BEFORE THE PUBLIC UTILITIES COMMISSION



OF THE

STATE OF CALIFORNIA

ADMINISTRATIVE LAW JUDGE RAFAEL L. LIRAG, presiding

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

Devidentian

Application

18-12-009

18-12-009

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1	SAN FRANCISCO, CALIFORNIA
2	OCTOBER 14, 2019 9:31 a.m.
3	* * * *
4	ADMINISTRATIVE LAW JUDGE LIRAG: Let's
5	go on the record.
6	Good morning, everyone. We are at
7	the last week of our scheduled evidentiary
8	hearings. There may be an additional hearing
9	on November 6th based on what happens with
10	the updated testimony and as we await further
11	developments regarding the motion by the City
12	and County of San Francisco. So we'll set
13	that aside for now.
14	Today we have a short day. We'll
15	have Ms. Weaver and Mr. Cheng.
16	Good morning, Ms. Weaver. We'll get
17	to you in a little bit.
18	We're on schedule thanks in large
19	part, I guess, to Mr. Arnold. So I'll
20	acknowledge Mr. Arnold's excellent scheduling
21	efforts.
22	All right. First up let's identify
23	an exhibit by the Joint CCAs. I understand
24	this is was an exhibit in lieu of cross for
25	Mr. Marcus; is that correct, Mr. Lindl?
26	MR. LINDL: Yes, your Honor.
27	ALJ LIRAG: All right. I'll identify
28	this as Exhibit-173. And this is TURN's

1	Response to the Joint CCA's Data Request 1,
2	Question 1.
3	(Exhibit No. 173 was marked for
4	identification.)
5	ALJ LIRAG: A move to admit this into
6	the record, Mr. Lindl?
7	MR. LINDL: So moved, your Honor.
8	ALJ LIRAG: Any objections from TURN or
9	any other parties?
10	MS. GANDESBERY: No, your Honor.
11	MS. GOODSON: No, your Honor.
12	ALJ LIRAG: Hearing none, 173 is
13	received into the record.
14	(Exhibit No. 173 was received into evidence.)
15	evidence.)
16	MR. LINDL: Thank you, your Honor.
17	ALJ LIRAG: Ms. Weaver, good morning
18	again. Please raise your right hand. Please
19	state your name, spell your last name, and
20	provide a business address.
21	THE WITNESS: Monica Weaver,
22	W-e-a-v-e-r. 505 Van Ness, San Francisco
23	California.
24	ALJ LIRAG: Let's go off the record.
25	(Off the record.)
26	ALJ LIRAG: Let's go back on the
27	record.
28	Thank you, Ms. Weaver. Let's

1	identify a couple of exhibits first.
2	First is Exhibit-174. And this is
3	The Prepared Testimony of Ms. Weaver
4	Regarding the Company Wide Administrative and
5	General Expenses for PG&E.
6	(Exhibit No. 174 was marked for identification.)
7	identification.
8	ALJ LIRAG: Next is Exhibhit-175.
9	Let me clarify. Ms. Weaver is a
10	witness for Cal PA.
11	Next is Exhibit-175, and this is The
12	Workpapers For the Testimony of Ms. Weaver.
13	(Exhibit No. 175 was marked for identification.)
14	Mr. Sher?
15	DIRECT EXAMINATION
16	BY MR. SHER:
17	Q Good morning, your Honor. Nicholas
18	Sher on behalf of the Public Advocates
19	Office.
20	Good morning, Ms. Weaver. Did you
21	prepare what has been marked Exhibits 174 and
22	175?
23	A Yes.
24	Q Your qualifications are contained
25	in what is marked as Exhibit-174, your direct
26	testimony?
27	A Yes.
28	Q Do you have any additions or

1	corrections to make to your testimony?
2	A No.
3	Q Are the facts and opinions set
4	forth in your testimony and workpapers true
5	and correct to the best of your knowledge?
6	A Yes.
7	MR. SHER: Your Honor, the witness is
8	available for cross-examination.
9	ALJ LIRAG: All right. I believe we
10	have cross by Ms. Kantor.
11	MS. KANTOR: Yes, that's correct.
12	ALJ LIRAG: All right. Go ahead.
13	MS. KANTOR: We actually have one cross
14	exhibit.
15	ALJ LIRAG: Let's have that.
16	Let's go off the record.
17	(Off the record.)
18	ALJ LIRAG: Let's go back on the
19	record.
20	While we were off the record, an
21	exhibit was distributed. And this is a
22	cross-exhibit by the Joint CCAs for
23	Ms. Weaver. So I will identify Exhibit-176.
24	This is Cal PA's Response to the Joint CCAs
25	Data Request No. 2.
26	(Exhibit No. 176 was marked for identification.)
27	140.1.C1. 104.C10111)
28	ALJ LIRAG: That's Exhibit-176.

1	All right. You may proceed,
2	Ms. Kantor. You can ignore that Mr. Lindl is
3	there when you do your cross.
4	MS. KANTOR: Sounds good.
5	CROSS-EXAMINATION
6	BY MS. KANTOR:
7	Q Good morning, Ms. Weaver.
8	A Good morning.
9	Q I'm Julia Kantor. I'm counsel for
10	the Joint CCAs. And I'm going to be asking
11	you some questions today on the allocation of
12	PG&E's insurance costs.
13	Do you have your testimony marked
14	just now as Exhibit Number 174 and a copy of
15	the Joint CCAs cross-exhibit in front of you?
16	A Yes.
17	Q In your testimony on page 15, lines
18	14 through 18, and just let me know when you
19	get there.
20	A I'm there.
21	Q You recommend that approximately
22	\$300 million of incremental costs from
23	general excess liability insurance expense be
24	allocated to electric distribution and
25	electric transmission; correct?
26	A Yes.
27	Q And you propose this reallocation
28	to reflect the increased number of wildfires

over the past several years, which you state 1 have been ignited by electrical components 2 3 rather than gas components or electric generation components; correct? 4 5 Α Correct. And this \$300 million proposed 6 0 7 adjustment is an approximation of the 8 incremental insurance expense increase 9 calculated by comparing a five-year average of 2013 to 2017 to what PG&E forecasts it 10 11 will need for 2020; correct? 12 Α That is correct. 13 0 Great. 14 ALJ LIRAG: You have to speak up a 15 little bit more, Ms. Weaver. Thank you. 16 BY MS. KANTOR: 17 And the purpose of this insurance, 0 18 the general excess liability insurance, is to 19 ensure against the third-party liability 20 claims for all of PG&E's lines of business 21 for unbundled cost categories; correct? 22 Α Can you please point to where in my 23 testimony I said that? 24 Q Sure. Pages 6 to 7. Starting at 25 line 27 on page 6 and going over to line 4 on 26 the next page. So here you state that PG&E has 21 insurance policies for excess 27 28 liability. And you list the range of

liabilities that the policies cover; correct? 1 2 Α Yes. 3 And the policies that you list Q there cover workers' compensation, bodily and 4 5 property damage liability, bodily and 6 property damage liability non-wildfire only, 7 bodily injury and property damage liability, property damage liability, property damage 8 9 liability wildfire only, and bodily and 10 property damage liability wildfire only; 11 correct? 12 Α Correct. 13 So do you agree that these policies 0 14 would cover claims arising from various lines 15 of business like electric distribution, gas 16 distribution, electric generation, et cetera? 17 Α Yes. 18 So payments on claims related to 0 19 liabilities caused by PG&E's gas storage facilities, its gas pipelines, its generation 20 21 facilities, or its transmission system, those 22 would all come from this liability insurance; 23 correct? 24 Α Probably. 25 0 Okay. Thank you. And do you agree 26 that the liability insurance expense is 27 currently classified as an administrative and 28 general expense functionalize as a common

1 cost? I'm not sure if it would be 2 Α 3 classified as a common cost, but it would be classified as AMG. 4 5 Okay. And just to clarify. By common costs, I'm using that to mean across 6 7 all lines of business. 8 Α Okay. 9 So you agree that this liability Q 10 insurance expense is functionalized across 11 all lines of business? 12 Α Yes. 13 Great. To your knowledge, did the 0 14 Commission revise the functionalization of 15 PG&E's expenses for liability insurance 16 premiums after the 2010 gas pipeline 17 explosion in San Bruno? 18 Α I'm not aware. Okay. To your knowledge, does PG&E 19 Q 20 as a general practice reallocate the cost of 21 insurance to a particular line of business 22 when premiums may have been affected by 23 industry risks related to that particular line of business? 24 25 Α I'm not aware. 26 Okay. Can you please turn to 0 27 Public Advocates Office Response to Joint 28 CCAs Data Request 2, which is the

cross-exhibit that's been marked as 1 2 Exhibit-176? 3 Α I'm there. 4 0 In question 2.1-A, the Joint CCAs 5 ask you to provide the basis and any 6 underlying support for the statements that 7 the incremental increase in excess liability insurance is mainly due to wildfires; 8 9 correct? Α 10 Yes. 11 And in your answer, you provide Q 12 three references to PG&E's testimony where 13 PG&E generally states that liability 14 insurance prices have risen for the 15 California IOUs due to wildfire risk and that 16 the increase in PG&E's liability insurance 17 expense is largely due to the increased wildfire risks; correct? 18 19 Α Yes. 20 And those three references are the 0 entirety of your answer to question 2.1-A; 21 22 correct? 23 Α Yes. 24 Q Other than relying on PG&E's 25 testimony, did you perform or review any other analyses that explain what's driving 26 27 the increase in excess liability insurance 28 premiums?

Based on PG&E's testimony, it's 1 Α stated that it was due to the wildfires. 2 3 Okay. But other than that Q testimony, you didn't perform or review any 4 5 other analyses that explain that or show 6 that; correct? 7 I also reviewed Cal Fire's report Α on what caused the 12 wildfires in 2017. 8 9 On the causes of the Q Okay. wildfires themselves? 10 11 Α Yes. 12 Okay. But just to clarify those 0 13 other reports that you're referencing now, those reports don't explain what's driving 14 15 the increase in the liability insurance 16 premiums; correct? 17 Α Correct. 18 0 Thank you. Do you agree that 19 PG&E's rebuttal testimony states that in the 20 world of insurance pricing, specific portions 21 of increases and insurance premiums cannot be 22 attributed to specific events or factors? 23 Α I don't have PG&E's rebuttal testimony in front of me. 24 25 0 Okay. MS. KANTOR: Your Honor, I have a 26 reference exhibit that's PG&E's rebuttal 27 28 testimony on administrative and general

```
expenses previously marked as PG&E-23.
 1
                                              Can I
 2
     please distribute that?
 3
           ALJ LIRAG: All right. You can hand
     one to PG&E and to Ms. Weaver and to
 4
 5
     Mr. Sher.
 6
           MS. KANTOR:
                        Okay.
 7
           ALJ LIRAG: Let's go off the record.
               (Off the record.)
 8
 9
           ALJ LIRAG: All right. Let's go back
     on the record. Ms. Kantor distributed -- I
10
11
     quess it's -- the Joint CCAs distributed a
12
     reference exhibit, and this is PG&E's
     rebuttal testimony. So Ms. Kantor was
13
14
     directing Ms. Weaver to a certain line on
15
     page 3-9.
16
               Please proceed.
17
     BY MS. KANTOR:
18
               So, Ms. Weaver, you reviewed PG&E's
     testimony on administrative and general
19
20
     expenses in connection with your work in this
21
     proceeding; correct?
22
           Α
               Correct.
23
               So in this exhibit, PG&E 23,
           Q
24
     page 3-9, lines 16 through 20, have you had a
25
     chance to review those lines? Or should I
26
     give you a moment now?
27
               I've reviewed.
           Α
28
               Okay. So do you agree that here
           Q
```

1	PG&E is discussing how insurance pricing
2	works and generally states that specific and
3	identifiable portions of increases in
4	insurance premiums cannot be attributed to
5	specific individual events or factors?
6	A That's what it says.
7	Q Okay.
8	MS. KANTOR: Thank you. No further
9	questions.
10	ALJ LIRAG: Any questions, Mr. Sher?
11	REDIRECT EXAMINATION
12	BY MR. SHER:
13	Q Just one redirect, your Honor.
14	Ms. Weaver, you stay on page 3-9 of
15	rebuttal testimony and look at lines 20
16	through 23, can you read those to yourself?
17	And does it state there that
18	wildfire risk had led to increased premiums
19	due to inverse condemnation?
20	A Yes, it does.
21	MR. SHER: No further questions.
22	ALJ LIRAG: Any questions off that,
23	Ms. Kantor?
24	MS. KANTOR: Could I have a moment,
25	your Honor?
26	ALJ LIRAG: All right. Let's have
27	Ms. Gandesbery.
28	MS. GANDESBERY: I'd like to just talk

1	to counsel for a second if I could?
2	ALJ LIRAG: All right. Let's go off
3	the record.
4	(Off the record.)
5	ALJ LIRAG: Let's go back on the
6	record.
7	Let's have Ms. Kantor first.
8	MS. KANTOR: I actually have no further
9	questions.
10	ALJ LIRAG: Okay. Ms. Gandesbery, is
11	there anything you wanted to address?
12	MS. GANDESBERY: Yes, your Honor.
13	CROSS-EXAMINATION
14	BY MS. GANDESBERY:
15	Q Good morning, Ms. Weaver.
16	A Good morning.
17	Q I'd like to direct your attention
18	to question and answer on page 2 of the
19	document that's been marked as 176.
20	A The data request?
21	Q Yes. The data request. And
22	there's one statement in particular I wanted
23	to ask you about.
24	A Which page are you on?
25	Q This is on page 2. It says I'd
26	like to turn your attention to the first, I
27	guess, AC on page 2.
28	A I'm there.
	i

1	Q Do you see that? You stated you
2	reviewed CAL FIRE reports on the 2017
3	wildfires?
4	A I reviewed the CAL FIRE news
5	release that was released on June 8, 2018.
6	Q Okay. And are you did you
7	review the CAL FIRE news releases on all the
8	wildfires in 2017?
9	A This news release that I reviewed
10	investigated 12 of the Northern California
11	wildfires.
12	Q So did you review any CAL FIRE news
13	releases or reports about the Tubbs Fire?
14	A No.
15	Q And are you aware that CAL FIRE
16	determined the Tubbs Fire was not caused or
17	related to PG&E equipment?
18	A Yes.
19	Q Okay. And same question. Did you
20	review the CAL FIRE Report about the Carr
21	Fire?
22	A No.
23	Q And are you aware that CAL FIRE
24	found that was also not related to PG&E
25	equipment?
26	A I was not aware.
27	Q Okay. So you're not your
28	testimony says:

1		CAL FIRE determined the 12
2		wildfires that broke out in
3		2017.
4		You see that statement there?
5	Α	Yes.
6	Q	Do you mean 12 of the wildfires?
7	Α	Yes.
8	Q	Of the those 2017 wildfires?
9	Α	Yes.
10	Q	Okay. And are you sure the number
11	12 is corr	rect?
12	Α	According to the CAL FIRE news
13	release.	
14	Q	Okay. But you have no personal
15	knowledge	of this?
16	Α	Aside from the release, no.
17	Q	Okay.
18	MS.	GANDESBERY: Thank you. I have
19	nothing fu	ırther.
20	ALJ	LIRAG: Any questions off that,
21	Mr. Sher?	
22	MR.	SHER: No, your Honor.
23	ALJ	LIRAG: Any questions, Ms. Goodson?
24	MS.	GOODSON: No, your Honor.
25		EXAMINATION
26	BY ALJ LIF	RAG:
27	Q	I just have one question regarding
28	your direc	ct testimony, page 9, the risk
- 1		

transfer balancing account. So Cal PA's 1 2 proposal is that the RTBA be established but 3 to only apply to the first \$1.4 billion; is that correct? 4 5 To the \$1.4 billion in average. 6 What's the basis for the 1.4 --0 your objection is to the amount. But what's 7 the basis for your proposal of \$1.4 billion? 8 9 Α Cal Advocates determined that 10 \$1.4 billion in coverage was a reasonable 11 number due to the fact that we're in 12 unprecedented territory, and this is the 13 highest it's ever been. 14 So with the \$1.4 billion, it will 15 -- it should provide enough coverage. And if 16 PG&E determines that it's not adequate, they 17 can go out and procure more insurance with 18 either doing the tier 3 advice letter or 19 sharing the cost 50/50. 20 So, again, the basis for the 21 \$1.4 billion is that Cal PA's -- that is the 22 adequate amount of coverage? Was it based on 23 historical costs? 24 Α This was the amount of coverage 25 that PG&E had procured in 2018. 26 Q Okay. Thank you. 27 ALJ LIRAG: Any questions off that, 28 Mr. Sher?

1	MR. SHER: No, your Honor.
2	ALJ LIRAG: All right.
3	A move to admit Exhibits 174 and 175
4	into the record?
5	MR. SHER: Please, your Honor.
6	ALJ LIRAG: Any objections?
7	(No response.)
8	ALJ LIRAG: Hearing none, Exhibits 174
9	and 175 are received into the record.
10	(Exhibit No. 174 was received into evidence.)
11	(Exhibit No. 175 was received into
12	evidence.)
13	ALJ LIRAG: Ms. Kantor, same motion for
14	Exhibit-176?
15	MS. KANTOR: Yes, your Honor.
16	ALJ LIRAG: Any objections?
17	(No response.)
18	ALJ LIRAG: Hearing none, Exhibit-176
19	is received into the record.
20	(Exhibit No. 176 was received into evidence.)
21	evidence.)
22	ALJ LIRAG: Off the record.
23	(Off the record.)
24	ALJ LIRAG: All right. Let's go back
25	on the record. And we have Mr. Cheng who is
26	raring to go.
27	Please raise your right hand. State
28	your name, spell your last name, and provide
	· · · · · · · · · · · · · · · · · · ·

ı	ו
1	a business address.
2	THE WITNESS: My name is David Cheng,
3	C-h-e-n-g. I'm with TURN. Business address
4	is 1620 5th Avenue, Suite 810, San Diego,
5	California 92101.
6	ALJ LIRAG: All right. Thank you,
7	Mr. Cheng.
8	So I'll identify as Exhibit-177, The
9	Prepared Testimony of David Cheng Related to
10	Customer Care and the Earnings Adjustment
11	Mechanism.
12	(Exhibit No. 177 was marked for identification.)
13	identification.)
14	ALJ LIRAG: Ms. Goodson?
15	DIRECT EXAMINATION
16	BY MS. GOODSON:
17	Q Thank you, your Honor.
18	Good morning, Mr. Cheng. Do you
19	have before you the document that's been
20	identified as Exhibit-177?
21	A Yes, I do.
22	Q And did you prepare this testimony,
23	Mr. Cheng?
24	A Yes.
25	Q And to the extent it contains
26	factual assertions, are those true and
27	correct to the best of your knowledge?
28	A Yes.

1 0 And to the extent it contains your 2 opinions, are they consistent with your best 3 professional judgment? Α Yes. 4 5 0 Thank you. I should ask one more 6 thing. Mr. Cheng, do you have any 7 corrections to make to your testimony? 8 Α No. 9 All right. Q 10 MS. GOODSON: With that, your Honor, 11 this witness is available for 12 cross-examination. 13 ALJ LIRAG: All right. Ms. Slocum. 14 CROSS-EXAMINATION 15 BY MS. SLOCUM: 16 Q Thank you, your Honor. 17 Good morning, Mr. Cheng. 18 Α Good morning. 19 Now, first I'd like to just review Q 20 the state of play on all of the issues that 21 are listed inside of Exhibit-177. PG&E and 22 TURN have met and successfully entered into 23 stipulations that are shown in Exhibits 97, 24 98, and 99, such that there's only one issue 25 in TURN's testimony that has not already been 26 addressed in the stipulation; is that 27 And that would be the area of correct? 28 manual meter reading?

Correct. 1 Α 2 Now, before I go into my Q Okav. 3 questions on manual meter reading, I'd like to ask you a little bit about your statement 4 5 of qualifications at page 15 of your 6 Exhibit-177. 7 Α Okay. 8 I see you have a bachelor of Q 9 science in computer science and that 10 thereafter you received and obtained a 11 masters of business administration in 2003; 12 correct? 13 Α Correct. 14 Q Your statement didn't state what 15 the concentrations were in your MBA studies. 16 But I saw from your LinkedIn post that your 17 concentrations were in finance and strategy; 18 is that correct? 19 Α Correct. 20 I see that during your time working Q 21 at Sempra, you were employed by San Diego Gas 22 & Electric; right? 23 Α Yep. 24 Q And you list there some positions 25 that you held in your eight years at San 26 Diego Gas & Electric as being enterprise risk 27 management manager, new products and service

manager, new business development manager,

customer operations project manager, and what 1 you call other positions. Do you see that? 2 3 Α Yep. What other positions did you hold 4 0 5 at SDG&E in addition to these? 6 I was a senior advisor, I was an 7 advisor, I was a team lead. Those are the three other ones that I can remember right 8 9 now. 10 So when you were a senior advisor, Q 11 what substantive area of work at SDG&E were 12 you advising about? 13 Customer services, which PG&E calls Α 14 "customer care." And how long did you hold that 15 Q 16 position? 17 I was in customer services for more 18 than four years out of the eight years -eight and a half years or so. 19 20 And were any of the -- was that --0 21 is that continuous with or inclusive of some 22 of the items that you listed specifically as responsibilities? Or is it completely in 23 24 addition to? 25 Customer operations project manager 26 is the only other one within customer 27 The rest were not in customer services. 28 service.

1 Q I see. Okay. And so when you were 2 an advisor and team lead, was that also in 3 the same area of customer service, or was it in a different area? 4 5 Customer services. 6 0 Okay. So what did you specifically 7 work on as a customer operations project 8 manager? 9 I worked on various projects 10 related to customer operations and customer services. 11 One of them included establishing 12 the remote disconnection functionality. 13 plenty of other projects that I'm happy to discuss if you believe it's relevant. 14 15 Did you say remote disconnection? Q 16 Α Yes. 17 And what did you do? What were 0 your responsibilities with regard to remote 18 disconnection? 19 20 For remote disconnection I was a 21 project lead so I designed the project, 22 designed the project specs, did the 23 forecasting, did the budget forecasting, did 24 the field services forecasting, did the head 25 count forecasting. Just all of the aspects of planning. Also drafted all the 26 27 presentations that went to the executives for

approval of this project; did the cost

benefit analysis, and so on. 1 2 And the remote disconnection Q 3 project that you worked on, was that related to the rollout of smart meters? 4 5 It's because of smart meters that 6 enabled the functionality, yes. 7 0 I don't see any positions that you held at SDG&E that had direct responsibility 8 9 for manual meter reading; is that right? 10 Α The remote disconnection project I 11 just talked about had to do with manual field 12 services. I don't think specifically manual 13 reading per se. 14 Q All right. So you didn't have 15 direct responsibility to oversee the manual meter readers at SDG&E did you? 16 17 But I'm very familiar with the Α No. 18 forecasting. Now, you've been a staff 19 Okay. Q attorney at TURN since July 2017. The last 20 21 two years and four months; correct? 22 Α Correct. 23 Your statement of qualifications Q 24 lists several CPUC proceedings in which you 25 represented TURN, and I'd like to inquire as to the nature of your roles in each. 26 27 you representing --I'm not sure that that's relevant 28 Α

1	to my testimony here.
2	MS. SLOCUM: I'm trying to establish,
3	your Honor, what his expertise is on the
4	topics that we're talking about. And I think
5	it's relevant to TURN's positions in this
6	proceeding.
7	ALJ LIRAG: Well, let's hear a few of
8	the questions.
9	BY MS. SLOCUM:
10	Q One proceeding you listed was the
11	CPUC Disconnections OIR; correct?
12	A Correct.
13	Q Has your role been as TURN's
14	attorney throughout the proceeding? Or are
15	you representing TURN on a substantive basis
16	on that proceeding?
17	A Both.
18	Q Are you still representing TURN in
19	that proceeding?
20	A Yes.
21	Q Did you appear at the CPUC's
22	disconnection workshops?
23	A Yes.
24	Q Who else at TURN has been on the
25	disconnections team since July 2018?
26	A Gabriella Sandoval.
27	ALJ LIRAG: Let's try and skip a few of
28	these questions since it doesn't seem to be

1	leading to anything.
2	MS. SLOCUM: Can I just ask one more on
3	this line, your Honor?
4	ALJ LIRAG: All right.
5	BY MS. SLOCUM:
6	Q Why didn't you sponsor the portion
7	of TURN's testimony in what's premarked as
8	TURN Exhibit-08 relating to disconnections
9	instead of TURN's newer employee,
10	Ms. Dowdell?
11	MS. GOODSON: Objection, your Honor.
12	This really goes to how TURN allocates
13	resources to a proceeding. I'm not sure what
14	the relevance is. If Mr. Cheng would like to
15	explain how we did our best to spread
16	responsibilities across our very limited
17	staff, he can try to talk to that issue. But
18	I really don't understand the relevance here.
19	ALJ LIRAG: I'll sustain the objection.
20	Unless he was adopting someone else's
21	testimony.
22	MS. SLOCUM: Understood, your Honor.
23	ALJ LIRAG: All right.
24	BY MS. SLOCUM:
25	Q In your time at TURN as well as
26	your time with SDG&E, did you ever work on
27	another GRC Phase 1 proceeding?
28	A Yes.

1	Q Which one did you work on?
2	A I don't remember specifically which
3	one, but I definitely provided support for
4	GRC proceedings while I was at SDG&E.
5	Q Okay. Did you appear as a witness
6	in the SDG&E Phase 1 GRCs?
7	A I appeared as a witness in other
8	proceedings, not a Phase 1.
9	Q Okay. And did you ever work on a
10	GRC Phase 2 proceeding in your time either at
11	TURN or at SDG&E?
12	A Yes.
13	Q And when did you do that?
14	A I worked on the Edison Phase 2
15	proceeding. I was a witness in SDG&E's Phase
16	2 proceeding. And once again, I don't see
17	the relevance to my testimony.
18	Q All right. Turning to the subject
19	of manual meter reading at page 10, lines 1
20	through 10 of your testimony in Exhibit-177,
21	you introduce TURN's argument that PG&E's
22	2020 forecast in Chapter 6 of PG&E's
23	testimony of a little less than \$10 million
24	for manual meter reading an investigation
25	into meters should be reduced by
26	\$2.1 million; is that correct?
27	A Correct.
28	Q And specifically at line 8 you say

that this recommended reduction was based on 1 what you called TURN's quote "closer 2 3 examination of the forecasted meter reads and meter reader head count." Unquote; correct? 4 5 Α Yep. Is it -- am I understanding 6 0 7 correctly that the basic premise of your recommended \$2.1 million disallowance is your 8 9 concern that the reduction in the number of meters needing to be manually read and the 10 11 reduction in meter reader head count doesn't 12 seem proportionate to the reduction in cost 13 projected for 2020 to do the manual meter 14 reading; correct? 15 Α Those are just some of the factors, 16 yes. 17 Okay. At page 10, lines 11 0 18 through 12 of your testimony, you talk about 19 the number of meter reads in 2020 being 20 1,098,000 which you calculate as a 43 percent 21 decrease from recorded 2017 meter reads of 22 1,912,473; correct? 23 Α Correct. 24 Q Your testimony's recommendation 25 uses this 43 percent decrease in meter reads to argue that PG&E's 2020 expense cost 26 27 forecast should be 43 percent lower than 2017

recorded costs; correct?

1	A Correct.
2	Q So your calculated cost reduction
3	of 43 percent assumes that PG&E's manual
4	meter reading costs will decrease by the
5	exact same percentage as the reduction in the
6	units of work; correct?
7	A I don't think I'm assuming
8	anything. That's what I'm recommending.
9	Q Okay. Now, your testimony doesn't
10	mention any accounting for cost escalation
11	for labor hours does it?
12	A Escalation is taken care of
13	elsewhere outside of this elsewhere in the
14	GRC. Not here.
15	Q Wouldn't the labor costs escalation
15 16	affect the 2020 cost differential for manual
	-
16	affect the 2020 cost differential for manual
16 17	affect the 2020 cost differential for manual meter reading relative to 2017 and be
16 17 18	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal
16 17 18 19	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here?
16 17 18 19 20	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars
16 17 18 19 20 21	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars are in the same year dollars, which if you
16 17 18 19 20 21 22	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars are in the same year dollars, which if you look at
16 17 18 19 20 21 22 23	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars are in the same year dollars, which if you look at ALJ LIRAG: Let's go off the record.
16 17 18 19 20 21 22 23 24	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars are in the same year dollars, which if you look at ALJ LIRAG: Let's go off the record. (Off the record.)
16 17 18 19 20 21 22 23 24 25	affect the 2020 cost differential for manual meter reading relative to 2017 and be embedded in PG&E's costs for this proposal here? A It depends on if all the dollars are in the same year dollars, which if you look at ALJ LIRAG: Let's go off the record. (Off the record.) ALJ LIRAG: Let's go back on the

BY MS. SLOCUM: 1 2 Mr. Cheng, drawing your attention Q 3 to Exhibit-91 with regard to PG&E's metering proposal that you are asking for the \$2.1 4 5 disallowance on, do you see at page 6-11, 6 lines 3 through 14, PG&E lists the expense drivers for its 2020 forecast? 7 8 And specifically talks of its 9 forecast of \$28 million in metering labor escalation costs for 2020 relative to the 10 11 2017 recorded expense costs. Do you see 12 that? 13 Yeah. But I'm not -- I don't know Α how much of that is related to meter reading. 14 15 Well, this chapter relates -- this Q 16 section relates to metering expenses? 17 Α No. This covers more than metering. The \$28 million covers more than just 18 19 metering. 20 So when it says \$2.8 million in Q 21 metering labor escalation costs for 2020, you 22 didn't take that into account in changing 23 your 43 percent to reflect the percentage 24 change that would erode because of labor escalation, did you? 25 So back to what we're talking 26 Α 27 about --28 Q That was a yes-or-no question.

We're still talking about 1 Α No. 2 whether or not the \$28 million is meter 3 reading or more than meter reading. 4 The \$27.7 million (sic). Q 5 Α Yeah. The \$28.7 million is more 6 than manual meter reading. So I'm going to point to your workpaper. If you look at PG&E 7 Workpaper 6-14, the meter reading portion is 8 9 only \$12.4 million in 2017. But there's still the forecast of 10 Q 11 \$2.8 million in metering labor escalation 12 costs that's listed in PG&E's testimony as 13 having been something that when you look at 14 page 6-3 of PG&E's testimony, it shows PG&E increased the costs to reflect labor 15 16 escalation and then reduced the cost for 17 meter reading. 18 And I'm asking you whether you adjusted your 43 percent to reflect the 19 20 impact of labor escalation, which will tend 21 to decrease that 43 percent to a lower 22 Did you do that? percent. 23 No, I didn't. Α 24 Q Thank you. You don't dispute that 25 the average cost to accomplish an individual meter read or the unit costs changes over 26 27 time including to reflect increases in such

costs of doing business as labor cost

1 escalations do you? 2 Labor cost escalations are Α 3 reasonable, but not the reason PG&E listed out. 4 5 Okay. You don't disagree that 0 labor costs have gone up between 2017 and 6 7 2020; correct? 8 Α Correct. 9 Are you aware that TURN has not Q 10 objected to the continued use of PG&E's 11 standard labor escalation methodology across 12 the boards for all cost calculations in this 13 GRC that include labor? 14 Α I'm not aware. That's not my area. 15 Did you inquire about labor Q 16 escalation? 17 I believe we covered that already. I did not count the labor escalation. 18 19 Q Okay. In PG&E's rebuttal 20 testimony, Exhibit-93, or premarked as PG&E-20. Could you please turn to page 6-8? 21 22 I'm there. Α 23 There PG&E calculated that taking Q 24 escalation into account for labor, PG&E 25 forecasts a lower reduction of costs than the 26 43 percent you propose. Namely, a 26 percent 27 gross reduction or a 17 percent reduction 28 after netting out escalation and labor costs.

1 Do you see that? 2 I don't know what PG&E's including Α 3 in this calculation. So you didn't do your own 4 5 calculation after you received PG&E's rebuttal to come up with what you would say 6 the net reduction after -- including labor 7 escalation costs would be? 8 9 Α Net escalation of what? The net reduction in costs between 10 Q 11 2017 and 2020. After you take into account labor escalation, you're saying you don't 12 know what PG&E included to come up with 13 14 17 percent. 15 I'm asking you after you received 16 PG&E's rebuttal, did you make your own 17 calculation of what that percentage would be 18 after you take into account labor escalation? 19 So are you arguing that PG&E's only 20 including labor escalation and it argues it 21 should be 17 percent? It's not including any 22 other increased costs? 23 Q Correct. Wait. I am sorry. 24 ALJ LIRAG: Let's go off the record. 25 (Off the record.) ALJ LIRAG: Let's go back on the 26 27 record. 28 Please continue, Ms. Slocum.

BY MS. SLOCUM:

Q Yes. So let me ask it a different way, Mr. Cheng. After you received PG&E's rebuttal testimony, did you perform any calculations to include any of the kinds of factors that would cause PG&E to come up with a reduction that's more at 17 percent net than your 43 percent?

A Like I said, I don't know how PG&E came up with 17 percent, but I certainly did my own calculation, which is why I concluded once again that PG&E's theory is incorrect.

And I'll point you to the workpaper to show that the data does not support PG&E's theory that the unit cost of the meter read is increasing because of the so-called increase primarily due to the average time traveled.

Q So I'd like to walk through that.

I have a series of questions with regard to this topic. So I'd like to move forward with that, please.

So prior to making your recommended disallowance at 43 percent or \$2.1 million, what did you do to familiarize yourself with PG&E's actual manual meter reading operations?

A I reviewed the testimony and the

1 workpaper. 2 And did you also submit to Q 3 PG&E the data request that appears at the very end of your Exhibit-177? The very last 4 5 page TURN-61, Question 08, which indicates that you did do a data request on manual 6 7 meter reading reductions related and 8 support-related items; correct? 9 Α Correct. 10 Q And this data response was sent to 11 you on July 15, 2019. Do you see that? 12 Α Yes. 13 And that was before you prepared or 0 14 finalized your 43 percent testimony; correct? 15 Α Correct. 16 Q Look at the bottom of that data 17 request page, the one-page response. In the 18 last paragraph it says: 19 PG&E notes that a reduction 20 in its meter reader head 21 count does not directly 22 correlate with a reduction 23 in PG&E's manual meter 24 reading activities. PG&E meter readers are retired 25 26 or seeking other job 27 alternatives as they become 28 available and PG&E does not

1	fill these vacancies.
2	Since reading a meter is a
3	basic and shared work task
4	across almost every field
5	classification, other
6	utility field employees
7	perform manual meter
8	reading work as part of
9	other routine job duties.
10	Do you see that?
11	A Yes.
12	Q So when you developed your proposed
13	disallowance, you knew that PG&E does not
14	rely exclusively on dedicated meter readers
15	to do its manual meter reading; correct?
16	A Correct.
17	Q And did you review PG&E's
18	workpapers before you prepared your
19	43 percent?
20	A Yes.
21	Q So turn in PG&E's opening testimony
22	in Exhibit-91 to page 6-18.
23	A I am sorry. Say that again.
24	Q Page 6-18?
25	A Of TURN's testimony?
26	Q No. Of PG&E's opening testimony,
27	Exhibit-91?
28	A Okay.

1 Q And look at line 12 under Major 2 Work Category for MWCAR entitled "Perform Meter Reading." Do you see that? 3 Α 4 Yes. 5 0 PG&E describes the work it must do 6 under this major work category as being for 7 dedicated meter readers, other field 8 resources performing manual meter reading 9 activities, and the systems administrations 10 and clerical support necessary to effectively 11 perform these activities. Do you see that? 12 Α That's what it says. 13 0 Do you have any basis to disagree 14 that this is an accurate general description 15 of the types of work PG&E does under Major 16 Work Category AR? 17 Α No. 18 0 Are you familiar with the economic principle of diminishing marginal returns or 19 20 the principle of -- well, let's start with 21 diminishing marginal returns? 22 Α Yes. 23 And are you familiar with the Q 24 economic principle of increasing marginal 25 cost of production as the number -- as units 26 go up, there's an upward curve on costs; 27 correct? 28 There's no such thing. Absolutely Α

```
1
     not.
           I don't know what context you're
 2
     talking about. There's no such general
 3
     principle.
 4
           MS. SLOCUM: Your Honor, may I have a
 5
     moment off the record?
           ALJ LIRAG: All right. Off the record.
 6
 7
               (Off the record.)
           ALJ LIRAG: Let's go back on the
 8
 9
     record.
10
               Ms. Slocum, proceed.
11
     BY MS. SLOCUM:
12
               Mr. Cheng, is it your understanding
13
     that the number of meters PG&E still needs to
     manually read has steadily and significantly
14
15
     declined since the start of PG&E's smart
16
     meter deployment?
17
           Α
               Yes.
18
           0
               Looking at PG&E's rebuttal in
19
     Exhibit-93, page 6-7, lines 20 to 23.
20
               I'm there.
           Α
21
               There PG&E recounts that back in
           0
22
     2008 at the start of its smart meter
23
     deployment, it had over 9 million meters
24
     needing to be manually read 12 times a year
25
     at an average unit cost of $0.84 per read.
26
     Do you see that?
27
           Α
               Yes.
28
               And then by 2017 that number -- and
           Q
```

1	this is at the top of page 6-8 in
2	Table 6-3 had fallen to about 1.9 million.
3	And as of the end of 2019, only 98.5 percent
4	of PG&E's meters are projected to be
5	electronically read through remote automated
6	data collection system instead of manually;
7	correct?
8	A I don't know where you're reading
9	after that sentence.
10	Q Let's just break it down. For 2017
11	looking at Table 6-3, that number of meters
12	and the cost per read both reflect a
13	reduction. 1.9 million meters with a
14	increase excuse me. An increase in
15	average unit cost of \$5.71. Do you see that?
16	A Yeah. That's what it says.
17	Q And is it your understanding that
18	as of the end of 2019 about 98.5 percent of
19	PG&E's meters are projected to be
20	electronically read?
21	A I don't know where the 98.5 percent
22	comes from if you want to point me to it.
23	Q If you look at the opening
24	testimony, PG&E's opening testimony, line 11
25	and 12 where it says:
26	More than 98 percent of
27	PG&E's meters are currently
28	read electronically through

an automated collection 1 2 system. 3 Which page, Counsel? MS. GOODSON: 4 MS. SLOCUM: 6-8. I am sorry. 5 MS. GOODSON: Thank you. 6 Okay. I believe you were THE WITNESS: talking about 98.5 earlier. I'm not sure. 7 BY MS. SLOCUM: 8 9 Q It says more than 98 percent. Ιf you look at Table 6-1, that breaks down the 10 11 types of meters that -- the categories of 12 manually read meter, and it comes up to a 13 total of 154,199 as remaining by year end 14 2019. Do you see that? 15 Α Yep. 16 Q So given that PG&E started at over 17 9 million meters when its -- when it was in 18 2008, and now it's come down to 154,199, 19 would you agree that that is approximately a 20 98.5 percent reduction? 21 Α Subject to check, sure. 22 So with only about 1.5 percent of 0 23 all of its meters being manually read, one 24 could say that PG&E has gotten down pretty 25 close to the bottom of the barrel on 26 replacing those remaining manually read 27 meters. Wouldn't you agree? I don't know what "bottom of the 28 Α

barrel" means. So I don't know. What does 1 2 bottom of the barrel mean? 3 The last remaining ones that Q haven't been able to be addressed before? 4 5 We can agree PG&E's replacing the 6 remaining 1.5 percent if that's how you'd 7 like to phrase it. That's not how I would like to 8 0 No. phrase it, but I think I have an answer so 9 10 thank you. 11 So looking at PG&E's rebuttal 12 exhibit, PG&E-20 again. That's Exhibit-93, 13 at page 6-7, lines 14 to 28, PG&E explains 14 why as the number of manually read meters 15 declines, the unit costs for meter reads has 16 trended upwards year over year. Do you see 17 that? 18 Α Yeah. I guess I disagree. 19 In addition to the changes in labor Q 20 escalation costs, would you agree that there 21 are also fixed overhead costs that with the 22 reduction in meters must be spread over fewer 23 meters? 24 Α Possibly. 25 0 And would you also agree that the fact that some meter reads are done is not 26 27 because they are on the monthly meter read,

but they might have a special read initiated

by a customer action such as opening an 1 2 account or closing an account? 3 Α Yes. And would you agree that the travel 4 0 time to -- for the meter reader to go the 5 6 distance to cover the route is another factor that affects the cost remaining? 7 No, I don't. I'll point you to 8 Α 9 workpaper 6-15. 10 Of which workpapers? Q 11 Α PG&E opening testimony workpapers 12 6-15. 13 I'm going to go through that. 0 But 14 what I want to do is just lay a foundation. 15 Let me give you an illustrative hypothetical 16 example. 17 Suppose there's a PG&E dedicated 18 meter reader with an existing route of 19 50 meters a day in 2019. But in 2020, five 20 of those meters -- or 10 percent -- on his 21 route are converted to smart meters so that 22 45 still need manual meter reading. Do you 23 have that in mind? 24 Α Sure. 25 0 The distance to cover the route 26 leaving from the service center and getting 27 to the remaining 45 meters is approximately 28

the same but just with five gaps interspersed

1	throughout the route. Do you have that in
2	mind?
3	A Sure.
4	Q So in that case, wouldn't the
5	savings only be the incremental time not to
6	stop at those five omitted meters?
7	A No. Because you can perform other
8	optimization routes.
9	Q You can change the route?
10	A Absolutely.
11	Q Okay. Have you done any studies
12	for PG&E to determine whether such changes in
13	route are feasible?
14	A Like I said, the data
15	Q That's a yes-or-no question. Did
16	you do it? Did you perform any studies?
17	A Yes. I studied PG&E workpaper, and
18	the workpaper does not reflect that theory.
19	The data shows that theory as incorrect.
20	Q All right. Let's go through that.
21	ALJ LIRAG: Let's take a 10-minute
22	break.
23	Off the record.
24	(Off the record.)
25	ALJ LIRAG: Let's go back on the
26	record.
27	We're back from our morning break.
28	We'll continue with the cross by Ms. Slocum.

1 MS. SLOCUM: Thank you, your Honor. 2 CROSS-EXAMINATION RESUMED BY MS. SLOCUM: 3 Mr. Cheng, could you please confirm 4 0 5 that from your review of PG&E's opening 6 testimony, one of the reasons why some meters 7 that remain needing to be read manually is 8 because of gas and electric meter network 9 connectivity challenges? 10 Α I think I remember seeing that. 11 Q Do you agree that there are network 12 connectivity challenges in general from your 13 knowledge of your work at SDG&E on remote 14 meter reading? 15 Α Yes. 16 Q So earlier you had talked about 17 optimizing a route when I was talking about 18 the distances. And I'd like to just walk you 19 through something that is basically a 20 difference between PG&E and SDG&E. 21 SDG&E's service territory is relativity 22 small. It's one county; correct? 23 Α I think it covers more than one 24 county. 25 It's the smallest of all the 26 service territories of the major utilities; 27 correct? 28 Α Sure.

1 Q But PG&E's is the largest of all 2 the major utilities in California; correct? 3 Α Sure. So let me give you an example of 4 0 5 network connectivity-related issues that 6 drive PG&E's per-unit cost based on distance. 7 The distance from -- take for example with me the distance from service 8 center Merced to a location in Yosemite 9 National Park to read a meter that needs to 10 11 be manually read. Do you have that 12 hypothetical in mind? 13 Α Yes. 14 Q Okay. And assume that this morning 15 according to Google Maps that's an hour and 16 45 minutes one way to get from the Merced 17 Service Center to the Yosemite National Park. 18 Would you agree to that subject to check? 19 Α Sure. 20 0 Okay. Let's say that there are 21 five meters in Yosemite National Park, and 22 one of them becomes capable of being read 23 remotely, but the others don't. PG&E still 24 has to send someone from Merced to Yosemite 25 National Park regardless of what route that's 26 Someone has to cover that mileage; in. 27 correct? 28 Α Sure.

Q And take for example the service center in Auburn. The distance there that a manual meter reader needs to go to the Sugar Bowl Ski Resort in Soda Springs is about an hour away. And regardless of how you might change routes, someone from PG&E has to go from that service center in Auburn to that Sugar Bowl Ski Resort to manually read that meter that either has network connectivity problems or opted out of smart meters or some other reason why it's manual?

A Someone has to read it. I don't

A Someone has to read it. I don't know if it needs to be from that service center. But sure. Someone has to read it.

Q All right. Would you agree that the situations where there are constraints on network coverage that prevent a smart meter from being used at a particular location and require the meter to be manually read can be in mountainous areas or in remote agricultural fields due to constraints on the network? In other words, as remote locations?

A Yes. In fact I think in general those -- a lot of those meters are clustered together. Because they're in the same regional geographic area. Mountainous areas for example, a lot of meters have a problem

talking about.

1 with signal. 2 Right. But did you do any Q 3 independent study to locate where the meters are to see that they're clustered together? 4 5 No. I'm saying that's a theory that I've heard. 6 7 Q So how did you account for the fact 8 that every month those meters in Yosemite National Park and at Sugar Bowl Ski Resort 9 10 have to be read and the distance stays the 11 same to get to them? 12 Α So the hypothetical as you pose --13 0 Actually, those are not 14 hypotheticals. Those are real meters. You said they're hypotheticals. 15 Α You're correct. 16 Q Okay. 17 Α The hypotheticals you pose are all 18 using examples of one meter or five meters. 19 That's why in theory that sounds nice. 20 in reality, when you're reading -- when you 21 have millions of meter reads, they don't come 22 That's why the data doesn't support out. 23 that theory. 24 Q Well, it's not a theory that 25 someone has to go to those locations. 26 I'm talking about the theory of decreasing costs. That's the theory I'm 27

1	ALJ LIRAG: Let's limit it to
2	question-and-answer type of discussion.
3	BY MS. SLOCUM:
4	Q Well, you can't optimize away the
5	fact that someone has to go from the service
6	center in Merced to Yosemite National Park,
7	can you?
8	A Like I said, I don't know which
9	service center they'd go from. But someone
10	has to read it.
11	MS. SLOCUM: Thank you, Your Honor.
12	Those are all my questions.
13	ALJ LIRAG: Any redirect, Ms. Goodson?
14	MS. GOODSON: Yes, your Honor.
15	REDIRECT EXAMINATION
15 16	REDIRECT EXAMINATION BY MS. GOODSON:
16	BY MS. GOODSON:
16 17	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum
16 17 18	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation?
16 17 18 19	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes.
16 17 18 19 20	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not
16 17 18 19 20 21	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not account for labor escalation in your
16 17 18 19 20 21 22	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not account for labor escalation in your recommendation; is that right?
16 17 18 19 20 21 22 23	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not account for labor escalation in your recommendation; is that right? A That's correct.
16 17 18 19 20 21 22 23 24	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not account for labor escalation in your recommendation; is that right? A That's correct. Q Do you believe that labor
16 17 18 19 20 21 22 23 24 25	BY MS. GOODSON: Q Mr. Cheng, do you recall Ms. Slocum asking you questions about labor escalation? A Yes. Q And you testified that you did not account for labor escalation in your recommendation; is that right? A That's correct. Q Do you believe that labor escalation should be accounted for in the

A I think it would be reasonable to adjust our recommendation based on that fact and to implement -- to account for labor escalation what I would do is I would take the \$28.7 million of recorded in 2017 that PG&E pointed to earlier -- if I can find the page. Hold on a second.

In page 6-11 of the direct testimony, I think it would be reasonable to take that \$28.7 million, which led to a \$2.8 million escalation, and take a ratio for the 2017 recorded portion meter reading, which is \$12 million. Which would result in approximately \$1.1 million of labor escalation, which would result in calculating it a recommendation of \$1 million reduction instead of a \$2.1 million reduction.

Q Thank you. And, Mr. Cheng, do you recall Ms. Slocum's most recent line of questions about reading -- about the costs of reading -- manually reading meters and how those costs change as the number of meters declines?

A Yes.

Q And you said in response to her questions that while you agree that meters that continue to require manual meter reading do need to be read, you disagree with PG&E's

theory that the marginal cost of reading 1 2 remaining manual meter reads as the volume 3 goes down will always increase. Do you remember that? 4 5 Α Yes. 6 And why is that your response, Q 7 Mr. Cheng? Can you explain that? 8 Α Sure. If you take a look at PG&E's 9 workpaper, direct testimony workpaper 6-15, 10 the data is very evident that that theory 11 does not hold true. If you look at from 2014 12 to 2015, the number of regular meter reads 13 decreased by 15 percent. 14 Now, based on PG&E's theory, you 15 would expect that the average cause per 16 regular read would increase. In fact if you look at the data, the unit cost of the 17 18 regular read actually decreased from \$4.22 to 19 \$4.04. 20 And is that line 14 on that Q 21 workpaper? 22 It's on line 14. Actually it 23 happened again from 2016 to 2017 when the 24 total regular reads decreased by 22 percent. 25 The average unit cost actually decreased 26 And so PG&E's theory that average again. 27 unit costs goes up because the meter reads

are decreasing does not hold true as evident

```
in their own workpapers showing that has four
 1
 2
     years of recorded data. Out of the four
 3
     years, two years does not comport with that
     theory.
 4
 5
               Thank you, Mr. Cheng.
           0
 6
           ALJ LIRAG: Any questions off the
 7
     redirect, Ms. Slocum?
               All right. Let's go off the record.
 8
 9
               (Off the record.)
           ALJ LIRAG: Let's go back on the
10
11
     record.
12
               Ms. Slocum, any --
                   RECROSS-EXAMINATION
13
14
     BY MS. SLOCUM:
15
                     Mr. Cheng, looking at that
           Q
     same Table 6-5 that you just referenced.
16
               Yes, I'm there.
17
           Α
18
           0
               If you look at the entire string of
19
     numbers going from 2014 to 2020, we see that
20
     even though there was a slight decrease
21
     between 2014 and 2015, there were increases
22
     shown for each of the years after 2017;
23
     correct?
24
               After 2017 those are forecasted
25
     numbers, and PG&E doesn't have a good basis
     for those forecasted numbers.
                                     So I'm not
26
27
     counting their forecasted number.
28
               So there's -- okay. So you're only
           Q
```

counting through 2017?

A I'm using four years of the recorded costs.

Q And I believe when you responded earlier in 2008 the cost was .84 -- well, \$0.84 for the 9 million meters. And then I believe you answered earlier about the 2014 figure being \$4.22. Do you see that the actual cost in 2016 was \$5.74 in that table?

A Sure.

Q So that's an upward trend from the start of the rollout of smart meters in terms of the unit cost to read?

A Incorrect. When you're trying to forecast or isolate a factor in determining per-unit cost for example, you want to use data that's as close as possible to isolate other factors. Like you talked about earlier, Over a range of nine years, a lot of factors going to the cost of -- the total cost of the program.

But when you look at year-by-year data, that's when you can isolate the factors and try to focus on what changed from one year to the next. And so it's more reasonable to look at years that are closer together than to look at years nine years apart to create a trend.

What do you think changes from one 1 Q 2 year to the next? 3 A lot of factors could change from nine years. 4 5 Could you tell me -- in your 6 analysis, you're telling me that this theory is incorrect. That these forecast numbers 7 for 2018, 2019, and 2020 are incorrect. 8 9 I'm asking you which -- what factors do you 10 see that would change the \$5.71 in 2017? 11 MS. GOODSON: Objection, your Honor. 12 Ms. Slocum is asking Mr. Cheng to speculate 13 about things that relate to PG&E's operations 14 that go beyond the information presented in 15 PG&E's testimony and workpapers. 16 If he has a response, I don't want 17 to cut him off. But I believe this is going 18 beyond the scope of appropriate re-cross. 19 ALJ LIRAG: Do you have a response, 20 Mr. Cheng? 21 THE WITNESS: I can explain why I 22 stated earlier PG&E's forecasting is flawed. 23 BY MS. SLOCUM: 24 Q That's not what the question was. 25 My question was about you and you're 26 saying that you disagree with our numbers. 27 No, I didn't. I disagree with the

forecasting numbers, which I wanted to

1	explain why I disagreed, and you said you
2	don't want to hear it.
3	Q No. No. No. That's not what I'm
4	getting at. I'm getting at the actual
5	numbers, okay, and what happened on the trend
6	of the actual numbers.
7	Did you investigate what the causes
8	would be for that upward trend since 2008 to
9	2017?
10	A I am saying that
11	Q I'm asking did you investigate it?
12	A Did I investigate what?
13	Q You said there could be many
14	causes, and you didn't want to answer what
15	those causes are. So I'm going to ask you
16	more generally. Did you investigate what
17	kind of causes
18	A I have general knowledge, yes.
19	Q Did you investigate for PG&E's
20	numbers
21	A I have a general knowledge of the
22	subject matter.
23	ALJ LIRAG: So let's just say the
24	answer is no.
25	MS. SLOCUM: Thank you, your Honor.
26	Those are all of my questions.
27	ALJ LIRAG: Just one question on the
28	time-of-use proposal by TURN.

1	Based on your review of PG&E's
2	proposed costs, the objection is well, let
3	me backtrack a little bit.
4	For the proposed costs regarding the
5	time-of-use transitioning that PG&E's
6	proposing, where are the bulk of the costs
7	at? Are they IT related? Labor related?
8	Education?
9	MS. SLOCUM: Excuse me, your Honor.
10	May I just clarify? When you say
11	"time-of-use," I'm not sure I'm understanding
12	how that relates to the metering issues.
13	ALJ LIRAG: This is not about the
14	metering. This is about Mr. Cheng's prepared
15	testimony.
16	MS. SLOCUM: Well, that is subject to a
17	stipulation.
18	ALJ LIRAG: Well, I'm asking him
19	questions.
20	MS. SLOCUM: All right.
21	EXAMINATION
22	BY ALJ LIRAG:
23	Q All right. So the bulk of the
24	costs for the time-of-use transitioning, is
25	it more related to labor, IT, or something
26	else like perhaps education?
27	A So keep in mind the transition that
28	we're talking about is only a transition of

the time period. They're not being 1 2 transitioned to a different rate. 3 Q Correct. So IT-wise that's a very simple 4 5 implementation. And so the bulk of the cost is for outreach and education. 6 7 ALJ LIRAG: All right. Any questions 8 off that, Ms. Slocum? 9 MS. SLOCUM: Yes, your Honor. 10 **EXAMINATION** 11 BY MS. SLOCUM: 12 Mr. Cheng, when a nonresidential 13 customer's time-of-use period changes, there has to be communication with that customer to 14 15 tell them what the new hours for the peak 16 period are so that they can avoid the high 17 cost period; is that correct? 18 That's why I said outreach Yes. 19 and education. 20 0 And do you have any basis for 21 determining that there's no IT costs in 22 making a structural change to the billing 23 system? 24 ALJ LIRAG: Counsel, the question was 25 where were the bulk of the costs. Not all 26 the costs. So he acknowledged that there are 27 IT costs. 28 Thank you. MS. SLOCUM:

ALJ LIRAG: 1 Does that help? 2 BY MS. SLOCUM: 3 Mr. Cheng, did you Q Yes. investigate the specific IT costs for 4 5 changing the billing system to reflect the 6 structural change to put new hours into the rate, which is different than a value change 7 8 just putting different values in the same TOU 9 period structure? 10 Based on my background as a Α 11 computer scientist and my many years in the 12 IT field, yes. I'm comfortable that my 13 assessment would be correct. 14 I asked you did you investigate for Q 15 PG&E's billing system whether that is true? 16 MS. GOODSON: Objection, your Honor. Ι just want to make clear for you what 17 18 Ms. Slocum tried to communicate before. TURN 19 no longer intends to advocate the 20 recommendations on this issue in TURN's 21 testimony in our brief because of the 22 stipulation we have with PG&E, which 23 addresses the cost for that chapter. 24 So I just want to be clear. Ι 25 certainly want Mr. Cheng to answer any 26 questions that you have. And I understand 27 the record will help you evaluate the 28 stipulations. I just wanted to be clear

1	before we go down this path.
2	ALJ LIRAG: Right. Thank you for the
3	clarification. And I was asking to determine
4	where the costs were. So regardless of
5	whether two parties have some sort of
6	agreement, it doesn't mean the Commission
7	will just agree to that even though no one
8	else is opposing that proposal.
9	We have the right to investigate and
10	review all the proposed costs whether or not
11	it's opposed or unopposed. That's just for
12	clarification.
13	Ms. Slocum, any more questions?
14	MS. SLOCUM: No, your Honor.
15	ALJ LIRAG: All right. Thank you,
16	Mr. Cheng. You're not off yet.
17	A move to admit Exhibit-177?
18	MS. GOODSON: Yes, your Honor.
19	ALJ LIRAG: Any objections?
20	(No response.)
21	ALJ LIRAG: Hearing none, 177 is
22	received into the record.
23	(Exhibit No. 177 was received into
24	evidence.)
25	ALJ LIRAG: Thank you, Mr. Cheng.
26	You're excused.
27	THE WITNESS: Thank you, your Honor.
28	ALJ LIRAG: Let's go off the record.

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1	(Off the record.)
2	ALJ LIRAG: Let's go back on the
3	record. Let's identify exhibits. These are
4	for witnesses where cross had been waived.
5	The first is Exhibit-178. And this
6	Is the Testimony of Mina Botros and
7	Ms. Pui-Wa Li on Safety and Risk and
8	Integrated Planning. So that's Exhibit-178.
9	(Exhibit No. 178 was marked for
10	identification.)
11	ALJ LIRAG: Exhibit-179 are The
12	Workpaper to the Testimony of Ms. Li and
13	Ms. Botros.
14	(Exhibit No. 179 was marked for identification.)
15	identification.)
16	ALJ LIRAG: I may get the gender wrong,
17	Ms. Shek. So my apologies for that.
18	MS. SHEK: Thank you.
19	ALJ LIRAG: Exhibit-180. This is The
20	Direct Testimony of Thomas Renaghan on Cost
21	Escalation.
22	(Exhibit No. 180 was marked for identification.)
23	identification.)
24	ALJ LIRAG: Exhibit-181 is The
25	Testimony of Mr. Dao Phan on Gas Distribution
26	Expenses.
27	(Exhibit No. 181 was marked for identification.)
28	///

1	ALJ LIRAG: Exhibit-182 is The
2	Workpapers to the Testimony of Mr. Phan.
3	(Exhibit No. 182 was marked for identification.)
4	identification.)
5	ALJ LIRAG: And Exhibit-183 is The
6	Direct Testimony of a Tamera Godfrey on the
7	Electric Distribution Expenses.
8	(Exhibit No. 183 was marked for
9	identification.)
10	ALJ LIRAG: Exhibit-184 is The
11	Workpapers to Ms. Godfrey's Testimony.
12	(Exhibit No. 184 was marked for identification.)
13	identification.)
14	ALJ LIRAG: Exhibit-185 is The Direct
15	Testimony of Mr. Tom Roberts on Electric
16	Distribution Capital Part 1 and DER.
17	(Exhibit No. 185 was marked for identification.)
18	identification.)
19	ALJ LIRAG: Exhibit-186 is The
20	Workpapers to the Testimony of Mr. Roberts on
21	Part 1.
22	(Exhibit No. 186 was marked for identification.)
23	identification.)
24	ALJ LIRAG: Exhibit-187 is The
25	Workpapers let me backtrack.
26	So 186 is The Workpapers Book 1 of
27	2.
28	Exhibit-187 is the workpapers of

	·
1	Mr. Roberts Book 2 of 2.
2	(Exhibit No. 187 was marked for
3	identification.)
4	ALJ LIRAG: Next is Exhibit-188. This
5	is The Direct Testimony of Mariana Campbell
6	on Energy Supply Part 1.
7	(Exhibit No. 188 was marked for
8	identification.)
9	ALJ LIRAG: Exhibit-189 is the
10	Workpapers of Ms. Campbell on Energy Supply
11	Part 1.
12	(Exhibit No. 189 was marked for identification.)
13	identification.)
14	ALJ LIRAG: Exhibit-190 is the
15	testimony of Mr. Scott Logan on Energy
16	Supply. This is part 2.
17	(Exhibit No. 190 was marked for identification.)
18	identification.)
19	ALJ LIRAG: Exhibit-191 is The
20	Workpapers of Mr. Logan's Testimony on Energy
21	Supply Part 2 of 2.
22	(Exhibit No. 191 was marked for identification.)
23	radicer roacton. j
24	ALJ LIRAG: Next is Exhibit-192. This
25	is The Direct Testimony of Mark Waterworth on
26	Shared Services.
27	(Exhibit No. 192 was marked for identification.)
28	///
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1	ALJ LIRAG: Exhibit-193 is The
2	Workpapers of Mr. Waterworth's Testimony.
3	(Exhibit No. 193 was marked for
4	identification.)
5	ALJ LIRAG: Exhibit-194 is The Direct
6	Testimony of Yakov Lasko on IT and
7	Cybersecurity.
8	(Exhibit No. 194 was marked for
9	identification.)
10	ALJ LIRAG: Exhibit-195 is The
11	Workpapers to the Testimony of Mr. Lasko.
12	(Exhibit No. 195 was marked for
13	identification.)
14	ALJ LIRAG: Exhibit 196 is The Direct
15	Testimony of Stacy Hunter on Human Resources.
16	This is a public version.
17	(Exhibit No. 196 was marked for identification.)
18	identification.)
19	ALJ LIRAG: Exhibit 196-C is The
20	Confidential Version of Ms. Hunter's
21	Testimony.
22	Ms. Shek, can you explain about the
23	confidential nature of Exhibit 196-C, which
24	we just identified?
25	MS. SHEK: It relates to information
26	mostly likely due to employment salaries and
27	information on individuals.
28	ALJ LIRAG: So it's PG&E that marked
	i la companya di managanta di ma

1	the information that's
2	MS. SHEK: Yes.
3	ALJ LIRAG: confidential as
4	confidential?
5	MS. SHEK: Yes.
6	ALJ LIRAG: Is that correct, Ms.
7	Gandesbery?
8	MS. GANDESBERY: Yes. To my
9	understanding.
10	ALJ LIRAG: So we'll just accept that,
11	and we'll I think we've granted
12	confidential treatment to that information on
13	PG&E's side. And so we'll accept the
14	confidential nature of the information that
15	is in Exhibit 196-C.
16	(Exhibit No. 196-C was marked for identification.)
17	identification.)
18	ALJ LIRAG: Next is Exhibit-197 is The
19	Workpapers of Ms. Hunter.
20	(Exhibit No. 197 was marked for identification.)
21	identification.)
22	ALJ LIRAG: Next is the Exhibit-198.
23	This is The Direct Testimony of Lindsay
24	Laserson on AMG.
25	(Exhibit No. 198 was marked for identification.)
26	Identifi Idationi j
27	ALJ LIRAG: Exhibit-199 is The
28	Workpapers on Ms. Laserson.

1	(Exhibit No. 199 was marked for				
2	identification.)				
3	ALJ LIRAG: And then Exhibit-200 is The				
4	Joint Testimony of Sophie Chia and Joyce Lee				
5	on Financial Examination. So that's				
6	Exhibit-200.				
7	(Exhibit No. 200 was marked for identification.)				
8	ruener reaction.				
9	ALJ LIRAG: So, Ms. Shek, a move to				
10	admit Exhibits 178 through 200 including				
11	196-C, which is the confidential version of				
12	196?				
13	MS. SHEK: Yes, your Honor.				
14	ALJ LIRAG: Any objections?				
15	MS. GANDESBERY: No, Your Honor.				
16	ALJ LIRAG: Hearing none, Exhibits 178				
17	through 196 are admitted into the record.				
18	(Exhibit Nos. 178-196 were received into evidence.)				
19	11100 0114011001)				
20	ALJ LIRAG: 196-C is also admitted.				
21	(Exhibit No. 196-C was received into evidence.)				
22	The overest y				
23	ALJ LIRAG: As well as 197 through 200.				
24	(Exhibit Nos. 197-200 were received into evidence.)				
25	11100 0114011001)				
26	ALJ LIRAG: Off the record.				
27	(Off the record.)				
28	ALJ LIRAG: Let's go back on the				
	ı				

1	record.				
2	Let's identify several more				
3	exhibits. Exhibit-201 is a cross-exhibit for				
4	Ms. Dao Phan. And this is Cal PA's Response				
5	to Data Request PG&E Pub Advocates-029.				
6	(Exhibit No. 201 was marked for				
7	identification.)				
8	ALJ LIRAG: Next is Exhibit-202. This				
9	is PG&E's Response to Data Request of Cal PA				
10	No. 052, Question 2.				
11	(Exhibit No. 202 was marked for identification.)				
12	identification.)				
13	ALJ LIRAG: Ms. Gandesbery, a move to				
14	admit Exhibits 201 and 202 into the record?				
15	MS. GANDESBERY: Yes, Your Honor.				
16	ALJ LIRAG: Any objections?				
17	MS. SHEK: No, your Honor:				
18	ALJ LIRAG: Hearing none, Exhibits 201				
19	and 202 are received into the record.				
20	(Exhibit No. 201 was received into evidence.)				
21	(Exhibit No. 202 was received into evidence.)				
22	evidence:)				
23	ALJ LIRAG: Let's go off the record.				
24	(Off the record.)				
25	ALJ LIRAG: Let's go back on the record				
26	and we'll identify more exhibits.				
27	First we'll identify Exhibit-203.				
28	This is PG&E's Response to TURN Data Request				

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94 - 1.
 1
 2
               (Exhibit No. 203 was marked for
               identification.)
 3
           ALJ LIRAG: Next is Exhibit-204. This
 4
 5
     is The Prepared Testimony of William Marcus.
               (Exhibit No. 204 was marked for
 6
               identification.)
 7
 8
           ALJ LIRAG: And then, Ms. Goodson, can
 9
     you explain about the next document that
10
     we'll identify as 204-C, the confidential
11
     version of Mr. Marcus's testimony?
12
           MS. GOODSON: Yes, your Honor.
13
     Exhibit 204-C includes information related to
     PG&E's energy supply testimony that PG&E
14
15
     provided to TURN subject to our nondisclosure
     agreement. And PG&E has marked certain
16
17
     information as confidential. So pursuant to
18
     our NDA, TURN is treating it as confidential.
19
           ALJ LIRAG: I believe we have already
20
     discussed that that information is
     confidential. So I'll accept the
21
22
     confidential nature of Exhibit 204-C.
23
               (Exhibit No. 204-C was marked for
               identification.)
24
25
           ALJ LIRAG: Next is Exhibit-205.
                                              It's
26
     the Attachments to the Testimony of
27
     Mr. Marcus.
28
     ///
```

1	(Exhibit No. 205 was marked for		
2	identification.)		
3	ALJ LIRAG: Next is Exhibit 206-C.		
4	This is one confidential attachment of		
5	Mr. Marcus's testimony.		
6	Ms. Goodson, explanation regarding		
7	the confidential nature of this document?		
8	MS. GOODSON: Yes. This is a document		
9	that was provided by PG&E to TURN relating to		
10	PG&E's energy supply testimony. Once again		
11	PG&E deemed certain information confidential.		
12	And pursuant to our nondisclosure agreement,		
13	TURN is treating it as such.		
14	ALJ LIRAG: All right. The same nature		
15	as Exhibit 204-C. We've already discussed		
16	the information is confidential. And so we		
17	accept the confidential nature of		
18	Exhibit 206-C or the information contained in		
19	Exhibit 206-C.		
20	(Exhibit No. 206-C was marked for		
21	identification.)		
22	ALJ LIRAG: A move to admit		
23	Exhibits 203, 204, 204-C, 205, mand 206-C		
24	into the record, Ms. Goodson?		
25	MS. GOODSON: Yes, please, your Honor.		
26	ALJ LIRAG: Any objections?		
27	MS. GANDESBERY: No objection.		
28	ALJ LIRAG: Hearing none, Exhibit 203,		
20	ALU LINAG. HEALTING HOHE, EXHITUTE 200,		

1	204, 204-C, 205, and 206-C are received into				
2	the record.				
3	(Exhibit No. 203 was received into evidence.)				
4	(Exhibit No. 204 was received into				
5	èvidence.)				
6	(Exhibit No. 204-C was received into evidence.)				
7	(Exhibit No. 205 was received into				
8	evidence.)				
9	(Exhibit No. 206-C was received into evidence.)				
10					
11	ALJ LIRAG: I believe that concludes				
12	today's hearing. Let's tackle more exhibits				
13	the following day or whenever there's a good				
14	time to do so.				
15	Tomorrow we'll continue with				
16	Mr. Lowe, Mr. Sugar, and Mr. Lambert. So we				
17	are adjourned until tomorrow at 9:30.				
18	Thank you, everyone.				
19	Off the record.				
20	(Off the record.)				
21	(Whereupon, at the hour of 11:21 a.m. this matter having been continued				
22	to 9:30 October 15, 2019 at San Francisco, California, the				
23	Commission then adjourned.)				
24	* * * *				
25					
26					
27					
28					

1	BEFORE THE PUBLIC UTILITIES COMMISSION			
2	OF THE			
3	STATE OF CALIFORNIA			
4				
5				
6	CERTIFICATION OF TRANSCRIPT OF PROCEEDING			
7	I, JASON STACEY, CERTIFIED SHORTHAND REPORTER			
8	NO. 14092, IN AND FOR THE STATE OF CALIFORNIA DO			
9	HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT			
10	PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT			
11	TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN			
12	THIS MATTER ON OCTOBER 14, 2019.			
13	I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE			
14	EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.			
15	EXECUTED THIS OCTOBER 18, 2019.			
16				
17				
18				
19	/ N N			
20				
21	JASON A. STACEY CSR NO. 14092			
22	33K NOT 21332			
23				
24				
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