?

17 A Yes.

18 Q And just for clarity, when you say  
19 "capital program" on line 3, we're talking  
20 about the expenditures to install the  
21 slam-shut devices that PG&E's proposing?

22 A Yes.

23 Q Okay. And then, as another reason  
24 for your recommendation, if you look on  
25 page 9, on line 12 -- there's a paragraph  
26 from line 12 through 19 that, in particular,  
27 on line 15, you make a statement that, in  
28 response to a Cal Advocates' data request:

1 PG&E states that it never  
2 experienced catastrophic  
3 consequences at any of its  
4 M&C stations --  
5 Which stands for "measurement  
6 control"; is that correct?

7 A Yes.

8 Q And you're referring to the large  
9 overpressure events that PG&E's experienced  
10 from 2012 to 2017 when you make that  
11 statement; is that right?

12 A Yes.

13 Q Okay. So now I want to review some  
14 of PG&E's recent overpressure events with  
15 you. And could you turn to what was  
16 previously identified as hearing Exhibit 41?

17 Do you have that?

18 A Yes.

19 Q And hearing Exhibit 41 was PG&E's  
20 response to TURN Data Request 82 and was  
21 introduced during the cross-examination of  
22 Terry White, PG&E's witness on this topic.

23 And, Mr. Lee, have you had a chance  
24 to review this document?

25 A Yes.

26 Q Okay. And, just for the record, on  
27 page 1 of the Data Request, the first  
28 paragraph under the red text states that:

1 PG&E has reviewed 32 large  
2 overpressure events that  
3 occurred from 2016 to 2019  
4 and has prepared causal  
5 assessments of these events  
6 to better understand the  
7 need for actions to prevent  
8 reoccurrence.

9 So that's a summary of what's in  
10 this response.

11 Can I refer you to the top of  
12 page 2, Mr. Lee? There's a table at the top  
13 of page 2. And the third column on that  
14 table states:

15 Events attributable to  
16 common mode failure at  
17 pilot-operated stations.

18 Do you see that?

19 A Yes.

20 Q Okay. And just to recap what we  
21 discussed earlier, common mode failure is  
22 when both the regulator and monitor fail  
23 together?

24 A Okay.

25 Q All right. And, again, to recap  
26 PG&E's OPP program it's proposing here, the  
27 slam-shut devices are aimed at guarding  
28 against common mode failure at pilot-operated

1 regulator stations.

2 Would that be fair to say?

3 A Yes, for the all the district  
4 stations.

5 Q Okay. Thank you.

6 And is it your opinion, Mr. Lee,  
7 that the continued occurrence -- sorry.

8 Before I ask that question, going  
9 back to the table at the top of page 2 in  
10 that third column, PG&E lists, if I do my  
11 math correctly, 14 over -- large overpressure  
12 events that occur between 2016 and 2019 that  
13 were attributable to this common-load  
14 failure.

15 Is that what the numbers say --  
16 there's 12 events there; right?

17 A Well, that's what I see on the  
18 table.

19 Q Okay. Yeah.

20 So is it your opinion, assuming  
21 that's correct that that's how many large  
22 overpressure events PG&E experienced, that  
23 the continued occurrence of this level of  
24 large OP events, due to common mode failure  
25 poses no risk of a dangerous incident?

26 A Well, you have a common mode  
27 failure. But then you should have a primary  
28 system, like such as relief valve, to take

1 care of the issue. And I did not see, you  
2 know, any really devastating events happen,  
3 you know, from all these events that you list  
4 here.

5 And I'm not too sure, you know,  
6 whether here these are pilot-operated events  
7 or, you know, you are only including the ones  
8 that are occur at the district stations that  
9 you plan to -- that you propose to put the  
10 OPP in or slam-shut valve in. Or is it  
11 including all the, you know, other stations?

12 Q I think the table says these are  
13 events attributable to common mode failure of  
14 pilot-operated stations, which are the kind  
15 of stations that PG&E's proposing to put  
16 slam-shut devices on its direction system?

17 A Okay. And I have not seen any data  
18 in there that shows that there is a  
19 break-even down streak.

20 Q Okay. So let's talk about that for  
21 a minute. I understand that's your position.

22 I did attach to the hard copy that  
23 we distributed on this exhibit one of the  
24 causal evaluations that PG&E conducted. And  
25 if you could turn to that, it's -- after  
26 page 3 of the data response, there is a page  
27 that says line rupture, Los Banos.

28 Do you see that?

1           A    Yes.

2           Q    Okay.  And this was one of the  
3 large overpressure events that resulted in  
4 line rupture.

5                    Could you turn to page 8 of that  
6 causal evaluation?

7                    Are you there?

8           A    Yes.

9           Q    And on page 8, there's a paragraph  
10 labeled "Image 1, lifted concrete slab."

11                   Do you see that?

12          A    Okay.  Yes, I see that.

13          Q    And above that in the text, it  
14 states, "Video provided by the customer."  It  
15 shows a concrete slab lifted from its  
16 foundation due to the pressure release.

17                   Do you see that?

18          A    Yes.

19          Q    Okay.  And then lower down on  
20 page 8, there are four bullets.  And the  
21 first bullet there says:

22                   Ductile failure of the  
23 4-inch plastic service  
24 pipe.  See image 2.

25                   And then on page 9, the opposite  
26 page, there's a photograph of the plastic  
27 pipe ruptured.

28                   Do you see that?



1           A    Yes.

2           Q    So there was no ignition of gas in  
3 this event. But would you agree, Mr. Lee, if  
4 there had been an ignition source with this  
5 kind of release of gas, there could have been  
6 an explosion or a catastrophic consequence?

7           A    Yes, possibly.

8           Q    Okay. Especially if this line, for  
9 example, had been out on a public street or  
10 something like that?

11          A    Yeah.

12          Q    Okay. Let's turn back to your  
13 testimony --

14          A    Can I add something to this --

15          Q    Yes.

16          A    -- from what I read on this thing?

17                There's some issue with this  
18 station to begin with. It's not a station,  
19 you know, that -- and here, you know, the  
20 post-accident report indicated that this  
21 station was operating at the pressure level  
22 that was not designed for. And then, as a  
23 matter of fact, it's your own word --

24          Q    What page are you referring to?  
25 Can you help me out here?

26          A    Oh, let me get my copy out. I had  
27 it highlighted.

28          ALJ LAU: Off the record.

1 (Off the record.)

2 Back on the record.

3 THE WITNESS: On page 7 of the this  
4 post-accident report, and -- let's see.

5 For this particular station, I mean,  
6 this is your own post-accident report that  
7 says, you know -- it says several things  
8 beforehand about, you know, the operating  
9 conditions. And it says here:

10 This lead the team to  
11 conclude that the existing  
12 equipment was inappropriate  
13 for the current operating  
14 conditions.

15 So, I mean, you're way  
16 overstressing the equipment by putting higher  
17 pressure than the equipment was designed for.  
18 And that information was, you know, in a  
19 fairly-detailed form in this report.

20 Plus, you know, also, I believe on  
21 page 9, line 3, the summary here says:

22 The solid bypass valve  
23 leakage.

24 That means there was some issue  
25 with the bypass valve. So you really have an  
26 equipment regulator station that really needs  
27 to be fixed. So I didn't know what -- you  
28 know, what -- if it's operating properly, you

1 probably would not have an issue of an  
2 overpressure.

3 BY MR. OUBORG:

4 Q So -- but isn't it true, Mr. Lee,  
5 that regardless of the cause of the pressure  
6 spike and the failure of the regulator to  
7 control it, in an event like this, a  
8 slam-shut valve would serve as a last resort  
9 to protect the downstream system?

10 This is about exactly what you're  
11 talking about when for whatever reason the  
12 regulation fails, the slam-shut is the last  
13 resort if you have one installed; isn't that  
14 correct?

15 A Possibly.

16 Q Okay. Can we turn to your  
17 testimony page 10, please. And we looked at  
18 this before, but on line 2 you make the --

19 A What page number are you --

20 Q Sorry. Page 10.

21 Are you there?

22 A Yes.

23 Q And on line 2, you say:

24 PG&E should review the  
25 effectiveness of filters  
26 before committing to the  
27 capital program.

28 And the capital program, again, is

1 to install the slam-shut valves isn't that  
2 correct? -- that you're referring to?

3 A Yes.

4 Q Okay. Do you agree that ongoing  
5 initiatives such as filtration and gas  
6 quality improvement cannot fully mitigate the  
7 risk that regulators can fail in the common  
8 mode?

9 A Well, you know, in PG&E's proposal,  
10 basically, you know, the reason they state --  
11 the main reason PG&E states in proposing this  
12 capital program, the OPP program, is that the  
13 debris from upstream can get into the  
14 regulators, and that can cause it to fail.  
15 And for -- in your expense program, you're  
16 spending millions of dollars putting filters  
17 in. And supposedly that's going to be able  
18 to filter out at least most of debris that  
19 are coming into the regulators. And, I mean,  
20 if that works, then you should not have the  
21 problem of, you know, debris causing the  
22 regulators to fail.

23 And I mean, in PG&E's justification  
24 for the capital program, that's the main  
25 point, you know, the debris is getting into  
26 the regulator that causes it to just stop,  
27 you know. And does the high pressure, you  
28 know, go right through the regulators? But

1 that's -- you know, I mean, that's PG&E's  
2 justification for the program.

3 Q Well, PG&E's justification for the  
4 program is that it is a protection against  
5 catastrophic events when all these other  
6 measures fail.

7 Isn't that a correct  
8 characterization of PG&E's program?

9 A Yes. And, also, in the data PG&E  
10 provided me, you know, I have not seen any  
11 catastrophic failure in any of the systems  
12 and in all these years of its operation,  
13 so...

14 Q Is it your testimony, Mr. Lee, that  
15 PG&E should not try to mitigate against these  
16 low-probability but high-consequence events  
17 when all else fails?

18 MS. SHEK: Your Honor, objection.

19 Mr. Ouborg hasn't cited any  
20 specifics from Mr. Lee's testimony to  
21 summarize that argument.

22 ALJ LAU: Right. But this is just  
23 asking -- I will allow it. But this is just  
24 asking Mr. Lee's opinion.

25 THE WITNESS: All right. Could you  
26 please restate the question?

27 BY MR. OUBORG:

28 Q Sure.

1           Is it your testimony that PG&E  
2   should not try to mitigate these  
3   low-probability but high-consequence events,  
4   such as the common failure mode of a  
5   regulator station, for whatever reason, after  
6   all measures have been taken to prevent that,  
7   given that there's always a probability that  
8   those measures might not work.

9           Should PG&E not plan to mitigate  
10   against that potential outcome?

11          A   Well, I mean, you know, to answer  
12   your question, you know -- you need to do a  
13   cost-effectiveness study to see whether, you  
14   know, the amount is appropriate. And I think  
15   that's a lot of money to spend and expect to  
16   spend on this GRC and over the next GRC to  
17   solve an issue -- try to solve an issue that  
18   may not be a problem.

19           I mean, you're talking about  
20   spending all this money to do 200  
21   pilot-operator valves during this GRC. And  
22   you have a total of, what, a  
23   thousand-330-something valves. So it's going  
24   to be about a-year program. And, you know,  
25   the amount that you're going to spend would  
26   be huge, you know. So you need to, you know,  
27   tell us, you know, how cost-effective that  
28   is. And, right now, I don't see any study on

1 that.

2 MR. OUBORG: Can we go off the record  
3 for a second?

4 ALJ LAU: Let's go off the record.  
5 (Off the record.)

6 ALJ LAU: On the record.

7 BY MR. OUBORG:

8 Q Mr. Lee, earlier on, you agreed  
9 with me that the slam-shut device program  
10 that PG&E's proposing is on the high-pressure  
11 distribution system.

12 Are you familiar with PG&E's  
13 low-pressure distribution system?

14 A No.

15 Q So could I turn you to PG&E's  
16 rebuttal testimony?

17 Do you have that in front of you?

18 A Yes.

19 ALJ LAU: Mr. Ouborg, could you remind  
20 us what hearing exhibit --

21 MR. OUBORG: Hearing Exhibit 15, your  
22 Honor.

23 ALJ LAU: Thank you.

24 BY MR. OUBORG:

25 Q And if you turn to page 20?

26 A This is 5-20?

27 Q Yes.

28 A I'm there.

1 ALJ LAU: Are we on 5-20?

2 MR. OUBORG: Yes, your Honor.

3 ALJ LAU: Okay. Thank you.

4 BY MR. OUBORG:

5 Q And on that page, Mr. Lee, on  
6 line 8, PG&E describes its high-pressure  
7 regulation systems and, on line 18 its  
8 low-pressure regulations systems.

9 On line 27 it states:

10 PG&E has modified its  
11 low-pressure district  
12 regulators to include  
13 slam-shut devices a  
14 secondary OPP -- as a  
15 secondary OPP device to  
16 mitigate potential OP  
17 events as a result of a  
18 past event in Alameda in  
19 April 1994.

20 Do you see that?

21 A Yes.

22 Q And do you believe that those  
23 slam-shut devices are an effective control on  
24 the low-pressure system to control against  
25 overpressure events.

26 Do you have an opinion on that?

27 A No.

28 Q Returning to the mitigating against



1 high -- high over -- large overpressure  
2 events.

3 Is there some number of large over  
4 pressure events on PG&E's system that Cal  
5 Advocates finds an acceptable number, and  
6 that does not need further mitigation?

7 MS. SHEK: Your Honor, objection.

8 Mr. Lee doesn't have anything  
9 related to the number of events that would  
10 relate to how he would feel the OP system  
11 would be effective and should be approved in  
12 this GRC.

13 MR. OUBORG: So I can refer the witness  
14 to his testimony where he talks about it.

15 ALJ LAU: Okay. Please.

16 BY MR. OUBORG:

17 Q So, Mr. Lee, if you would turn to  
18 your testimony again on page 9 and, again,  
19 the paragraph between lines 12 and 19, you  
20 state that there were 11 events that occurred  
21 in pilot -- and these are large overpressure  
22 events that occurred in pilot-operated  
23 regulator station.

24 Do you see that?

25 A Yes.

26 Q Okay. Does Cal Advocates believe  
27 that as an acceptable number of large  
28 overpressure events PG&E should not concern

1 themselves to guard against that level of  
2 occurrence of overpressure events? ]

3 A Well, that's just part of it. The  
4 idea -- the thing I -- if you take a look at  
5 it, it says, in my testimony here that you  
6 quoted on line 17, you know, I said, "None of  
7 them experience release of gas, and there was  
8 never any safety or customer impact  
9 documented."

10 Q So Mr. Lee, are you saying that  
11 your recommendation is that PG&E should wait  
12 until there is a catastrophic overpressure  
13 event with severe consequences before  
14 considering putting slam-shut devices on  
15 these regulator stations?

16 A I -- I think I did recommend it in  
17 my testimony, that PG&E should wait and  
18 see -- the expense program, to see how  
19 affective that is first. And I'm not saying  
20 that you never do this or you -- you need to  
21 do more study and analysis.

22 Q Thank you, Mr. Lee. Can we -- I  
23 want to talk about one more thing. And that  
24 is to talk about some recent overpressure  
25 events in the gas industry. First I want you  
26 to review what is being numbered Hearing  
27 Exhibit 170, which is your response to PG&E  
28 data request.

1 Can you turn to that document?

2 A Okay.

3 Q And this data request asked you if  
4 you were aware of recent overpressure events  
5 in the industry and recommendations from  
6 regulators and industry experts stemming from  
7 recent OP events, and your response was that  
8 except to the extent provided in PG&E's  
9 testimony workpapers and data responses, the  
10 Public Advocates Office has not addressed OP  
11 events in the industry and recommendations  
12 from regulators and industry experts stemming  
13 from recent OP events that are related to  
14 pilot operator regulator valves.

15 So now I wanted to have you look at  
16 what was previously marked as Hearing Exhibit  
17 41 -- sorry -- Hearing Exhibit 40. Four,  
18 zero. And this document is a National  
19 Transportation Safety Board safety  
20 recommendation report relating to the  
21 Merrimack Valley, Massachusetts incident  
22 which occurred in 2018.

23 Do you have that document?

24 A Yes.

25 Q And have you had a chance to review  
26 this document?

27 A Yes, I have.

28 Q First I'd like to refer you to page

1 6 of the document. And in the first full  
2 paragraph on page 6, on the second line, it  
3 states, "A risk identification and assessment  
4 are necessary to establish the appropriate  
5 prevention and mitigation measures to reduce  
6 the likelihood of consequences should an  
7 incident occur."

8 Do you see that?

9 A Yes.

10 Q Isn't that exactly what PG&E has  
11 done with its proposal to install slam-shut  
12 devices? In other words, PG&E's identified a  
13 risk, named it a common mode failure, and  
14 PG&E has proposed a mitigation; namely, the  
15 slam-shut valves to guard against the  
16 likelihood of consequences from the  
17 incident -- the high-pressure incident.

18 Isn't that what PG&E's done?

19 A I have not seen any detail analysis  
20 from PG&E on the risk identification and  
21 assessment of this particular program. I  
22 mean, I seen words in the testimony, but I  
23 have not seen any detail assessment that's  
24 related to the program.

25 Q So the number of the continuing  
26 occurrence of large overpressure events, as  
27 we reviewed earlier in Exhibit 41, that is  
28 not evidence that there's a risk from large

1 overpressure events that is --

2           A    There's always a risk, but I did my  
3 assessment based on the same data that PG&E  
4 use and that PG&E have and provided to me.  
5 And as I mentioned earlier and I read into  
6 the record in a certain sentence, that there  
7 was never any gas released from the events or  
8 there was never any real big issues from  
9 those.

10           Q    Thank you for that. Can you  
11 turn -- can you look at page 7 of this  
12 report. And at the top of that page, it  
13 states "recommendations."

14                   Are you at that page?

15           A    Yes.

16           Q    And in the section which contains  
17 the recommendations to NiSource Inc., which  
18 was the utility involved in this incident,  
19 the third recommendation down states, "Apply  
20 management of change processes to all changes  
21 to adequately identify system threats that  
22 could result in a common mode failure."

23                   Do you see that?

24           A    Yes.

25           Q    And again, I would ask you the same  
26 question. Isn't PG&E's identification of the  
27 common mode failure on its pilot operated  
28 regulated stations and proposal of a measure

1 to mitigate that threat, isn't that exactly  
2 what PG&E's done with its proposal?

3 A That's -- yes, that's what PG&E has  
4 done. But the thing is you identify there  
5 may be an issue, but then whether or not you  
6 need to take that action, that's another  
7 issue.

8 MR. OUBORG: Thank you, Mr. Lee.

9 I have no further questions, your  
10 Honor.

11 ALJ LAU: Ms. Shek.

12 MS. SHEK: Thank you, your Honor. Can  
13 we go off the record?

14 ALJ LAU: Let's go off the record.

15 (Off the record.)

16 ALJ LAU: On the record.

17 We're having a break until 11:30.

18 Off the record.

19 (Off the record.)

20 ALJ LAU: Let's go back on the record.

21 Ms. Shek, do you have any redirect?

22 MS. SHEK: Yes, your Honor. Thank you.

23 REDIRECT EXAMINATION

24 BY MR. LEE:

25 Q Mr. Lee?

26 A Yes.

27 Q Is it correct that the Cal  
28 Advocates considered the various incidents

1 that PG&E's cited in its request for its OPP  
2 program, but PG&E has not demonstrated why  
3 the program is the best and most  
4 cost-effective response to the cited risks?

5 A Yes.

6 Q Is it true you state in your  
7 testimony that PG&E should assess the  
8 effectiveness of their filtration program  
9 before initiating the very costly OPP  
10 program?

11 A Yes.

12 Q Now, Mr. Ouborg asked you a number  
13 of questions related to the Massachusetts  
14 incident, Exhibit 40. Can you tell us how  
15 this incident can be differentiated from what  
16 PG&E is requesting it's OPP program?

17 A Yes. PG&E's OPP program was for a  
18 normal operation of the regulator stations,  
19 but in the Massachusetts incident, it's a  
20 one-time incident and -- where an  
21 inexperienced engineer design a procedure for  
22 an upgrade of the pipes from an iron pipes to  
23 a newer pipes. And he forgot to write in the  
24 procedure to move the low-pressure censor  
25 from the old iron pipes to the new pipes. So  
26 that's why the accident happened, and it's a  
27 one-time accident caused by the wrong  
28 procedure. It's not during normal operation.

1           Q    So the request for the OPP program  
2 really is related more to normal day-to-day  
3 operations?

4           A    Yes.

5           Q    Thank you.

6           MS. SHEK: Your Honor.

7           ALJ LAU: Mr. Ouborg, do you need a --  
8 let's go off the record.

9                   (Off the record.)

10          ALJ LAU: Back on the record.

11                  Mr. Ouborg, do you have any recross?

12          MR. OUBORG: Thank you, your Honor. I  
13 do have some recross questions.

14                   RE CROSS-EXAMINATION

15          BY MR. OUBORG:

16           Q    Mr. Lee, let's talk for a minute  
17 about the Massachusetts incident that was  
18 described in Exhibit 40. And, as you point  
19 out -- can we turn to page 1 of that report.

20           A    Okay.

21           Q    And at the last full paragraph of  
22 the report, it says, "The project was to  
23 install a plastic distribution main and  
24 abandon and place a cast iron distribution  
25 main. The distribution main that was  
26 abandoned still had the censor -- the  
27 regulator sensing lines that we used to  
28 detect pressure in the distribution system



1 and provide input to the regulators to  
2 control the system pressure. Once the  
3 contractor crews disconnected the  
4 distribution main that was being abandoned,  
5 the section containing the regulator sensing  
6 lines began to lose pressure."

7           On the following page, it basically  
8 says that as a result of that, the regulator  
9 responded by opening further, and they were  
10 responding basically to this pressure from  
11 the abandoned line, which fell to almost  
12 zero; is that correct?

13           A   That's what I understand.

14           Q   Okay. And if a slam-shut device  
15 had been installed on that distribution  
16 system, in your opinion, would it have  
17 operated to stop this high pressure from  
18 migrating downstream into the distribution  
19 system?

20           A   Well, it depends on where were the  
21 slam-shut well is and --

22           Q   But if we assume it was the  
23 regulators that were opening to allow the gas  
24 out, if the slam-shut was downstream of that,  
25 it would have stopped that once the pressure  
26 got to a dangerous level. Isn't that  
27 correct?

28           A   Possibly. But in this particular

1 case, it's really up to the engineer that  
2 design the procedure to figure that out, and  
3 obviously, due to his inexperience -- and the  
4 procedures are not being reviewed by a  
5 professional engineer because there's no  
6 requirement for that at that time. And so  
7 that's why the incident occur, and that's why  
8 after the incident the NTSB recommended all  
9 procedure must be reviewed by a professional  
10 engineer.

11 And yes, it could possibly help,  
12 and I don't know the detail of the total  
13 design enough that -- to see -- say whether  
14 the slam-shut would have help. But if it's  
15 in the right place, it could help.

16 Q On another line of questioning from  
17 your counsel, you made the statement, I  
18 believe, that PG&E's OPP program -- "Our  
19 proposal to install slam-shut devices is  
20 designed for normal day-to-day operation;" is  
21 that correct?

22 A Yes.

23 Q Since PG&E's proposal is to provide  
24 a final control when the regulator station  
25 fails, including the monitor, why would you  
26 regard it -- and then there's overpressure,  
27 why would you regard that as normal operation  
28 when the regulator station has failed?

1           A    It's the day-to-day operation, not  
2   a one-time incident, like the Massachusetts.

3           Q    But isn't the only time a slam-shut  
4   would operate -- when everything has failed  
5   and there's high pressure migrating  
6   downstream and there's no further control of  
7   that, that's the situation for which the  
8   slam-shut is designed, isn't it?

9                   The slam-shut design is not --  
10   sorry. The slam-shut device is not designed  
11   to operate in normal conditions?

12          A    Well -- but day-to-day operations  
13   means that the gas is flowing through, and  
14   somebody is getting the gas. Somebody is  
15   pushing gas through. And it's not a one-time  
16   incident where somebody totally did the wrong  
17   thing.

18          Q    But wouldn't the slam-shut work for  
19   any kind of incident where the pressure  
20   spikes down? The slam-shut doesn't know what  
21   the cause of the high pressure is. It just  
22   operates when that spike starts to migrate  
23   downstream. Isn't that correct?

24                   It doesn't really matter what the  
25   cause is, whether it's designed to --

26          A    Well, that's what the slam-shut  
27   valve was designed for.

28          MR. OUBORG:   Okay.   Thank you.

1 I have no further recross, your  
2 Honor.

3 ALJ LAU: Ms. Shek, do you have further  
4 questions?

5 MS. SHEK: No, your Honor. Thank you.

6 ALJ LAU: Judge Lirag.

7 ALJ LIRAG: Just one question. And,  
8 Ms. Shek, this may be better answered by  
9 someone else, but let me ask Mr. Lee.

10 EXAMINATION

11 BY ALJ LIRAG:

12 Q Mr. Lee, in the various capital  
13 proposals for 2018, your recommendation was  
14 to use the 2018 recorded costs versus PG&E's  
15 2018 forecast. Is that fairly accurate?

16 A Yes.

17 Q And the reason being that 2018  
18 recorded costs are perhaps more accurate than  
19 the 2018 forecast?

20 A Yes, basically -- I mean, that's  
21 accurate.

22 Q If there are, let's say -- I'll  
23 just give one example. Let's say there are  
24 project delays in 2018 that causes a project  
25 to be -- instead of being finished in 2018,  
26 perhaps it got delayed to 2019 or even 2020.  
27 Is it PG&E's or -- in your view, is it PG&E's  
28 responsibility to explain the discrepancy, or

1 does your recommendation take that into  
2 account?

3 A I think PG&E should explain that  
4 and make a request to spend the money on the  
5 GRC, and I have seen testimony previously  
6 that utilities do that. And if they didn't  
7 want to spend the money that was not spent  
8 previously in the current -- the upcoming  
9 GRC, they would explain it on the GRC  
10 testimony.

11 Q But -- so my question is, you don't  
12 adjust a 2019 or 2020 recommendation based on  
13 that?

14 A 2019 or 2020, personally, I would  
15 look at that as whatever they recommend new.  
16 I mean, if there is something that they want  
17 to move from the previous GRC into it, they  
18 need to explain it and request it.

19 Q Understood. So if the forecast is  
20 different from the actual expenditures in  
21 2018 -- I'm just repeating it -- it's PG&E's  
22 responsibility to explain that?

23 A Yes.

24 ALJ LIRAG: All right. No questions --  
25 no more questions for me.

26 ALJ LAU: Let's go off the record.

27 (Off the record.)

28 ALJ LAU: Let's go back on the record.

1                   Is there a motion to move Exhibit  
2 168 to 169 into the record?

3           MS. SHEK: Yes, your Honor. Thank you.

4           ALJ LAU: Are there any objections?

5           MR. OUBORG: No, your Honor.

6           ALJ LAU: Hearing none, Exhibits 168  
7 and 169 are moved into the record.

8                   (Exhibit Nos. 168 and 169 were  
9 received into evidence.)

10           ALJ LAU: Is there a motion to move  
11 Exhibit 170 into the record?

12           MR. OUBORG: Yes, your Honor. PG&E so  
13 moves.

14           ALJ LAU: Are there any objections?

15                   (No response.)

16           ALJ LAU: Hearing none, Exhibit 170 is  
17 moved into the record.

18                   (Exhibit No. 170 was received into  
19 evidence.)

20           ALJ LAU: Mr. Lee, you are excused.

21           ALJ LIRAG: Hang on just a second,  
22 Mr. Lee.

23                   Ms. Shek, any questions off the  
24 questions I asked Mr. Lee?

25           MS. SHEK: No, your Honor.

26           ALJ LIRAG: All right.

27           MS. SHEK: Thank you.

28           ALJ LAU: Let's go off the record.

1 (Off the record.)

2 ALJ LAU: Let's go back on the record.

3 We are now identifying an additional  
4 exhibit. This is Exhibit 171, and that is  
5 the testimony by the National Diversity  
6 Coalition, the prepared testimony of Faith  
7 Bautista on the 2020 general rate case  
8 application of PG&E.

9 Is there a motion to move Exhibit  
10 171 into the record?

11 MR. GONDAI: Yes, your Honor.

12 ALJ LAU: Any objections?

13 MR. KLOTZ: No, your Honor.

14 ALJ LAU: Exhibit 171 is moved into the  
15 record.

16 (Exhibit No. 171 was received into  
17 evidence.)

18 MR. GONDAI: Thank you. And in  
19 addition, as we had notified your Honors last  
20 week, PG&E and NDC have reached an agreement  
21 in principle. And I'm happy to report we've  
22 now finalized that agreement and have a  
23 prepared stipulation that we move for  
24 admission.

25 MR. KLOTZ: Your Honor, I have copies  
26 of those to distribute.

27 ALJ LAU: Okay.

28 Off the record.

1 (Off the record.)

2 ALJ LAU: Let's go back on the record.

3 We have identified another exhibit.  
4 This is going to be Exhibit 172, and this is  
5 a stipulation between the National Diversity  
6 Coalition, NDC, and PG&E. This pertains to  
7 the outreach to communities of color and  
8 supplier diversity.

9 Is there a motion to move this into  
10 the record?

11 MR. GONDAI: Yes, your Honor. And I  
12 believe I identified myself earlier, Tadashi  
13 Gondai, National Diversity Coalition.

14 ALJ LIRAG: Mr. Gondai, can you explain  
15 a little bit what this document is.

16 MR. GONDAI: Yes, your Honor. So NDC  
17 had raised a number of issues related to  
18 outreach to communities of color and supplier  
19 diversity. As far as I understand, no other  
20 parties really address these issues. So they  
21 cover primarily spending related to  
22 time-of-use -- default time-of-use, spending  
23 related to the supplier diversity technical  
24 assistance program, reporting on spending on  
25 safety outreach as well as engagement between  
26 PG&E and community leaders in the minority  
27 community.

28 ALJ LIRAG: I suppose you'll confirm



1 that, Mr. Klotz.

2 MR. KLOTZ: Yes, that's correct.

3 ALJ LIRAG: All right. ALJ Lau.

4 ALJ LAU: Any objections?

5 (No response.)

6 ALJ LAU: Hearing none, Exhibit 172 is  
7 moved into the record.

8 (Exhibit No. 172 was received into  
9 evidence.)

10 ALJ LAU: Right now on the witness  
11 stand we have Mr. Steve Calvert. Mr.  
12 Calvert, I forgot if you were excused, so  
13 we're going to swear you in again. Can you  
14 please raise your right hand.

15 STEVE CALVERT, called as a witness  
16 by Pacific Gas and Electric Company,  
17 having been sworn, testified as  
18 follows:

18 THE WITNESS: I do.

19 ALJ LAU: You may lower your right  
20 hand. Please state for the record your full  
21 name, spelling your last and also give us  
22 your business address.

23 THE WITNESS: Sure. My name is Steve  
24 Calvert. The last name is C-A-L-V-E-R-T. I  
25 work at the PG&E office at 303 Carlson Street  
26 in Vallejo, California.

27 ALJ LAU: Mr. Gallo, you may begin your  
28 direct.

1 MR. GALLO: Yes, your Honor.

2 ALJ LAU: Or reaffirm the testimony.

3 MR. GALLO: Yes, your Honor. Mr.

4 Calvert is not sponsoring any additional

5 exhibits today. He is here in order to

6 answer some questions that PG&E witness

7 Sandra Cullings was unable to answer last

8 week or the week before. I can't remember.

9 ALJ LAU: Cal Advocates, would you like  
10 to begin your cross?

11 MR. SHER: Yes, thank you, your Honor.

12 CROSS-EXAMINATION

13 BY MR. SHER:

14 Q Nicholas Sher on behalf of Cal  
15 Advocates.

16 With regards to one exhibit, does  
17 Mr. Calvert have Exhibit 58, which I believe  
18 was entered into when Ms. Cullings was  
19 cross-examined?

20 A Is that a 94-page exhibit? It  
21 looks kind of like -- starts off with "your  
22 Wikipedia"?

23 Q Yes.

24 A Yes, I have that in front of me.

25 Q Great. Okay. Good morning, Mr.  
26 Calvert. My name is Nicholas Sher on behalf  
27 of Public Advocates Office.

28 A Good morning.

1           Q    According to your statement of  
2   qualifications, you are a registered  
3   electrical engineer and manager since 1985,  
4   correct?

5           A    That's correct.

6           Q    And you are a witness for PG&E's  
7   overhead system hardening and distribution  
8   system protection chapters of Exhibit 16,  
9   PG&E-4, correct?

10          A    Correct.

11          Q    You are, therefore, familiar with  
12   fuses and surge arresters?

13          A    Yes, I am.

14          Q    And their use in PG&E's overhead  
15   electric distribution system?

16          A    I am.

17          Q    Were you here last Friday when  
18   Ms. Cullings was on the stand?

19          A    I was here last Friday, but Ms.  
20   Cullings -- that was our hardening panel.

21          Q    The Friday before?

22          A    No, I was not.                                 ]

23          Q    Did you have a chance to read the  
24   transcripts of Miss --

25          A    I did. And I have them here with  
26   me, yes.

27          Q    Okay. Great. Thank you.  
28                And you understand that you were

1 identified as a person able to answer certain  
2 technical questions that she was not able to?

3 A My name was cited in the  
4 transcript, yes.

5 Q Great.

6 And as you've said, you have  
7 Exhibit 58. And do you have a Cross Exhibit  
8 59?

9 Scratch that. It's irrelevant.

10 With regards -- one second, your  
11 Honor.

12 ALJ LAU: Off the record.

13 (Off the record.)

14 ALJ LAU: Back on the record.

15 BY MR. SHER:

16 Q Mr. Calvert, I'm just going to ask  
17 you to confirm a number of technical terms.

18 First, S-A-G, SAG; that's the Serge  
19 Arrestor Grounding program?

20 A Yes. I believe that's the -- that  
21 was in the transcript, yes.

22 Q Okay. And this was previously  
23 authorized in the 2017 GRC as an expense  
24 program with MAT, which stands for  
25 maintenance activity type KAR?

26 A I know what a maintenance activity  
27 type is, but I can't attest to the  
28 maintenance chapter in the last rate case. I

1 was a witness, but for different material.

2 Q Okay. And then the NESAR, which  
3 stands for the non-exempt surge arrestor  
4 replacement program proposed in this GRC and  
5 requested as MAT 2AR; is that correct?

6 A That's my understanding, yes.

7 Q Okay. And PG&E has a second  
8 program request in this GRC to replace  
9 non-exempt equipment MAT 2AP; correct?

10 A Correct.

11 Q I'm going to refer to this through  
12 the questioning as the MAT or MAT 2 AP  
13 program. Okay?

14 A All right.

15 Q Are you familiar with the general  
16 scope of this program, MAT 2 AR and the MAT 2  
17 AP?

18 A Generally, I'm not an expert on  
19 this program. I'm an electrical engineer.  
20 And I can talk about how the equipment works  
21 and how to install it.

22 Q Are you familiar with the details  
23 other than -- you may not may be familiar  
24 with certain details; correct?

25 A Yeah. I can tell you the number of  
26 units. I have to research it here. But I'm  
27 familiar with non-exempt equipment, yes.

28 Q Are you familiar with PG&E's

1 procedures and practices for installing surge  
2 arrestors and fuses?

3 A I'm familiar with the standards  
4 that governs them, yes.

5 Q Okay. If we can turn to  
6 Exhibit 16, your direct testimony, which is  
7 page 9-42?

8 A Are you talking about the hardening  
9 chapter?

10 Q I believe so.

11 A Okay. No, I only brought the  
12 maintenance items. I can trust that what you  
13 read is subject to check, but --

14 Q Okay. Let's try and see --

15 ALJ LAU: Let's go off the record.

16 (Off the record.)

17 ALJ LAU: Back on the record.

18 BY MR. SHER:

19 Q So are you at 9-42, lines 3  
20 through 12?

21 A I am.

22 Q Great.

23 Do you mind just reading these to  
24 yourself to familiarize yourself?

25 A Yes, I'm familiar with this.

26 Q Okay. In your testimony in  
27 Chapter 9, it includes a program to install  
28 overhead fuses on tap lines as MAT 49C;

1 correct?

2 A That is correct.

3 Q Okay. Does figure 9-9 on the next  
4 page show a main line to tap line connection  
5 that includes a fuse on each face?

6 A Yes.

7 Q Okay. Turning back in the same  
8 volume to page 9-34.

9 A I'm there.

10 Q And if you look at the third bullet  
11 starting with "replacement of non-exempt"?

12 A Correct.

13 Q Okay. This implies that non-exempt  
14 equipment will be replaced as part of MAT 08W  
15 overhead system hardening; is that correct?

16 A Yes, in conjunction (sic) with the  
17 hardening work, there is a number of work  
18 activities. And that is one of them.

19 Q Okay. The list of equipment here  
20 does not include surge arrestors; is that  
21 correct?

22 A Surge arrestors is not listed. But  
23 the statement is "line equipment such as  
24 fuses." As we rebuild the line, we will  
25 rebuild it to current standards.

26 Q Do your testimony or workpapers  
27 provide the cost of non-exempt equipment  
28 replacement within MAT 08W?

1           A     Yes. I don't have the workpapers  
2 in front of me. But from what I recall, I  
3 have a table in there, and there's a line  
4 item for non-exempt equipment -- I want to  
5 say it's equipment and the transformers. But  
6 subject to check, I have a workpaper that  
7 calls out the work.

8           MR. GALLO: Your Honors, I would just  
9 like to point out that Mr. Calvert is not  
10 here to talk about the hardening program  
11 today. He's here to answer technical  
12 questions related to the surge arrestor  
13 program.

14          MR. SHER: Understood. But Ms.  
15 Cullings should have been able to answer  
16 these questions and wasn't able.

17          MR. GALLO: Questions about the  
18 overhead system hardening program? I  
19 disagree with that.

20          ALJ LAU: Let's try. And if Mr.  
21 Calvert cannot answer, then we will have to  
22 address those issues.

23          THE WITNESS: Okay.

24          MR. SHER: Okay.

25 BY MR. SHER:

26          Q     Did PG&E provide the cost of  
27 non-exempt equipment replacement within MAT  
28 08W in response to discovery?



1           MR. GALLO: Again, your Honors, I  
2 object.

3           This is unrelated to the MAT 2AP and  
4 2AR programs which are supposed to be the  
5 subject of testimony today.

6           MR. SHER: Okay. We'll move on.

7 BY MR. SHER:

8           Q This next line of questioning we'll  
9 focus on fuse terminology and proximity to  
10 surge arrestors.

11           If you can have Exhibit 58 in front  
12 of you for this?

13           A Okay.

14           Q Good. Turning to the first page,  
15 which is the wiki page?

16           A I'm there.

17           Q W-i-k-i.

18           A Mm-hm.

19           Q Item E is labeled "Fuse Cutout";  
20 correct?

21           A It is.

22           Q And this provides the mounting for  
23 a fuse element and a fuse element?

24           A That is correct. Just for general  
25 knowledge, the cutout is the fuse holder. So  
26 you see the insulator and all that? That's  
27 the mechanism that holds the fuse. That's  
28 known as the cutout. And the fuse is the

1 element on the left there.

2 Q Thank you.

3 And PG&E has requested funding for  
4 a program to replace non-exempt equipment  
5 focused on fuses, the MAT 2AP program?

6 A Yes, as well as other non-exempt  
7 equipment.

8 Q Okay. Do you know for a fact this  
9 program would replace fuse cutouts, fuse  
10 elements, or both?

11 A It will replace, in some cases,  
12 just the fuse; in other cases, both. Fuses  
13 are not always interchangeable with the  
14 cutout. Or there's standard changes around  
15 fault -- or continuous current ratings, et  
16 cetera, that may change it.

17 Q So that's why it would make sense  
18 in your professional opinion to replace one  
19 without the other?

20 A Well, PG&E would evaluate the  
21 current equipment and determine whether or  
22 not it needs to be replaced. If it doesn't  
23 meet the standard, then it would be upgraded.  
24 But it needs to meet our current standards.

25 Q For the next few questions, do you  
26 mind if we use "fuse" to refer to both the  
27 fuse cutout and the fuse element?

28 A Allow -- with the understanding

1 that we may need to clarify it if we're too  
2 general.

3 Q Absolutely. If you look at  
4 page 30, 3-0, Figure 6, in Exhibit 56?

5 A So page 30, or?

6 Q Page 30 of 94.

7 A Okay.

8 Q And this image shows is surge  
9 arrestors and fuses on the same crossarm;  
10 correct?

11 A Just to make sure we're talking  
12 about the same -- well, this appears to be  
13 in, like, a test yard or a training center.  
14 This isn't on a regular distribution pole.

15 Q Correct.

16 A But in this particular drawing, it  
17 looks like a fiber glass crossarm with fuses  
18 on the backside and new surge arrestors on  
19 the front, closest to the camera.

20 Q If a new crossarm is installed, any  
21 fuses on the crossarm would require mounting  
22 too; correct?

23 A Correct. Yeah.

24 When you replace the crossarm, you  
25 take all the equipment off of it and replace  
26 it.

27 Q Okay. I'm going to refer to a  
28 number of pages. And I just want to know

1 whether or not fuses are shown on these  
2 pages?

3 A Sure.

4 Q And if you look at page 31, it's  
5 the next page?

6 A Is there a question incoming, or?

7 Q Yeah. I just want to know whether  
8 or not you see a fuse on that page?

9 A This appears to be the new exempt  
10 surge arrestors. Again, it's on a fiberglass  
11 arm. It's hard to tell, but perhaps on the  
12 backside there, near that pole on the left  
13 side -- I can't tell from this photo, but  
14 there could be a fuse back there.

15 Q Okay. If you could turn to  
16 page 38?

17 A I'm at page 38. Yes.

18 Q And Figure 1-R, if there are any  
19 fuses shown?

20 A Yeah. It's difficult to see. But  
21 this appears to be -- there appears to be a  
22 bushing mounted cutouts and fuses. You can  
23 see one insulator and near that upper-right,  
24 upper circle, just below it looks like the  
25 top of a fuse connection so it appears to be  
26 a set of bushing mounted cutouts with fuses  
27 in it. But, again, you could see the  
28 perspective from where the photo is taken,

1 it's very -- you don't see very much.

2 Q Understood. If you look at the  
3 next page, Figure 2.

4 Do you see any fuses here?

5 A On page 39?

6 Q Correct.

7 A Yes. It appears that there's fuses  
8 on the backside of the crossarm, furthest  
9 from the camera, with the surge arrestor on  
10 the front.

11 Q Okay. If we can turn to page 70?

12 A Yes, I'm there.

13 Q On this diagram, do you see any  
14 fuses?

15 A I see a diagram that shows a set of  
16 fuses that protect the transformer there on  
17 the backside of the crossarm and some surge  
18 arrestors on the front.

19 Q And then turning the page to 72 and  
20 73. The two diagrams there, do you see  
21 fuses on those two diagrams?

22 A I do. I just want to point out  
23 that these diagrams are, you know, again for  
24 the current standards, not necessarily what  
25 might -- the latest equipment that might  
26 exist in the field.

27 Q But, again, your answer is "yes,"  
28 you do see fuses?

1 A Yes.

2 Q Okay. Thank you.

3 Does PG&E have a standard for when  
4 to install fuses relative to surge arrestors?

5 A Whether?

6 Q Does PG&E have a standard for when  
7 to install fuses relative to surge arrestors?

8 A Do you mean in relation to fuse  
9 arrestors?

10 Q Correct.

11 A The fuses and arrestors are two  
12 different elements that may or may not be  
13 called for on a particular pole. So, I can't  
14 directly answer that. They are spelled out  
15 separately. So there's a standard for  
16 transformer fusing, which is what these  
17 are -- these pictures -- fuses that protect  
18 the transformer. And then theres' the surge  
19 arrestor. I think this is meant to be  
20 illustrative of a typical installation or of  
21 an installation.

22 Q Do you happen to know offhand what  
23 the standard is for the installation of the  
24 fuses?

25 A I probably consulted it a hundred  
26 times. I don't have it memorized. But I  
27 want to say 015 -- it --

28 Q I'd rather you not guess, so that's

1     okay.   Understood.

2           A     Yes.   But we have one specifically  
3     for both cutouts, as well as distribution  
4     line fuses.

5           Q     Okay.   And do you know whether or  
6     not that standard has been provided anyone in  
7     this case?   In response to do discovery, for  
8     example?

9           A     It was -- I can only speak for the  
10    material I have provided.   That's in our  
11    reliability chapter, Chapter 9.   And I did  
12    not provide that as an exhibit -- at least in  
13    this case.   It could have been in 2017.

14          Q     Okay.   Are you able to summarize in  
15    installations where fuses are installed with  
16    surge arrestors, versus locations with surge  
17    arrestors but no fuses installed?

18          A     Well, again, I'll attempt to --

19          Q     Okay.

20          A     So, again, think of these as two  
21    different programs.   You have fuses that --  
22    and I'm going by the fuses you're showing me  
23    pictures of.   We have distribution line fuses  
24    that are installed for preventing outages and  
25    limiting the impact of outages, which is in  
26    my reliability chapter.

27                 And then what you show me in these  
28    pictures are transformer fuses, which protect

1 from a failure of the transformer when it's  
2 over loaded. So that's a standard  
3 installation of a transformer.

4 Now, depending on where that  
5 transformer is located, whether it's in a  
6 lightening district or other areas where we  
7 may need surge arrestors, they would then be  
8 applied on top of that. So, such as -- I  
9 believe you have it in our standard drawing  
10 that shows when you would apply surge  
11 arrestors and what the conditions are.  
12 Typically, it's the last transformer at the  
13 end of the tap line or open point, different  
14 pieces of equipment, et cetera.

15 Q And do you --

16 ALJ LIRAG: Sorry to interrupt, Mr.  
17 Sher. We'll take a five-minute break.  
18 Apologies for cutting in on the cross.

19 So let's come back at 12:15.

20 Off the record.

21 (Off the record.)

22 ALJ LIRAG: All right. Let's go back  
23 on the record.

24 Let's continue, Mr. Sher.

25 BY MR. SHER:

26 Q Thank you, your Honor.

27 Are there cases where you have  
28 surge arrestors without fuses?



1           A    Um, yes. I believe that's called  
2 out in our standard.

3           Q    Okay. Do you know how prevalent  
4 this situation is?

5           A    I do not. I've installed -- as an  
6 engineer, I've installed surge arrestors  
7 myself without fuses to address voltage  
8 issues.

9           Q    Okay. Can you briefly describe the  
10 process of replacing a non-exempt fuse with  
11 an exempt fuse, as proposed in the MAT 2AP  
12 program?

13          A    So, again, we're talking fuse and  
14 cutout; correct? -- when you use the term  
15 "fuse"?

16          Q    Correct.

17          A    So the process would involve -- I  
18 mean, every installation is unique. I mean,  
19 it depends on what you're starting with and  
20 what your current standards are. So I'll  
21 take a simple one.

22                You have a crossarm, you got  
23 cutouts on the crossarm, you have an open  
24 link fuse with -- or I'll try and use terms  
25 -- you have a non-exempt fuse in there. So  
26 you have to replace the fuse. You then  
27 determine whether the cutout is adequate for  
28 the exempt fuse. Oftentimes, it's not. So

1 you would then need to replace the cutout and  
2 the -- that process would involve -- do you  
3 need more detail?

4 Q Let me ask you a couple questions  
5 to get to that detail.

6 Would you de-energize the primary  
7 conductors?

8 A Not necessarily. That's what I was  
9 about to go into.

10 Q Okay. You would get materials and  
11 personnel for the job site?

12 A Absolutely.

13 Q And you would access fuses with a  
14 bucket truck?

15 A In some cases. Not all of our  
16 poles are bucket-truck accessible. They  
17 could be backyard easements or off-road.

18 Q Okay. Would you modify any  
19 groundwork on the pole?

20 A For a --

21 Q Fuse --

22 (Crosstalk.)

23 THE WITNESS: -- non-exempt fuse, that  
24 wouldn't be necessary. The fuse is serving a  
25 different function.

26 BY MR. SHER:

27 Q Okay. And, do you know, what is  
28 the cost of an exempt fuse?

1           A    Again, are we talking -- it varies  
2 widely. Are we talking fuse? Are we talking  
3 fuse and cutout? Are we talking current  
4 limiting fuse? Are we talking --

5           Q    Let's go fuse and cutout.

6           A    Fuse and cutout, you can look at my  
7 workpapers for Chapter 9 for installing new  
8 distribution line fuses, the hundred that you  
9 had me read earlier.

10          Q    Okay. So --

11          ALJ LIRAG: Apologies, again, Mr. Sher.  
12 Let's take another five-minute break right  
13 now.

14                   Let's go off the record.

15                   (Recess taken.)

16          ALJ LIRAG: Let's go back on the record  
17 and finish up with the cross questions from  
18 Mr. Sher.

19 BY MR. SHER:

20          Q    Before we went on break, you had  
21 mentioned that we could find the costs for  
22 non-exempt fuses in your workpapers; correct?

23          A    Well, let me correct myself. We  
24 can find the costs for fuse installations in  
25 my Chapter 9 workpapers, the 49-C section.  
26 If you are referring to the non-exempt fuses  
27 replaced as part of the hardening program, I  
28 have a workpaper in 08W that covers that.

1           Q    Okay. Thank you.

2                   And with regards to other materials  
3 and their costs when you're replacing the  
4 exempt fuse, where would I find those costs?

5           A    Well, actually -- let me -- I want  
6 to clarify something that I just said. On  
7 the hardening program, the cost to replace  
8 fuses is less because the line is  
9 de-energized and completely rebuilt the line.  
10 So the costs are a little different. So can  
11 you re-ask your --

12           Q    Sure. Where would we find those  
13 costs?

14                   MR. GALLO: Your Honor, can I ask  
15 for a clarification?

16                   So far, Mr. Calvert has been talking  
17 about his Chapter 9 fuse replacement program.  
18 And I think Mr. Sher is talking about the 2AP  
19 program, which was in Ms. Cullings'  
20 testimony, not in Mr. Calvert's testimony.

21 BY MR. SHER:

22           Q    That is correct. And I appreciate  
23 the clarification.

24           A    So can you restate the question or  
25 re-ask it?

26           Q    Well, I'll make an assumption -- no  
27 assumptions. Strike that.

28                   With regards to the non-exempt

1 fuses and their costs, which were in Ms.  
2 Cullings' testimony, do you know where weld  
3 find the costs for those non-exempt fuses?

4 A I would be -- I do not. I would  
5 speculate that they are in her workpapers.  
6 But I don't know that for a fact.

7 Q Okay. Thank you.

8 With regard to the next set of  
9 questions. If you could look at page 68 of  
10 Exhibit 58?

11 A Sure.

12 Q And Figure 1.

13 And this is with regards to the SAG  
14 program, S-A-G.

15 A Okay. I'm there.

16 Q Are you familiar with the equipment  
17 shown in this figure?

18 A Yes. Do you need me to describe  
19 it?

20 Q No, no. And the scope of the SAG  
21 and NESAR programs as to provide the  
22 grounding system shown; correct?

23 A I'm not as familiar with their --  
24 it sounds like you combined both there in  
25 that question? Can you ask it to me again?

26 Q Sure.

27 Are you familiar with the equipment  
28 shown in this figure and that the scope of

1 the SAG and the NESAR programs is to provide  
2 the grounding system shown?

3 MR. GALLO: Objection. Compound.

4 MR. SHER: Well that --

5 ALJ LAU: Can you try to break it up?

6 MR. SHER: I've broken the two  
7 questions to start. And I was asked to  
8 rephrase as one, so I did that. I'll restate  
9 the question as I first did it.

10 BY MR. SHER:

11 Q Are you familiar with the equipment  
12 shown in this figure?

13 A I am.

14 Q Okay. And the scope of the SAG and  
15 NESAR programs is to provide the grounding  
16 systems shown therein?

17 MR. GALLO: Objection. Compound.

18 The issue is that the scope of the  
19 SAG and NESAR programs are different.

20 ALJ LAU: Can you break it down to just  
21 one at a time?

22 MR. SHER: Sure.

23 ALJ LAU: One program at a time.

24 BY MR. SHER:

25 Q The scope of the SAG program is to  
26 provide grounding?

27 A That's not my understanding.

28 Q Okay.

1           A    Or, actually, I take that back.

2                   For the SAG program -- I mean,  
3   again, these are new acronyms to me.  But  
4   surge arrestor, grounding, not the non-exempt  
5   replacement.  So for the grounding, you are  
6   correct, it includes modifying the grounding  
7   as shown in the drawing.

8           Q    Okay.  And for the NESAR program?

9           A    The non-exempt equipment  
10   replacement?  As I mentioned earlier, we  
11   talked about fuses.  Fuses don't have  
12   anything to do with grounding.  Fuses are a  
13   protective device to limit outages or  
14   equipment overloads and damage.

15          Q    Okay.  Would you not say that NESAR  
16   is about surge arrestors and not fuses?

17          A    NESAR, the acronym is Non-exempt  
18   Surge Arrestor Replacement.  So I would say  
19   that's about surge arrestor replacement.

20          Q    Would you say the goal is to modify  
21   existing poles that use one ground system for  
22   both the surge arrestors and the transformer?

23          MR. GALLO:  Objection.  The goal of  
24   what?  That question is vague.

25   BY MR. SHER:

26          Q    Sure.  So let's go with the SAG  
27   program.

28          A    Yes.  The grounding program --

1 surge arrestor grounding program is  
2 associated with the grounding. And it  
3 involves making modifications to the existing  
4 ground on a particular pole.

5 Q And with regards to the NESAR  
6 program?

7 A My understanding is that it's  
8 different scope that's around replacing  
9 non-exempt surge arrestors that present a  
10 fire risk.

11 MR. GALLO: And, your Honors, again,  
12 Mr. Calvert is not so familiar with this  
13 program. But Ms. Cullings testified that the  
14 scope of the NESAR program included both the  
15 surge arrestor replacement and the work that  
16 had previously been part of the surge  
17 arrestor grounding program. I apologize for  
18 interjection.

19 ALJ LAU: That's fine.

20 BY MR. SHER:

21 Q Moving on to Figure 2 on page 69.

22 A I'm there. ]

23 Q If I used the term "grounding  
24 system" to include ground wire, conduit to  
25 the ground wire and the associated ground  
26 rods for one current path, does that make  
27 sense?

28 A I'll trust your definition.



1 There's more than one current path when it  
2 gets down to the first rod, but I'll follow  
3 along with your assumption here.

4 Q Does this figure show two ground  
5 systems, one for the surge arresters in pink  
6 on the left and one on the right for the  
7 service transformer?

8 A Yes, it does.

9 Q Is it true that at a minimum the  
10 SAG and NESAR programs would include the  
11 addition of one ground wire, one conduit for  
12 that wire and two or more ground rods?

13 A I believe -- yeah, I can't speak to  
14 the program as to -- I'm not responsible for  
15 that program. So I can't tell you what's in  
16 the field, but basically it's a field  
17 determination. If the crew goes out there  
18 and finds it's already been modified or it's  
19 a single grounding, it's a site-specific  
20 decision.

21 Q The ground wire conduit and ground  
22 rods for the transformer are on the lower  
23 right side of the figure, correct?

24 A In this diagram, yes.

25 Q Last -- now, I think more than last  
26 week -- but Ms. Cullings was asked if the  
27 transformer ground system would require  
28 modifications for SAG, and she indicated it

1 would be up to the work crew.

2 Does that response make sense to  
3 you?

4 MR. GALLO: Objection, your Honor.  
5 Asked and answered by the original witness.

6 ALJ LAU: Sustained.

7 BY MR. SHER:

8 Q Would it make -- early on when we  
9 were talking about a bucket truck and the  
10 need for a bucket truck, do you recall that?

11 A I do.

12 Q Would you say that a bucket truck  
13 is required to reach the transformer and  
14 surge arrester?

15 A No. I mentioned the couple cases  
16 where bucket trucks aren't accessible or the  
17 location is not accessible by bucket.

18 Q In the circumstances where a bucket  
19 truck is needed and works, would the bucket  
20 truck be moved by a technician?

21 A I want to make sure I understand  
22 your question. You said the bucket truck is  
23 available and works. I gotta assume they all  
24 work. You mean they are like adjacent to a  
25 roadway so that that bucket can reach it?

26 Q Sorry for the confusing question.  
27 No. To the degree a bucket truck is required  
28 and one can use a bucket truck for that

1 purpose --

2 A Okay.

3 Q -- would you say that a bucket  
4 truck is -- the bucket is moved by a  
5 technician in the bucket?

6 A We have a lineman that is in the  
7 bucket truck, and he has controls in that  
8 bucket to -- they use the term "boom" to  
9 relocate the bucket to where it needs to be  
10 for him to do his work.

11 Q Does PG&E have any requirements  
12 that linemen be certified to work safely on  
13 equipment at primary voltages?

14 A Absolutely.

15 Q Are there PG&E lineman who are  
16 certified to work on lower voltage equipment  
17 at lower secondary voltage but not at the  
18 higher primary voltage equipment?

19 A My understanding is no, that's part  
20 of a lineman classification. You may be  
21 referring to an electrician, which is a  
22 different classification. The linemen work  
23 high voltage, they work streetlighting, they  
24 work secondary, various voltages.

25 Q Do you know if the work is  
26 performed by a contractor versus a PG&E  
27 lineman, do the same certification  
28 requirements apply?

1           A    My understanding is they do. They  
2 are IBEW employees and certified.

3           Q    Looking at figure 1 on page 68 --

4           A    Okay.

5           Q    -- it appears that the ground wire  
6 conduit for the surge arrester is  
7 approximately twice the length of the  
8 transformer conduit; is that accurate?

9           A    Can you repeat the question,  
10 please.

11          Q    It appears that the ground wire  
12 conduit for the surge arrester is  
13 approximately twice the length of the  
14 transformer conduit. And I'm trying to  
15 determine whether that is correct, that it  
16 is?

17          A    I wanted to make sure -- we use  
18 different terms. So I think of it as ground  
19 molding, but you're talking about the red  
20 conduit on the left compared to what looks  
21 like gray or a different color on the right?

22          Q    Correct.

23          A    It appears to be in this example.  
24 However, note that the pole is broken there.  
25 So I can't say that that's true in the field.

26          Q    Do you know what the typical height  
27 of a service transformer is?

28          A    It depends on the voltage and in

1 location, but we'll say 25 feet, maybe a  
2 little less.

3 Q Do you know what the minimum  
4 difference in height between the top of these  
5 two conduits is?

6 A I do not. I could -- it could be  
7 included in the details of the standard, but  
8 it looks -- from the photo, obviously one is  
9 above the transformer and the other is below.

10 Q Would you say that the average  
11 typical approximate difference would be 10,  
12 feet, 5 feet?

13 A I would speculate. It depends on  
14 the size of the transformer. Not all  
15 transformers are the same height. It depends  
16 on the manufacturer. Some are taller. Some  
17 are fatter for the same KVa.

18 Q If you don't mind, just keep your  
19 finger on page 69, and just go back to page  
20 40.

21 A Keep on page 69 and go back to 40?

22 Q Yeah. Just flip between those, ask  
23 you a question or two.

24 A Okay. So you're talking about the  
25 data response?

26 Q Correct.

27 A Okay.

28 Q And as referenced here, PG&E's

1 rebuttal at page 6-15 states that the SAG  
2 program was initially performed by a  
3 two-person crew, correct?

4 A It states that, but I'm not  
5 familiar with the program to comment on the  
6 number of folks that -- number of workers  
7 involved in the work.

8 Q So you would not be able to answer  
9 questions as to how many people PG&E should  
10 have out when this work is done?

11 A Not for the maintenance program.  
12 And I believe it's different with contractors  
13 as well. We have observers and things like  
14 that. So -- it's really site specific, you  
15 know. There are -- it's hazardous work  
16 obviously. Depending on the primary  
17 configuration and all, you may need  
18 additional crew members. You got traffic  
19 conditions to deal with. You have narrow  
20 roads, et cetera, many site-specific factors.

21 Q It's correct that PG&E is proposing  
22 to double the crew size from 2 to 4, if you  
23 look at this DR?

24 A I can only comment as to what I  
25 read there. I'm not familiar with the  
26 program enough to answer that.

27 Q Do you know who would be familiar  
28 with the program?

1           A    I would suggest someone in our  
2 maintenance department.

3           Q    Anyone whose provided testimony in  
4 this proceeding?

5           A    I would have to default to one of  
6 our attorneys to help you with that. I don't  
7 know all of our witnesses and everyone that's  
8 been on the stand here.

9           Q    I feel you for you in that way.

10          MR. SHER: Your Honor, PG&E, would you  
11 know who could answer these questions?

12          MR. GALLO: Your Honor, I believe that  
13 these questions could possibly have been  
14 answered by Ms. Cullings but were not asked.  
15 We have responded to questions about this  
16 two-person crew, four-person crew extensively  
17 in discovery.

18          MR. SHER: Can we go off the record,  
19 your Honor.

20          ALJ LAU: Off the record.

21                (Off the record.)

22          ALJ LAU: Back on the record.

23 BY MR. SHER:

24          Q    The next number of questions will  
25 refer to the NESAR program, N-E-S-A-R. Or  
26 actually, are you the right witness to answer  
27 questions about the NESAR program?

28          A    Depends on what the question is. I

1 can tell you about how surge arresters work  
2 or whatever you want to know.

3 Q I'll give it a go. Is any of the  
4 grounding work required -- that is required  
5 for the SAG program not required for the  
6 NESAR program?

7 A My understanding is not -- the  
8 intent is to separate the two grounding  
9 systems, the transformer from the surge  
10 arrester.

11 Q It appears the primary change in  
12 scope is that instead of just changing the  
13 ground wire connection at the existing surge  
14 arresters NESAR installs new surge arresters  
15 and connects the new ground wire to them; is  
16 that correct?

17 A That's my understanding. There's  
18 modifying in the ground while the crew is  
19 there changing the surge arresters.

20 Q Do you know if any other  
21 incremental work to the SAG program is  
22 required?

23 A I'm not familiar with the program.  
24 I can tell you why we need the ground.

25 Q I have some grounding questions to  
26 see if the witness can answer?

27 A Sure.

28 Q If you can, again, in Exhibit 58,



1 look at pages -- look at page 69, figure 2.

2 A Okay.

3 Q Is it correct this figure shows two  
4 ground rods per ground wire?

5 A That's correct.

6 Q And I believe, in response to  
7 questions, Ms. Cullings agreed that these  
8 have historically been eight feet long. Is  
9 that consistent with your understanding?

10 A I believe it's in the standard. It  
11 calls for, I want to say, five-eighths by  
12 eight feet, subject to check, but I believe  
13 it's in the standards.

14 Q And would this provide a total of  
15 16 feet of rod in the ground to provide a  
16 current path?

17 A Two eight-foot rods, yes, that  
18 equals 16 feet, but there's more to it than  
19 that. But go ahead.

20 Q I have a hypothetical for you. If  
21 these rods were not installed to the full  
22 length and only six feet of rod was installed  
23 in the ground and two feet was cut off, this  
24 would not be desirable, correct?

25 A Well --

26 Q Hypothetical.

27 A You didn't give me enough  
28 information. I mean, grounding is somewhat

1 complex. It has to do with the spacing of  
2 the ground rods, the interference hemisphere,  
3 that is, the voltage rise that occurs when  
4 there's a lighting strike or an overvoltage  
5 event. So the conductivity of the soil. You  
6 could have a shorter rod with less impedance.  
7 So I don't have enough information to answer  
8 your question.

9 MR. SHER: Your Honor, can we go off  
10 the record just to determine how many  
11 questions we have left.

12 ALJ LAU: Off the record.

13 (Off the record.)

14 ALJ LAU: Back on the record.

15 BY MR. SHER:

16 Q Mr. Calvert, if you answer this the  
17 way we want it answered, it will be the last  
18 question.

19 A My goal is to give you a truthful  
20 and honest answer, not to give you --

21 Q No, no. I was joking. Sorry. I  
22 was not implying that you don't give  
23 truthful, honest answers.

24 Would you say that it is better to  
25 have 16 feet of ground rod as opposed to 12  
26 feet?

27 A Same answer I gave you before.  
28 That's not enough information. I mean,

1 ground rod is just one of the components.  
2 There's a ground conductor that ties both  
3 rods together that's also buried and provides  
4 grounding. There's the spacing I talked  
5 about earlier. There's the type of soil the  
6 rods are driven into. There's multiple  
7 factors. So I can't tell you that's true.

8 Q Just even with all those factors,  
9 different factors that you've mentioned, it's  
10 still your testimony that it would depend  
11 that -- sorry -- that -- strike that.

12 No further questions.

13 ALJ LIRAG: Maybe more feet would have  
14 done it.

15 MR. SHER: Yes.

16 ALJ LIRAG: All right. Judge Lau.

17 ALJ LAU: All right. I believe -- Mr.  
18 Calvert, let's just have you step down from  
19 the witness stand before we excuse you.

20 THE WITNESS: Okay.

21 ALJ LAU: Yeah.

22 ALJ LIRAG: Question to Ms. Shek. Do  
23 you want to address Exhibit 117 now or at  
24 some other time?

25 MR. SHER: I can try and address that.

26 ALJ LIRAG: All right. Does PG&E still  
27 maintain its objection to Exhibit 117?

28 MR. GALLO: Sorry, your Honor. Can I

1 see again?

2 MR. SHER: It was from red-line.

3 MR. GALLO: Oh. Yes. Okay. Yes, your  
4 Honor. As I recall -- and I haven't reviewed  
5 the transcript. As I recall, when the  
6 questions were posed using these documents,  
7 the witnesses were specifically told just to  
8 look at the information in the documents and  
9 not worry about their providence. And,  
10 again, these are UCSD materials of some sort.  
11 We don't really know where they came from,  
12 how vetted they are. So we still do -- we  
13 still do have an issue with --

14 ALJ LIRAG: Any -- counter that?  
15 Either Mr. Sher or -- I'll let Mr. Roberts  
16 speak, if he wants.

17 MR. SHER: Let me go first, then he can  
18 save me.

19 ALJ LIRAG: All right.

20 MR. SHER: As with Mr. Calvert, I don't  
21 expect anything but honesty and truth.  
22 There's no basis to put forward that these  
23 documents would have been changed. These are  
24 from UCSD. That aside, when the questions  
25 were asked, there were no objections. And so  
26 now we're going to be left with transcripts  
27 which we can use in the briefs. There are  
28 certain questions that didn't read

1 specifically from this document that don't  
2 make a lot of sense. So I would argue that  
3 the objection was waived by not objecting  
4 during the cross-examination itself.

5 ALJ LIRAG: Do you have anything to  
6 add, Mr. Roberts?

7 MR. ROBERTS: I'd only add that in the  
8 past -- I don't understand the basis of the  
9 objection, because I'm not an attorney. But  
10 I've seen objections where someone tried to  
11 put a piece of data into the record without  
12 asking questions about it. So -- and I also  
13 have not reviewed the transcript, but I do  
14 recall that this exhibit, which includes  
15 three documents, that we asked questions  
16 about each of them. And so that's the only  
17 thing that I can add.

18 MR. SHER: I would say -- sorry, your  
19 Honor -- that that just rings a bell. We're  
20 not putting these in for the truth of the  
21 document. It was the witnesses's response to  
22 this. It's the witness's responses that  
23 don't make sense without us at least pointing  
24 to this. But it's not -- it was the  
25 witness's knowledge that was being  
26 questioned.

27 ALJ LIRAG: All right. I believe,  
28 though, that all the questions regarding this

1 document were directed to Mr. Strasburger,  
2 and Mr. Strasburger's response was he's not  
3 familiar with the document. And so he wasn't  
4 able to answer any question regarding these  
5 three documents.

6 Mr. Roberts.

7 MR. ROBERTS: Just to clarify, the  
8 first two documents in the exhibit, those  
9 questions were asked of Mr. Nakayama.

10 ALJ LIRAG: All right.

11 MR. ROBERTS: And then my recollection  
12 of the transcript with regard to Mr.  
13 Strasburger is he said he -- I asked him  
14 about a page, and he wasn't familiar with  
15 this cipher. So it was -- this is a  
16 cybersecurity thing. Asked if he was  
17 familiar with it. He was not familiar with  
18 this thing, and then subsequently, we asked  
19 about a conclusion, whether he agreed or not,  
20 and he didn't. So that's just all I --

21 ALJ LIRAG: All right. Thanks for  
22 clarifying regarding questions that were  
23 asked to Mr. Nakayama. But I believe the  
24 answer was still the same, that he was  
25 reading off the document but then he's not  
26 familiar with the document nor its contents.

27 And so with that in mind, I'm going  
28 to deny this exhibit, but please explore if

1 these are documents that the Commission can  
2 take official notice of. So as far as  
3 submitting this as a cross-exhibit, the  
4 questions were not answered. And so it would  
5 appear as if nothing was asked off this  
6 document because the witnesses were not  
7 familiar with it.

8           However, if this is an important  
9 document that the Commission can take  
10 judicial notice of, please explore that route  
11 instead in order to get this into the record.

12           MR. SHER: Thank you, your Honor. I  
13 don't believe it would qualify, but we will  
14 look into it.

15           ALJ LIRAG: All right. Look at other  
16 opportunities to get this information in.

17           Yes, Mr. Gallo.

18           MR. GALLO: Just one last thing, your  
19 Honor. I have no redirect for Mr. Calvert,  
20 but I wasn't offered the opportunity. So for  
21 good order, I just wanted to note that I --

22           ALJ LIRAG: Thank you, Mr. Gallo. No  
23 redirect for Mr. Calvert, who had just left.  
24 Oh. He's still here. Thank you for staying.

25           MR. SHER: I don't believe he's been  
26 excused.

27           ALJ LAU: He was not excused.

28           ALJ LIRAG: All right. You're excused,

1 Mr. Calvert. So you don't have to come back.  
2 Ms. Gandesbery.  
3 MS. GANDESBERY: I wanted to move some  
4 exhibits into the record if I could before we  
5 break.  
6 ALJ LIRAG: Let's -- first -- so  
7 Exhibit 117 is denied. And then Mr. Sher, as  
8 I mentioned, please explore options to get  
9 the information in through some other means.  
10 MR. SHER: Thank you.  
11 ALJ LIRAG: Mr. Gondai, regarding the  
12 stipulation between NDC and PG&E, I believe  
13 the next step is for both you and PG&E --  
14 both NDC and PG&E to address the stipulation  
15 and other issues in briefs; is that correct?  
16 MR. GONDAI: Yes, your Honor. Thank  
17 you for the opportunity to clarify. We're  
18 not going to be filing an additional  
19 settlement document or an agreement paper.  
20 The stipulation is, I guess, the summation of  
21 our position, we we'll comment on it in  
22 briefing.  
23 ALJ LIRAG: All right. We appreciate  
24 your coming here personally. I believe this  
25 will be the last we'll see of you, though.  
26 All right. Let's take care of a  
27 couple of exhibits with the -- maybe the 10  
28 minutes we have left.



1                   Let's go off the record.

2                   (Off the record.)

3                   ALJ LIRAG: Let's go back on the  
4 record.

5                   Let's first address that tomorrow's  
6 witnesses, cross as been cancelled, I  
7 believe, by Mr. Long and by PG&E.

8                   Is that correct?

9                   MR. LONG: That's correct, your Honor.

10                  ALJ LIRAG: So no hearings will be  
11 scheduled tomorrow, and because of the waiver  
12 of cross, I believe Ms. Gandesbery has some  
13 exhibits that are ready to be moved into the  
14 record.

15                  MR. LONG: Excuse me, your Honor.  
16 Could I just note that the basis of the  
17 waiver of the cross is an agreement with PG&E  
18 at a later point to seek to move into the  
19 record certain documents.

20                  ALJ LIRAG: Please remind us that this  
21 was the case when those records are being  
22 identified and there's a motion to admit them  
23 into the record just so we remember that  
24 that's the reason.

25                  MR. LONG: Sure. Thank you.

26                  ALJ LIRAG: All right. Ms. Gandesbery,  
27 exhibits.

28                  MS. GANDESBERY: Exhibits 80 through 89

1 regarding the results of operation. We also  
2 have Exhibit 69 and 70 having to do with  
3 PG&E's general report and Exhibit 72 and 73  
4 with regard to results of operations in our  
5 general report, and we'd also like to move  
6 into the record Exhibits 157 to 160 regarding  
7 our A&G showing.

8 ALJ LIRAG: Let's take it one -- at a  
9 time. Any objections to Exhibits 80 through  
10 89?

11 (No response.)

12 ALJ LIRAG: Hearing none, Exhibits 80  
13 through 89 are received into the record.

14 (Exhibit Nos. 80 to 89 were received  
15 into evidence.)

16 ALJ LIRAG: Next is Exhibit -- any  
17 objections to Exhibit 69, 70, 72 and 73?  
18 Just to clarify for the record, 71 has  
19 already been received into the record. So it  
20 is just those four exhibits.

21 Any objections?

22 (No response.)

23 ALJ LIRAG: Hearing none, Exhibit 69,  
24 70, 72 and 73 are received into the record.

25 (Exhibit Nos. 69, 70, 72 and 73 were  
26 received into evidence.)

27 ALJ LIRAG: Last bunch is Exhibits 157  
28 through 160, which were identified today.

1 Any objections regarding those  
2 exhibits?

3 (No response.)

4 ALJ LIRAG: Hearing none, Exhibits 157  
5 through 160 are received into the record as  
6 well.

7 (Exhibit Nos. 157 to 160 were  
8 received into evidence.)

9 ALJ LIRAG: So thank you, Everyone, for  
10 accommodating our schedule as well. Thank  
11 you very much to the court reporter for  
12 extending well into the lunch hour. The  
13 exchange is we will take a recess and resume  
14 on Monday at 9:30.

15 Off the record.

16 (Whereupon, at the hour of 12:51  
17 p.m., this matter having been continued  
18 to 9:30 a.m., October 14, 2019 at  
San Francisco, California, the  
Commission then adjourned.)

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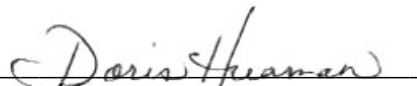
BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, DORIS HUAMAN, CERTIFIED SHORTHAND REPORTER  
NO. 10358, IN AND FOR THE STATE OF CALIFORNIA, DO  
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT  
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT  
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN  
THIS MATTER ON OCTOBER 10, 2019.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE  
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED THIS OCTOBER 17, 2019.

  
DORIS HUAMAN  
CSR NO. 10538

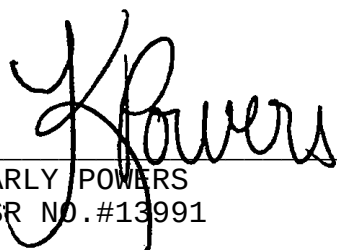
BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING

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I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE  
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED THIS OCTOBER 17, 2019.

  
KARLY POWERS  
CSR NO. #13991

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