

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA



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ADMINISTRATIVE LAW JUDGE ELAINE LAU, presiding

Order Instituting Rulemaking to ) EVIDENTIARY  
Consider Distributed Energy Resource ) HEARING  
Program Cost-Effectiveness Issues, )  
Data Access and Use, and Equipment ) Rulemaking  
Performance Standards. ) 22-11-013  
)

REPORTERS' TRANSCRIPT  
Virtual Proceeding  
January 23, 2024  
Pages 1 - 176  
Volume 1

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1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

INDEX

WITNESSES	PAGE
ROBERT EARLE	
Direct Examination By Ms. Koss	33
Cross-Examination By Ms. White	35
Cross-Examination By Mr. Lin	42
Cross-Examination (Continued) By Ms. White	72
ERIC BORDEN	
Direct Examination By Mr. Pettit	87
Cross-Examination By Ms. Armstrong	88
Cross-Examination By Ms. White	95
SAM WRAY	
Direct Examination By Mr. Sezgen	117
Cross-Examination By Mr. Lin	119
Cross-Examination By Ms. Armstrong	147
Cross-Examination By Ms. White	153

EXHIBITS	MARKED	RECEIVED
CLE-01	19	
CLE-02	19	
CBD-01	19	
CLC-01	19	
CLC-02	19	
CUE-01	19	
CUE-02	20	
GGL-01	20	
IOU-01	20	
IOU-02	20	
IOU-03	20	
NRDC-01	21	
NRDC-02	21	
PCF-01	21	
PCF-02	21	
PCF-03	21	
PCF-04	22	
PCF-05	22	
PCF-06	22	
PCF-07	22	
PCF-08	23	
PCF-09	23	
PCF-10	23	
PCF-11	23	
PCF-12	23	
PCF-13	24	
PCF-14	24	
CA-01	24	
CA-01E	24	
CA-02	24	

1	CA-03	25
	SBUA-01	25
2	SBUA-02	25
	SEIA-01	25
3	SEIA-02	25
	SEIA-03	26
4	SEIA-04	26
	SEIA-05	26
5	SoCalGas-01	26
	SoCalGas-02	27
6	TURN-01	27
	TURN-02	27
7	CUE-02-E	36
	CBD-02	119
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

VIRTUAL PROCEEDING

JANUARY 23, 2024 - 10:01 A.M.

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ADMINISTRATIVE LAW JUDGE LAU: The Commission will come to order. This is the evidentiary hearing in Order Instituting Rulemaking R.22-11-013 to Consider Distributed Energy Resource, DER, Program Cost-Effectiveness Issues, Data Access and Use, and Equipment Performance Standards.

For this evidentiary hearing, we will examine facts related to the 2024 Avoided Cost Calculator or ACC update.

Good morning, I am Administrative Law Judge Elaine Lau, and the presiding officer in this proceeding. The assigned commissioner is Commissioner Darcie Houck, but she will not be joining us.

First, I want to review some housekeeping matters. We will begin each day at 10:00 a.m. with about a one hour lunch break at around noo -- noon. There will be a 15-minute break in the afternoon, and we will end -- we may end as late as 5:00 p.m., but I hope that we end around 4:30.

Yesterday, I circulated a hearing schedule. We will try to follow it as much as possible but, of course, we may have to adjust it as necessary. We will

1 try to just follow the -- the first day schedule of  
2 witness and attorneys for the first day, and then the  
3 second day, follow that with what -- if in the event  
4 that we finish day one very early, like, two hours  
5 early, I will prompt -- and I hope, you know, like,  
6 people will also be on alert and a -- for the second day  
7 witness to come on stand even though it's day one. If  
8 we were finishing really early ahead of schedule, I  
9 would like the second day morning witnesses to be, you  
10 know, prepared to -- to appear on the end of the first  
11 day, and -- and -- and the same goes for the second day.  
12 For third day witnesses, if we -- to appear on stand on  
13 the second day if we end earlier.

14 So, now, I want to talk about exhibits. So,  
15 before we do our first prompt, how I do things is I plan  
16 to mark and identify all the exhibits that were on the  
17 draft exhibit list that was circulated. In my  
18 experience, this may take up to an hour, and then, at  
19 the end of hearing -- so, Thursday afternoon, I set  
20 aside 30 minutes -- around 30 minutes at the end of  
21 hearing on Thursday to take motions for entering  
22 exhibits into evidence.

23 I see that from the exhibit list, none of the  
24 exhibits were stipulated for entering into evidence as  
25 of now, but between now and Thursday afternoon, at the

1 end of hearing, I -- I -- I ask -- I ask PG&E to arrange  
2 a meet and confer with parties to try to stipulate as  
3 many exhibits to enter into evidence as possible and put  
4 together that list of stipulated exhibits. So -- and,  
5 of course, the list does not need to contain all the  
6 exhibits, but as many as -- as possible. Right now, I  
7 have none stipulated so, you know -- and I would like  
8 PG&E to provide me with that list of stipulate --  
9 stipulated exhibits around the Thursday afternoon break,  
10 so before -- ideally before the Thursday afternoon  
11 break, but if not, immediately afterwards.

12 I also ask that PG&E maintain a list of  
13 exhibits identified and entered into evidence for our  
14 proceedings. Our proceeding analyst, Etchissa Genesis  
15 will also be maintaining our own list, but it's good to  
16 have two different people -- or two different sets of  
17 people doing it, so we can cross check.

18 And one more thing regarding hard copies. I  
19 received a lot of mail, but I haven't had a chance to  
20 check my mail, but if you haven't done so, I request  
21 that parties mail me a hard -- one hard copy of each  
22 exhibit, which includes erratas or cross exhibits. I  
23 don't think I saw any cross exhibits, but I -- I want,  
24 at least, one hard copy of all exhibits, which includes  
25 erratas this were served. I saw them -- one served as

1 late as yesterday. Please mail me to my address. My  
2 address should be on the Commission website, and if  
3 there were any corrections that a witness needed to make  
4 on the stand, please also send me a hard copy of the  
5 revised version of the corrected exhibit. So, that's  
6 all for the hard copies.

7 Now, I -- in terms of confidential data, I  
8 don't believe based on the exhibit list that there were  
9 any exhibits requesting -- like, that would contain  
10 confidential information for which parties would request  
11 confidential treatment, so I don't believe there are any  
12 concerns regarding crossing confidential data.

13 I don't expect any motions for confidential  
14 treatment. I just want to double check if -- if that is  
15 not correct, this is the time to raise your virtual  
16 hand.

17 I give people 30 seconds to raise their virtual  
18 hands if necessary.

19 MS. HERBERT: Your Honor, this is Annalissa. I  
20 am not seeing any hands raised.

21 ALJ LAU: Thank you, Annalissa.

22 Mr. Sezgen for PG&E, can you turn your camera  
23 on? I just want the double check with you.

24 MR. SEZGEN: Yes, your Honor, we didn't receive  
25 any confidential exhibits.

1 ALJ LAU: Right. Okay. Thank you.

2 MR. SEZGEN: Thank you.

3 ALJ LAU: Next item I want to talk about:  
4 Common briefing outline.

5 So, in the next few days -- next two days, I  
6 ask that parties meet and confer to agree on a common  
7 briefing outline. So, on Thursday afternoon, I will ask  
8 PG&E to give an update on the progress of this common  
9 briefing outline. It can be -- it can be very rough  
10 but, of course, I prefer it to be as detailed as -- you  
11 know, as possible.

12 I mean, we kind of all -- all the parties  
13 submitted testimony in some sort of outline already,  
14 like, quest -- issue one, issue two, issue three, but if  
15 we can get more detailed that is my preference.

16 So, if -- Mr. Sezgen, if your team can help  
17 coordinate that, I would really much appreciate it.

18 MR. SEZGEN: I will. Thank you, your Honor.

19 ALJ LAU: Thank you.

20 So, as I said earlier before I went on the  
21 record, that to maintain order, I will set some  
22 preferences on the stage. I will ask that IT select the  
23 panelists that will be speaking and cross examining or  
24 sponsoring the witness to be pinned. So, pinned on the  
25 screen should be the witness, the direct coun -- the



1 counsel sponsoring the witness, the counsel -- the  
2 counsel that will be cross-examining the witness, the  
3 assigned ALJ, which is me, the hearing reporter -- well,  
4 the hearing reporter is on, but she doesn't need to be  
5 pinned. So, those are the people that should be pinned  
6 on the stage. That would just help me maintain and see,  
7 you know, people's interactions that will kind of mimic  
8 the hearing room, you know.

9           So, if you're not speaking, I ex -- I -- I wish  
10 that you will mute your computer or -- and also, I  
11 think -- I see that people are doing that already. If  
12 you're not speaking, turn off your camera and mute your  
13 computer.

14           Now, I am going to talk about attestations.  
15 So, I circulated a set of attestations for attorneys and  
16 witnesses, and I ask that the attorneys and witnesses  
17 read the full set of attestations prior to attending  
18 today's hearing. So, in a moment, I will be taking  
19 attendance for the record. When I take attendance for  
20 the record, I would like attorn -- the attorneys, when  
21 they state their appearances, to make their attestations  
22 at that time.

23           For witnesses, I will ask witnesses to make  
24 their attestations when they first appear for  
25 cross-examination. Is that clear?

1 I give 10 seconds for people to raise their  
2 virtual hands.

3 MS. HERBERT: Your Honor, Rachael Koss' hand is  
4 raised.

5 ALJ LAU: Ms. Koss?

6 MS. KOSS: Thank you, your Honor. Would you  
7 like us to read the attestation in full, or would you  
8 like us to just agree to the attestation --

9 ALJ LAU: So, how --

10 MS. KOSS: -- in one sentence?

11 ALJ LAU: How I normally conduct it is I ask  
12 the attorneys if they've, you know, read -- agree with  
13 the attestations that would be put forth on the screen,  
14 and what I -- what I put forth on the screen is a set of  
15 attestations that I circulated and were in the ruling,  
16 so.

17 MS. KOSS: Thank you.

18 ALJ LAU: Thank you. So, yeah -- so, at this  
19 time, before we, you know, begin the exciting process of  
20 marking exhibits, you know, is there any questions or  
21 concerns?

22 Please raise your virtual hand if you do.

23 (No response.)

24 ALJ LAU: So, as I said before we went on  
25 record, if at any time during the hearing you have

1 questions or concerns, please raise your virtual hand.  
2 One of our proceeding analysts will be monitoring the  
3 list of panelists, and they will notify me.

4           You may also use the chat function to notify  
5 them, and they are Annalissa Herbert and Etchissa  
6 Genesis.

7           So, actually the first order of business is  
8 taking attendance. So, for our first -- now, we are in  
9 our first order of business, which is to take attendance  
10 for the record. Once I call on your party's name --  
11 actually, I will have IT actually to call on the  
12 parties' names, because there's so many parties.

13           I will ask IT to call on the party. When they  
14 call on your party, I want the counsel representing the  
15 party to introduce themselves, and when you introduce  
16 yourself, now is an opportunity for you to specify your  
17 preferred pronouns. Of course, this is not a  
18 requirement, but just an opportunity for us to make our  
19 preferences known, then I will ask the -- the attorney  
20 whether they agree to the set of attestations posted on  
21 the screen.

22           Again, these are the same attestations -- same  
23 set of attestations provided in the ALJ ruling setting  
24 the rules for the hearing.

25           So, IT can you put the set of attorney

1 attestations on the screen?

2 Thank you. And would you mind being the one  
3 going through the panel -- the -- the attendance list  
4 today and will bring forth the first person that you  
5 will call -- bring them forth to the stage?

6 So, I am going to let you, if you don't mind,  
7 kind of do a roll call of the -- the people that are  
8 attending today.

9 MR. HAGA: Good morning, ALJ Lau, this is Joe  
10 Haga.

11 Should I prioritize today's witnesses and  
12 cross-examiners? I have the daily schedule.

13 ALJ LAU: Hold on, let's go off record.

14 (Off the record.) ]

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

16 Etchissa, can you call on the first party.

17 MS. GENESIS: I have Jeanne Armstrong.

18 (Reporter clarification.)

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

20 (Off the record.)

21 ALJ LAU: Let's go back on record.

22 We have Ms. Jeanne Armstrong on the stage.

23 Ms. Armstrong, can you introduce yourself, your  
24 party and spell your last name.

25 MS. ARMSTRONG: Yeah. It's Jeanne Armstrong,

1 A-r-m-s-t-r-o-n-g, and I am representing the Solar  
2 Energy Industries Association.

3 ALJ LAU: Can you see the set of attestations  
4 on the screen, which is the same attestations that were  
5 circulated?

6 MS. ARMSTRONG: Yes, I can.

7 ALJ LAU: Do you agree to the set of the  
8 attestations set forth on the screen?

9 MS. ARMSTRONG: Yes, I do.

10 ALJ LAU: Okay. Thank you. You may mute your  
11 camera -- mute yourself, turn off your camera.

12 Next we have Jonathan Newlander. From, I  
13 believe, SDG&E.

14 MR. NEWLANDER: Good morning, your Honor.  
15 Jonathan Newlander on behalf of San Diego Gas & Electric  
16 Company. I spell my last name N-e-w-l-a-n-d-e-r.

17 ALJ LAU: Do you see the set of attestations  
18 set forth on the screen?

19 MR. NEWLANDER: (Line muted.)

20 ALJ LAU: Mr. Newlander, I think you muted  
21 yourself.

22 MR. NEWLANDER: Apologies, your Honor. Yes, I  
23 see the attestation, and I agree to it.

24 ALJ LAU: Thank you. You may mute yourself.

25 Next I have Mr. Roger Lin.

1 MR. LIN: Good morning, your Honor. Roger  
2 Lin -- R-o-g-e-r L-i-n. My pronouns are "he," "him" --  
3 with the Center for Biological Diversity.

4 ALJ LAU: Do you see the set of attestations on  
5 the screen?

6 MR. LIN: Yes.

7 ALJ LAU: Do you agree to them?

8 MR. LIN: Yes.

9 ALJ LAU: Thank you. You may mute yourself.

10 And next I have Mr. Gautam Dutta. I may have  
11 pronounced your name wrong. Please correct me.

12 MR. DUTTA: Good morning, your Honor. Yes,  
13 this is Gautam Dutta appearing on behalf of Cal  
14 Advocates, and I agree to the attestations.

15 ALJ LAU: All right. Thank you. Thank you,  
16 Mr. Dutta.

17 MR. DUTTA: Thank you, your Honor.

18 ALJ LAU: Next we have Eric Sezgen.

19 MR. SEZGEN: Good morning, your Honor. Eric  
20 Sezgen for Pacific Gas and Electric Company -- last name  
21 is S-e-z-g-e-n -- and I agree to the attestations.

22 ALJ LAU: Thank you, Mr. Sezgen.

23 MR. SEZGEN: Thank you.

24 ALJ LAU: Next we have -- next we have Mr. Paul  
25 Sung.

1 MR. SUNG: Good morning, your Honor. Counsel  
2 for Southern California Edison Company, Paul Sung. My  
3 last name is spelled S-u-n-g. And I agree to the  
4 attorney attestations.

5 ALJ LAU: Thank you, Mr. Sung.

6 Next we have Ms. Andrea White.

7 MS. WHITE: Good morning, your Honor. Andrea  
8 White from the Protect Our Communities Foundation. And  
9 my last name is spelled W-h-i-t-e, and my pronouns are  
10 "she," "her" and -- yes.

11 ALJ LAU: Do you see the set of attestations  
12 set forth on the screen?

13 MS. WHITE: I do.

14 ALJ LAU: Do you agree to them?

15 MS. WHITE: I do.

16 ALJ LAU: Thank you.

17 Next we have Ms. Rachael Koss.

18 MS. KOSS: Good morning, your Honor. This is  
19 Rachael Koss, K-o-s-s, on behalf of the Coalition of  
20 California Utility Employees. I see the attestations,  
21 and I agree to them.

22 ALJ LAU: Thank you, Ms. Koss.

23 Next we have Nora Sheriff.

24 MR. HAGA: Your Honor, this is Joe. I haven't  
25 seen -- Joe Haga. I haven't seen Nora Sheriff in the

1 proceeding.

2 ALJ LAU: Okay. Thank you.

3 Next we have Edward Hsu.

4 MR. HSU: Good morning, your Honor. Edward  
5 Hsu, H-s-u, for Southern California Gas Company. And  
6 I've reviewed the attorney attestations that are shown,  
7 and I agree to them.

8 ALJ LAU: Thank you, Mr. Hsu.

9 Next we have David Cheng.

10 MR. CHENG: Thank you, your Honor. This is  
11 David Cheng representing TURN. Last name is spelled  
12 C-h-e-n-g. And I agree to the attorney attestation.  
13 Thank you.

14 ALJ LAU: Thank you.

15 And last on my list is David Pettit.

16 MR. PETTIT: Thank you. Good morning, your  
17 Honor. This is David Pettit. I spell my last name P,  
18 as in Paul, e-t-t-i-t. I'm representing the Natural  
19 Resources Defense Counsel. I've read the attestations,  
20 and I agree to them.

21 ALJ LAU: Thank you, Counsel.

22 Annalissa.

23 MS. HERBERT: Yes, your Honor. We do have two  
24 additional names: Mr. Daniel Douglass and Ms. Jennifer  
25 Weberski. And I apologize if I mispronounced your name.



1 ALJ LAU: Can we have Daniel Douglass on the  
2 screen first.

3 MR. DOUGLASS: Good morning, your Honor. This  
4 is Daniel Douglass, counsel for Google Inc. My last  
5 name is spelled D-o-u-g-l-a-s-s. I have reviewed and  
6 agree to the attorney attestations.

7 ALJ LAU: Thank you, Counsel.

8 And we have one last one. Annalissa, can you  
9 call her on the stage.

10 MS. HERBERT: Yes, your -- yes, your Honor.  
11 Jennifer Weberski.

12 MS. WEBERSKI: Thank you, your Honor. Jennifer  
13 Weberski -- my last name is spelled W-e-b-e-r-s-k-i --  
14 on behalf of Small Business Utility Advocates. I have  
15 read and agree to the attorney attestation.

16 ALJ LAU: Thank you, Counsel. You may mute  
17 your screen.

18 So before I go on, I'll give -- Annalissa, do  
19 you still have your hand raised or --

20 MS. HERBERT: My apologies. I put it down.

21 ALJ LAU: Okay. But I will still give someone  
22 10 seconds to raise your hands if we missed them. Now  
23 is an opportunity to raise your virtual hand if I missed  
24 you.

25 MS. HERBERT: I do have one hand raised, Mr. --

1 ALJ LAU: Okay. Can you -- IT, can you put  
2 them on the screen.

3 Counsel, you are on screen. Can you please  
4 introduce yourself.

5 MR. HAFEZ: Yes, your Honor. Earlier you  
6 called Nora Sheriff. I will be attending in  
7 Ms. Sheriff's place. My name is Samir Hafez -- last  
8 name is spelled H-a-f, like Frank, e-z -- on behalf of  
9 CLECA. I read and agree to the attorney attestation.

10 ALJ LAU: Thank you, Counsel. So are there any  
11 other person that I haven't -- that hasn't made their  
12 appearance? I give you another five seconds to raise  
13 your virtual hand.

14 (No response.)

15 ALJ LAU: So hearing none, now we will move on  
16 to the next order of business which is marking and  
17 identifying exhibits. I will now begin marking and  
18 identifying exhibits that were in the exhibit list that  
19 PG&E circulated. I will make slight modifications to  
20 some of the names of the exhibit to improve clarity. So  
21 the PG&E team may have to listen carefully as we are  
22 asking that you help maintain our exhibit list.

23 So now we will begin marking and identifying  
24 exhibit. We will first mark and identify CLE-01, which  
25 is titled Direct Testimony on Behalf of CLECA.

1 (Exhibit No. CLE-01 was marked for  
2 identification.)

3 ALJ LAU: Next be exhibit is CLE-02, which is  
4 titled Rebuttal Testimony on Behalf of CLECA.

5 (Exhibit No. CLE-02 was marked for  
6 identification.)

7 ALJ LAU: Next exhibit is CBD-01, which is  
8 titled Prepared Direct Testimony of Roger Lin on Behalf  
9 of the Center for Biological Diversity. Excuse me.

10 (Exhibit No. CBD-01 was marked for  
11 identification.)

12 ALJ LAU: Next exhibit is CLC-01, which is  
13 Titled Direct Testimony of Clean Coalition.

14 (Exhibit No. CLC-01 was marked for  
15 identification.)

16 ALJ LAU: Next Exhibit is titled CLC-02, which  
17 is titled Rebuttal Testimony of Clean Coalition.

18 (Exhibit No. CLC-02 was marked for  
19 identification.)

20 ALJ LAU: Next Exhibit is titled CUE-01, which  
21 is titled Opening Testimony of CUE.

22 (Exhibit No. CUE-01 was marked for  
23 identification.)

24 ALJ LAU: Next exhibit is identified as CUE-02,  
25 which is titled Rebuttal Testimony of CUE.

1 (Exhibit No. CUE-02 was marked for  
2 identification.)

3 ALJ LAU: Next exhibit is GGL-01, which is  
4 titled 2024 Avoided Cost Calculator Prepared Testimony  
5 of Aaron Berndt.

6 (Exhibit No. GGL-01 was marked for  
7 identification.)

8 ALJ LAU: Next exhibit is titled IOU-01, which  
9 is titled Opening Testimony of the Joint Investor-Owned  
10 Utilities.

11 (Exhibit No. IOU-01 was marked for  
12 identification.)

13 ALJ LAU: Next exhibit is IOU-02, which is  
14 titled Rebuttal Testimony of the Joint Investor-Owned  
15 Utilities.

16 (Exhibit No. IOU-02 was marked for  
17 identification.)

18 ALJ LAU: Next exhibit is IOU-03, which is  
19 titled Errata to Rebuttal Testimony of the Joint  
20 Investor-Owned Utilities.

21 (Exhibit No. IOU-03 was marked for  
22 identification.)

23 ALJ LAU: Next Exhibit is NRDC-01, which is the  
24 opening testimony sponsored by NRDC.

25 ///

1 (Exhibit No. NRDC-01 was marked for  
2 identification.) ]

3 ALJ LAU: The next exhibit is NRDC-2, which is  
4 the rebuttal testimony sponsored by NRDC.

5 (Exhibit NRDC-02 was marked for  
6 identification.)

7 ALJ LAU: Next exhibit is PCF-1 which is titled  
8 "Direct testimony of Bill Powers, P.E., on Behalf of  
9 Protect Our Communities Foundation."

10 (Exhibit PCF-01 was marked for  
11 identification.)

12 ALJ LAU: Next exhibit is PCF-2 which is titled  
13 "Rebuttal Testimony of Bill Powers, P.E., on Behalf of  
14 the Protect Our Communities Foundation."

15 (Exhibit PCF-02 was marked for  
16 identification.)

17 ALJ LAU: Next exhibit is PCF-3 which is titled  
18 "Excerpts of CPUC: Utility Costs and Affordability of  
19 the Grid of the Future."

20 (Exhibit PCF-03 was marked for  
21 identification.)

22 ALJ LAU: Next Exhibit PCF-4 which is titled  
23 "CPUC, 2022 Distributed Energy Resources Avoided Cost  
24 Calculator Documentation for the --" we'll just leave it  
25 at that.

1           So it is titled -- again for the record, PCF-4  
2 is titled "CPUC, 2022 Distributed Energy Resources  
3 Avoided Cost Calculator Documentation."

4           (Exhibit PCF-04 was marked for  
5 identification.)

6           ALJ LAU: Next we have PCF-5, which is titled  
7 "CPUC, 2022 Distributed Energy Resources Avoided Cost  
8 Calculator Documentation."

9           (Exhibit PCF-05 was marked for  
10 identification.)

11           ALJ LAU: Next exhibit is PCF-6, which is  
12 titled "CPUC, Overview of the DER Cost-Effectiveness  
13 Process."

14           (Exhibit PCF-06 was marked for  
15 identification.)

16           ALJ LAU: Next exhibit is PCF-7 which is titled  
17 "IPCC, 2021: Climate Change 2021: The Physical Science  
18 Basis. Contribution of Working Group 1 to the Sixth  
19 Assessment Report of the Intergovernmental Panel on  
20 Climate Change."

21           (Exhibit PCF-07 was marked for  
22 identification.)

23           ALJ LAU: Next exhibit is PCF-8, which is  
24 titled "CAISO, 2015 to 2016 Transmission Plan: Board  
25 Approved dated March 28th, 2016."

1 (Exhibit PCF-08 was marked for  
2 identification.)

3 ALJ LAU: Next Exhibit PCF-9, which is titled  
4 "CAISO 2017 to 2018 Transmission Plan: Board Approved  
5 dated March 22, 2018."

6 (Exhibit PCF-09 was marked for  
7 identification.)

8 ALJ LAU: Next Exhibit PCF-10 titled  
9 "Reporter's Transcript Volume 5, 875, to Volume 9,  
10 1630."

11 (Exhibit PCF-10 was marked for  
12 identification.)

13 ALJ LAU: Next Exhibit PCF-11 is "CPUC  
14 California Standard Practice Manual: Economic Analysis  
15 of Demand-Side Programs and Projects dated October  
16 2001."

17 (Exhibit PCF-11 was marked for  
18 identification.)

19 ALJ LAU: Next exhibit is PCF-12 which is  
20 titled "CAISO, C-A-I-S-O, California ISO Peak Load  
21 History 1998 through 2022, 2023."

22 (Exhibit PCF-12 was marked for  
23 identification.)

24 ALJ LAU: Next Exhibit PCF-13 titled "Excerpts  
25 of Executive Order B-55-18 to Achieve Carbon

1     Neutrality."

2                     (Exhibit PCF-13 was marked for  
3                     identification.)

4                     ALJ LAU: Next Exhibit PCF-14 which is titled  
5     "Colton Poore, Switching to Hydrogen Fuel Could Prolong  
6     the Methane Problem; Risk of the Hydrogen Economy for  
7     Atmospheric Methane."

8                     (Exhibit PCF-14 was marked for  
9                     identification.)

10                    ALJ LAU: Next exhibit is CA-1, which is titled  
11     "Opening testimony" of the Public Advocates Office.

12                    (Exhibit CA-01 was marked for  
13                    identification.)

14                    ALJ LAU: Next exhibit is CA-01E which is  
15     titled "Errata to Opening Testimony of the Public  
16     Advocates Office."

17                    (Exhibit CA-01E was marked for  
18                    identification.)

19                    ALJ LAU: Next exhibit is CA-2 which is titled  
20     "Supporting Attachments to the Opening Testimony of the  
21     Public Advocates Office."

22                    (Exhibit CA-02 was marked for  
23                    identification.)

24                    ALJ LAU: Next exhibit is CA-3, which is titled  
25     "Rebuttal testimony of the Public Advocates Office."



1 (Exhibit CA-03 was marked for  
2 identification.)

3 ALJ LAU: Next exhibit is SBUA-1, which is  
4 titled "Direct Testimony of Ted Edward on behalf of  
5 Small Business Utility Advocates."

6 (Exhibit SBUA-01 was marked for  
7 identification.)

8 ALJ LAU: Next exhibit is SBUA-2, which is  
9 titled "Rebuttal Testimony of Ted Edward on behalf of  
10 Small Business Utility Advocates."

11 (Exhibit SBUA-02 was marked for  
12 identification.)

13 ALJ LAU: Next exhibit is SEI -- SEIA-1, which  
14 is the Prepared Direct Testimony on behalf of SEIA.

15 (Exhibit SEIA-01 was marked for  
16 identification.)

17 ALJ LAU: Next exhibit is SEIA-2, which is  
18 titled "The Prepared Rebuttal Testimony on Behalf of  
19 SEIA."

20 (Exhibit SEIA-02 was marked for  
21 identification.)

22 ALJ LAU: Next exhibit is SEIA-3, which is  
23 titled "Cross-Exhibit CAISO 2022 to 2023 Transition  
24 Plan -- Executive Summary."

25 ///

1 (Exhibit SEIA-03 was marked for  
2 identification.)

3 ALJ LAU: Next exhibit SEIA-4, which is titled  
4 "Cross-Exhibit CAISO 2017 to 2018 Transmission Plan  
5 Executive Summary."

6 (Exhibit SEIA-04 was marked for  
7 identification.)

8 ALJ LAU: Next exhibit is SEIA-5 titled  
9 "Cross-Exhibit California Solar and Storage Association  
10 Impact of NEM-3 on California's Renewable Energy  
11 Progress and Solar Jobs dated November 2023."

12 (Exhibit SEIA-05 was marked for  
13 identification.)

14 ALJ LAU: Next exhibit is SoCalGas-1, which is  
15 titled "Prepared Direct Testimony of Rosalinda Magana  
16 and Anders Danryd on behalf of Southern California Gas  
17 Company on issues related to the 2024 Avoided Cost  
18 Calculator."

19 (Exhibit SoCalGas-01 was marked for  
20 identification.)

21 ALJ LAU: Next exhibit is SoCalGas-2 which is  
22 the "Prepared Rebuttal Testimony of Rosalinda Magana and  
23 Anders Danryd on behalf of Southern California Gas  
24 Company on Issues Related to the 2024 Avoided Cost  
25 Calculator."

1 (Exhibit SoCalGas-02 was marked for  
2 identification.)

3 ALJ LAU: Next exhibit is TURN-1, which is  
4 titled "Prepared Testimony of Jaime McGovern."

5 (Exhibit TURN-01 was marked for  
6 identification.)

7 ALJ LAU: The last exhibit is identified as  
8 TURN-2, which is titled "Rebuttal Testimony of Jaime  
9 McGovern."

10 (Exhibit TURN-02 was marked for  
11 identification.)

12 ALJ LAU: So these are the exhibits I have so  
13 far. I do see a hand raised by SBUA, counsel for SBUA.

14 Can we -- or, IT, can you put her on the  
15 screen.

16 MS. WEBERSKI: Yes, your Honor. Jennifer  
17 Weberski on behalf of SBUA.

18 I just want to make sure that the record  
19 reflects -- you said direct testimony, rebuttal  
20 testimony on behalf of, and you said "Ted Edward." And  
21 I want to make sure that the record accurately reflects  
22 Ted Howard. So I just want to make sure that was on the  
23 record correctly. That was it.

24 ALJ LAU: That's good. Thank you, Counsel.

25 For the record, let me correct the exhibits

1 SBUA-1 and SBUA-2. SBUA-1 is titled -- should be titled  
2 "Direct testimony of Ted Howard on behalf of Small  
3 Business Utility Advocates."

4 The next exhibit that I want to correct is  
5 SBUA-2, which should be titled "Rebuttal testimony of  
6 Ted Howard on behalf of Small Business Utility  
7 Advocates."

8 Before I move on, I will let people have a  
9 minute to raise your virtual hand if you have any  
10 questions or concerns.

11 MS. HERBERT: Your Honor, Mr. Dutta also has  
12 his hand raised.

13 ALJ LAU: Okay. Can we pin Mr. Dutta on stage.

14 Mr. Dutta, can you introduce yourself and let  
15 us know what are your concerns.

16 MR. DUTTA: Yes, your Honor. Thank you. And  
17 thank you for -- for recognizing me.

18 I'm Gautam Dutta, last name D-u-t-t-a,  
19 appearing on behalf of Cal Advocates. And I just have a  
20 question regarding one topic your Honor mentioned which  
21 is that your Honor mentioned how you wanted the  
22 (indecipherable) to see if they could stipulate to  
23 exhibits. But in the event that, you know, there's a  
24 disagreement about admissibility, if there's objections  
25 that remain, how does your Honor want to handle it? Do

1 you want to handle it at the time the exhibit is, say,  
2 used and if it actually comes up in cross-examination or  
3 do you want to -- you know, or would your Honor want to  
4 address it on Thursday?

5 ALJ LAU: So I take all motions before entering  
6 exhibits on Thursday. I believe that gives an  
7 opportunity for parties to talk more further as to  
8 stipulation. So we will just allow parties to  
9 cross-examine whether it's currently just submitted as  
10 prepared testimony and identified as an exhibit. But to  
11 enter into evidence, we will discuss that when that  
12 motion for entering into evidence is raised on Thursday  
13 afternoon.

14 My hope and desire, not just from Mr. Gautam  
15 but all the parties attending today's hearing, is that  
16 my hope and desire is that on Thursday afternoon PG&E  
17 can come and make a motion on behalf of several parties  
18 as much as possible. I know it will not be all parties,  
19 but we'll make a motion on behalf of some parties  
20 entering stipulated exhibits into evidence. So that is  
21 my hope and desire. And that for the few -- hopefully  
22 few that parties remaining, then we will address those  
23 motions and hear arguments for or against entering that  
24 exhibit into evidence at that time.

25 I typically spend only thirty minutes

1 addressing that because I usually have successful, you  
2 know, parties coming and stipulating a good chunk of  
3 exhibits into evidence. So I'm hoping and desiring that  
4 that will be the same result.

5 MR. DUTTA: Your Honor, just as a quick  
6 follow-up, let's suppose that there are cross-exhibits  
7 as to which we object. Obviously, you know, as your  
8 Honor mentioned, you know, your Honor would only address  
9 that on Thursday. But if it's used in  
10 cross-examination, what's the best means of addressing  
11 it? Because, you know, we would have issues -- you  
12 know, hypothetically, you know, we could have issues or  
13 any other party for that matter could have issues with,  
14 you know, questioning based on an exhibit that to a  
15 party may be problematic.

16 ALJ LAU: That is a good hypothetical issue  
17 that I haven't thought about. If we come to that  
18 exhibit, let's take motions then and address it and then  
19 we'll see -- proceed on whether how cross should be done  
20 at that point.

21 MR. DUTTA: Thank you, your Honor.

22 ALJ LAU: Thank you, Counsel.

23 Any more questions or concerns? I'll let  
24 parties have a minute to raise their virtual hands. I  
25 will note that I'm early on the schedule. It's only

1 10:45.

2 MS. HERBERT: Your Honor, we have another hand  
3 up from Ms. White.

4 ALJ LAU: Ms. White. Can we pin her to the  
5 stage.

6 Ms. White, can you introduce yourself, please.

7 MS. WHITE: Thank you, your Honor. I'm Andrea  
8 White from PCF. And I just wanted to clarify for the  
9 record that Exhibit PCF-04 is version 1B of the 2022  
10 Avoided Cost Calculator documentation and PCF Exhibit 05  
11 is version 1A of the 2022 avoided cost calculator  
12 documentation.

13 ALJ LAU: Thank you.

14 Can we go off the record. Let's go off the  
15 record.

16 (Off the record.) ]

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

18 When we were off the record, we discussed some  
19 corrections to the exhibit list. I want to correct, on  
20 the record, two exhibits. The first exhibit is PCF --  
21 PCF-04, which should be titled: CPUC, 2022 Distributed  
22 Energy Resources Avoided Cost Calculator Documentation,  
23 Version 1B.

24 Next exhibit is -- to be corrected is PCF-05,  
25 which should be titled: CPUC, 2022 Distributed Energy

1 Resources Avoided Cost Calculator Documentation, Version  
2 1A.

3 If, counsel, you have any concerns or  
4 questions, please raise your virtual hand. I will also  
5 wait another minute to make sure that we have concerns  
6 addressed before we move onto the next order of  
7 business.

8 (No response.)

9 ALJ LAU: All right. Hearing none, let's call  
10 our first witness on the stage.

11 Let's elevate Mr. Robert Earle, and  
12 representing Robert Earle is counsel Rachael Koss; and  
13 the first counsel that is scheduled to cross-examine  
14 Mr. Earle is counsel Andrea White. Can we also bring  
15 her on stage?

16 Can we also bring forth the set of witness  
17 attestations on stage? Okay. Thank you.

18 Good morning, Mr. Earle.

19 THE WITNESS: Good morning, Judge.

20 ALJ LAU: Can you introduce yourself by also  
21 pronouncing your last name, and the party you are  
22 representing at this moment? You can also specify your  
23 preferred pronouns if you so choose, but this is not  
24 required.

25 THE WITNESS: My name is Robert Earle,



1 E-a-r-l-e. I have testified on behalf of the Coalition  
2 of California Utility Employees.

3 ROBERT EARLE,  
4 called as a witness by Coalition of  
5 California Utility Employees, having been  
6 sworn, testified as follows:

7 ALJ LAU: Mr. Earle, do you see the set of  
8 witness attestations set forth on the screen, which is  
9 the same that were circulated and in the ALJ ruling?

10 THE WITNESS: I do, your Honor, and --

11 ALJ LAU: And do you --

12 THE WITNESS: -- I agree to them.

13 ALJ LAU: Okay. Thank you.

14 So, Counsel Koss, you may begin your direct  
15 examination of your witness.

16 DIRECT EXAMINATION

17 BY MS. KOSS:

18 Q Thank you, your Honor.

19 Dr. Earle, are you sponsoring what has been  
20 marked as Exhibit CUE-01, which is your testimony on  
21 behalf of the Coalition of California Utility Employees;  
22 and what has been marked as Exhibit CUE-02, which is  
23 errata to your rebuttal testimony on behalf of the  
24 Coalition of California Utility Employees?

25 A I am.

1 ALJ LAU: And to clarify, CUE -- CUE is  
2 abbreviated for CUE-1 and CUE-2.

3 Thank you. Counsel, you may continue.

4 BY MS. KOSS:

5 Q And were exhibits CUE-01 and CUE-02 prepared by  
6 you?

7 A Yes, they were.

8 Q And are they true and correct to the best of  
9 your knowledge?

10 A Yes, they are.

11 Q And do they reflect your best professional  
12 judgment?

13 A Yes, they do.

14 Q Do you have any corrections to make to these  
15 documents?

16 A I do not.

17 MS. KOSS: Okay. Thank you. Dr. Earle is  
18 available for cross-examination.

19 ALJ LAU: Thank you. We have counsel Andrea  
20 White. Can you please introduce yourself before you  
21 begin cross-examination of Dr. Earle?

22 MS. WHITE: Hello, your Honor. I am Andrea  
23 White from the Protect our Communities Foundation.

24 Good morning, Dr. Earle and ALJ Lau and  
25 Ms. Koss.

1 THE WITNESS: Good morning.

2 CROSS-EXAMINATION

3 BY MS. WHITE:

4 Q Okay. So, I guess I will begin with my first  
5 question.

6 So, Dr. Earle, do you have or do you provide  
7 any testimony that is inconsistent with the IOU  
8 testimony?

9 MS. KOSS: Your Honor, I object as quite broad.

10 Could you ask questions that are based on  
11 specific parts of Dr. Earle's testimony?

12 ALJ LAU: Counsel White, maybe -- what I would  
13 suggest is if you can point to specific references to  
14 his testimony and set a foundation on how -- whether --  
15 how it relates to other party's testimony.

16 MS. WHITE: Okay. Yes, your Honor.

17 Q So, my first example, I will turn to your  
18 rebuttal testimony, the errata, on page 2, line 16  
19 through 17.

20 Do you see that?

21 A 2 through 17?

22 Q Yes. On your rebuttal testimony.

23 ALJ LAU: Wait. Counsel, I believe there isn't  
24 an errata on that. I believe there's only a rebuttal  
25 testimony; is that correct?

1 MS. KOSS: Your Honor, this is Rachael Koss for  
2 CUE. We served an errata last week, which fully  
3 replaces the original rebuttal and the link that is  
4 included in the updated exhibit list is to the errata.

5 ALJ LAU: Okay. Then, before we begin --  
6 continue on the cross, let me correct on the record that  
7 CUE-02 should be titled CUE-02-E, and that should be  
8 titled: Errata Rebuttal Testimony of CUE.

9 (Exhibit CUE-02-E was marked for  
10 identification.)

11 ALJ LAU: Okay. So, I have marked and  
12 identified the errata to CUE-02.

13 All right. Thank you. You may continue,  
14 Ms. White.

15 MS. WHITE: Okay. Thank you, your Honor.

16 Q So, my question refers to page 2, line 16  
17 through 17, as I mentioned.

18 So, I want to ask Mr. -- or Dr. Earle, do you  
19 support the utilities proposal to exclude noncoincident  
20 demand-driven distribution costs from the ACC?

21 A So -- so, just to be clear, the whole sentence  
22 runs from line 15 to 18, and I -- I agree with their  
23 proposal.

24 Q You agree? Okay.

25 So, my next question refers to whether you

1 believe that the Commission should exclude nonenergy  
2 benefits and social costs --

3 (Audio failure.)

4 THE WITNESS: I'm sorry, you -- you broke up,  
5 so I didn't hear the whole question.

6 BY MS. WHITE:

7 Q Oh, okay. I will repeat it. Apologies.

8 So, Dr. Earle, do you agree with the utilities  
9 that the Commission should exclude nonenergy benefits  
10 and social costs for --

11 (Audio failure.)

12 ALJ LAU: Counsel, I think you should repeat  
13 the question, because I -- I didn't hear it clearly.

14 For the benefit of a clear transcript for our hearing  
15 reporters, can you repeat the question one more time?

16 Thank you.

17 MS. WHITE: Yes, I am not sure with my audio.  
18 I'm sorry.

19 Q So, my question is whether Dr. Earle agrees  
20 with the utilities that the Commission should exclude  
21 nonenergy --

22 (Audio failure.)

23 THE WITNESS: I apologize again. The last part  
24 of your -- your question was subject to a good bit of  
25 distortion.

1 (Reporter clarification.)

2 MS. WHITE: Okay. I have switched to not using  
3 my headphones, so does that improve the audio, your  
4 Honor?

5 ALJ LAU: Yes, it does.

6 Let's go off the record first.

7 (Off the record.)

8 ALJ LAU: Let's go on the record.

9 Ms. White, can you repeat your question?

10 MS. WHITE: Yes, of course.

11 Q So, Dr. Earle, do you agree with the utilities  
12 that the Commission should exclude nonenergy benefits  
13 and social costs from the ACC?

14 A Yes, I do.

15 Q Okay. And do you support the utilities  
16 proposed methane leakage adders, or their suggestions  
17 related to the methane leakage adders?

18 A Yes, I do.

19 Q And do you support the utilities arguments  
20 regarding modifications to the biennial update process?

21 MS. KOSS: Your Honor --

22 THE WITNESS: I --

23 (Crosstalk.)

24 MS. KOSS: Yeah, and I am sorry. I am going to  
25 object.

1           Can you be more specific, please, with what the  
2 utilities proposals are exactly?

3           MS. WHITE: Sure. Does your Honor think I  
4 should be more specific?

5           ALJ LAU: (Line muted.)

6           MS. WHITE: Your --

7           ALJ LAU: Now, I forgot to unmute myself,  
8 sorry.

9           Can you repeat your question, and then I heard  
10 Ms. Koss' objection, but can you repeat your question?

11          MS. WHITE: Yeah. So, I was asking Dr. Earle  
12 if he agrees with the utilities' arguments regarding  
13 modifications to the biennial update process, which he  
14 elaborates on on pages 12 through 14 of his rebuttal  
15 testimony.

16          ALJ LAU: I -- Ms. Koss, is that clear enough,  
17 or do you want her -- Ms. White to specify further what  
18 modifications she is referring to.

19          MS. KOSS: Yes, thank you. I reiterate my  
20 objection. I -- I don't know whether Dr. Earle has  
21 agreed with every single one of their proposals in his  
22 testimony, so if you can be specific about which ones  
23 you're talking about that would be helpful.

24          Thank you.

25          ALJ LAU: Yeah, Ms. White, do you mind kind of

1 summarize -- or, you know, highlighting the -- the  
2 modifications that you want Mr. Earle -- or Dr. Earle to  
3 discuss?

4 MS. WHITE: Well, I think Dr. Earle could  
5 elaborate on some of the modifications he thinks are  
6 appropriate to the biennial update process.

7 One of the things that he mentioned is that it  
8 does not allow for sufficient input from stakeholders  
9 and -- nor sufficient vetting on staff proposals.

10 MS. KOSS: So, your Honor, I am sorry.  
11 Objection. I -- I don't hear a question. What is the  
12 question?

13 MS. WHITE: So, my question is could Dr. Earle  
14 please state whether he believes that his suggestions  
15 regarding modification to the biennial update process  
16 are in alignment with the utilities' testimony?

17 MS. KOSS: Yeah. And, again, I am sorry, I  
18 have to object. Which proposals in the utilities'  
19 testimony are you referring to?

20 ALJ LAU: I -- let me rephrase -- try to  
21 rephrase Ms. White's question.

22 Ms. White is asking if Dr. Earle believes that  
23 modifications to the biennial update process related to,  
24 I am guessing, stakeholder input aligns with the joint  
25 utilities' proposal in regards to the biennial process?



1 MS. WHITE: Yes, that's correct, your Honor.  
2 Thank you.

3 MS. KOSS: So, it --

4 ALJ LAU: Let me just rephrase the question.

5 Dr. Earle, do you believe that the biennial  
6 update process should -- should obtain more stakeholder  
7 input?

8 THE WITNESS: Yes, I do.

9 ALJ LAU: Ms. White, can you further your line  
10 of questions?

11 MS. WHITE: I think I will just proceed to the  
12 next one if that's okay, your Honor?

13 ALJ LAU: Yeah.

14 BY MS. WHITE:

15 Q Okay. And then, so --

16 (Audio failure.)

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

18 (Off the record.)

19 ALJ LAU: Let's go on the record. We are  
20 having technical difficulties with counsel Andrea White  
21 from Protect our Communities Foundation.

22 So, now, as a result, we will ask Mr. Roger Lin  
23 from Center for Biological Diversity to first conduct  
24 his cross-examination of Dr. Earle.

25 Mr. Lin, can you introduce yourself and the

1 party you're sponsoring -- representing?

2 MR. LIN: Yes, your Honor. Roger Lin on behalf  
3 of the Center for Biological Diversity.

4 ALJ LAU: Thank you, Mr. Lin.

5 You may begin cross-examination of Dr. Earle.

6 CROSS-EXAMINATION

7 BY MR. LIN:

8 Q Good morning, Dr. Earle. Good morning,  
9 counsel.

10 Dr. Earle, your testimony cites to the Global  
11 Warming Solutions Act AB 32.

12 Does AB 32 consider disproportionate impacts of  
13 climate solutions? Said another way, does AB 32 guard  
14 against disproportionate impacts on disadvantaged  
15 communities?

16 A Could you take me to my testimony where that  
17 citation is, please?

18 Q Sure. I believe it's in your introduction.  
19 Why have an ACC, and you discuss in the first paragraph,  
20 we need an ACC as part of the framework to meet the  
21 climate target in the Global Warming Solutions Act AB  
22 32.

23 ALJ LAU: Is that --

24 THE WITNESS: Yes, I -- I see it.

25 ALJ LAU: Yeah, that is page 1 of your

1 testimony, line 5 -- excuse me -- 6 to 7 -- 6 to 8.

2 MS. KOSS: Mr. Lin, I am sorry, can you repeat  
3 your question?

4 BY MR. LIN:

5 Q Does AB 32, the Global Warming Solutions Act  
6 try to prevent the disproportionate impact of pollution  
7 on disadvantaged communities?

8 MS. KOSS: And I am going to object as that  
9 goes beyond the scope of what Dr. Earle has referenced  
10 in that law.

11 ALJ LAU: I agree.

12 MR. LIN: Your Honor, the -- whether the -- our  
13 climate targets or our climate policy require  
14 eliminating local pollution as part of our climate  
15 framework are wholly relevant to what goes in and what  
16 is not in the avoided cost calculator.

17 ALJ LAU: Okay, but I think your question is  
18 related to equity, right, or disadvantaged communities;  
19 and I don't see that -- I don't see Mr. Earle  
20 referencing that in that first paragraph. So, I --

21 MR. LIN: I have --

22 ALJ LAU: Go ahead.

23 BY MR. LIN:

24 Q Okay. Then referring to the rebuttal testimony  
25 on local air quality benefits. That is page 10 of the

1 rebuttal testimony, line -- beginning line 13.

2 A Yes.

3 Q Does local air pollution from fossil fuels or  
4 combustion like particulate matter disproportionately  
5 impact disadvantaged communities?

6 MS. KOSS: I am also going to object that that  
7 goes beyond the scope of Mr. Earle's testimony.

8 MR. LIN: This --

9 ALJ LAU: I agree. The objection is sustained.  
10 Mr. Earle is not referencing disadvantaged communities,  
11 at least in this paragraph of his testimony.

12 MR. LIN: Your Honor, bringing up local air  
13 quality without referencing disadvantaged communities  
14 flies against the intent of AB 32, which Health & Safety  
15 Code Section 38562(b)(2) specifically states that we  
16 have to ensure that any activities undertaken to comply  
17 with our climate targets do not disproportionately  
18 impact low-income communities.

19 ALJ LAU: I sustained -- I sustained the  
20 objection so, Mr. Lin, can you move onto your next  
21 question?

22 BY MR. LIN:

23 Q Dr. Earle, your testimony -- your opening  
24 testimony also cites to SB 100.

25 Are you familiar with the SB 100 joint agency

1 report that implements SB 100?

2 A I am trying to find the reference to SB 100 in  
3 the testimony just so I can get the context.

4 ALJ LAU: Mr. Lin, can you bring us to the  
5 reference in Mr. Earle's testimony?

6 MR. LIN: It is page 1, line 3 to 4:

7 California intends that 100 percent of  
8 retail sales of electricity to California  
9 end-use customers and 100 percent of  
10 electricity procured to service all state  
11 agencies be supplied to --

12 Basically, citing to SB 100.

13 MS. KOSS: And Dr. Earle is welcome to let you  
14 know whether he is familiar with the SB 100 report, but  
15 it's not referenced in this testimony, so if you're  
16 going to ask him questions about it, I am going object.

17 MR. LIN: Okay.

18 ALJ LAU: Can you restate your question again,  
19 Mr. Lin?

20 BY MR. LIN:

21 Q Dr. Earle, are you familiar with the SB 100  
22 joint agency report, even though it's not referenced in  
23 your testimony, but implements SB 100 that is referenced  
24 in your testimony?

25 ALJ LAU: I am going to overrule the objection,

1 because it's -- you know, it's -- Dr. Earle are you  
2 familiar with it, and your testimony does site to SB  
3 100?

4 THE WITNESS: And -- and I mean, I suppose it  
5 depends on what you mean by "familiar," but I have -- I  
6 have run across references to it. I may have read parts  
7 of it but, again, I don't -- I don't discuss it in my  
8 testimony.

9 BY MR. LIN:

10 Q Okay. Part of the report states that  
11 California still suffers some of the worst air quality  
12 in the nation resulting in more than 7,000 premature  
13 deaths and thousands of illnesses and emergency room  
14 visits each year.

15 Given that joint agency report finding, is  
16 there a societal benefit in avoiding local pollution in  
17 the state to prevent these premature deaths?

18 MS. KOSS: I am going to object. It's far  
19 beyond the scope of Dr. Earle's testimony.

20 ALJ LAU: I am going to sustain the objection.

21 BY MR. LIN:

22 Q Similar question, your Hon -- Dr. Earle. The  
23 joint agency report concludes that the -- given that a  
24 reliable supply of water will continue to be a key  
25 contributor to a reliable generation sector to meet SB

1 100, it will be imperative for water quality and water  
2 quantity impacts to be considered in planning and  
3 permitting processes.

4           Given this conclusion, is there a societal  
5 benefit to avoiding impacts to water quality and supply  
6 in the state?

7           MS. KOSS: Again, your Honor, I am going to  
8 object on the grounds that this is beyond the scope of  
9 Dr. Earle's testimony.

10           ALJ LAU: I -- sustained. Dr. Earle cannot  
11 speak on behalf of the joint agency report, so.

12           MR. LIN: Your Honor, I am just -- given that  
13 the avoided cost calculator is key to our planning  
14 processes, and the joint agency report finds that water  
15 quality and quantity have to be considered in planning  
16 processes, I think the question is relevant to this; and  
17 I am not asking for whether Dr. Earle is -- speak on  
18 behalf of the joint agencies, I am just asking  
19 Dr. Earle, in his expert opinion, whether given that  
20 planning purpose of the ACC, whether there's a parallel  
21 societal benefit to avoiding impacts to water quality  
22 and supply.

23           ALJ LAU: Dr. Earle -- I am going to let  
24 Dr. Earle answer to the best of his knowledge if this --  
25 you know, if -- you know, if this is beyond what you

1 testified for just say -- you may say so.

2 THE WITNESS: Okay. I -- may I please have the  
3 question again?

4 BY MR. LIN:

5 Q Given that the joint agency report concludes  
6 that we have to take into account water quality and  
7 quantity in planning processes, and the ACC is part of  
8 our planning processes, is it -- in your opinion, is  
9 there a societal benefit to avoiding impacts to water  
10 quality and supply from electricity generation in this  
11 state?

12 A So, it's a -- it's a -- it's a somewhat  
13 compound question, I think.

14 While I didn't talk about whether improving  
15 water quality is a potential society benefit, the issue,  
16 with respect to planning, is the ACC and the IRP are  
17 part of the planning process, but they're not the whole  
18 planning and permitting process; and the particular  
19 point of the ACC is that we figure out what are the most  
20 cost effective solutions on the DER side compared with  
21 the -- let's call it the supply side or the utility side  
22 of -- of -- of supply.

23 So, that's the whole -- that -- that that's --  
24 that's the purpose of -- of -- of the IRP in the ACC to  
25 determine what a least -- least cost solution is.



1           Whether water is a -- water quality is a social  
2 benefit or not is not -- not relevant and not part of  
3 the ACC/IRP process. While there --

4           Q     Okay.

5           A     -- may be a...

6           ALJ LAU: Counsel, let Dr. Earle finish if he  
7 wants to finish.

8           THE WITNESS: Thank you, your Honor.

9           So -- so, while water quality may be a social  
10 benefit that in particular DER proceedings or other  
11 proceedings the Commission wants to address or has  
12 addressed, it's -- it's place, given current regulation,  
13 is -- is not an appropriate benefit to count in the ACC.

14          ALJ LAU: All right --

15          MR. LIN: Okay. So --

16          ALJ LAU: -- Mr. Lin, go ahead.

17          MR. LIN: Okay.

18          Q     Thank you, Dr. Earle. And you're -- are you  
19 familiar with -- your testimony references, and you just  
20 reference the IRP, are you familiar with the recent  
21 proposed decision to adopt a preferred system plan? And  
22 the date of the proposed decision is January 10th of  
23 this year.

24          A     I -- I haven't reviewed that.

25          Q     On page 14 of that proposed decision in the

1    IRP, the proposed decision states that even if load  
2    serving entities, LSEs, do not specifically service  
3    disadvantaged communities as part of their customer  
4    base, almost all LSEs have impacts on disadvantaged  
5    communities, at least indirectly, as a result on their  
6    reliance on some system power or other power with local  
7    pollutants or GHG emissions, which can still impact  
8    disadvantaged communities; isn't that correct?            ]

9            MS. KOSS: Your Honor, I object. Dr. Earle  
10    just said he hasn't reviewed this proposed decision.

11    BY MR. LIN:

12            Q    And I'm just asking about this one portion from  
13    the proposed decision. There's no -- it's a simple  
14    proposition that load serving entities have impacts on  
15    disadvantaged communities, whether there are  
16    disadvantaged communities as part of their customer  
17    base. Do you agree with that, Dr. Earle?

18            MS. KOSS: And I'm going to object. This is  
19    beyond the scope of Dr. Earle's testimony.

20            ALJ LAU: I'm going to sustain the objection.  
21    And for the conducting of the hearing, I notice that,  
22    Mr. Lin, you referred to a lot documents that Mr. Earle  
23    referred to, for example, the decision -- IRP decision  
24    and SB 100. Just for the hearings and for the counsels  
25    attending this -- today's hearing and tomorrow and

1 Thursday's hearing, it would be helpful if you select,  
2 for example, the IRP decision -- select those  
3 references, put it as a cross-examination exhibit, serve  
4 it to the witness at least a day beforehand.

5 I believe my ruling actually was more like --  
6 it gave more advance notice but just because of how  
7 we're conducting the hearing.

8 I'm going to ask Mr. Lin if you can just  
9 review, you know, your line of questions again, and, if  
10 you're referencing to other materials, put it as a  
11 cross-examination exhibit and serve it to Ms. Koss and  
12 Dr. Earle at least 24 hours beforehand. And we can ask  
13 Mr. Earle to appear on the witness stand when you're,  
14 you know, maybe on the third day. Hopefully not the  
15 third day. Maybe tomorrow. Because the third day we're  
16 full.

17 So that's what I'm going to ask is that you  
18 have -- provide a reference for Mr. Earle to review.

19 MR. LIN: Your Honor, the portions of the IRP  
20 proposed decision I'm talking about implement  
21 requirements of the IRP. Dr. Earle's testimony states  
22 that he's familiar with the IRP. And one of his key  
23 propositions is that the avoided cost calculator must  
24 align with the IRP.

25 So if we are talking about IRP requirements, it

1 should well be -- be well within Mr. -- Dr. Earle's  
2 breadth of knowledge related to his testimony.

3 ALJ LAU: I -- and I've my said piece that --  
4 you know, I -- you need to provide a cross-examination  
5 exhibit with those references for him to review 24 hours  
6 beforehand.

7 MR. LIN: Okay. Ms. Koss, was -- would Dr. --  
8 would you and Dr. Earle be available tomorrow if I were  
9 to send this proposed decision?

10 MS. KOSS: I do -- yeah, I do apologize. This  
11 is the only day Dr. Earle is available.

12 ALJ LAU: Okay. So what I'm going to do is --  
13 let's go off the record.

14 (Off the record.)

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

16 Mr. Lin, I forgot if you had -- were asking a  
17 question or whatnot. If there was a question that you  
18 asked, you may proceed.

19 MR. LIN: I will do my best to reframe these  
20 questions so that knowledge of the proposed decision  
21 that I was referencing is not required, but I'll do my  
22 best.

23 ALJ LAU: Right. Yeah. Please keep it as  
24 general as possible.

25 ///

1 BY MR. LIN:

2 Q So Dr. Earle, part 4, beginning at page 6 of  
3 your testimony, line 19, states that equity issues  
4 should not be a part of the DER cost-effectiveness  
5 evaluation; is that correct?

6 A Yes.

7 Q And your rebuttal and your opening testimony  
8 generally seeks to get alignment between the IRP and the  
9 ACC; is that correct?

10 A Correct.

11 Q In the IRP, based on your knowledge, your  
12 expert knowledge of the IRP, do load serving entities  
13 have to report local air pollutants, for example, NOx,  
14 sulfur dioxide, particulate matter 2.5?

15 A You know, I'm not sure about that.

16 Q Okay. Do reporting activities from load  
17 serving entities have to be targeted at minimizing  
18 criteria air pollutants in disadvantaged communities?

19 A I'm sorry. Can you repeat that, please.

20 Q Do load serving entities in the IRP have to  
21 report activities targeted at minimizing local pollution  
22 such as criteria and toxic air pollutants in  
23 disadvantaged communities?

24 A I'm not sure. But, again, if there -- if --  
25 it's not part of the cost minimization of the IRP as far

1 as I'm aware.

2 Q Okay. Your Honor, we'll provide more briefing,  
3 but these reporting activities are required. And I  
4 think, again, it goes to the weight of Dr. Earle's  
5 testimony. But the IRP overall does process -- does try  
6 to minimize local air pollution in disadvantaged  
7 communities. So I'd like to just make that clear for  
8 the record.

9 ALJ LAU: You can make that in the briefing.

10 MR. LIN: Will do.

11 Q Dr. Earle, in your expert opinion on the IRP,  
12 does the IRP have a priority mapping screening tool to  
13 avoid the pollution from biomass and biogas resources in  
14 disadvantaged communities?

15 A I believe it does. And I think part of the --  
16 part of the screening process there with respect to land  
17 has to do with the placement of the facilities but also  
18 transmission requirements.

19 Q Yes. They require the use of the newly updated  
20 land-use screens from the Energy Commission as well. So  
21 wouldn't you agree that avoided land-use impacts and  
22 impacts to disadvantaged communities are part of the IRP  
23 process?

24 A They are part -- they may be part of the  
25 process in terms of what they have to report in terms of

1 screening for transmission, but they are not part of the  
2 cost minimization.

3 Q Okay. But they are part of the IRP process.  
4 The IRP considers avoided land-use impacts and avoided  
5 impacts to disadvantaged communities?

6 A I don't think I could agree with that  
7 statement. The output of the IRP in terms of the  
8 cost --

9 Q I'm not talking about the cost, Dr. Earle.

10 A Well, but that's --

11 Q I'm talking about whether the IRP process  
12 considers these impacts.

13 ALJ LAU: Wait. Hold on, Mr. Lin. So there  
14 were people -- try to let the witness finish first for  
15 the clarity of the record, because it's very challenging  
16 for our reporter to hear two people and transcribe two  
17 people speaking. So Mr. Lin, if you want to clarify  
18 your question, please go ahead.

19 MR. LIN: Thank you, your Honor.

20 Q And, Dr. Earle, I'll repeat my question. Does  
21 the IRP process as a whole consider avoided land-use  
22 impacts and avoided impacts to disadvantages communities  
23 whether air pollution, water pollution or other impacts  
24 to disadvantaged communities, the process as a whole?

25 A I think the issue in the -- giving you a good

1 answer to the question has to do with seeing the process  
2 as a whole. Is there a discussion of those issues? I  
3 believe you're correct in that.

4 In terms of coming up with a set of costs which  
5 is relevant for this proceeding, I believe the answer is  
6 no because the things that go into the cost optimization  
7 for the IRP are also -- are also things that affect what  
8 goes into the ACC.

9 And, in fact, if there were something like a  
10 land-use value that was considered in the IRP, the  
11 values that came out of that would, therefore, also be  
12 reflected in the values that are passed on to the ACC to  
13 the degree that the ACC is aligned with the IRP.

14 Q So you agree that the IRP process considers  
15 avoided land-use impacts and avoided impacts to  
16 disadvantaged communities?

17 A That sounds like the same question you just  
18 asked me.

19 Q I'm just clarifying your answer. It's a "yes"  
20 or "no."

21 A Again, I have -- you know, I have -- I have an  
22 issue with the way -- with the way it's framed. Is  
23 there -- is there a discussion of that in the IRP  
24 process? Yes. Do they form part of the cost  
25 minimization calculations to the IRP? I believe the



1 answer to that is -- is no.

2 If the goal here is to give DERs an equal  
3 evaluation to those resources that are in the IRP, then  
4 it's not appropriate to give them values in the ACC.

5 Q I'm not asking about the ACC, Dr. Earle. I'm  
6 asking about the IRP right now. And -- but we'll -- we  
7 can dive more into that at briefing, but thank you for  
8 your response. That's helpful.

9 Moving over to the societal cost test impact  
10 evaluation. Your testimony -- your rebuttal testimony  
11 references that -- references the inclusion that  
12 increased resource procurements of -- or sorry --  
13 consideration of the societal cost test can increase  
14 rates.

15 Do you recall that part of your testimony?

16 ALJ LAU: Sorry. Mr. Lin, can you point us to  
17 the page in the testimony, please.

18 MR. LIN: Rebuttal testimony. Let's see. It  
19 begins at page 3 of your rebuttal testimony at line 15.

20 The report concluded that any increased  
21 benefits shown by a societal cost test  
22 could increase rates.

23 Do you recall that part of your testimony,  
24 Dr. Earle?

25 A Yes.

1 Q Did the impact about -- you're familiar with  
2 the societal cost test impact evaluation then, I assume?

3 A Yes.

4 Q Didn't the societal cost test impact evaluation  
5 also say that any increased resource procurement was  
6 based on an assumption that it came from electricity  
7 rates -- that funding for DERs came from electric rates  
8 alone?

9 A I'm sorry. I think the last part of what you  
10 said got cut off.

11 Q I'll rephrase the question. Doesn't that  
12 impact evaluation assume that DERs are funded only by  
13 ratepayers? The conclusion that DER procurement will  
14 increase rates if we use a societal cost test, isn't  
15 that assumption based on the -- based on -- or isn't  
16 that conclusion based on the assumption that funding for  
17 DERs would only come from ratepayers?

18 A So you'd have to -- you'd have to show me  
19 where -- where you're quoting from the -- from the  
20 report, but I will say this: Obviously this could  
21 increase costs whether it's from supply-side resources.  
22 It could also ameliorate social costs for DERs. It's  
23 either going to be from the ratepayers or it's going to  
24 be from someplace else.

25 So if either -- if either the changes in

1 supply-side resources or DERs are from -- are funded by  
2 taxpayers rather than ratepayers, sure, you know,  
3 then -- then ratepayer costs would not increase.

4 Q And that's also confirmed by the impact  
5 evaluation report itself at page 6, and then there are  
6 also federal and state subsidies available for DERs.  
7 You disagree.

8 A Okay. So there were two parts to that. One,  
9 you reference what it says at page 6, and then you said,  
10 "Are there federal and state subsidies for DERs." And  
11 the first part I can't answer because I don't have --  
12 have that in front of me regarding page 6.

13 In terms of whether there are subsidies for  
14 DERs, yes, I agree with that.

15 Q So is it fair to say that given those subsidies  
16 not all resource procurement in the future for DERs will  
17 be for ratepayers; is that a fair statement?

18 A If the subsidies continue, I mean, I -- we  
19 have -- we have some elections coming up, you know, in  
20 the near future. So, you know, I'm not going to  
21 prognosticate on changes in policy, but certainly, there  
22 are subsidies for them -- for them now, and that means  
23 that not all DERs are paid for by ratepayers directly.

24 Q Okay. And as the societal cost test evaluation  
25 is based on the assumption of the opposite, that there

1 aren't any subsidies and it's only ratepayers' funding,  
2 isn't that conclusion questionable?

3 A I'm sorry. What conclusion?

4 Q That procurement of -- procurement of DERs  
5 under the societal cost test will increase rates?

6 A So -- okay. So -- so what we're -- what we're  
7 talking about here is the comparison of DERs versus  
8 other resources. And yes, if there -- and so the  
9 relevant comparison is that since, to my knowledge,  
10 we're not having subsidies for supply-side resources to  
11 reduce societal cost, in this framework of the ACC, the  
12 comparison is, well, if we -- if we include societal  
13 costs in evaluating the DERs' cost effectiveness but we  
14 don't for supply-side resources, then we won't have done  
15 a fair cost-effectiveness comparison.

16 Q Okay. Now switching to the comparison of  
17 resources, your testimony -- let me find the page. Your  
18 rebuttal testimony beginning at page 10, line 3  
19 discusses resiliency and says that, at line 6,  
20 "Resiliency is a private value or benefit."

21 Do you recall that part of your testimony?

22 A I'm finding it now. Yes.

23 Q In 2017, when Hurricane Maria devastated Puerto  
24 Rico, there were unfortunate deaths that resulted from  
25 longstanding outages from the bulk system -- bulk

1 utility system being out and people not being able to  
2 run lifesaving medical equipment or refrigerate  
3 lifesaving medicine. We pair that with when Hurricane  
4 Fiona hit Puerto Rico in 20 -- in 2021, homes in the  
5 central communities, services that had installed rooftop  
6 cellular with battery storage did not lose power.

7           Given those comparisons, do you agree that  
8 certain energy resources offer more resiliency benefits  
9 than others?

10         A     I'm sorry. That was a long -- that was a long  
11 comparison.

12                     (Crosstalk.)

13 BY MR. LIN:

14         Q     Focusing on Puerto Rico, in 2017 --

15         A     Right.

16         Q     -- the bulk system was out because of a  
17 hurricane. There were deaths unfortunately because the  
18 folks weren't able to run lifesaving medical equipment  
19 or refrigerate medicines. 2021 another hurricane hit.  
20 Community solar-plus-storage facilities were not  
21 impacted as much, and no deaths resulted in those  
22 instances.

23           Is there -- do certain energy resources offer  
24 more resiliency benefits than others?

25         A     So there's a lot -- there's a lot going on in

1 your question. But I think -- I think these sorts of  
2 issues are addressed, for instance, in -- in, for  
3 instance, emissions microgrids proceeding, and I  
4 think -- I think to say, well, simply, okay, the grid  
5 went out and we had -- we had local power, that seems  
6 true to be a benefit.

7           The real question is, here, not that resiliency  
8 concerns should or should not be funded by the  
9 Commission or how those costs should be borne by  
10 taxpayers or by ratepayers. The real question here is  
11 is this -- is this a benefit that should be included in  
12 the ACC, or is it more appropriate to be considered  
13 elsewhere in individual specific proceedings?

14           And I think the answer is, especially given the  
15 wide range of costs for different resiliency efforts  
16 that exist, it's going to be difficult or impossible to  
17 come up with a single resiliency value that goes across  
18 all DERs to -- to assign it.

19           Now, whether it should be considered in other  
20 proceedings is a different matter, but here, I do not  
21 think that it's appropriate to include it.

22           Q     Okay. And essential community services that I  
23 referenced include hospitals, clinics, community  
24 centers. Don't you agree that these essential community  
25 services provide community benefits?

1 A Yes. They provide community benefits.

2 Q So in that situation, resiliency, if -- if  
3 these hospitals, clinics, and community centers have, as  
4 you reference, local power, which is a benefit, are more  
5 resilient, isn't resiliency a societal benefit and  
6 that's -- that versus a private benefit, isn't resiliency  
7 a societal benefit in that situation?

8 A Well, I'm not sure what you mean by "that  
9 situation," but let me --

10 (Crosstalk.)

11 BY MR. LIN:

12 Q Community centers, hospitals.

13 ALJ LAU: Mr. --

14 THE WITNESS: Right. But that --

15 ALJ LAU: Let's hold on. We had Dr. Earle and  
16 counsel talking over each other. So --

17 MR. LIN: My apologies.

18 ALJ LAU: Dr. Earle, can you -- if you remember  
19 what you said, can you finish your testimony, and then  
20 we'll have counsel repeat his question.

21 THE WITNESS: Sure. So -- so I think that the  
22 question with respect to resiliency is yes, there may be  
23 a benefit to wherever the resiliency is centered. So if  
24 I have rooftop solar in storage, that's a resiliency  
25 benefit for me. If a hospital has DERs, it's --

1 installed, that's a benefit to them. But the resiliency  
2 measures are quite different.

3 The resiliency benefit for me is just however  
4 much I think it's worth. The resiliency benefit for a  
5 hospital may be -- may be very different depending on  
6 where it's located, access to it, you know, who it  
7 serves in the community, the size, all these different  
8 things, which make it not appropriate for the ACC  
9 because of -- one, the wide range of values but also --  
10 but also -- but also the fact that some of the -- some  
11 of the resiliency benefits are quite private.

12 Some of it are private in the sense that they  
13 only -- they only serve particular groups of people,  
14 community where the hospital is located. And so it's  
15 much more appropriate that these things be -- these  
16 resiliency benefits be considered in proceedings  
17 separate from the ACC so that the Commission can make a  
18 reasonable determination rather than a one-size-fits-all  
19 determination that, well, there's a resiliency benefit  
20 for me and, therefore, I should get the resiliency  
21 benefit that DERs at a hospital might provide, you know.

22 And I believe -- I believe that those -- I'm  
23 not terribly familiar with the proceedings, but I  
24 believe that, in fact, those sorts of things are being  
25 considered by the Commission elsewhere, which is



1 appropriate.

2 BY MR. LIN:

3 Q Okay. Sticking on the values question, you  
4 mentioned values just now in your testimony. It also  
5 says that there's -- you know, just now you said that  
6 there are -- you know, there could be multiple different  
7 values for resiliency to your testimony. For instance,  
8 at page 5 of -- your rebuttal testimony at page 5,  
9 beginning at line 6 talks about that -- organization  
10 does not propose a value or a valuation method for  
11 certain things like avoided fuel price uncertainty.

12 Just because there's no current methodology in  
13 California for some of these societal benefits -- to  
14 value some of these societal benefits that we're talking  
15 about, do they still have a value?

16 Just because we don't have a methodology, does  
17 that make the value zero?

18 A Not necessarily. But part of the problem in  
19 evaluating these different proposals where the  
20 methodology or calculation isn't given, it's been --  
21 it's very hard to understand exactly what's being  
22 proposed. And so, sure, it could be -- it could be that  
23 even though we don't know how to value something that it  
24 has a value. But if we don't know that it had -- you  
25 know, if we have -- don't have a way of calculating it

1 and they said -- hard to know when it's being proposed  
2 whether it's -- whether it's something to consider or  
3 not.

4 Q Okay. So just if it's hard to calculate,  
5 though -- if the value of a benefit is hard to  
6 calculate, do we calculate -- does it still have value?

7 A Okay. So what I would say is -- is if, in  
8 fact, it's a benefit and we know that somehow, but we  
9 don't know how to calculate its value, lack of data,  
10 difficulty of calculations, no economist has come up  
11 with a method to do it, it could still have -- it could  
12 still have value even though we don't know how to  
13 calculate it. But to posit what was benefit without  
14 other reason to think so makes it difficult to determine  
15 whether, in fact, there is -- there is an actual --  
16 there's an actual benefit or not.

17 Q Okay. And I have two more questions. I'm  
18 almost done, Dr. Earle. Thank you for your time.

19 The first one, I like to revisit AB 32, the  
20 Global Warming Solutions Act, and I'm acknowledging the  
21 objections that were sustained earlier. Just reference  
22 your opening testimony beginning at page 6, line 19 that  
23 equity should not be considered part of the  
24 cost-effectiveness evaluation.

25 I'd like to -- given that part of your

1 testimony, I'd like to reframe my question about whether  
2 the state's climate and clean energy policies consider  
3 equity. So in your expert opinion, Dr. Earle, do the  
4 state's climate and clean energy targets consider  
5 equity?

6 A The state has -- has started in the past few  
7 years to consider equity issues in its (inaudible).  
8 However, again, there's a difference between --  
9 (Reporter clarification.)

10 THE WITNESS: So just to start from the  
11 beginning, if you don't mind, the state certainly  
12 considers equity issues in its energy policy, but there  
13 is a big difference between saying, Well, something is  
14 cost effective, which is what this proceeding is about,  
15 and saying, Well, we have disparate impacts that we want  
16 to -- we want to consider.

17 So I think the appropriate way -- and I believe  
18 this is the way it currently works -- is to make  
19 cost-effectiveness determinations so that we, as a  
20 society, have the least-cost solution and we have the  
21 money leftover so that we can robustly address equity  
22 issues. So that if we -- if we change our  
23 cost-effectiveness determination to include equity  
24 issues, then we won't come up with a cheapest solution,  
25 and we'll be spending more money for the solution than

1 we would otherwise.

2           What's appropriate is to say, Well, here's the  
3 cost-effective solution. Now, what are the disparate  
4 impacts and how can we address them? So if there's a --  
5 if there's a proceeding on an individual DER, the  
6 Commission can say -- based on the ACC, if we do this  
7 right, the Commission can say, Oh, okay. So -- so  
8 community solar and storage, that's a cost-effective  
9 solution -- I'm positing that. I'm not saying that --  
10 then the Commission can say, Ah, maybe there are  
11 disparate impacts we want to avoid. How do we address  
12 those? But to confuse equity issues with cost  
13 effectiveness, I think is a mistake for the reasons I  
14 just stated. ]

15 BY MR. LIN:

16           Q     Okay. That leads well into my final question  
17 for you, Dr. Earle. Social costs grow with the level of  
18 pollution which increases in tantum with production  
19 levels. So goods with negative externalities are  
20 overproduced when only private costs are considered in  
21 decisions and not costs incurred by others.

22                     Your background is an economist. Do you agree  
23 with that?

24           A     I think so, but could I ask you to repeat it.  
25 You're not saying that I -- I don't think I said that in

1 my testimony. I'm happy to answer the question, but I  
2 just want to make sure that you're not quoting --

3 Q No, no, no. This is -- this is actually a  
4 quote from the International Monetary Fund. And I'll  
5 read it one more time. With your background as an  
6 economist, I figured you'd be familiar with it. "Social  
7 costs grow with the level of pollution which increases  
8 in tantum with production levels."

9 So goods -- this is the important part. Goods  
10 with negative externalities are overproduced when only  
11 private costs are considered in decisions and not costs  
12 incurred by others."

13 Do you agree with that statement from the  
14 International Monetary Fund?

15 A I can agree to that. I mean, some context, I  
16 think, is appropriate here. The -- the -- the statement  
17 is rather broad in terms of growth and production. So  
18 just focusing on what I believe was the second term in  
19 terms of negative externalities, it is true that if  
20 negative externalities are not priced in, what causes  
21 externalities? Optimal levels that -- the choices that  
22 will be made will not be optimal. And I think the  
23 challenge for policy is saying, well, what world of  
24 externalities do we want to consider? And there's a  
25 whole complicated world of externalities out there. And

1 the legislature and the Commission have sort of given us  
2 a roadmap to follow whether we like it or not; right?  
3 We are where we are. And so, for instance, we have  
4 renewables targets. And we may wish that they were on a  
5 more accelerated timetable. We have admissions targets.  
6 We may wish they were on a more-accelerated timetable --  
7 or less-accelerated timetable. We may, you know -- but  
8 really I think in this process our job here is -- I find  
9 it interesting but, you know, it's a bit of a narrow  
10 process here to look at -- to look at cost  
11 effectiveness. There may be other externalities that  
12 aren't in the law that we'd like to see considered. You  
13 know. All the jobs created by DERs are -- you know, pay  
14 a living wage and provide decent benefits. That might  
15 be a good law. It might be desirable, but it's not part  
16 of the framework we are working with here.

17 Q Thank you, Dr. Earle. That brings me back full  
18 circle to my opening round of questions on equity and  
19 AB 32, SB 100 whether we consider equity.

20 Final, final question. Do you disagree that  
21 externalities fall disproportionately -- externalities  
22 of our energy system fall disproportionately on  
23 disadvantaged communities?

24 A So that's a broad -- that's a broad statement.  
25 I think that there are examples that I'm familiar with

1 like energy metering 2.0. 1.0 is absolutely dead. Are  
2 there lots of other instances? Yes. And part of that  
3 is simply because the poorest cannot buy their way out  
4 of suffering those externalities.

5 Q Thank you for your time, Dr. Earle.

6 A Good to meet you.

7 ALJ LAU: Ms. Koss, do you need a moment to  
8 gather your questions for redirect?

9 MS. KOSS: No redirect. Thank you.

10 ALJ LAU: Okay. All right. Sounds good.

11 Can we bring Ms. White back onto the stage.

12 Thank you, Mr. Lin.

13 Let's go off the record.

14 (Off the record.)

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

16 We have counsel for Protect Our Communities  
17 Foundation.

18 Ms. White, can you introduce yourself. And  
19 then after you introduce yourself, you may begin  
20 cross-examination of Dr. Earle.

21 MS. WHITE: Okay. Thank you, your Honor. I'm  
22 Andrea White from the Protect Our Communities  
23 Foundation. And I would like to repeat the question  
24 that I was asking Dr. Earle. And after that, I will  
25 proceed to my next line of questioning.

1 CROSS-EXAMINATION (Continued)

2 BY MS. WHITE:

3 Q So, Dr. Earle, on page 15 of your rebuttal  
4 testimony you support the utility's arguments regarding  
5 equity consideration; correct? And let me know when you  
6 get there.

7 ALJ LAU: Ms. White --

8 THE WITNESS: I'm there.

9 ALJ LAU: Repeat the question.

10 MS. WHITE: Yes, yes.

11 Q So you support, Dr. Earle, the utility's  
12 argument regarding equity consideration. And this is  
13 referring specifically to the RIM test, which RIM stands  
14 for the ratepayer impact measure and also the  
15 distributional analysis. And just to clarify --

16 A So --

17 Q Yes, you can proceed.

18 A So I agree with the joint utilities that the  
19 use of RIM is important for considering equity and I  
20 agree that the distributional analysis that they  
21 describe can also be helpful in policy decisions on  
22 equity.

23 Q Okay. Thank you. So on that I'll ask my next  
24 question.

25 So this refers as well to your rebuttal



1 testimony. And it's page 2, lines nine through ten.

2 Let me know when you get there.

3 A I'm there.

4 Q Okay. So you testified that transmission  
5 projects are often cancelled for a variety of reasons  
6 that have nothing to do with DERs. So you would not  
7 agree that transmission projects have been cancelled  
8 because of DERs?

9 A No. As a matter --

10 ALJ LAU: Ms. White, actually can you repeat  
11 your question because it wasn't clear to me.

12 MS. WHITE: Okay. So Dr. Earle testified that  
13 transmission projects are often cancelled for a variety  
14 of reasons having nothing to do with DERs. And this is  
15 on page 2 of the rebuttal testimony, lines nine through  
16 ten. So I'm wondering if because of the statement he  
17 acknowledges that transmission projects have been  
18 cancelled because of DERs.

19 THE WITNESS: The evidence that we have is that  
20 no transmission projects have been cancelled because of  
21 DERs. Either specific DERs that is those that are  
22 targeted in order to cancel transmission projects or  
23 unspecified DERs. That is, DERs are simply the outcome  
24 of DERs appearing through various programs. And this  
25 conclusion is actually -- is based on two things.

1 First, the CAISO responded to SEIA's claim a few years  
2 ago that projects had been cancelled for DERs. And  
3 CAISO says, in fact, they weren't. And I believe that  
4 the joint filing news testimony has a reference to that  
5 -- to those comments by CAISO.

6 The other reason I say that is that the staff's  
7 analysis of unspecified resources, which I believe it  
8 came out in 2018, 2019, the subject of some discussion,  
9 I believe. I don't recall of the hearings, but there  
10 were certainly comments and -- on it. But that -- and  
11 it was in the predecessor proceeding to this proceeding.  
12 But they also concluded that basically when you look at  
13 unspecified DERs, which is really what we're talking  
14 about here, that the evidence that DERs could result in  
15 the cancellation of transmission projects basically  
16 (inaudible).

17 BY MS. WHITE:

18 Q So do you think -- do you think that it's  
19 possible for DERs to cancel transmission projects in  
20 your opinion?

21 A So -- so as a purely theoretical matter, one  
22 could imagine if every community was on a microgrid and,  
23 you know, either have community DERs or everybody had  
24 their own DERs to get their own power, you know, we  
25 might need a distribution system, but we wouldn't need a

1 transmission system. But as a practical realistic  
2 matter, I don't think that's either practical or  
3 realistic much less cost-effective. So, you know, again  
4 given the evidence from the CAISO and from staff, I  
5 don't see evidence that it's possible.

6 Now, what may happen in the future if DERs  
7 become a lot cheaper and there are more subsidiaries for  
8 them, who knows, but I just don't think that at this  
9 point that there's evidence for that.

10 Q Okay. Moving on to my next question. So in  
11 your rebuttal testimony on page 3 at line 2. And let me  
12 know when you get there.

13 A I'm there. Thank you.

14 Q You say that -- you testified that separating  
15 out secondary distribution costs adds complexity. This  
16 is a third reason to oppose the joint IOU's proposal.

17 So do you acknowledge based on this statement  
18 that the joint IOU's proposal adds complexity?

19 A So I am quoting Solar Energy Industry  
20 Association's witness. They say that it adds  
21 complexity.

22 Q Okay. So is it your opinion that each adds  
23 complexity?

24 A I don't think it adds complexity because the  
25 numbers for the secondary distribution system or those

1 that are part of the system where non-coincident demand  
2 is the cost causation factor. Those -- that part is  
3 already being considered, but what the -- what the joint  
4 IOU's proposal doesn't do is it will better align  
5 incentives for DERs in terms of what they do with their  
6 non-coincidental demand. And that, to my mind, is the  
7 whole point of the joint IOU's proposal.

8           As it is what happens is -- currently is both  
9 non-coincident and coincident demand is compensated  
10 during coincidental hours. And so actually the IOU  
11 report has some nice illustrations of why this is  
12 problematic. And certainly intuitively it's problematic  
13 because there are basically three parts to the  
14 distribution system. Parts are the cost causation  
15 coincident demand added to the whole capacity in the  
16 distribution system. The second part is the parts that  
17 are caused by non-coincident demand. And then there's a  
18 third party of the distribution system that is not  
19 related to demand. It's just what you have to have.  
20 You know, a distribution system either has to have poles  
21 or underground wires. There's no way around that. You  
22 know, as long as you want to be connected to a  
23 distribution system to supply power to you, those parts  
24 can't be avoided by DERs, but the first two in theory  
25 have the ability to avoid those. And certainly their

1 incentives for when they put power on system or when  
2 they take power off system should be aligned with how  
3 those costs are incurred.

4 Q Okay. Thank you, Dr. Earle, for your response.  
5 And I do plan on discussing non-coincident costs with  
6 the utilities as well.

7 So moving on to my next question, this refers  
8 to page 3, line six through seven. You testify not all  
9 DERs avoid all of the costs currently included in the  
10 ACC.

11 Do you have acknowledge that some DERs avoid  
12 some of the costs currently included in the ACC?

13 A So the whole part -- the whole sentence runs  
14 from lines five to seven.

15 Q Yes.

16 A And part of the -- part of the -- part of the  
17 issue we're looking at here is cost causation in terms  
18 of whether we have coincident or non-coincident demand.  
19 And some DERs may result in changes in non-coincident  
20 demand and some DERs may result in changes to coincident  
21 demand. So I -- I -- I agree that some DERs may result  
22 in some lower coincident demand and some DERs may result  
23 in lower or increased non-coincident demand.

24 Now, whether -- whether that actually results  
25 in avoiding the cost is a different issue. In terms of

1 the avoidance of cost, you actually need changes to the  
2 investment system to investment distribution that would  
3 reflect the presence of DERs. And I think that the  
4 available evidence for that is quite -- is quite low.  
5 And part of that is when we look at what happens with  
6 targeted DERs that are those in -- in the DIDF  
7 (indecipherable) process where the utilities say: Okay.  
8 Here's our distribution expansion plans. Can we --  
9 instead of building distribution infrastructure, can we  
10 go out and get DERs to supplant that and put off having  
11 to build that? And today those -- those efforts have  
12 only had a very few successes.

13 Now keeping in mind, this is -- these are  
14 targeted DERs. So we know where the specific upgrade  
15 is. We know, you know, what the costs are going to be.  
16 And we go out -- and we go out and they do solicitations  
17 and they get bids. Very few of those have been  
18 successful.

19 Now, in this situation what we're talking about  
20 is we're talking about -- about non-targeted. In other  
21 words, you know, the DERs spring up wherever they want.  
22 They're not location specific. They're not timing  
23 specific. They just spring up. Those -- the idea that  
24 those could actually avoid distribution costs, I think,  
25 is -- is very low. And, in fact, you know, again, I

1 know that the staff is updating the study they did back  
2 in 2018, 2019. But that study found that it took -- it  
3 would take about 81 kilowatts of DERs to avoid one  
4 kilowatt of distribution. So that's a very -- that's a  
5 very low number.

6 So I can't agree with the statement that DERs  
7 can avoid costs. What I can agree with is DERs can  
8 lower coincident peak and they can change what  
9 non-coincident peak is.

10 Q Okay. I'll move on to my next question. So  
11 this again refers to page 30. This time to line 17  
12 through 18. So here you state "BBD's proposal would  
13 increase rates that have made impacts to those most  
14 unable to afford rate increases."

15 And this is under your section titled  
16 "Non-Energy benefits and social costs."

17 A I see that. Thank you.

18 Q Yes. My question is have you taken any steps  
19 to quantify the rate increases that you testify about?

20 A I have not.

21 Q And have you also taken any steps to quantify  
22 the negative impacts that you testified about?

23 A I have not. You know, the best way to do that  
24 would be quite complicated. And maybe a worthwhile  
25 effort would be to -- would be to include these in the

1 IRP and measure that impact.

2 Q Okay.

3 A I'm not suggesting they be included in the IRP,  
4 just in the optimization machinery.

5 Q Okay. So could you elaborate on why you have  
6 not quantified the negative impacts or the rate  
7 increases?

8 A So here I am relying on the society cost  
9 impacted evaluation. As I have just mentioned, the  
10 process for doing a numerical evaluation would be  
11 running the various models that are used for the IRP and  
12 see what the -- what the different results were.

13 Q Okay. Thank you.

14 So my final question refers to your opening  
15 testimony, and it's page 4.

16 ALJ LAU: So, Ms. White, Dr. Earle flips pages.  
17 You actually -- your audio goes on and off. So can you  
18 repeat your question.

19 MS. WHITE: Yes.

20 Q So on page 4 Dr. Earle testifies stakeholders  
21 and the Commission are being asked to buy a pig and a  
22 poke. So essentially from my impression is that  
23 Dr. Earle is trying to say that stakeholders should know  
24 the outcome of a proposed process or a proposed  
25 calculation before it is implemented.



1           So is that fair to say?

2           A     I think that captures some if it. I think the  
3 problem has been -- and I give an example in my  
4 testimony. And also talking with -- with others about  
5 that, then it became clear to me that you look at the  
6 proposals and you don't really -- one, you aren't really  
7 clear what they are because they haven't been buttoned  
8 down and snapped. And so you don't -- you don't --  
9 before testimony you don't know exactly what the  
10 proposal is because you don't know the implementation.

11           And then there's a second level once you sort  
12 of know, okay, this is an exact algorithm. You know,  
13 when you're dealing with computation, you actually have  
14 to run the thing to know: Okay. Oh, that actually  
15 works. We get an answer, and this is what the answer  
16 is. And so I'd prefer -- I prefer to see and I think it  
17 would be helpful for most of the stakeholders to -- to  
18 have more of a chance to see exactly what the algorithm  
19 is, have real runs with it so we know what we're talking  
20 about rather than being -- you know, only being able to  
21 say: Well, gee, that sounds like a good idea. You  
22 know. And then in the case of the no UDR, it's "Oops.  
23 Maybe not."

24           Q     So would you say that the utilities should know  
25 the impact of a proposed process on their bottom line?

1           A     Well, that's a different -- that's a different  
2 question.  And, you know, the idea is not to give anyone  
3 a leg up in being able to say, oh, well, I know -- I  
4 know what the outcome is going to be for my organization  
5 financially or policy wise or something else.

6                     The idea -- the idea is for all the -- all the  
7 participants in these proceedings to get a chance to  
8 understand what's really being talked about.  You know.  
9 And that includes -- that includes your organization,  
10 the utilities to so on and so forth.                     ]

11                    MS. WHITE:  Okay.  Thank you, Dr. Earle.

12                    That concludes my questions, your Honor.

13                    ALJ LAU:  Thank you, Ms. White.

14                    Ms. Koss, do you have any redirect, or do you  
15 need to take time to look over your redirect questions?

16                    MS. KOSS:  I don't have any redirect.

17                    Thank you, your Honor.

18                    ALJ LAU:  All right.  Then that concludes the  
19 cross-examination of Dr. Earle.

20                    Thank you, Dr. Earle, for your participation  
21 today.  I know it was a challenging morning, but we got  
22 through.

23                    It's 12:25.  Before we break for lunch, I do  
24 want to go over certain things.  I think this is how I  
25 see -- normally as the presiding officer for several

1 other proceedings, that certainly in this proceeding, we  
2 are cross -- you know, we are cross referencing a lot of  
3 different legislation and many Commission -- prior  
4 Commission decisions that has an effect on either the  
5 IRP or the ACC process that if we are going to ask a  
6 witness on the stand referencing the specific  
7 legislation or prior Commission, I do ask that these  
8 references -- or even just, like, a portion of these  
9 decisions -- parsing that decision into what you want to  
10 reference for the witness be provided in a  
11 cross-examination exhibit and serve -- well, now that  
12 we're in the middle of hearing, that be served, you  
13 know, a few hours beforehand, you know, I would say,  
14 maybe, two hours beforehand, so that the witness can at  
15 least understand and not just be asked on the stand, you  
16 know, immediately what's -- what you're cross  
17 referencing to.

18           And I ask that because, you know, I mean, it's  
19 judgment. If it's an impeachment exhibit -- typically,  
20 when we were in hearings in person, we allow counsel to  
21 present that -- those exhibits on -- you know, on the  
22 day of and at the time when the witness comes on stand,  
23 but as we moved to virtual format, we developed a  
24 process of serving that impeachment practice a day  
25 beforehand; however, based on what I am seeing this is

1 not an impeachment, you know, so if we can have  
2 review -- if counsel can review their line of questions,  
3 and if we can see that we are referencing -- cross  
4 referencing certain legislation that would reference in  
5 the testim -- in the witness's testimony or previous  
6 Commission decisions, I do ask, if possible and if  
7 doable/practical to provide those in a word document,  
8 serve it as a cross-examination of that witness; and so,  
9 they have, at least, at this point -- I will make an  
10 exception -- an hour or two for the witness to kind of  
11 review what they're going to be asked based on their,  
12 you know, expert knowledge. That would help the flow of  
13 the hearings.

14 So, that is my request. Yeah, that is my  
15 request and, typically, you know, cross exhibits are  
16 also entered into evidence and if it's really just --  
17 you know, a -- a portion of a decision or a portion of a  
18 legislation, you know, it should not be an issue for  
19 entering that into evidence, because -- because we can  
20 take official notice of that.

21 So, that is my short little lecture, I guess,  
22 on how I want to proceed from now and forward to help  
23 with the line of questioning -- to smooth out the line  
24 of questioning in hearing for the rest of the time.

25 The time is now almost 12:30, and based on our

1 schedule, we will be back at 1:30, so we will break for  
2 lunch.

3 Let's go off the record.

4 (At the hour of 12:29 p.m., a recess was  
5 taken until 1:36 p.m.)

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AFTERNOON SESSION - 1:36 P.M.

\* \* \* \* \*

ALJ LAU: We just broke for lunch, we are back from recess. Now, we have Witness Eric Borden from NRDC on stage.

Mr. Borden, can you introduce yourself, spell your last name and specify the entity that you're representing without the abbreviation, which I just did?

THE WITNESS: I'm Eric Borden, B-o-r-d-e-n, working with Natural Resources Defense Council.

ALJ LAU: And Joseph, can you put forth the witness attestations? I will wait for you to put it on screen.

Mr. Borden, do you see the witness attestations that were circulated previously?

THE WITNESS: Yes.

ALJ LAU: Have you had the opportunity to review these in full?

THE WITNESS: Yes, I have.

ALJ LAU: Do you agree with the set of attestations?

THE WITNESS: Yes, I do.

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ERIC BORDEN,  
called as a witness by Natural Resources  
Defense Council, having been sworn, testified  
as follows:  
ALJ LAU: Thank you.  
Joseph, you make take that attestation off.  
Mr. Pettit, you may begin your direct  
examination of your witness Mr. Borden.

DIRECT EXAMINATION

BY MR. PETTIT:

Q Thank you, your Honor.

Good afternoon, Mr. Borden.

A Good afternoon.

Q You have prepared original and rebuttal  
testimony in this matter; is that right?

A Yes.

MR. PETTIT: And, your Honor, I will note for  
the record, the Court -- I'm sorry. Your Honor has  
marked those as NRDC-01 and NRDC-02; and if there's no  
stipulation -- I don't know if there is, but if there  
isn't -- we'll move those into evidence at the  
appropriate time.

Q Now, those two documents, your opening and  
rebuttal testimony, you prepared those yourself; is that  
correct?

1 A Yes.

2 Q And have you made any changes to either of  
3 them?

4 A No.

5 Q And they represent your best testimony as of  
6 this afternoon on the matter that we are going to talk  
7 about?

8 A Yes, they do.

9 MR. PETTIT: Your Honor, I offer the witness  
10 for cross-examination.

11 ALJ LAU: Thank you. We have Ms. Armstrong,  
12 who is scheduled to cross-examination Mr. Borden first.

13 Ms. Armstrong, can you introduce yourself and  
14 state the organization that you're representing not in  
15 abbreviations?

16 CROSS-EXAMINATION

17 BY MS. ARMSTRONG:

18 Q Yeah. Jeanne Armstrong for the Solar Energy  
19 Industries Association.

20 Thank you, Mr. Borden, I -- I just have a few  
21 questions for you this afternoon.

22 First, if you can look at your -- your opening  
23 testimony, NRDC-01, and on page 6, starting at line 25.  
24 Let me know when you have found that reference.

25 A I'm there.



1 Q Okay. You state there that:

2 Rebalancing within the ACC is only needed  
3 if DER's are incremental to what is already  
4 in the adopted plan.

5 So, does that sentence mean that, in your view,  
6 there is no need for rebalancing if the level of DER  
7 deployment in the various DER programs is reasonably  
8 consistent with the forecasted level of DER adoption in  
9 the IRP?

10 A Yes.

11 Q Thank you. That's the only question I have in  
12 your opening testimony.

13 So, if you can now go to your -- your rebuttal  
14 testimony NRDC-02.

15 A Okay.

16 Q Okay. And starting at the bottom of page 1 and  
17 going through page 3, you're discussing the issue of  
18 RESOLVE model for the 2023 for including new  
19 transmission capacity at zero cost; and this is in  
20 response to SEIA's testimony, correct?

21 A That's, I think, partially right. I am  
22 discussing SEIA's calculation to add \$2.5 billion to the  
23 GHG -- shadow price for GHG adder based on additional  
24 transmission costs that SEIA said are not included in  
25 the IRP modeling.

1 ALJ LAU: And for the clarity of the record,  
2 SEIA is...

3 MS. ARMSTRONG: SEIA is the Solar Energy  
4 Industries Association, S-E-I-A.

5 So, if I refer to SEIA, I am referring to the  
6 Solar Energy Industries Association.

7 ALJ LAU: Thank you.

8 BY MS. ARMSTRONG:

9 Q Okay. Mr. Borden, would you agree that this  
10 issue involves what is called policy-related  
11 transmission that is needed to drive access to a  
12 supply-side generation that the IRP modeling identifies  
13 as needed to meet the state's GHG goals?

14 A Sorry, the -- the what modeling? I missed that  
15 part.

16 Q The IRP modeling.

17 A I -- I believe it's related to forecasted needs  
18 from CAISO, and I know there is also an interactive  
19 process between CAISO, which is the California  
20 Independent System Operator and the -- the IRP.

21 Q Okay. Well, are you aware that there's sort of  
22 various buckets of transmissions that the -- the  
23 CAISO discusses and one is called policy-driven  
24 transmission?

25 A Yes.

1 Q So, would this -- in this discussion at pages 1  
2 to 3 of your rebuttal testimony, that discussion  
3 involves policy-related transmission costs; is that  
4 correct?

5 A Yes.

6 Q Okay. Are you familiar with RESOLVE model that  
7 is used in the IRP to identify new -- new resources?

8 A General -- generally speaking, but I do not do  
9 production cost modeling myself.

10 Q Okay. Let me ask you a -- a basic question.

11 Is it true that the GHG adder is based on the  
12 RESOLVE shadow price to meet IRP's GHG goal?

13 A Yes.

14 Q And is this correct to describe the shadow  
15 price as the marginal cost of new supply-side resources  
16 to meet the GHG goal?

17 A I think so. I believe it's the marginal cost  
18 needed to meet the GHG goal, which is, I believe,  
19 40 percent.

20 Q Yes, thank you.

21 Would you agree that in a supply-side resource  
22 planning model such as RESOLVE, it is important  
23 to include not only the cost of new candidate generation  
24 resources, but also the cost of any new policy-related  
25 transmission required to access those new generation

1 resources?

2 A I am not so comfortable testifying on what  
3 should or should not be included in RESOLVE. My  
4 testimony really relates to what should be included in  
5 the avoided cost calculator. The -- the types of costs  
6 that should be -- that should be included in that.

7 Q Okay. Let me -- let me phrase it this way  
8 then. With respect to determining the avoided cost of  
9 new gen -- candidate generation resources, would it be  
10 important to also include the avoided cost of the  
11 transmission necessary to access those resources?

12 A I will put it this way: If transmission can  
13 reasonably be deferred or avoided by DERs, it should be  
14 included in the -- in the avoided cost calculator.

15 If it cannot be avoided by incremental DERs,  
16 then it should not be included in the avoided cost  
17 calculator.

18 Q Okay. So, you just talked about the -- the  
19 deferral of -- of transmission due to DERs, and I think  
20 in your testimony you -- you reference also, you know,  
21 essentially cancelling the projects due to DERs.

22 Could transmission projects also be downsized  
23 due to DERs?

24 MR. PETTIT: I object. I think this is -- this  
25 is pretty heavily calling for speculation, and the

1 witness may need additional facts about the -- the  
2 downsizing in your hypothetical. For example, what  
3 reasons are given, what the economics are to answer the  
4 question faithfully.

5 ALJ LAU: Ms. Armstrong, do you want -- can you  
6 tie it to a certain aspect of Mr. Borden's testimony?

7 BY MS. ARMSTRONG:

8 Q Well, yeah. Looking at -- at page 2 of your --  
9 of your rebuttal, in the -- in the paragraph starting at  
10 line 17, you mentioned here that DER projects -- without  
11 specifying any particular one -- that certain DER  
12 projects can be cancelled for a variety of reasons; and  
13 then at the top of page 3, you talk about the deferral  
14 of DER projects. Not -- again, not specifying any  
15 particular projects.

16 So, I was just wondering, in your opinion,  
17 could DER or -- I mean, can transmission projects also  
18 be downsized as a result of the addition of any DER to  
19 the system?

20 A Well -- so, just to be clear, yeah, I was  
21 discussing what SEIA said on line 17, that projects can  
22 sometimes be deferred or cancelled.

23 I am not sure if I have ever seen analysis that  
24 projects are downsized due to DERs, so I think the  
25 answer is I -- I don't know, and I -- and I'm not aware

1 of analysis that -- that shows the relationship between  
2 DERs and -- and downsizing projects.

3 Q Okay. I think I am going to leave it at that.  
4 Thank you, Mr. Borden.

5 A Thanks.

6 ALJ LAU: Ms. Armstrong, do you have any  
7 further questions for Mr. Borden?

8 MS. ARMSTRONG: No, I do not. Thank you.

9 ALJ LAU: Mr. Pettit, do you have any redirect  
10 questions for Mr. Borden?

11 MR. PETTIT: No, your Honor. No redirect.

12 ALJ LAU: All right, thank you. We are blazing  
13 away.

14 Let's have Ms. Armstrong step down from the  
15 stage or, I guess, removed from the stage, and let's  
16 have Ms. White on the stage.

17 Can we put Ms. White on the stage? That's  
18 Andrea White.

19 Ms. White, you may begin.

20 MS. WHITE: One second.

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

22 (Off the record.)

23 ALJ LAU: Let's go back on record. We have on  
24 stage Ms. Andrea White.

25 Ms. White, can you introduce yourself and the

1 organization you're representing; and after your  
2 introduction, you may begin your cross-examination of  
3 Mr. Borden.

4 MS. WHITE: Yes. So, hello, I am Andrea White  
5 from the Protect our Communities Foundation.

6 Sorry, your Honor, was I supposed to say  
7 anything else?

8 ALJ LAU: No. So, you may begin your  
9 cross-examination of Mr. Borden.

10 CROSS-EXAMINATION

11 BY MS. WHITE:

12 Q Okay. Thank you, your Honor.

13 So, I will begin by looking at your opening  
14 testimony, Mr. Borden. So, page 2 line 33, if you have  
15 that pulled up.

16 A Okay.

17 Q Okay. So, you testified that recommendations  
18 regarding equity are not directly related to the ACC  
19 methodology.

20 What do you mean by that?

21 A The avoided cost calculator is really focused  
22 on ratepayer impacts of distributed energy resources;  
23 and so, I don't see -- so, if we're only focused on the  
24 calculator, equity may not be directly related. But if  
25 we're focused on application of the calculator, then

1 equity is -- is related, and we provided some  
2 recommendations for individual proceedings to address  
3 equity a little bit more holistically in the future.

4 Q Okay. So, to clarify, you don't think  
5 considerations of equity should be included in the ACC?

6 A Correct.

7 Q Okay. So, moving onto my next question, it's  
8 also referring to your opening testimony on page 3,  
9 lines 8 through 9.

10 A Yes.

11 Q Okay. So, you testified that you agree that:

12 The utilization of the IRP's latest system  
13 plan rather than a no new DER scenario is  
14 logical and likely more accurate.

15 So, in other words, you think that the  
16 Commission should drop the no new DER scenario, correct?

17 A Correct. The -- the staff has proposed to drop  
18 it for new methodology and -- and we agree that staff's  
19 recommendations make sense and should be adopted.

20 Q Okay. And you would agree that it's better to  
21 use the PSPs, I believe it is, instead?

22 A Correct.

23 Q Okay. So, my next question is to determine --  
24 in your opinion, to determine a particular avoided cost  
25 value, do you believe it's important to model the costs



1 that would occur with no new DERs?

2 A I think that staff explained well that that  
3 type of modeling is difficult and not always -- and  
4 increasingly complex, and that part of the goal here  
5 that -- that we support is to compare supply-side  
6 resources with demand-side resources; and so, in order  
7 to do that in the most accurate way possible, it made  
8 sense for us to use the same system planning -- the same  
9 scenario as what we are using for supply-side resources  
10 as well.

11 Q Okay. So, if you think that we should use the  
12 PSP as the base scenario, do you think that the baseline  
13 should be what the utilities are already planning on  
14 doing? Ra -- rather than the --

15 A I -- yeah, I understand your question. I think  
16 it's a little difficult than the abstract because, for  
17 example, one of the things staff discusses is modeling  
18 the avoided GHG and capacity costs in a more -- in an  
19 optimized fashion versus a, sort of, what you could call  
20 an ad hoc fashion outside of the IRP; and so, the -- you  
21 know, one of the reasons that I think that makes sense  
22 is that avoided costs in the ACC depend both on  
23 supply-side and demand-side resources. And so, to  
24 optimize those together is -- tends to be a more  
25 realistic scenario than to this sort of counterfactual

1 world of no DERs coming on the system.

2 Q Okay. I will move onto my next question.

3 So, you also testified in your opening  
4 testimony on page 4 at the top that:

5 The ACC should provide accurate estimates  
6 of costs avoided by ratepayers when a  
7 distributed energy resource either  
8 generates or reduces demand for a marginal  
9 unit of energy.

10 So, do you apply that logic to all estimates of  
11 costs avoided by ratepayers?

12 A I think so, yes. I would add DERs can also  
13 increase -- increase load, so that maybe wasn't captured  
14 in that sense, which -- which can result in a negative  
15 avoided cost. But I think, in general, we think of DERs  
16 as load modifiers, at least most of them.

17 So, many of them decrease load, which has  
18 certain impacts on the system and results in avoided  
19 costs.

20 Q Okay. Are there any costs avoided by  
21 ratepayers that you do not believe should be accurately  
22 estimated?

23 A I think all costs that impact ratepayers should  
24 be estimated in the avoided cost calculator.

25 Q But should they be estimated accurately?

1           A     Yes.

2           Q     Okay.  And then, let's see.  So, on the same  
3 page, page 4 of your opening testimony, at lines 15  
4 through 16, you refer to the cost of resource adequacy  
5 contracts.

6                     So, have you done any kind of assessment into  
7 the way that solar with battery storage is treated in  
8 the resource adequacy context?                     ]

9           A     No.

10          Q     Okay.  So -- well, I guess, following up on  
11 that, why have you not done any assessment?

12          A     Yeah.  It wasn't part of the scope of things  
13 that I looked at in this part of this testimony.

14          Q     Okay.  Okay.  So moving on to page 5, so  
15 starting at line 4, you testify that avoided costs  
16 should be determined by looking at the difference in  
17 utility spending with distributed resource deployment  
18 and the difference in utility spending without  
19 distributed resource deployment.  You then make  
20 reference that this is difficult to do when determining  
21 transmission and distribution system costs.

22                     So my question is related to your reference to  
23 transmission system costs.  Do you have any evidence to  
24 support your testimony that it is difficult to determine  
25 transmission system avoided costs?

1           A     I know from my years of experience looking at  
2 avoided transmission and distribution costs due to DERs  
3 is very difficult to determine. I'm not sure there's  
4 like a specific source I can point you to, but you know,  
5 you get into an issue -- you get into thorny  
6 counterfactuals around what happens when and what will  
7 the utility do when something happens. And if the  
8 utility doesn't actually go out and reduce its  
9 investment in something, you won't actually have an  
10 avoided cost. And so that's -- it's just very difficult  
11 to work through what essentially amounts to forecasting  
12 behavior of utilities in a precise way.

13                     And so I think we do our best in these  
14 proceedings and throughout the country in trying to  
15 estimate what the impacts are of reduced or increased  
16 load on a kind of aggregate basis across the system, but  
17 it's very -- it's a very difficult and -- thing -- it's  
18 just a difficult thing to do.

19           Q     Okay. So my next question is to confirm. In  
20 your rebuttal testimony, you do not rebut Mr. Power's  
21 testimony in PCF-01, correct?

22           A     That's correct.

23           Q     Okay. Let's see.

24           A     Just quickly -- quickly.

25           Q     Yes?

1           A     The fact that we didn't have a specific  
2 rebuttal doesn't mean NRDC may not -- may -- may or may  
3 not agree with each and every position.

4           Q     Okay. Okay. So next, turning again to your  
5 opening testimony at page 9, starting at line 20 -- so  
6 you proposed analyses of distributional impacts of  
7 programs to see how the benefits and costs are  
8 distributed among ratepayers.

9                     Is it fair to say that you're not proposing any  
10 assessment that would show how the benefits and costs  
11 are distributed among the ratepayers on one hand and  
12 shareholders on the other?

13           A     Yes, that is fair. The assumption is that,  
14 really, all costs that we're discussing here are borne  
15 by ratepayers. And so the most important equity  
16 analysis is to examine how they are distributed among  
17 various income groups and types of ratepayers.

18           Q     Okay. And so, therefore, does the analysis you  
19 propose assess distribution of costs and benefits to  
20 identify when utility shareholders are overrepresented  
21 in terms of benefits and ratepayers are overrepresented  
22 in terms of costs?

23           A     It doesn't address that. I don't  
24 necessarily -- well, I'm not sure if that is part of,  
25 you know, a definition of equity. Maybe it could be,

1 but it's not the definition that I had in mind.

2 Q What was the definition you had in mind?

3 A Particularly I was thinking about impacts on  
4 disadvantaged or vulnerable populations of ratepayers.

5 Q Okay. Okay. So moving on, this is just asking  
6 for your opinion. So if there were a choice between  
7 developing a project that shareholders would make a  
8 small profit on and a project that shareholders would  
9 make a large profit on, would the analysis that you're  
10 proposing address that?

11 MR. PETTIT: You're -- Counsel, you're  
12 referring to the avoided cost calculation analysis in  
13 that question; is that right?

14 MS. WHITE: Um.

15 MR. PETTIT: Yeah. You said, "the analysis  
16 that you're proposing." I'm just unclear on what that  
17 is.

18 MS. WHITE: Yeah. So it's the analysis  
19 referred to on page 9 of the opening testimony at line  
20 20. It's the section entitled Utilities Should Present  
21 Ex-Post and Ex-Ante Analysis of Distributional Impacts  
22 of Programs. So it's the analysis of Mr. Borden,  
23 interprets what he was trying to say in that section.

24 MR. PETTIT: Thank you.

25 THE WITNESS: So the analysis would examine

1 the -- like, all very theoretical. But, theoretically,  
2 if we had two projects and we were looking at this type  
3 of distributional analysis, it would examine the impact  
4 on ratepayers of both of the projects that you  
5 mentioned.

6 To the extent that the project with larger  
7 shareholder profits was worse for ratepayers, then that  
8 would be reflected in the analysis.

9 Q Okay. So -- and then does this analysis that  
10 you are proposing, the ex-post and ex-ante analysis,  
11 does it consider that ratepayers may have the same  
12 interest in particular projects as the utility  
13 shareholders?

14 A I'm not sure what you mean by "same interest."

15 Q I guess, you know, projects are constructed for  
16 a certain reason, and both ratepayers and shareholders  
17 may support it for the same reason.

18 I can move on to the next question.

19 A Okay. I mean --

20 Q Okay.

21 A -- I think -- well, okay. Sure.

22 Q Well, if you want to answer it, you can answer  
23 it.

24 A I was just going to say I don't think it  
25 examines -- it would necessarily provide an examination

1 of motivations of different, you know, projects. And  
2 here we are mainly thinking about distributed energy  
3 resources and their avoided costs. So, yeah, it's not  
4 meant to examine those motivations behind them. It's  
5 really looking at the distribution participation, bill  
6 impacts, how the programs are funded before and after --  
7 both before a proposal and what the proposal is forecast  
8 to do.

9 Q Okay. So -- let's see. So on the same page,  
10 page 9 of your opening testimony, you testify that DER  
11 programs -- starting at line 14 -- should conduct a  
12 distributional equity analysis.

13 Do you think it's important to make sure all  
14 the values included in the distributional equity  
15 analysis are accurate?

16 A This was more the general recommendation for  
17 the Commission to leverage materials that will be coming  
18 from Synapse on these -- on this topic, and so it may be  
19 timely to look at that. It's not all value, you know,  
20 calculation-related. The -- you know, some of the  
21 work -- and I'm not honestly super close to it, but some  
22 of the work has to do with understanding who  
23 stakeholders are, getting -- getting more representation  
24 from certain communities and those types of things. And  
25 so it's more of a general recommendation to check that



1 out when we're thinking about how to incorporate equity  
2 into -- into these programs in a better and more  
3 holistic way.

4 Q Okay. Well, I guess I should specify the  
5 reason I ask the question. So do you think it's okay as  
6 part of this distributional equity analysis to use the  
7 transmission costs that have been calculated before the  
8 transmission study that was recently ordered?

9 A Can you say more of about like what  
10 transmission study and the cost that you're referring  
11 to.

12 Q Yeah. So there was a transmission study. I  
13 just sent an email to ALJ Lau. And so Decision  
14 22-05-002 orders the transmission study to be conducted.  
15 So -- and in the decision, they essentially state that  
16 the current transmission values in the ACC are  
17 inaccurate. So that's why they wanted to order the  
18 transmission study in the successor proceeding, which is  
19 what they said.

20 So -- so going back to the distributional  
21 equity analysis, that was --

22 MR. PETTIT: Excuse me. Excuse me, Counsel.  
23 Pardon me for interrupting. I haven't seen that email.  
24 I'm not sure that the witness has, and I have a problem  
25 with you asking about documents that he hasn't seen or

1 that I haven't seen.

2 ALJ LAU: I think, to clarify, with the  
3 distribution and transmission, T&D -- transmission and  
4 distribution avoided costs, we had sent an email  
5 ruling -- it's a ruling issued -- asking parties to  
6 opine on the funding of having a consultant conduct the  
7 study. We have not -- the Commission has not issued any  
8 decision on whether funding is granted. And, of course,  
9 we need funding to start the study. So this study has  
10 not been started, and I'm guessing Ms. White is saying  
11 that since the study has not been started does the --  
12 Mr. Borden, you can fill in the questions.

13 MS. WHITE: Yeah. Yeah. Thank you, ALJ Lau.  
14 Yes.

15 BY MS. WHITE:

16 Q So I am saying the study hasn't been started  
17 yet. So do you -- you're recommending that the  
18 Commission should leverage the work by Synapse and  
19 Lawrence Berkeley National Laboratory for the  
20 distributional equity analysis.

21 So do you still think that's appropriate given  
22 that the study hasn't been conducted yet?

23 A So I'm not sure how much this ties to the  
24 distribution equity analysis, but I can answer the  
25 question more generally like -- well -- yeah, can you

1 rephrase it more generally, and then I'll try to answer  
2 it. Because I -- the problem is I don't -- you know,  
3 the distributional equity analysis isn't some specific  
4 analysis that I'm recommending. It's a framework for  
5 looking at equity. And so -- and so, yeah, I'm not sure  
6 if there's a clear connection between individual values  
7 and the analysis that I discuss in testimony.

8 Q Okay. I think -- I think that's a -- okay.  
9 Well, I guess I'll just move on to my next question  
10 then.

11 Okay. So in your -- now turning to your  
12 rebuttal testimony on page 1, lines 9 -- or lines 10  
13 through 11, you testify that NRDC strongly agrees that  
14 all transmission expenses that are avoided because of  
15 additional DERs should be accounted for in the avoided  
16 cost calculator.

17 So is this a position that NRDC has taken in  
18 the past?

19 A I can't say that I know every position that  
20 they've taken in the past. I believe it's consistent --  
21 to my knowledge, it's consistent, yes. But I also  
22 don't -- can't say that I -- that I know every position  
23 that the NRDC has taken in the past.

24 Q Okay. So would you say it was a new position  
25 or...

1 A I don't believe it was new, no.

2 Q Okay. Okay. So let's see. In your rebuttal  
3 testimony, at page 2, you testify that you agree with  
4 SEIA that avoided transmission costs should be accurate,  
5 but then you fault SEIA for an analysis you describe as  
6 incomplete, which is at approximately line 7.

7 Have you made any effort to ensure the accuracy  
8 of avoided transmission costs?

9 MR. PETTIT: Counsel, do you mean ever or in  
10 connection with this project?

11 BY MS. WHITE:

12 Q I think "ever" would be a bit broad. So  
13 perhaps in connection with this project.

14 A I'd rather respond to ever, but I guess --

15 Q Oh, I --

16 A As part of --

17 Q You can --

18 A Okay. I mean -- so, yes, it's an issue that  
19 I've looked at in the past. I previously worked for  
20 Utility Reform Network, and we looked into various  
21 methodologies and values around avoided transmission.  
22 This was a few years ago. In connection with this  
23 testimony, we were mainly addressing staff's proposal,  
24 which -- which, other than the mentioned study -- I  
25 don't know if that was in the staff's proposal or not --

1 but other than that forthcoming study, you know, it  
2 wasn't -- avoided transmission wasn't -- there wasn't  
3 wholesale modification to avoided transmission that we  
4 looked at.

5 Q Okay. So is there a reason you didn't look at  
6 that?

7 A Again, we've looked at it in the past, but it  
8 wasn't really part of the scope of the updates that  
9 were -- that were coming through. And certainly avoided  
10 transmission and distribution are things that are  
11 continuously looked at by the Commission on a fairly  
12 regular basis both as part of rate design and also part  
13 of these proceedings.

14 Q So, in your opinion, why did you think it was  
15 out of scope for this?

16 A It's out -- it's out of scope of my testimony.  
17 Certainly, I could have -- there's a -- there's many,  
18 many topics that the avoided cost calculator takes on,  
19 and as part of my scope with NRDC, we looked at issues  
20 related to staff's proposals as well as the equity  
21 analysis that -- that we were talking about earlier.

22 Q Okay. Let's see. So my next question refers  
23 to page 2, lines 24 to 25 of the rebuttal testimony.  
24 And you testify that as a matter of basic economics, the  
25 transmission costs in the ACC should be those marginal

1 costs that are deferred by additional DER.

2 Do you believe that the ACC, as currently  
3 constituted, accurately captures the marginal  
4 transmission costs that are deferred by additional DER?

5 A I do think that it -- there is a reasonable  
6 methodology to calculate marginal transmission costs.  
7 These things can always be improved upon. And so, you  
8 know, that's not to say that it's the only way or that  
9 it's the end-all be-all. But since California does do  
10 marginal cost studies in terms of rate design, these are  
11 issues that are looked at fairly regularly. And so, you  
12 know, I'm comfortable that they provide a reasonable  
13 proxy right now. And I'm certainly -- I'm personally,  
14 frankly, supportive of continued analysis by the CPUC on  
15 these issues because, as I mentioned, they are very  
16 difficult and do require periodic review and study.

17 Q Okay. And then -- so from the sentence I  
18 previously quoted where I said, "as a matter of basic  
19 economics the transmission costs in the ACC should be  
20 those marginal costs that are deferred by additional  
21 DER" -- so, in this instance, what do you mean when you  
22 refer to marginal costs?

23 A So the costs that are avoided due to one  
24 additional DER or one additional unit of load reduction.  
25 And so, you know, as we think about what is marginal to

1 the system, the marginal DER or additional DER that's  
2 not planned for, what additional costs does that avoid.  
3 And that's really what the avoided cost calculator is  
4 meant to calculate.

5 MS. WHITE: Okay. Thank you. So I am going  
6 to -- how am I on time, your Honor?

7 ALJ LAU: Approximately how many more minutes  
8 do you think you need?

9 MS. WHITE: Maybe 10 more minutes. Would that  
10 be appropriate?

11 ALJ LAU: That's fine.

12 BY MS. WHITE:

13 Q Okay. So let's see. I'm going to continue  
14 asking about your rebuttal testimony. So moving to page  
15 4, at the top of the page, you testify that CAISO does  
16 assess the availability of DG to meet the needs of  
17 transmission projects as part of its planning process.

18 So does CAISO's assessment have the direct  
19 impact on the transmission planning process?

20 A Yes, I'm referring to the CAISO transmission  
21 planning process. Yes.

22 Q Okay. And it has a direct impact on -- CAISO's  
23 assessment has a direct impact?

24 A On -- on what? On the --

25 Q On the --

1 A Oh, yes, they conduct the transmission --

2 (Reporter clarification.)

3 MS. WHITE: (Line muted.)

4 ALJ LAU: Yeah. Looks like you're on mute.

5 Can you re -- kind of --

6 MS. WHITE: Oh.

7 ALJ LAU: -- finish your question. I think  
8 it's direct impact --

9 UNIDENTIFIED SPEAKER: (Crosstalk).

10 ALJ LAU: -- transmission planning, but -- but  
11 I will let you finish your question, and then,  
12 Mr. Borden, can you repeat the answer to your question.

13 BY MS. WHITE:

14 Q Okay. So my question is, does CAISO's  
15 assessment have a direct impact on the transmission  
16 planning process?

17 A Yes.

18 Q Okay. So next I want to ask about your  
19 familiarity with, and specifically, are you familiar  
20 with the CPUC's techno-economic screens?

21 A I don't believe so.

22 Q Okay. Would you agree that already developed  
23 and industrialized areas present significant rooftop  
24 potential for solar generation?

25 MR. PETTIT: I'll object to that as beyond the



1 scope of his testimony or direct rebuttal.

2 ALJ LAU: Ms. White, can you direct any --  
3 direct us to anywhere in the testimony that he discusses  
4 that.

5 MS. WHITE: I am not sure. I can move on to my  
6 next question, if that would be okay.

7 ALJ LAU: Okay. Yes.

8 BY MS. WHITE:

9 Q Okay. Okay. So going back to your rebuttal --  
10 let's see -- on -- on page 2, line 26, you testify that  
11 additional DER will reduce the need for supply-side  
12 resources.

13 So do you believe that the ACC, as currently  
14 constituted, accurately captures the cost avoided by  
15 reducing the need for supply-side resources?

16 A So, yes, I believe overall it's a -- it  
17 provides a reasonable methodology to do so. That,  
18 again, can always be improved upon, and that's the  
19 purpose of these proceedings.

20 Q Okay. And then on page 3, lines 3 through 4,  
21 you testify that additional DER will replace some  
22 fraction of supply-side resources within forecasted  
23 projects.

24 So have you done any analysis to ascertain how  
25 much DER will replace the fraction of the supply-side

1 resources?

2 A I haven't -- I can't say I've done independent  
3 analysis. I think that's a lot of what the avoided cost  
4 calculator is trying to estimate.

5 Q Okay. And so you don't -- you don't want to  
6 conduct the same analysis as the avoided cost  
7 calculator?

8 MR. PETTIT: I'm sorry. Can I have the  
9 question back, Counsel. Did you say he doesn't want?

10 MS. WHITE: Well, I was responding to  
11 Mr. Borden. He said that he did not -- I'm sorry. I  
12 lost the thread of the conversation.

13 MR. PETTIT: Well, I'm just -- I'm not trying  
14 to be a jerk here, but, you know, I think what he wants  
15 isn't really relevant. I think you were going somewhere  
16 else.

17 MS. WHITE: Maybe I phrased it incorrectly.

18 ALJ LAU: Do you need a couple minutes to --

19 MS. WHITE: No. No, I don't.

20 Q I guess I'll just ask one more question. So on  
21 page 3, starting at line 18, you suggest that the CPUC  
22 should determine what avoidable transmission costs are  
23 driven, in part, by state clean energy requirements.

24 Should the CPUC consider alternatives to  
25 transmission projects when it considers the projects

1 driven by clean energy requirements?

2 A So I was thinking more of a historical-type  
3 analysis. I think if you're doing a future-oriented  
4 analysis certainly you would compare different  
5 alternatives, but to address this issue of whether  
6 policy-related projects are really deferrable by DERs, I  
7 was thinking of more looking at historically, you know,  
8 were those types of projects deferred or cancelled based  
9 on DER deployment that occurred. ]

10 MS. WHITE: Okay. Thank you. That concludes  
11 my questions, Mr. Borden.

12 ALJ LAU: Thank you, Ms. White.

13 Mr. Pettit, do you have any redirect for  
14 Mr. Borden?

15 MR. PETTIT: No, your Honor. No redirect.

16 ALJ LAU: All right. Thank you, Mr. Borden. I  
17 believe that concludes your testimony.

18 We can bring Mr. Borden off the stage. And we  
19 will have our next witness. Actually, we can also bring  
20 Mr. Pettit off the stage and Ms. White off the stage for  
21 now. And we move on to the cross-examination of Sam  
22 Wray. I hope I didn't pronounce the name wrong. Can we  
23 put him on stage.

24 And the attorney sponsoring Mr. Wray should be  
25 Eric Sezgen from PG&E.

1 MR. SEZGEN: Yes, your Honor.

2 ALJ LAU: Can we put Mr. Sezgen on stage. Can  
3 we also put on stage the set of witness attestations.

4 Okay. Good afternoon, Mr. Wray. Can you  
5 introduce yourself. And if I pronounced your name  
6 wrong, I apologize. And also please let us know which  
7 organization you are representing.

8 THE WITNESS: Good afternoon, your Honor. My  
9 name is Sam Wray spelled W-r-a-y. I'm representing  
10 Pacific Gas & Electric Company.

11 ALJ LAU: And that sometimes is referred to as  
12 PG&E. I just want to state that for the record for when  
13 we start using acronyms.

14 Mr. Wray, do you see the set of witness  
15 attestations on the screen?

16 THE WITNESS: I do.

17 ALJ LAU: And have you had the opportunity to  
18 revenue them in full?

19 THE WITNESS: Yes, I have.

20 ALJ LAU: And do you agree to them?

21 THE WITNESS: Yes, I do.

22 SAM WRAY,  
23 called as a witness by Pacific Gas &  
24 Electric, having been sworn, testified as  
25 follows:

1 ALJ LAU: All right. Thank you.

2 Let us begin the direct examination of Mr. Wray  
3 first and then we will allow Mr. Lin to come on the  
4 stage.

5 So Mr. Sezgen.

6 MR. SEZGEN: Thank you, your Honor.

7 DIRECT EXAMINATION

8 BY MR. SEZGEN:

9 Q Mr. Wray, do you have what has been marked  
10 Exhibit IOU-01, which is the opening testimony of the  
11 Joint Investor-owned Utilities, and what has been marked  
12 as Exhibit IOU-02, the rebuttal testimony of the Joint  
13 Investor-owned utilities before you?

14 A Yes, I do.

15 Q Are you sponsoring some of the testimony in  
16 this proceeding?

17 A Yes, I am.

18 Q Was the material prepared by you?

19 A Yes, it was.

20 Q Do you have any corrections you would like to  
21 flag for the Commission?

22 A No.

23 Q Insofar as the material in these two exhibits  
24 as factual in nature, do you believe it to be correct?

25 A Yes.

1 Q And insofar as the material containing  
2 opinions, do you believe that to be your best  
3 professional opinion?

4 A Yes.

5 Q And do you adopt this testimony as your sworn  
6 testimony in this proceeding?

7 A Yes, I do.

8 MR. SEZGEN: Your Honor, Mr. Wray is available  
9 for cross-examination.

10 ALJ LAU: All right. Thank you.

11 Can we bring Mr. Lin to the stage.

12 Mr. Lin, before you begin your cross, can you  
13 introduce yourself again and the organization you are  
14 representing and then afterwards you may go ahead and  
15 proceed with the cross.

16 MR. LIN: Thank you, your Honor. Roger Lin  
17 with Center for Biological Diversity.

18 I have one quick procedural question, your  
19 Honor. We would like to introduce what was emailed over  
20 the lunch break Cross-examination Exhibits CBD-02. It's  
21 been served on everyone, but I have not put it in the  
22 formatting that you requested. Should that be uploaded  
23 to the supporting documents -- documents portal and also  
24 served on all parties as well?

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

1 (Off the record.)

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

3 Before going off record, Mr. Lin offered a  
4 cross-examination exhibit. I will now mark and identify  
5 it as CBD-02 which is titled Proposed Decision of ALJ  
6 Fitich in Rulemaking 20-05-003 with the Title Decision  
7 Adopting 2023 Preferred System Plans and related matters  
8 in addressing two petitions for modification. So I'm  
9 now finish marking and identifying CBD-02.

10 (Exhibit CBD-02 was marked for  
11 identification.)

12 ALJ LAU: And, Mr. Lin, you may begin  
13 cross-examination of Mr. Wray.

14 MR. LIN: Thank you, your Honor.

15 CROSS-EXAMINATION

16 BY MR. LIN:

17 Q Mr. Wray, the Joint IOU's proposed guiding  
18 principles seek to align the IRP and the ACC that's at  
19 your opening testimony page 41, line five, aligning the  
20 IRP with ACC. Is that correct?

21 A Let me get there.

22 ALJ LAU: And, Mr. Wray, feel free to take your  
23 time.

24 And, Mr. Lin, sometimes you may need to be more  
25 specific about the reference so Mr. Wray -- that will

1 help Mr. Wray.

2 THE WITNESS: Can you repeat the page and line  
3 citation. Page 45, line 5.

4 BY MR. LIN:

5 Q Sorry. Page 41 beginning at line five.

6 Your -- the joint IOUs proposed guiding principles seek  
7 to align the IRP and the ACC. I just want to make sure  
8 that is correct.

9 A Yes, that's correct.

10 Q Okay. And are you familiar with CBD Exhibit 2,  
11 the recent proposed decision in the IRP proceeding to  
12 the adopt preferred system file?

13 A Familiar with the exhibit. I haven't read the  
14 entire decision.

15 Q One thing that the proposed decision states is  
16 that even if load-serving entities do not specifically  
17 serve disadvantaged communities as part of their  
18 customer base, all load-serving entities have impacts on  
19 disadvantaged communities as a result of the reliance on  
20 system power or other power with local pollutants or GHG  
21 emissions which can still impact disadvantaged  
22 communities.

23 Do you agree with that statement?

24 ALJ LAU: Mr. Lin, can you point to a reference  
25 to that -- to the page number in that decision or



1 proposed decision.

2 MR. LIN: It's page 14 of that proposed  
3 decision.

4 THE WITNESS: Page 14.

5 ALJ LAU: Yeah. Mr. Lin, if you can provide  
6 some line reference and read it for the record again  
7 which -- what portion you're referring to.

8 BY MR. LIN:

9 Q "Almost all LSEs, load-serving entities, have  
10 impacts on disadvantaged communities as a result of  
11 their reliance on some system power or other power with  
12 local pollutants or GHG emissions which can still impact  
13 disadvantaged communities."

14 Mr. Wray, do you agree with that statement?

15 A I'm sorry. I'm not seeing it on page 14.

16 ALJ LAU: I think it's on page 15.

17 THE WITNESS: Okay. There we go.

18 ALJ LAU: It's on the second line. Let's  
19 have --

20 THE WITNESS: Yeah. I saw it. Now I've got  
21 it. I've got it. I'm just reading through it one more  
22 time.

23 ALJ LAU: Okay. Are you ready or do you need a  
24 few minutes to review?

25 THE WITNESS: No. I'm okay.

1 ALJ LAU: Okay. All right.

2 THE WITNESS: Yes, I agree with the statement  
3 that LSEs potentially have some reliance on system  
4 power. That power could result in either local  
5 pollutants or GHG emissions which would have an affect  
6 on all communities including disadvantaged communities.

7 BY MR. LIN:

8 Q And there are disadvantaged communities within  
9 PG&E's service territory; is that correct?

10 A Yes.

11 Q And continuing along I think in the same  
12 section of that proposed decision, I have it as page 15.  
13 I could be wrong because I got the last one wrong, but I  
14 have it at page 15 that we continue to expect  
15 low-serving entities to take a more expansive view of  
16 their responsibilities and describe their efforts to  
17 address disadvantaged community impacts not only in  
18 their own service areas but also in the state as a  
19 whole. LSEs -- low-serving entities -- should address  
20 programs and activities they offer to mitigate these  
21 impacts.

22 Do you see that section?

23 A I do see that section, yes.

24 Q And as a result of that proposed decision  
25 requires certain LSEs to redo and resubmit their

1 individual IRPs. One of these at page 20 includes  
2 reporting on local air pollutants including NOx, sulfur  
3 dioxide PM 2.5. And then also on page 21 including  
4 specific metrics and scoring criteria. That's LSEs, the  
5 load-serving entities, uses to prioritize the  
6 minimization of criteria air pollution in disadvantaged  
7 communities again at page 21.

8           Given those two portions, do you agree that the  
9 IRP process tries to minimize local air pollution in  
10 disadvantaged communities?

11           A     I would say that it is a point of emphasis in  
12 the IRP to study air pollution impacts on disadvantaged  
13 communities.

14           Q     Thank you.

15           Moving on to the same proposed decision, same  
16 exhibits pages 79 through 80, it summarizes updates in  
17 Busbar mapping from the October 5, 2023, ALJ ruling  
18 including the application of the disadvantaged  
19 communities on air pollutants non-attainment zones as  
20 locations with the priorities to avoid mapping biomass  
21 and bio-gas resources.

22           So in other words, there's the IRP places  
23 priority on avoiding water or air pollution from biomass  
24 or other local impacts from biomass and bio-gas  
25 resources in disadvantaged communities.

1 Do you agree with that?

2 A I'm not really familiar with this analysis so I  
3 can't say one way or the other.

4 Q Okay. Now moving on to land use. The IRP  
5 tries to avoid land use impacts by -- in the same  
6 section -- so pages 79 to 80 of the exhibits -- updating  
7 land use and environmental criteria to utilize the new  
8 CEC land use screens.

9 Do you agree that the IRP tries to avoid land  
10 use impacts through the use of CEC land use screens?

11 A I'm not sure of the IRP's either authority or  
12 focused on avoiding land use impacts although I am aware  
13 within the capacity expansion modeling that they do.  
14 They apply constraints around where resources can be  
15 built therefore including constraints about land use for  
16 various utility investments and infrastructure.

17 Q So in addition to biomass, avoiding biomass,  
18 bio-gas plants, impacts on disadvantaged communities,  
19 and from what you just described avoiding land use  
20 impacts generally. Is that fair?

21 A I don't believe that was what I said. I  
22 believe I said the capacity expansion model includes a  
23 constraint around land use impacts which will impact the  
24 resource built in the resolve capacity expansion model  
25 to my knowledge.

1 Q So in other words, it's like if there are land  
2 use impacts, we should try and avoid those through the  
3 IRP process through that capacity expansion modeling  
4 that you're talking about?

5 A Yeah. I'm not sure I would phrase it that way.  
6 I'm just familiar with technical modeling does not allow  
7 certain resources to be built in certain areas according  
8 to these land use screens.

9 Q Well, prohibition sounds much stricter than  
10 points on a cost benefit analysis so . . .

11 And the last question on this proposed decision  
12 on CBD-02, again on page 79 to 80 the -- right under the  
13 Busbar bets summarizes -- the PB summarizes the ALJ  
14 ruling by saying that IRPs should also incorporate  
15 information on critically overdrafted groundwater  
16 basins.

17 Do you see that part?

18 A Page number, please.

19 Q Page 79. Eighty. Sorry.

20 A Is this after land use?

21 Q Let me pull it up. Yes.

22 A There's quite a few bullet points. I'm trying  
23 to find the right one.

24 ALJ LAU: Mr. Lin, can you repeat the bullet  
25 point. Is it the one that is adding --

1 MR. LIN: Yes.

2 Q Incorporating information on critical  
3 overdrafted ground water basins.

4 A I see.

5 Q So in other words, the IRP wants to make sure  
6 that we don't draw further through electricity  
7 generation from overdrafted groundwater basins. And the  
8 IRP tries to avoid water quality and quantity impacts as  
9 related to these groundwater basins.

10 Do you agree?

11 MR. SEZGEN: Objection, your Honor. It's a  
12 leading question based on a contextual decision here  
13 that you haven't frankly had a lot of time to read. And  
14 so if Counsel could keep his questions more direct  
15 rather than, I think, phrasing them as the answer that  
16 he's been doing.

17 ALJ LAU: I agree with the objection.

18 So, Counsel, can you just kind of, you know,  
19 rephrase your question or relate it to more to  
20 Mr. Wray's testimony.

21 BY MR. LIN:

22 Q So given the -- given what you just said about  
23 the capacity expansion models and how land-use screens  
24 are applied there, do you agree that it's applying the  
25 similar information or prohibitions through certain

1 filters or screens in regards to overdrafted groundwater  
2 implies that the IRP also tries to avoid water quality  
3 and quantity impacts?

4 A I'm not familiar with how the IRP deals with  
5 water quality issues.

6 Q Okay. Moving on to resiliency, which is in  
7 your rebuttal testimony starting at page 37, line one.

8 ALJ LAU: Mr. Lin, we'll let Mr. Wray get  
9 there.

10 THE WITNESS: Okay.

11 BY MR. LIN:

12 Q You state similar to the prior witness from CUE  
13 that resiliency is a private benefit. And I'm going to  
14 ask you the same question that we asked the previous  
15 witness about Puerto Rico and two hurricane events, one  
16 in 2017 that resulted in many deaths because of outages,  
17 the bulk system as people were unable to run life-saving  
18 medical equipment or refrigerate life-saving medicine.  
19 2021 another hurricane but homes and essential community  
20 services that had rooftop solar with battery storage did  
21 not lose power.

22 Given the comparisons of those two unfortunate  
23 events in Puerto Rico, do you agree that certain energy  
24 resources offer more resiliency benefits than others?

25 A Maybe -- let me correct one thing. So I think

1 my testimony states that the Commission has reinforced  
2 that private resiliency benefits from solar and storage  
3 are not appropriate for the ACC. That was a more  
4 accurate reading of my testimony on the issue.

5 Now, could I have the rest of the question,  
6 please.

7 Q Yes. If given those two hurricane events,  
8 unfortunately 2017 bulk system damaged, unfortunate  
9 deaths and in 2021 another hurricane, homes with -- or  
10 essentially community services that had local generation  
11 with battery storage, not losing power, not having as  
12 many casualties, would you agree that certain energy  
13 resources offer more resiliency benefits than others?

14 A I think it's highly situational dependent and I  
15 think it would depend on the type of mitigation that is  
16 being built to provide resiliency for the specific  
17 circumstance or group of individuals. So it really  
18 depends on the location at the need, the timing of the  
19 need, the quantity of the need. But I think it's too  
20 broad of a question to say that certain types of  
21 resources would provide more resiliency benefits than  
22 others.

23 Q Okay. Would one of those criteria be whether  
24 it's a system based on the bulk system where there are  
25 multiple -- where one single point could disrupt the



1 entire system versus a local generation system where  
2 local generation is not affected by the outages to the  
3 bulk system?

4 A I think in the hypothetical where there is the  
5 reliance on the bulk system, there's many potential  
6 mitigations to provide resiliency to certain areas.

7 Q Would community solar and storage have to also  
8 have mitigation diversity?

9 A I think for one they would have to have the  
10 ability to safely disengage from the (indecipherable)  
11 island. That would be one.

12 Q Okay. Going to the private benefits that you  
13 referenced to the ACC -- apologies for getting the  
14 quotes to your testimony wrong. But essentially  
15 community services include possible clinics and  
16 community centers. Do you agree that these essential  
17 community services provide community benefits?

18 A Yes.

19 Q And as disadvantaged communities have been  
20 historically exposed to more health damaging pollutants,  
21 disadvantaged communities face higher risk with less  
22 resilient infrastructure. Is that fair to say?

23 A I think it's somewhat of a compound question  
24 and I think it's somewhat broad. I'm not sure which  
25 risks you're referring to as the disadvantaged

1 communities.

2 Q Risk to public health generally.

3 A Risk again is somewhat broad. So risk to  
4 public health from -- from what exactly?

5 Q Natural disasters, power outages, ability to  
6 recover from natural disaster, fatalities unfortunately.

7 ALJ LAU: Mr. Lin, can you rephrase your  
8 question or provide more clarity. I think we all lost  
9 the chain of the question.

10 MR. LIN: No problem, no problem. We have a  
11 lot of research on this one so I might just be being a  
12 bit unfair to Mr. Wray right now. Sorry. But the point  
13 is seeing if Mr. Wray agrees with the proposition that  
14 environmental justice communities are hit first and  
15 worse by the impacts of climate change.

16 MR. SEZGEN: Objection. This is kind of broad  
17 and speculative at this time.

18 MR. LIN: I can move on, your Honor.

19 ALJ LAU: Yeah. Okay.

20 BY MR. LIN:

21 Q Now, I'm not deliberately trying to make you  
22 jump all over the place. Sorry. But going back to your  
23 opening testimony at page 43, beginning at line 12.

24 A Okay. I've got it.

25 Q Your testimony discusses the societal cost of

1 test impact evaluation and that how it anticipates  
2 increased rates with the consideration of social costs  
3 and implementation of a societal cost test. Is that  
4 correct?

5 A That's not an exact quote. I can read it if  
6 you'd like.

7 Q Oh, is that a correct paraphrase? I'm sorry.  
8 I was trying to save us time.

9 A Sort of. I believe that testimony refers to  
10 the societal cost test impact evaluation report and  
11 quotes that that report found that any increased  
12 benefits shown by societal cost tests relative to a TRC  
13 or society benefits rather than ratepayer benefits and  
14 therefore basing cost effectiveness on an SCT could  
15 increase cause and increase to rates which is a quote  
16 from that report.

17 Q Great. And are you familiar with the  
18 assumption that that conclusion was based on in that  
19 report?

20 A Sadly, yes. And some of the assumptions, yes.

21 Q Is one of the assumptions that increase  
22 resource procurements would be paid for through electric  
23 rates alone?

24 A So I don't believe the Commission necessarily  
25 quantified the impacts or increase to rates as a result

1 of including societal adders in the ACC, but they --  
2 positive that it's including the societal adders could  
3 cause an increase to rates if those increased costs of  
4 the DER measures were paid for through rates.

5 Q And only rates; is that correct?

6 A So I think the proposition was that if those  
7 increased costs were paid for through rates, they could  
8 cause an increase of rates, yes. ]

9 ALJ LAU: Mr. Lin, can I interrupt you? Just  
10 make sure the -- because when you have two people  
11 talking, it is really hard for the hearing reporter, so  
12 wait for Mr. Wray to finish speaking before you correct  
13 it or offer additional questions -- follow-up questions.

14 Thank you.

15 MR. LIN: Apologies.

16 Q Mr. Wray, no more interruptions from me.  
17 Sorry.

18 Are there -- do you disagree that there are  
19 federal and state subsidies available for DERs?

20 A No.

21 Q So, is it fair to say that given those  
22 alternative funding streams, federal and state  
23 subsidies, not all resource procurement for DERs will be  
24 from ratepayers?

25 A Yes, I think with the availability of federal

1 funding or non-ratepayer funding, not all spending on  
2 DERs will necessarily be captured or collected through  
3 utility revenue requirements and rates; however, the  
4 funds do have to be collected somewhere.

5 Q Okay. And then sticking to your opening  
6 testimony, moving onto state climate policy. Starting  
7 at page 43, line 9, again this is on your opening.

8 A Okay.

9 Q You talk about how the core principles proposed  
10 by the Joint IOUs will make sure that we right-size  
11 budget or help decision makers right-size budget and  
12 incentives.

13 Do you see that part?

14 A Yes.

15 Q And right-sizing budgets is -- are you --  
16 you're referring to procuring more resources whether  
17 it's DERs, whether it's multiple system resources,  
18 nuclear, wind, whatever?

19 A And again, here, I am more referring to DER  
20 customer programs.

21 Q Budgets for customer programs, that's what you  
22 mean?

23 A That's right.

24 Q Okay. And do you agree that the state's  
25 climate policy is to achieve our climate goals and avoid

1 disproportionate impacts of pollution on disadvantaged  
2 communities?

3 A Are you referring to any place in my testimony,  
4 or is that a general question?

5 Q Just generally.

6 A I think achieving environmental goals,  
7 minimizing impacts to disadvantaged communities are two  
8 of the many goals that the state and the CPUC have to  
9 balance.

10 Q And wouldn't you agree the procurement of an  
11 investment in energy resources including in DER customer  
12 programs should be geared toward meeting our climate --  
13 our climate goals?

14 A I guess I would amend that to say that DER  
15 customer programs and procurement should be geared  
16 towards cost effectively meeting our climate goals in a  
17 least cost manner.

18 Q Okay. Let's see going onto -- still in your  
19 opening testimony, the next page, page 44, line 3.

20 You have a heading: The ACC Should Reflect  
21 Costs That Are Universally Avoided By All DERs.

22 A Yes, sir.

23 Q The current ACC includes avoided transmissions,  
24 correct?

25 A Yes, that's one of the categories.

1 Q So, the -- the current ACC right now, are you  
2 satisfied with the current ACC and that it covers -- it  
3 satisfies this heading that the current ACC univer --  
4 includes factors that are universally avoided by all  
5 DERs?

6 A Can you repeat the question?

7 Q Does the current ACC include -- do all of the  
8 factors included in the current ACC universally avoid --  
9 or reflect costs universally avoided by all DERs?

10 A No. We have sections of testimony, mine and  
11 others from the IOUs, that suggest there are certain  
12 costs that are currently included in the ACC that do not  
13 universally -- do not reflect universally avoided costs  
14 by all DERs.

15 Q Oh, but avoided transmissions is in there right  
16 now?

17 A It's currently in there, yes.

18 Q Okay. And avoided transmission build out can  
19 avoid impacts to the environment including by not having  
20 to build large transmission lines or projects, we can  
21 avoid impacts to biodiversity and sensitive habitats; is  
22 that correct?

23 A I don't believe that is part of my testimony,  
24 so.

25 Q Okay.

1           The current ACC includes the value for avoided  
2 natural gas infrastructure; is that correct?

3           A     Yeah, and I'll -- I will just clarify, the  
4 avoided gas infrastructure cost is categorized, but it's  
5 somewhat separate from the hourly marginal avoided costs  
6 that are applied more on an even or peanut butter basis  
7 to all DERs, which is, essentially, a separate  
8 standalone calculation to avoid gas infrastructure  
9 costs.

10          Q     Okay. And the avoided natural gas  
11 infrastructure can also avoid local air pollution?

12           MR. SEZGEN: Objection. Calling for  
13 speculation, I think. Beyond the scope of the  
14 testimony.

15           ALJ LAU: I do agree. So, it is beyond the  
16 scope of Mr. Wray's testimony.

17 BY MR. LIN:

18          Q     Okay. One more that may also be beyond the  
19 scope, but we will see.

20           Industrial processes create greenhouse gases  
21 through combustion. Co-pollutants, such as particulate  
22 matter are released into the atmosphere when GHGs are  
23 created, degrading local air quality.

24           So, if we avoid GHG, we also avoid  
25 co-pollution. Do you disagree with that one?



1           MR. SEZGEN: This is a similar objection that  
2 this is sort of beyond the scope of Mr. Wray's testimony  
3 here for the guiding principles.

4           MR. LIN: Okay. Well, what I am trying to get  
5 at, your Honor, is that the factors in the ACC --  
6 Mr. Wray's testimony states that all the factors in the  
7 ACC should be -- should be applicable to all DERs. I am  
8 just trying to show that all of these avoided costs that  
9 are linked to all of these factors in the current ACC  
10 also apply to all DERs as well.

11           ALJ LAU: I actually lost -- can you ask the  
12 question again and see if it's...

13           MR. LIN: Well, your Honor, this exceeds the  
14 relevancy of the question. The scope of Mr. Wray's  
15 testimony is that the ACC should reflect costs that are  
16 universally avoided by all DERs. I've run through some  
17 of the factors in the current ACC -- avoided  
18 transmission, avoided natural gas infrastructure and  
19 avoided GHGs, and a lot of the social benefits whether  
20 it's land-use impact, water and air quality impacts,  
21 co-pollutant impacts are linked to those factors that  
22 are in the ACC right now.

23           So, going back to Mr. Wray's testimony, the  
24 Joint IOUs are arguing that only avoided costs that  
25 apply to every single DER should be in the ACC. I am

1 trying to get at, well, if these factors are currently  
2 in the ACC, then all of the other factors that accompany  
3 these current ACC factors should also be in the ACC.

4 Well, I will stop there. I will rephrase that  
5 one sorry -- are also costs that are universally  
6 applicable to all DERs as well.

7 ALJ LAU: So, based on your line of connection,  
8 what is the ultimate question? Can you specify that  
9 question for Mr. Wray?

10 MR. LIN: Just trying to --

11 Q All right. Mr. Wray, can you clarify whether  
12 the -- is it PG&E's position to believe that the  
13 co-pollution exists? That GHGs are not created in a  
14 vacuum. If we burn something, we emit GHGs, but we also  
15 emit co-pollutants. Is that something that PG&E  
16 acknowledges?

17 A So, going back to the testimony, costs that are  
18 universally avoided by all DERs. The purpose of this  
19 section was to get across that certainly co-pollutants  
20 do exist from various fossil combustion sources. I  
21 don't disagree with that.

22 The purpose of the ACC is not to necessarily  
23 capture specific sources of -- of co-pollutants or even  
24 find solutions to -- to those issues; it's to capture  
25 marginal costs that would be avoided through load

1 reduction. Certainly, DERs may help in some way  
2 contribute to lowering co-pollutants; however, that is  
3 certainly not a universal truth.

4           Some DERs may be better than others.  
5 Appropriately targeting and citing DERs to solve that  
6 need would probably be more appropriate than including a  
7 peanut buttered benefit or adder, that would apply to  
8 all DERs whether they truly do avoid that co-pollutant  
9 or not.

10         Q     But we have acknowledged through the ACC that  
11 we are avoiding a certain amount of GHGs, doesn't it  
12 necessarily follow that we are also avoiding the  
13 co-pollutants that come with those GHGs?

14         A     The way the ACC captures that is through the GH  
15 -- the marginal cost of the GHG abatement, which comes  
16 from the IRP. So, that avoided cost, if there is a  
17 co-pollutant associated with it, it would already be  
18 reflected by the GHG marginal cost of the abatements.

19         Q     Okay. Moving on, just three more questions.  
20                 Going to your rebuttal testimony now, page 36,  
21 line 10.

22         A     Okay.

23         Q     Well, line -- starting at line 9, you talk  
24 at -- is it fair to say that 9 -- lines 9 and 10 is  
25 focusing on job -- job benefits, but is it the Joint

1 IOUs' point that we shouldn't consider the job benefits  
2 of DERs because doing so would create -- wouldn't allow  
3 for an apples-to-apples comparison with -- if we don't  
4 consider the job benefits of other resources?

5 Is that what your testimony is getting at?

6 A Yes. So, this section of testimony is  
7 responding to proposals to create a local economic  
8 benefit through jobs benefit adder.

9 I think the -- the purpose of this testimony is  
10 to say that this would skew the analysis of various  
11 classes of resources if we are including a monetary  
12 benefit for one class of resources while not including  
13 it for another class of resources.

14 Q Okay. So, when we were comparing them, right,  
15 like, when we are comparing with another one, if we  
16 consider job benefits here, it's (indecipherable)  
17 because we are not considering job benefits there; is  
18 that right?

19 A I think even beyond that, it's a -- it's a  
20 somewhat difficult -- a difficult benefit to quantify  
21 generically, because different energy projects have  
22 different cost structures, different types of employees.

23 So, it's not really suitable to include in a  
24 generic marginal cost calculator like the ACC.

25 Q And the ACC is used to value compensation in

1 the net billing tariff. Are you familiar with the net  
2 billing tariff?

3 A Yes, I am.

4 Q Okay. And are you familiar with the proposals  
5 in the CPUC's community solar proceeding?

6 A Yes, I am.

7 Q Where the ACC is likely to be used to value  
8 bill savings but as a tool to value DERs? Well, the --

9 A I --

10 Q -- compensation that people receive, sorry.

11 A Right. Yes, I'm -- I'm familiar with some of  
12 those proposals.

13 Q So, is it fair to say that in those two  
14 instances, the net billing tariff and community solar,  
15 the ACC is not being used to compare the value of DERs  
16 to other energy resources? Those proceeding are just  
17 looking at what the ex -- what is the value that we  
18 give -- we provide customers who use DERs?

19 A The -- the ACC was used in the NEM -- the net  
20 engineering proceeding to evaluate the cost  
21 effectiveness of the legacy and future rooftop solar  
22 policy. So, no, it's not solely used for export  
23 compensation for the net billing tariff.

24 Similarly, in the community solar proceeding,  
25 the ACC use -- was used as a cost effectiveness screen.

1 Q But in those two programs, though, isn't the  
2 ACC used as -- to determine the value that -- in NEM for  
3 export compensation, in community solar for similar bill  
4 savings?

5 A The ACC is being used to calculate and provide  
6 export compensation credits to customers in the net  
7 billing tariff. The community solar proceeding is not  
8 concluded, so I am not sure.

9 Q Okay. Okay. Your rebuttal testimony, page 36,  
10 line 3. You cite to our opening testimony about using  
11 studies -- DER-specific studies from other  
12 jurisdictions.

13 Do you see that?

14 A Yes.

15 Q So, Arizona -- our opening testimony states  
16 that Arizona, New Jersey, Pennsylvania, have estimates  
17 for avoiding water quality and quantity impacts from  
18 DERs.

19 These are other jurisdictions, but it shows it  
20 can be done. Just because there is no current  
21 methodology in California to do the same, don't these  
22 avoided impacts still provide some societal value even  
23 though we haven't quantified or qualitatively considered  
24 them?

25 A So, for this particular quote, the heading for

1 the paragraph is NEB, such as local economic  
2 developments. So, I believe referring to studies in  
3 other jurisdictions was more referring to the local  
4 economic development, societal or -- or nonenergy  
5 benefits.

6 Can you repeat the question?

7 Q Yeah, we've used the same question for jobs.  
8 Same question applies here whether we are talking about  
9 water or air quality or jobs, but just because there's  
10 no methodology adopted in California, does that mean the  
11 societal value is zero?

12 A It doesn't necessarily mean that the societal  
13 value is zero, but I would still caution against  
14 including something that is somewhat difficult or so  
15 generic as to be meaningless in a calculator that is  
16 supposed to calculate the marginal cost of providing  
17 electric and gas service. Not to say that those  
18 benefits couldn't be calculated elsewhere and outside of  
19 the avoided cost calculator, which is part of the  
20 Commission's cost-effectiveness processes to -- part of  
21 the overall cost-effectiveness framework to allow  
22 parties to propose alternative benefits outside of the  
23 primary energy benefits calculated in the ACC.

24 Q And related to that -- related to that point --  
25 sorry -- about that specific benefits should be

1 considered in programs-specific proceedings. The -- we  
2 call this kicking the can down the road, and the road  
3 seems to be endless, but are you aware of any  
4 proceedings that adequately consider nonenergy benefits  
5 or social costs as far as increasing the value of DERs?

6 A I can't point to a specific study or value, but  
7 I am aware within the energy saving assistance program,  
8 there are multiple categories of nonenergy benefits that  
9 are included in cost-effectiveness evaluations of  
10 low-income energy efficiency programs that are  
11 administered by the utilities.

12 Additionally, in the demand response cost  
13 effectiveness protocols, applicants are allowed to  
14 propose quantities of nonenergy benefits within their  
15 applications, so regardless of whether a specific value  
16 exists, the opportunity is there to propose values where  
17 they make sense.

18 Q In the energy efficiency and demand response  
19 proceedings that you referenced, though, aren't  
20 nonenergy benefits and social costs treated as metrics  
21 for all the utilities to meet versus actual increasing  
22 the value of DERs?

23 A I -- I can't say how any values quantified  
24 there are used for decision making.

25 Q Okay.



1 ALJ LAU: Mr. Lin, I just want to do a time  
2 check. We are 20 minutes over time.

3 MR. LIN: Okay, last question.

4 Q Thank you for your time, Mr. Wray. Based on  
5 your experience -- this is not in your testimony, but  
6 based on your experience as a revenue requirements  
7 analyst at PG&E, would you agree that one of the dangers  
8 to utility shareholders from the increasing growth of  
9 DERs is that the investments made by individuals with  
10 their own money may supplant investments that the  
11 utility may otherwise have be able to make and earn a  
12 return on for the benefit of their shareholders?

13 A So, this is fairly out of scope of what I  
14 focused on here, but I would say that when evaluating  
15 the cost effectiveness of the DER customer program or  
16 resource, you should compare the -- the cost of that  
17 resource to a cost of the supply-side investment  
18 inclusive of financing costs or any other costs that  
19 might be required to effectuate that investment.

20 So, to the extent that a rate of return is  
21 included in the cost of the supply-side investment and  
22 DER is more cost effective in meeting that need, then  
23 the DER solution would be the one selected; and that's,  
24 I think, part of the Commission's cost-effectiveness  
25 framework and just part of the Loading Order generally.

1 Q And would that be a disadvantage to utility  
2 shareholders?

3 MR. SEZGEN: Objection, speculation. The  
4 disadvantage to the utility shareholder is fairly  
5 complex and out of the scope of Mr. Wray's testimony.

6 ALJ LAU: Objection sustained. I agree. It's  
7 pretty out of scope of Mr. Wray's testimony.

8 MR. LIN: Okay. Then thank you for your time,  
9 Mr. Wray.

10 THE WITNESS: Thank you.

11 ALJ LAU: All right.

12 Mr. Sezgen, do you have any redirect for  
13 Mr. Wray?

14 MR. SEZGEN: No, I do not, your Honor.

15 ALJ LAU: All right. Sounds good.

16 Mr. Wray, I believe that concludes your  
17 testimony -- oh, no, hold on, I am wrong. I believe we  
18 have two other parties who want to cross --  
19 cross-examine you, so we will -- we concluded the  
20 cross-examination from Mr. Lin; and we will take a  
21 15-minute break.

22 Let's get back by 3:40. Now, it's 3:25. Let's  
23 get back at 3:40, and when we get back, we will have  
24 Ms. Armstrong to conduct the cross-examination, okay?

25 Let's go off the record and go on break.

1 (Off the record.)

2 ALJ LAU: Let's go back on record. We  
3 concluded cross-examination of Mr. Wray by Mr. Lin.

4 Now, we have Ms. Armstrong that will be  
5 cross-examining Mr. Wray.

6 Ms. Armstrong, can you introduce yourself?

7 MS. ARMSTRONG: Yes. Jeanne Armstrong for the  
8 Solar Energy Industries Association.

9 ALJ LAU: You may now begin -- proceed with the  
10 cross-examination.

11 CROSS-EXAMINATION

12 BY MS. ARMSTRONG:

13 Q Great, thank you.

14 Good afternoon, Mr. Wray. You are the Joint  
15 IOU's witness with respect to the methane leakage adder,  
16 correct?

17 A Correct.

18 Q And would you consider methane to be a potent  
19 greenhouse gas?

20 A I believe we stated in testimony that it is,  
21 yes.

22 Q Okay. And are methane emissions a significant  
23 contributor to climate change?

24 A I'm not an atmosphere scientist, so I -- I  
25 can't say the -- the percentage contribution accurately

1 but, yes, they -- they are a big contributor.

2 Q Is there methane leakage associated with the  
3 production, gathering, processing and pipeline  
4 transportation of natural gas borne in -- burned in  
5 California to produce electricity?

6 A To my knowledge, yes, there is some leakage  
7 associated with those activities.

8 Q Does the development of new renewable  
9 generation and storage projects in California result in  
10 the substitution of renewable fuels, such as the sun, to  
11 assess the issue of renewable fuel storage for natural  
12 gas in the generation of electricity?

13 A Solar facilities rely on the sun to produce  
14 electricity so, no, they would not rely on natural gas.

15 Q No, I'm -- I'm asking you whether the  
16 development of new renewable generation result in the  
17 substitution of renewable fuels for natural gas in the  
18 generation of electricity?

19 A Yes. Over a long enough time, there is a -- it  
20 could result in less natural gas used to provide  
21 electricity.

22 Q Okay. And it is the target of California to  
23 have retail customers served with 100 percent clean  
24 energy by 2045?

25 A Are you referring to a specific legislative

1 target?

2 Q Yes.

3 A That sounds right. It might be based on retail  
4 sale, I -- I am not sure, depending on which legislative  
5 target you're referring to, but that sounds generally  
6 accurate.

7 Q Okay. Would you agree that by 2045, there'll  
8 be substantially less natural gas burned to produce  
9 power in California? ]

10 A Yes, I think so.

11 Q And would you agree that by 2045 there will be  
12 significantly -- I'm sorry -- significantly less methane  
13 leakage associated with producing and transporting  
14 natural gas use for power generation in California?

15 A I'm not sure if there is a direct connection or  
16 correlation there. Certainly there could be less  
17 methane leakage within California by 2045.

18 Q But, in your opinion, some of that reduction  
19 would not be associated with the reduction in the  
20 production and transportation of natural gas?

21 A There could be some association if there is  
22 essentially less mileage or less of those pipelines  
23 delivering natural gas. I would agree that there would  
24 likely be less methane leakage.

25 Q Okay. If I could get you to turn to page 32 of

1 the IOU's opening testimony, Exhibit IOU-01.

2 A Okay.

3 Q Okay. And I'm looking at the header. It's on  
4 line 25. And you sponsor a section that's entitled  
5 Methane Leakage Adders Should be Applied only for Fuel  
6 Substitution Programs.

7 What do you mean by "fuel substitution  
8 programs"?

9 A I mean by programs that substitute the use of  
10 natural gas and end-use appliances for electric end-use  
11 appliances, like switching from a gas furnace in a home  
12 to an electric heat pump.

13 Q So you're only talking about electrification?

14 A Yeah. It's commonly referred no as fuel  
15 substitution in the EE parlance, but yeah.

16 Q Okay. So with that definition in mind, would  
17 you describe the state's SB 100 goal of 100 percent  
18 clean electricity by 2045 as a fuel substitution goal?

19 A I don't think I would describe it that way.

20 Q So, in your opinion, the substitution of clean  
21 fuels like -- you know, like the sun and the wind for  
22 natural gas in the production of electricity is not fuel  
23 substitution?

24 A Not in the way I'm referring to it here in this  
25 testimony, no.

1 Q Okay. On page 33 of your testimony, starting  
2 at line 5 -- at the very end of line 5, you state:

3 The joint IOUs support including  
4 calculation of benefits of reduced methane  
5 leakage or reduced zonal electrification  
6 costs as a result of nontargeted  
7 electrification programs.

8 What is a nontargeted electrification program?

9 A Yeah. Here I'm referring to programs that  
10 might incentivize fuel substitution but that are not  
11 targeted at a particular location or particular customer  
12 class or particular load profile. These would be  
13 programs built around electrification broadly,  
14 one-appliance-in, one-appliance-out sort of thing across  
15 the state of California.

16 Q Do you have -- can you give me an example of a  
17 specific program that would meet your definition of a  
18 nontargeted electrification program?

19 A I think one example would be -- I believe it's  
20 referred to as the Tech Program, so incentives  
21 distributed by the state to help with the adoption of  
22 heat pumps and electrification devices.

23 Q Okay. And based on your definition of a  
24 nontargeted electrification program, am I correct that  
25 you would not consider the net billing tariff a non -- a

1 nontargeted electrification program?

2 A I would consider that nontargeted, and I would  
3 not consider it an electrification program.

4 Q Okay. So based on your testimony in this  
5 section, is it your proposal that the methane leakage  
6 adder component of the A -- well, let me rephrase that.

7 If the Commission were to adopt your proposal  
8 here in this section of your testimony, would one of the  
9 results be that the methane leakage adder component of  
10 the ACC would be removed from the export rates paid to  
11 customers under the net billing tariff?

12 A Yes.

13 MS. ARMSTRONG: Okay. Thank you. That's all  
14 the questions I have.

15 ALJ LAU: Mr. Sezgen, do you have any redirect  
16 for Mr. Wray?

17 MR. SEZGEN: No, I do not, your Honor.

18 ALJ LAU: Thank you, Ms. Armstrong. You may  
19 mute.

20 Let's bring Andrea White on the screen.

21 Let's go off the record.

22 (Off the record.)

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

24 We have Ms. White. Ms. White, can you  
25 introduce yourself and the organization you're



1 representing.

2 MS. WHITE: Okay. So I'm Andrea White, and I'm  
3 representing the Protect Our Communities Foundation.

4 ALJ LAU: Thank you, Ms. White. You can -- you  
5 may begin your cross-examination of Mr. Wray.

6 CROSS-EXAMINATION

7 BY MS. WHITE:

8 Q Okay. So first, Mr. Wray, I would like to  
9 direct you to your opening testimony beginning on page  
10 31 starting at line 29.

11 A Okay.

12 Q Okay. Good. So here you say:

13 The joint IOUs request the Commission  
14 provide guidance as to whether the ACC  
15 should be adjusted.

16 So when you say that the ACC should be  
17 adjusted, are you referring to avoided transmission  
18 costs?

19 A No.

20 Q You are not. Okay. So what are you referring  
21 to then?

22 A I'm referring to the transmission loss factor  
23 and planning reserve margin which are adders to the  
24 overall benefits provided to demand response resources  
25 and demand response cost-effectiveness calculation.

1 Q Okay. And directly above that, I see that  
2 you -- you have a large quote that cites to a decision  
3 in which you quote the decision which states:

4 We acknowledge that the Commission avoided  
5 cost calculator includes avoided  
6 transmission line losses for distributed  
7 energy resources and that the Commission is  
8 undertaking an effort in the distributed  
9 energy resources cost-effectiveness  
10 proceeding to further study and refine the  
11 value of those avoided line losses.

12 So just to clarify on -- when you're asking the  
13 Commission to provide guidance, aren't -- didn't that  
14 decision you quoted already say the Commission was going  
15 to provide guidance?

16 A Sorry. Can you clarify "provide" -- provide  
17 guidance with respect to the line losses or something  
18 else?

19 Q Yeah. So the quote you reference specifically  
20 mentions avoided transmission line losses for  
21 distributed energy resources. And then it says:

22 In this proceeding, there will be further  
23 study and refinement.

24 So do you think the Commission has already  
25 directed -- I just wanted to understand why you're

1 recommending that they provide guidance?

2 A So the quote notes that the CPUC is undertaking  
3 an effort for further study and refinement of avoided  
4 line loss values. To my knowledge, that study hasn't  
5 been completed. Were it to be completed within this  
6 proceeding, if they do provide guidance on the line loss  
7 factors, that should also flow into the avoided cost  
8 calculator and downstream into demand response  
9 cost-effectiveness analysis.

10 Q Okay. Thank you. Okay. Now I would like to  
11 move to your rebuttal testimony. So this is on page  
12 38 -- okay -- and, specifically, lines 6 through 10. So  
13 you say:

14 Developing a system-wide approximation to  
15 include in the ACC is not appropriate given  
16 the highly locational nature of resiliency  
17 initiatives, and doing so will almost  
18 certainly ascribe benefits to nontargeted  
19 DER adoption that are not reflective of  
20 system-wide avoided costs.

21 So are you familiar with the system-wide costs  
22 involved in any of the electric utilities wildfire  
23 mitigation proposal?

24 A No.

25 Q Okay. And are you familiar with the

1 system-wide costs involved in the SDG&E's wildfire  
2 mitigation proposals?

3 A No.

4 Q Okay. Do you have any knowledge whether the --  
5 what the utilities' estimated undergrounding costs per  
6 mile are?

7 MR. SEZGEN: Objection, your Honor. This is  
8 beyond the scope of Mr. Wray's testimony.

9 ALJ LAU: Sustained.

10 BY MS. WHITE:

11 Q Okay. I'll move on then. So essentially what  
12 I'm getting at is since wildfire threat is treated as a  
13 system-wide problem that all ratepayers are facing,  
14 doesn't it make sense to treat wildfire as a  
15 system-wide -- sorry -- wildfire risk reduction solution  
16 as -- on a system-wide basis?

17 A I think it's a large problem to tackle, and I  
18 agree that we should look at as many cost-effective  
19 solutions as possible to increase resiliency. But the  
20 solution in one area of the grid will likely not be the  
21 same as the solution in another area. And these  
22 projects should be looked at on a specific basis to  
23 understand the benefits, the costs and the cost  
24 effectiveness of various approaches to mitigating --  
25 mitigating disruptions or increasing resiliency.

1 Q Okay. Related to that, do you think that  
2 assuring -- in your opinion, assuring grid reliability  
3 under high-fire threat conditions constitutes a  
4 system-wide benefit?

5 A I'd say generally that impact from wildfires or  
6 service disruptions won't happen unilaterally across the  
7 system. So the impacts could be different in different  
8 places.

9 Q Okay. I will move on to my next set of  
10 questions. Okay. So going back to your opening --  
11 let's see. Just going to look at my -- ah. Okay. So  
12 turning to page 32, which -- specifically the section  
13 about NDT output. Okay. So --

14 A Yeah.

15 Q -- this is just a clarifying question. So on  
16 line 6 through 7, you refer to a standardized output  
17 sheet. So I just wanted clarification on what that  
18 would refer to?

19 A Here I'm referring to the net billing tariff.  
20 And within the net billing tariff, any export from net  
21 billing tariff systems would be credited at an ACC value  
22 or export compensation rate. And what I'm referring to  
23 as the standardized output sheet is just sort of a list  
24 of those avoided cost calculator values to be used in  
25 the net billing tariff export compensation rate. So

1 it's a separate --

2 Q Okay.

3 A -- like a separate output sheet for ACC export  
4 rate.

5 Q Okay. Is this something that has been  
6 published by the Commission previously?

7 A I believe within the modeling and the net  
8 energy metering proceeding they did produce export  
9 compensation rates from the ACC for analysis of various  
10 net energy metering successor proposals. So it is  
11 analysis that has been done within the Commission.  
12 However, the utilities, I believe, were required to  
13 provide their own export compensation rates in advice  
14 letters for the net billing tariff.

15 Q Okay. Thank you. So in response in -- later  
16 in this section, on lines 15 through 16, you state:

17 The joint IOUs believe all stakeholders  
18 would be better served by having these  
19 values directly calculated in the ACC  
20 update process.

21 So do you think, in your opinion, when you say  
22 "all stakeholders," that simplifying the process to  
23 update export compensation rates would also benefit  
24 ratepayers with NEM solar?

25 A I think in the testimony I refer to both

1 industry and the Commission. I think it could also  
2 benefit potential solar customers. If the export  
3 compensation -- compensation rates were produced in  
4 parallel with the final ACC model, they would be  
5 available sooner so customers would have more advanced  
6 knowledge of what those export compensation rates are,  
7 and we wouldn't have to wait for another process where  
8 the utilities separately calculate them, provide an  
9 advice letter and then have them adopted in the tariff.

10 Q Okay. And do you think that this process that  
11 you recommend of updating how the export compensation  
12 rates are published would reduce the opportunity for  
13 ratepayers to comment on these export compensation  
14 rates?

15 A No, I don't believe so. I suggested that they  
16 could be provided through the resolution process which  
17 allows for public comment.

18 Q Okay. So do you think it's important that  
19 ratepayers are able to comment on these export  
20 compensation rates?

21 A Yes. I believe stakeholder engagement, public  
22 comment is important.

23 Q Okay. And you think it's important that  
24 ratepayers are able to understand the calculations being  
25 utilized in the ACC?

1 A Not necessarily, no.

2 Q Okay. Would you think that it's important  
3 directly related to export compensation rates?

4 A From this perspective?

5 Q The ratepayers. Well, yeah, the ratepayers.  
6 Is it important from the ratepayers' perspective that  
7 they are able to understand the calculations?

8 A In the avoided cost calculator?

9 Q Sorry. Is it -- I will rephrase my question.  
10 Do you think that it is important for  
11 ratepayers that they understand the export compensation  
12 rates that you suggest should be published in this  
13 process by the Commission?

14 A So I would say for prospective solar adopters I  
15 think it is important to understand the economics of  
16 their decision making. And so the export compensation  
17 rates are a part of those economics. So I think it's  
18 important that those are transparently presented to the  
19 public so they can make decisions.

20 Whether it's important that they understand all  
21 of the mechanics of the ACC, I don't think that's as  
22 important.

23 Q Okay. Makes sense. Okay. So I am going to  
24 move to -- let's see -- page 35 of your opening  
25 testimony. Okay. So this is in the section about



1 methane leakage adders. And so starting at line 14 on  
2 page 35, you -- and which you're quoting the 2020 ACC  
3 documentation. So the quote acknowledges that as part  
4 of the natural gas distribution system are shutdown,  
5 methane leakage will decrease, correct?

6 I can also directly read the quote that I'm  
7 referencing if that would be more helpful.

8 A No, I think that's okay. I think this quote is  
9 generally saying that that's correct as part of the --  
10 parts of the gas system are pruned or decommissioned  
11 this will eliminate methane leakage.

12 Q So then continuing on that line of questioning,  
13 so you don't support including the long-term affects of  
14 electrification and how those will reduce methane  
15 leakage in the ACC, correct? And this is referring --

16 A Correct.

17 Q Yes. Sorry. Go on.

18 A Yeah. I'll just -- I'll just clarify. I think  
19 what I suggested was that the methane leakage adder, as  
20 it's currently constructed, should not be part of the  
21 hourly electric avoided costs or the -- I believe it's  
22 monthly natural gas avoided costs on a marginal basis.  
23 But I did indicate that the ACC could continue to  
24 publish leakage rates.

25 And for programs that do contribute to gas

1 decommissioning, it may be appropriate in those  
2 program-specific proceedings to quantify a benefit  
3 associated with reduced methane leakage or avoided gas  
4 decommissioning costs.

5 Q Okay. I'll just clarify as to that point. So  
6 on page 36, starting on line 3, I believe -- however, in  
7 the long term -- okay. In the long term, the joint  
8 IO -- I'm quoting here:

9 The joint IOUs agree that some pruning of  
10 the natural gas system will occur as a  
11 result of the state's electrification  
12 pathway.

13 Okay. So I -- that's essentially saying that  
14 as there's more electrification that there eventually  
15 will be less methane leakage because there will be  
16 fewer -- well, sorry. This is a -- this is too many  
17 questions -- but there will be fewer leaks.

18 A So the quote that you referenced, it goes on to  
19 state:

20 However, these efforts will be targeted,  
21 and coordinated efforts among stakeholders  
22 to pursue cost-effective zonal  
23 electrification in a combination of  
24 planning venues.

25 So I wouldn't describe it the way you just did,

1 that generalized nontargeted appliance switching will  
2 necessarily lead to pruning. I believe it takes a  
3 little bit more analysis and effort to target areas  
4 where we think it would be cost effective to  
5 decommission sections of the natural gas system and  
6 replace end uses with electric use -- end uses.

7 Q Okay. So then going back to my -- to my  
8 ultimate question, do you support including the  
9 long-term effects of electrification or the long-term  
10 effects of moving away from methane as part of the  
11 methane leakage adder in the ACC?

12 A No. I believe I stated in testimony I think  
13 this would be more appropriate for consideration in the  
14 societal cost test which already does include a methane  
15 leakage component in that analysis.

16 Q Yeah.

17 A So I think it's more suited for a long-term  
18 evaluation of societal benefits in the societal cost  
19 tests.

20 Q Okay. So moving on to the societal cost test  
21 then, you state in footnote 57 on page 33 that -- I'll  
22 allow you to get there. Sorry.

23 A Thank you. I'm there.

24 Q Yeah. Okay. So you state in footnote 57 that:

25 The societal cost tests should be limited



1 informational purpose will the long-term benefits be  
2 utilized for?

3 A I can't think of all the examples or ways it  
4 could be used now. I just provided one as sort of a  
5 tiebreaker, but there are other long-term planning  
6 studies that look at a variety of pathways that meets  
7 decarbonization targets that look more realistically at  
8 supply sight and demand sight resources rather than just  
9 one category of resources that ACC does. So in sort of  
10 those larger scoping efforts like the CARB scoping plan  
11 and other places where state policy and regulations are  
12 made, it might be informative to decision-makers to have  
13 an estimate of societal benefits.

14 Q Okay. So then, Mr. Wray, in your opinion is it  
15 appropriate to analyze the long-term benefits of  
16 electrification in reducing methane emissions through a  
17 method of analysis that is used for program approvals or  
18 determination of program budget?

19 A I think it would depend on the program. I  
20 think if there is a specified benefit for a program that  
21 is primarily focused on zone electrification or gas  
22 decommissioning, then it may make sense in those  
23 instances to include a methane leakage benefit and the  
24 calculation of the cost effectiveness of the program.

25 Q Okay. And so then has PG&E specifically

1 considered whether DERs can led to this long-term  
2 reduction in methane leakage?

3 A I can't name a particular analysis if that's  
4 what you're asking. I think generally through the IRP  
5 process and other planning in procurement venues, we  
6 look at all ways to cost effectively decarbonize.

7 Q Okay. So you're saying that if you have done  
8 such a thing, such a thing referring to DERs leading to  
9 the long-term reduction in methane leakage, that it  
10 would be in the IRP process?

11 A Not necessarily. I guess I was more generally  
12 stating that holistic planning exercises like the IRP or  
13 the carb scoping plan that look at pathways to  
14 decarbonization, you know, may consider these things.  
15 I'm not aware of a specific analysis that PG&E or any  
16 other folks have done that have showed a specific  
17 methane leakage reduction as a result of DERs.

18 Q Okay. I am going to move on to my next line of  
19 questioning. So on page 43 of your opening testimony  
20 starting at line 25.

21 A Okay.

22 Q Okay. So here you state nonenergy and capacity  
23 benefits or other energy-related benefits that are  
24 specific to one technology type should not be included  
25 in the ACC.

1           So to clarify it, in your opinion are you  
2 saying that if utilizing a specific technology type  
3 avoided the need for a transmission line, that is not  
4 something that should be incorporated into the ACC.

5           A     Here transmission is more of a general category  
6 of avoided costs in the ACC. Here I'm referring to  
7 non-energy system benefits or energy-related system  
8 benefits that might only be -- that might only be  
9 accrued or realized by a specific type of DER. I think  
10 the example of electrification is one where it's one  
11 specific type of DER that might result in a specific  
12 benefit which is not really appropriate for including in  
13 the ACC which is meant to capture generalized marginal  
14 costs on the system. So those -- the specified benefits  
15 shouldn't be included in the ACC.

16           Q     Okay. So when you reference technology type,  
17 do you include the solar plus battery storage as a  
18 technology type?

19           A     Yes.

20           Q     Okay. I'll move on to page 45 of your opening  
21 testimony starting at line 22. You state:

22                     When procuring for specific grid needs, the  
23                     IOUs use the least-cost, best-fit  
24                     evaluation framework."

25                     When you use the term "least cost" at line 22,

1 are avoided costs considered one of the particular  
2 resource as assessed as least cost?

3 A Not avoided costs as going in the ACC. This is  
4 more referring to least cost -- least cost being least  
5 cost of a particular resource that fits a particular  
6 procurement need. So evaluating a need for generation  
7 in a particular area or for a particular LSE, once  
8 you've established that the resource can provide or fit  
9 that need, then evaluate which cost -- or which resource  
10 provides it at the least cost.

11 Q Okay. Okay. Then moving to page 42 of your  
12 opening testimony starting at line 22. So you testified  
13 that the ACC should be used for planning, not for the  
14 evaluation of utility procurement solicitation or  
15 compensation for qualified facilities.

16 So in your opinion is there a relationship  
17 between planning on the one hand and utility procurement  
18 solicitations or compensation on the other hand?

19 A There is a relationship. I would agree with  
20 that.

21 Q What is the relationship?

22 A Well, planning generally sets high-level  
23 targets for either the state's or potentially for  
24 individual load-serving entities, their bundled needs,  
25 but it doesn't necessarily prescribe how LSEs or program



1 administrators for DERs should meet those needs. That's  
2 typically the fear of procurement and solicitations and  
3 compensation. So while planning can set high-level  
4 budgets and targets, there is more flexibility for LSEs  
5 to meet those targets in the least-cost way through  
6 consultation and procurement.

7 Q Okay. So in your opinion do planning  
8 assessments lead to different procurement choices?

9 A I'm not sure I fully follow. I think planning  
10 can lead to procurement choices.

11 MS. WHITE: Okay. Well, that should conclude  
12 my questions. Thank you, Mr. Wray.

13 THE WITNESS: Thank you.

14 ALJ LAU: Mr. Sezgen, do you have any redirect  
15 for Mr. Wray?

16 MR. SEZGEN: No, I do not, your Honor.

17 ALJ LAU: All right. Thank you, Mr. Wray.

18 Thank you for appearing today. I believe that concludes  
19 your testimony for this set of evidentiary hearings. If  
20 you'd mute and turn off your camera.

21 Thank you, Ms. White. I believe you can also  
22 mute and turn off the camera. And I guess now it's just  
23 me. I'm reviewing our schedule for today and tomorrow.  
24 It seems that for tomorrow we have first for our  
25 scheduled witness to be two Cal Advocates witnesses. I

1 will not try to pronounce their name, but it's Paul W.  
2 and James A. for Cal Advocates. And we have Desiree  
3 Wong from Edison. And we also have Reuben B. from  
4 Edison. So let's have those witnesses be prepared to  
5 sign in.

6 Also, please again sign in at 9:30 so we can do  
7 audio tech checks for all the witnesses and all the  
8 attorneys appearing or during conducting  
9 cross-examination or responsive witnesses.

10 As for tomorrow, I don't believe that we need  
11 everyone to attend other than the sponsoring attorneys  
12 and the attorneys conducting the cross-examination. And  
13 I believe all the attorneys scheduled for  
14 cross-examination has -- they have already done their  
15 attestations. So when we have the witnesses, then we'll  
16 do a set of witness attestations for each witness.

17 I saw on a circulation of the emails in my  
18 email Ms. White asked questions referring to PCF-15 and  
19 PCF-16. And they are cross-examination exhibits.

20 Ms. White, can you specify which witnesses  
21 these cross-examination exhibits pertain to.

22 MS. WHITE: Yes. Hello. Can you hear me?

23 ALJ LAU: Yes.

24 MS. WHITE: Yes. Okay. So the PCF-15 was  
25 intended to be for Energy (indecipherable). And then

1 PCF-16 -- I cannot currently specify which witnesses  
2 because we do intend to use it for quite a few of the  
3 witnesses. But I can check that and email and get back  
4 after this call if that's okay, your Honor.

5 ALJ LAU: So we did have Mr. Borden. I don't  
6 believe we used PCF-14, did we? Or PCF-15?

7 MS. WHITE: I did not end up using it.

8 ALJ LAU: Okay. Well, that's fine. So when  
9 you talk to the parties, we can meet and confer about  
10 entering exhibits into evidence. Then you can -- you  
11 can discuss this with all the other parties.

12 MS. WHITE: Okay. Thank you, your Honor.

13 ALJ LAU: We're coming to the conclusion of day  
14 one of evidentiary hearing. Before we conclude, are  
15 there any questions or concerns that you'd like to bring  
16 to my attention? Please raise your virtual hand.

17 Annalissa, can you double-check that there are  
18 no questions.

19 MS. HERBERT: Your Honor, Ms. Armstrong has her  
20 hand up.

21 ALJ LAU: Okay. Can we bring Ms. Armstrong to  
22 the stage.

23 MS. ARMSTRONG: Yes. This is simply a concern,  
24 but I was noting on Thursday's schedule that I reserved  
25 thirty minutes for Mr. Strack of SDG&E. It will be more

1 like ten to fifteen minutes. And I was wondering given  
2 some conflicts I have that day if I could be the first  
3 cross-examiner. If Ms. White wouldn't mind, if I went  
4 first and she followed me.

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

6 (Off the record.)

7 ALJ LAU: So let's go back on the record.

8 During when we were off the record, we just had  
9 clarifications and modifications to the hearing schedule  
10 for day three. And we agreed that Ms. Armstrong will  
11 cross-examine Mr. Strack before Ms. Andrea White. So  
12 those are the only things that were modified.

13 Are there any other concerns or questions that  
14 you'd like to bring to my attention before we conclude?  
15 Please raise your virtual hand.

16 (No response.)

17 ALJ LAU: All right. Seeing and hearing none,  
18 then I declare that we are in recess until tomorrow  
19 morning at 10:00 a.m. Again, we ask that witnesses and  
20 attorneys please -- please log in at 9:30 to do audio  
21 tech checks.

22 All right. Let's go off the record. Thank  
23 you.

24 ///

25 ///

1 (At the hour of 4:32 p.m., this matter having  
2 been continued to 10:00 a.m., January 24,  
3 2024, the Commission then adjourned.)

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BEFORE THE PUBLIC UTILITIES COMMISSION  
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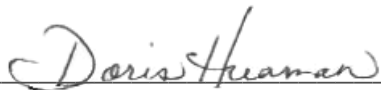
  
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<u>\$</u>	<b>19</b> 53:3 66:22	<b>24</b> 51:12 52:5 109:23	<u>5</u>
<b>\$2.5</b> 89:22	<b>1998</b> 23:21	<b>25</b> 88:23 109:23 150:4 166:20	<b>5</b> 23:9 43:1 65:8 99:14 120:3 123:17 151:2
<u>0</u>	<b>1:30</b> 85:1	<b>26</b> 113:10	<b>57</b> 163:21,24
<b>05</b> 31:10	<b>1:36</b> 85:5 86:1	<b>28th</b> 22:25	<b>5:00</b> 4:21
<u>1</u>	<b>1A</b> 31:11 32:2	<b>29</b> 153:10	<u>6</u>
<b>1.0</b> 71:1	<b>1B</b> 31:9,23	<u>3</u>	<b>6</b> 43:1 53:2 59:5,9,12 60:19 65:9 66:22 88:23 155:12 157:16
<b>10</b> 10:1 17:22 43:25 60:18 107:12 111:9 139:21,24 155:12	<u>2</u>	<b>3</b> 45:6 57:19 60:18 75:11 77:8 89:17 91:2 93:13 96:8 113:20 114:21 134:19 142:10 162:6	<u>7</u>
<b>10.0</b> 44:24,25 45:1,2,7,9, 12,14,21,23 46:3 47:1 50:24 70:19 148:23 150:17	<b>2</b> 35:18,21 36:16 73:1, 15 75:11 93:8 95:14 108:3 109:23 113:10 120:10	<b>30</b> 5:20 7:17 79:11	<b>7</b> 43:1 108:6 157:16
<b>10:00</b> 4:18	<b>2.0</b> 71:1	<b>31</b> 153:10	<b>7,000</b> 46:12
<b>10:01</b> 4:2	<b>2.5</b> 53:14 123:3	<b>32</b> 42:11,12,13,22 43:5 44:14 66:19 70:19 149:25 157:12	<b>79</b> 123:16 124:6 125:12, 19
<b>10:45</b> 31:1	<b>20</b> 61:4 101:5 102:20 123:1 145:2	<b>33</b> 95:14 151:1 163:21	<u>8</u>
<b>10th</b> 49:22	<b>20-05-003</b> 119:6	<b>35</b> 160:24 161:2	<b>8</b> 43:1 96:9
<b>11</b> 107:13	<b>2001</b> 23:16	<b>36</b> 139:20 142:9 162:6	<b>80</b> 123:16 124:6 125:12
<b>12</b> 39:14 130:23	<b>2015</b> 22:24	<b>37</b> 127:7	<b>81</b> 79:3
<b>12:25</b> 82:23	<b>2016</b> 22:24,25	<b>38</b> 155:12	<b>875</b> 23:9
<b>12:29</b> 85:4	<b>2017</b> 23:4 26:4 60:23 61:14 127:16 128:8	<b>38562(b)(2)</b> 44:15	<u>9</u>
<b>12:30</b> 84:25	<b>2018</b> 23:4,5 26:4 74:8 79:2	<b>3:25</b> 146:22	<b>9</b> 23:9 96:9 101:5 102:19 104:10 107:12 133:7 139:23,24
<b>13</b> 44:1	<b>2019</b> 74:8 79:2	<b>3:40</b> 146:22,23	<u>A</u>
<b>14</b> 39:14 49:25 104:11 121:2,4,15 161:1	<b>2020</b> 161:2	<u>4</u>	<b>A-R-M-S-T-R-O-N-G</b> 13:1
<b>15</b> 36:22 57:19 72:3 99:3 121:16 122:12,14 158:16	<b>2021</b> 22:17 61:4,19 127:19 128:9	<b>4</b> 45:6 53:2 80:15,20 98:4 99:3,15 111:15 113:20	<b>a.m.</b> 4:2,18
<b>15-minute</b> 4:20 146:21	<b>2022</b> 21:23 22:2,7 23:21 25:23 31:9,11,21,25	<b>40</b> 91:19	<b>Aaron</b> 20:5
<b>16</b> 35:18 36:16 99:4 158:16	<b>2023</b> 23:21 25:23 26:11 89:18 119:7 123:17	<b>41</b> 119:19 120:5	<b>AB</b> 42:11,12,13,21 43:5 44:14 66:19 70:19
<b>1630</b> 23:10	<b>2024</b> 4:2,11 20:4 26:17, 24	<b>42</b> 168:11	<b>abatement</b> 139:15
<b>17</b> 35:19,21 36:17 79:11 93:10,21	<b>2045</b> 148:24 149:7,11, 17 150:18	<b>43</b> 130:23 133:7 166:19	<b>abatements</b> 139:18
<b>18</b> 36:22 79:12 114:21	<b>21</b> 123:3,7	<b>44</b> 134:19	<b>abbreviated</b> 34:2
	<b>22</b> 23:5 167:21,25 168:12	<b>45</b> 120:3 167:20	
	<b>22-05-002</b> 105:14	<b>4:30</b> 4:22	
	<b>23</b> 4:2		

<b>abbreviation</b> 86:8	<b>acknowledged</b> 139:10	<b>admissions</b> 70:5	149:7,11,23 156:18 162:9 168:19
<b>abbreviations</b> 88:15	<b>acknowledges</b> 73:17 138:16 161:3	<b>adopt</b> 49:21 118:5 120:12 152:7	<b>agreed</b> 39:21
<b>ability</b> 76:25 129:10 130:5	<b>acknowledging</b> 66:20	<b>adopted</b> 89:4 96:19 143:10 159:9	<b>agrees</b> 37:19 39:12 107:13 130:13
<b>absolutely</b> 71:1	<b>acronyms</b> 116:13	<b>adopters</b> 160:14	<b>ahead</b> 5:8 43:22 49:16 55:18 118:14
<b>abstract</b> 97:16	<b>Act</b> 42:11,21 43:5 66:20	<b>Adopting</b> 119:7	<b>air</b> 43:25 44:3,12 46:11 53:13,18,22 54:6 55:23 123:2,6,9,12,19,23 136:11,23 137:20 143:9
<b>ACC</b> 4:11 36:20 38:13 42:19,20 47:20 48:7,16, 19,24 49:13 53:9 56:8, 12,13 57:4,5 60:11 62:12 64:8,17 68:6 77:10,12 83:5 89:2 95:18 96:5 97:22 98:5 105:16 109:25 110:2,19 113:13 119:18,20 120:7 128:3 129:13 132:1 134:20,23 135:1,2,3,7, 8,12 136:1 137:5,7,9, 15,17,22,25 138:2,3,22 139:10,14 140:24,25 141:7,15,19,25 142:2,5 143:23 152:10 153:14, 16 155:15 157:21 158:3,9,19 159:4,25 160:21 161:2,15,23 163:11 165:9 166:25 167:4,6,13,15 168:3,13	<b>activities</b> 44:16 53:16, 21 54:3 122:20 148:7	<b>adoption</b> 89:8 151:21 155:19	<b>alert</b> 5:6
<b>ACC/IRP</b> 49:3	<b>actual</b> 66:15,16 144:21	<b>advance</b> 51:6	<b>algorithm</b> 81:12,18
<b>accelerated</b> 70:5	<b>ad</b> 97:20	<b>advanced</b> 159:5	<b>align</b> 51:24 76:4 119:18 120:7
<b>access</b> 4:8 64:6 90:11 91:25 92:11	<b>add</b> 89:22 98:12	<b>advice</b> 158:13 159:9	<b>aligned</b> 56:13 77:2
<b>accompany</b> 138:2	<b>added</b> 76:15	<b>Advocates</b> 14:14 17:14 24:11,16,21,25 25:5,10 28:3,7,19 169:25	<b>aligning</b> 119:19
<b>account</b> 48:6	<b>adder</b> 89:23 91:11 139:7 140:8 147:15 152:6,9 161:19 163:11	<b>affect</b> 56:7 122:5	<b>alignment</b> 40:16
<b>accounted</b> 107:15	<b>adders</b> 38:16,17 132:1, 2 150:5 153:23 161:1	<b>affected</b> 129:2	<b>aligns</b> 40:24
<b>accrued</b> 167:9	<b>adding</b> 125:25	<b>affects</b> 161:13	<b>ALJ</b> 7:21 8:1,3,19 9:3 10:5,9,11,18,24 11:23 12:9,13,15,19,21 13:3, 7,10,17,20,24 14:4,7,9, 15,18,22,24 15:5,11,14, 16,22 16:2,8,14,21 17:1,7,16,21 18:1,10,15 19:3,7,12,16,20,24 20:3,8,13,18,23 21:3,7, 12,17,22 22:6,11,16,23 23:3,8,13,19,24 24:4, 10,14,19,24 25:3,8,13, 17,22 26:3,8,14,21 27:3,7,12,24 28:13 29:5 30:16,22 31:4,13,17 32:9,20 33:7,9,11,13 34:1,19,24 35:12,23 36:5,11 37:12 38:5,8 39:5,7,16,25 40:20 41:4,9,13,17,19 42:4, 23,25 43:11,17,22 44:9, 19 45:4,18,25 46:20 47:10,23 49:6,14,16 50:20 52:3,12,15,23 54:9 55:13 57:16 63:13, 15,18 71:7,10,15 72:7,9 73:10 80:16 82:13,18 86:3,11,17,20 87:5 88:11 90:1,7 93:5 94:6, 9,12,21,23 95:8 105:13 106:2,13 111:7,11
<b>accuracy</b> 108:7	<b>addition</b> 93:18 124:17	<b>afford</b> 79:14	
<b>accurate</b> 96:14 97:7 98:5 104:15 108:4 128:4 149:6	<b>additional</b> 16:24 89:23 93:1 107:15 110:1,4,20, 24 111:1,2 113:11,21 132:13	<b>Affordability</b> 21:18	
<b>accurately</b> 27:21 98:21,25 110:3 113:14 147:25	<b>Address</b> 7:1,2 29:4,22 30:8,18 49:11 67:21 68:4,11 96:2 101:23 102:10 115:5 122:17,19	<b>afternoon</b> 4:20 5:19,25 6:9,10 8:7 29:13,16 86:1 87:12,13 88:6,21 116:4,8 147:14	
<b>achieve</b> 23:25 133:25	<b>Addressed</b> 32:6 49:12 62:2	<b>agencies</b> 45:11 47:18	
<b>achieving</b> 134:6	<b>addressing</b> 30:1,10 108:23 119:8	<b>agency</b> 44:25 45:22 46:15,23 47:11,14 48:5	
<b>acknowledge</b> 75:17 77:11 154:4	<b>adds</b> 75:15,18,20,22,24	<b>aggregate</b> 100:16	
	<b>adequacy</b> 99:4,8	<b>agree</b> 8:6 10:8,12 11:20 13:7,23 14:7,14,21 15:3,14,21 16:7,12,20 17:6,15 18:9 33:12 36:22,24 37:8 38:11 43:11 44:9 50:17 54:21 55:6 56:14 59:14 61:7 62:24 68:22 69:13,15 72:18,20 73:7 77:21 79:6,7 86:20 90:9 91:21 96:11,18,20 101:3 108:3 112:22 116:20 120:23 121:14 122:2 123:8 124:1,9 126:10, 17,24 127:23 128:12 129:16 133:24 134:10 136:15 145:7 146:6	
	<b>adequately</b> 144:4		
	<b>adjust</b> 4:25		
	<b>adjusted</b> 153:15,17		
	<b>administered</b> 144:11		
	<b>Administrative</b> 4:4,13		
	<b>administrators</b> 169:1		
	<b>admissibility</b> 28:24		

112:4,7,10 113:2,7 114:18 115:12,16 116:2,11,17,20 117:1 118:10,25 119:2,5,12, 22 120:24 121:5,16,18, 23 122:1 123:17 125:13,24 126:17 127:8 130:7,19 132:9 136:15 137:11 138:7 145:1 146:6,11,15 147:2,9 152:15,18,23 153:4 156:9 169:14,17	<b>apologize</b> 16:25 37:23 52:10 116:6 <b>appearance</b> 18:12 <b>appearances</b> 9:21 <b>appearing</b> 14:13 28:19 73:24 169:18 <b>apples-to-apples</b> 140:3 <b>appliance</b> 163:1 <b>appliances</b> 150:10,11 <b>applicable</b> 137:7 138:6 <b>applicants</b> 144:13 <b>application</b> 95:25 123:18 <b>applications</b> 144:15 <b>applied</b> 126:24 136:6 150:5 <b>applies</b> 143:8 <b>apply</b> 98:10 124:14 137:10,25 139:7 <b>applying</b> 126:24 <b>approaches</b> 156:24 <b>Appropriately</b> 139:5 <b>approvals</b> 164:2,7 165:17 <b>Approved</b> 22:25 23:4 <b>approximately</b> 108:6 111:7 <b>approximation</b> 155:14 <b>area</b> 156:20,21 168:7 <b>areas</b> 112:23 122:18 125:7 129:6 163:3 <b>arguing</b> 137:24 <b>argument</b> 72:12 <b>arguments</b> 29:23 38:19 39:12 72:4 <b>Arizona</b> 142:15,16 <b>Armstrong</b> 12:17,22, 23,25 13:6,9 88:11,13, 17,18 90:3,8 93:5,7 94:6,8,14 146:24 147:4, 6,7,12 152:13,18	<b>arrange</b> 6:1 <b>ascertain</b> 113:24 <b>ascribe</b> 155:18 <b>aspect</b> 93:6 <b>assess</b> 101:19 111:16 148:11 <b>assessed</b> 168:2 <b>assessment</b> 22:19 99:6,11 101:10 111:18, 23 112:15 <b>assessments</b> 169:8 <b>assign</b> 62:18 <b>assigned</b> 4:15 9:3 <b>assistance</b> 144:7 <b>association</b> 13:2 26:9 88:19 90:4,6 147:8 149:21 <b>Association's</b> 75:20 <b>assume</b> 58:2,12 <b>assumption</b> 58:6,15, 16 59:25 101:13 131:18 <b>assumptions</b> 131:20, 21 <b>assuring</b> 157:2 <b>atmosphere</b> 136:22 147:24 <b>Atmospheric</b> 24:7 <b>Attachments</b> 24:20 <b>attendance</b> 9:19 11:8, 9 12:3 <b>attending</b> 9:17 12:8 18:6 29:15 50:25 <b>attestation</b> 10:7,8 13:23 16:12 17:15 18:9 87:6 <b>attestations</b> 9:14,15, 17,21,24 10:13,15 11:20,22,23 12:1 13:3, 4,8,17 14:4,14,21 15:4, 11,20 16:6,19 17:6 32:17 33:8 86:12,14,21 116:3,15 <b>attorn</b> 9:20	<b>attorney</b> 11:19,25 15:4 16:6,12 17:6,15 18:9 115:24 <b>attorneys</b> 5:2 9:15,16, 20 10:12 <b>audio</b> 37:3,11,17,22 38:3 41:16 80:17 <b>authority</b> 124:11 <b>availability</b> 111:16 132:25 <b>avoid</b> 54:13 68:11 76:25 77:9,11 78:24 79:3,7 111:2 123:20 124:5,9 125:2 126:8 127:2 133:25 135:8,19, 21 136:8,11,24 139:8 <b>avoidable</b> 114:22 <b>avoided</b> 4:11 20:4 21:23 22:3,7 26:17,24 31:10,11,22 32:1 43:16 47:13 51:23 54:21 55:4, 21,22 56:15 65:11 76:24 92:5,8,10,13,14, 15,16 95:21 96:24 97:18,22 98:6,11,15,18, 20,24 99:15,25 100:2, 10 102:12 104:3 106:4 107:14,15 108:4,8,21 109:2,3,9,18 110:23 111:3 113:14 114:3,6 134:21,23 135:4,9,13, 15,18 136:1,4,5,10 137:8,16,17,18,19,24 138:18,25 139:16 142:22 143:19 153:17 154:4,5,11,20 155:3,7, 20 157:24 160:8 161:21,22 162:3 167:3, 6 168:1,3 <b>avoiding</b> 46:16 47:5,21 48:9 77:25 123:23 124:12,17,19 139:11,12 142:17 <b>aware</b> 54:1 90:21 93:25 124:12 144:3,7 166:15
<hr/> <b>B</b> <hr/>			
<b>B-55-18</b> 23:25			
<b>B-O-R-D-E-N</b> 86:9			

<b>back</b> 12:15,21 31:17 52:15 70:17 71:11,15 79:1 85:1 86:3 94:23 105:20 113:9 114:9 119:2 130:22 137:23 138:17 146:22,23 147:2 152:23 157:10 163:7	14,18 26:16,23 27:17, 20 28:2,6,19 29:17,19 33:1,21,23 42:2 47:11, 18	<b>Biological</b> 14:3 19:9 41:23 42:3 118:17	<b>bullet</b> 125:22,24
<b>background</b> 68:22 69:5	<b>behavior</b> 100:12	<b>biomass</b> 54:13 123:20, 23,24 124:17	<b>bundled</b> 168:24
<b>balance</b> 134:9	<b>believes</b> 40:14,22	<b>bit</b> 37:24 70:9 96:3 108:12 130:12 163:3	<b>burn</b> 138:14
<b>base</b> 50:4,17 97:12 120:18	<b>benefit</b> 37:14 46:16 47:5,21 48:9,15 49:2, 10,13 60:20 62:6,11 63:4,5,6,7,23,25 64:1,3, 4,19,21 66:5,8,13,16 125:10 127:13 139:7 140:8,12,20 145:12 157:4 158:23 159:2 162:2 165:20,23 167:12	<b>blazing</b> 94:12	<b>burned</b> 148:4 149:8
<b>based</b> 7:8 30:14 35:10 53:11 58:6,15,16 59:25 68:6 73:25 75:17 83:25 84:11,25 89:23 91:11 115:8 126:12 128:24 131:18 138:7 145:4,6 149:3 151:23 152:4	<b>benefits</b> 37:2,9 38:12 43:25 57:21 61:8,24 62:25 63:1 64:11,16 65:13,14 70:14 79:16 101:7,10,19,21 127:24 128:2,13,21 129:12,17 131:12,13 137:19 139:25 140:1,4,16,17 143:5,18,22,23,25 144:4,8,14,20 151:4 153:24 155:18 156:23 163:18 165:1,13,15 166:23 167:7,8,14	<b>Board</b> 22:24 23:4	<b>Busbar</b> 123:17 125:13
<b>baseline</b> 97:12	<b>Berkeley</b> 106:19	<b>Borden</b> 86:4,6,9,14 87:1,8,12 88:12,20 90:9 94:4,7,10 95:3,9,14 102:22 106:12 112:12 114:11 115:11,14,16,18	<b>business</b> 11:7,9 17:14 18:16 25:5,10 28:3,6 32:7
<b>basic</b> 91:10 109:24 110:18	<b>Berndt</b> 20:5	<b>Borden's</b> 93:6	<b>butter</b> 136:6
<b>basically</b> 45:12 74:12, 15 76:13	<b>best-fit</b> 167:23	<b>borne</b> 62:9 101:14 148:4	<b>battered</b> 139:7
<b>basing</b> 131:14	<b>bets</b> 125:13	<b>bottom</b> 81:25 89:16	<b>buttoned</b> 81:7
<b>basins</b> 125:16 126:3,7, 9	<b>bids</b> 78:17	<b>breadth</b> 52:2	<b>buy</b> 71:3 80:21
<b>basis</b> 22:18 100:16 109:12 136:6 156:16,22 161:22	<b>biennial</b> 38:20 39:13 40:6,15,23,25 41:5	<b>break</b> 4:19,20 6:9,11 82:23 85:1 118:20 146:21,25	<hr/> <b>C</b> <hr/>
<b>battery</b> 61:6 99:7 127:20 128:11 167:17	<b>big</b> 67:13 148:1	<b>briefing</b> 8:4,7,9 54:2,9 57:7	<b>C-A-I-S-O</b> 23:20
<b>BBD's</b> 79:12	<b>bill</b> 21:8,13 104:5 141:8 142:3	<b>bring</b> 12:4,5 32:14,16 45:4 71:11 115:18,19 118:11 152:20	<b>C-H-E-N-G</b> 16:12
<b>be-all</b> 110:9	<b>billing</b> 141:1,2,14,23 142:7 151:25 152:11 157:19,20,21,25 158:14	<b>bringing</b> 44:12	<b>CA-01</b> 24:12
<b>begin</b> 4:18 10:19 18:17, 23 33:14 34:21 35:4 36:5 42:5 71:19 87:7 94:19 95:2,8,13 117:2 118:12 119:12 147:9 153:5	<b>billion</b> 89:22	<b>brings</b> 70:17	<b>CA-01E</b> 24:14,17
<b>beginning</b> 44:1 53:2 60:18 65:9 66:22 67:11 120:5 130:23 153:9	<b>bio-gas</b> 123:21,24 124:18	<b>broad</b> 35:9 69:17 70:24 108:12 128:20 129:24 130:3,16	<b>CA-02</b> 24:22
<b>begins</b> 57:19	<b>biodiversity</b> 135:21	<b>broadly</b> 151:13	<b>CA-03</b> 25:1
<b>behalf</b> 13:15 14:13 15:19 17:14 18:8,25 19:4,8 21:8,13 25:4,9,	<b>biogas</b> 54:13	<b>broke</b> 37:4 86:3	<b>CA-1</b> 24:10
		<b>buckets</b> 90:22	<b>CA-2</b> 24:19
		<b>budget</b> 133:11 165:18	<b>CA-3</b> 24:24
		<b>budgets</b> 133:15,21 164:3,7 169:4	<b>CAISO</b> 22:24 23:4,20 25:23 26:4 74:1,3,5 75:4 90:18,19,23 111:15,20
		<b>build</b> 78:11 135:18,20	<b>CAISO's</b> 111:18,22 112:14
		<b>building</b> 78:9	<b>Cal</b> 14:13 28:19 169:25
		<b>built</b> 124:15,24 125:7 128:16 151:13	<b>calculate</b> 66:4,6,9,13 110:6 111:4 142:5 143:16 159:8
		<b>bulk</b> 60:25 61:16 127:17 128:8,24 129:3, 5	<b>calculated</b> 105:7 143:18,23 158:19
			<b>calculating</b> 65:25
			<b>calculation</b> 65:20 80:25 89:22 102:12 136:8 151:4 153:25 165:24
			<b>calculation-related</b>

104:20	<b>carefully</b> 18:21	<b>choose</b> 32:23	<b>co-pollutant</b> 137:21 139:8,17
<b>calculations</b> 56:25 66:10 159:24 160:7	<b>case</b> 81:22	<b>chunk</b> 30:2	<b>co-pollutants</b> 136:21 138:15,19,23 139:2,13
<b>calculator</b> 4:11 20:4 21:24 22:3,8 26:18,25 31:10,11,22 32:1 43:16 47:13 51:23 92:5,14,17 95:21,24,25 98:24 107:16 109:18 111:3 114:4,7 140:24 143:15, 19 154:5 155:8 157:24 160:8	<b>cases</b> 164:11	<b>circle</b> 70:18	<b>co-pollution</b> 136:25 138:13
<b>California</b> 15:2,20 16:5 23:14,20 26:9,16,23 33:2,5,21,24 45:7,8 46:11 65:13 90:19 110:9 142:21 143:10 148:5,9,22 149:9,14,17 151:15	<b>casualties</b> 128:12	<b>circulated</b> 4:23 5:17 9:15 10:15 13:5 18:19 33:9 86:15	<b>Coalition</b> 15:19 19:13, 17 33:1,4,21,24
<b>California's</b> 26:10	<b>categories</b> 134:25 144:8	<b>circumstance</b> 128:17	<b>Code</b> 44:15
<b>call</b> 11:10,11,13,14 12:5,7,16 17:9 32:9 48:21 97:19 144:2	<b>categorized</b> 136:4	<b>citation</b> 42:17 120:3	<b>coincident</b> 76:9,15 77:18,20,22 79:8
<b>called</b> 18:6 33:4 87:2 90:10,23 116:23	<b>category</b> 165:9 167:5	<b>cite</b> 142:10	<b>coincidental</b> 76:10
<b>calling</b> 92:25 136:12	<b>causation</b> 76:2,14 77:17	<b>cites</b> 42:10 44:24 154:2	<b>collected</b> 133:2,4
<b>camera</b> 7:22 9:12 13:11 169:20,22	<b>caused</b> 76:17	<b>citing</b> 45:12 139:5	<b>Colton</b> 24:5
<b>cancel</b> 73:22 74:19	<b>caution</b> 143:13	<b>claim</b> 74:1	<b>combination</b> 162:23
<b>cancellation</b> 74:15	<b>CBD</b> 120:10	<b>clarification</b> 12:18 38:1 67:9 112:2 157:17	<b>combustion</b> 44:4 136:21 138:20
<b>cancelled</b> 73:5,7,13, 18,20 74:2 93:12,22 115:8	<b>CBD-01</b> 19:7,10	<b>clarify</b> 31:8 34:1 55:17 72:15 96:4 106:2 136:3 138:11 154:12,16 161:18 162:5 164:4 167:1	<b>comfortable</b> 92:2 110:12
<b>cancelling</b> 92:21	<b>CBD-02</b> 118:20 119:5, 9,10 125:12	<b>clarifying</b> 56:19 157:15	<b>comment</b> 159:13,17, 19,22
<b>candidate</b> 91:23 92:9	<b>CEC</b> 124:8,10	<b>clarity</b> 18:20 55:15 90:1 130:8	<b>commentary</b> 164:9
<b>capacity</b> 76:15 89:19 97:18 124:13,22,24 125:3 126:23 166:22	<b>cellular</b> 61:6	<b>class</b> 140:12,13 151:12	<b>comments</b> 74:5,10
<b>capture</b> 138:23,24 167:13	<b>Center</b> 14:3 19:9 41:23 42:3 118:17	<b>classes</b> 140:11	<b>Commission</b> 4:4 7:2 37:1,9,20 38:12 49:11 54:20 62:9 64:17,25 68:6,7,10 70:1 80:21 83:3,4,7 84:6 96:16 104:17 106:7,18 109:11 117:21 128:1 131:24 152:7 153:13 154:4,7, 13,14,24 158:6,11 159:1 160:13
<b>captured</b> 98:13 133:2	<b>centered</b> 63:23	<b>CLC-01</b> 19:12,14	<b>Commission's</b> 143:20 145:24
<b>captures</b> 81:2 110:3 113:14 139:14	<b>centers</b> 62:24 63:3,12 129:16	<b>CLC-02</b> 19:16,18	<b>commissioner</b> 4:15
<b>carb</b> 165:10 166:13	<b>central</b> 61:5	<b>CLE-01</b> 18:24 19:1	<b>common</b> 8:4,6,8
<b>Carbon</b> 23:25	<b>chain</b> 130:9	<b>CLE-02</b> 19:3,5	<b>commonly</b> 150:14
	<b>challenge</b> 69:23	<b>clean</b> 19:13,17 67:2,4 114:23 115:1 148:23 150:18,20	<b>communities</b> 15:8 21:9,14 34:23 41:21 42:15 43:7,18 44:5,10, 13,18 50:3,5,8,15,16 53:18,23 54:7,14,22 55:5,22,24 56:16 61:5 70:23 71:16,22 95:5 104:24 120:17,19,22
	<b>challenging</b> 55:15 82:21	<b>clear</b> 9:25 36:21 37:14 39:16 54:7 73:11 81:5,7 93:20 107:6	
	<b>chance</b> 6:19 81:18 82:7	<b>CLECA</b> 18:9,25 19:4	
	<b>change</b> 22:17,20 67:22 79:8 130:15 147:23	<b>climate</b> 22:17,20 42:13, 21 43:13,14 44:17 67:2, 4 130:15 133:6,25 134:12,13,16 147:23	
	<b>chat</b> 11:4	<b>clinics</b> 62:23 63:3 129:15	
	<b>cheaper</b> 75:7	<b>close</b> 104:21	
	<b>cheapest</b> 67:24		
	<b>check</b> 6:17,20 7:14,23 104:25 145:2		
	<b>Cheng</b> 16:9,10,11		
	<b>choice</b> 102:6		
	<b>choices</b> 69:21 169:8,10		

121:10,13 122:6,8 123:7,10,13,19,25 124:18 129:19,21 130:1,14 134:2,7 153:3	74:12 142:8 146:19 147:3	<b>consultant</b> 106:6	11,22 32:1 43:16 47:13 48:20,25 51:23 53:25 55:2,8,9 56:6,24 57:9, 13,21 58:2,4,14 59:24 60:5,11,13 67:14 68:12 70:10 76:2,14 77:17,25 78:1 80:8 89:19 91:9, 15,17,23,24 92:5,8,10, 14,16 95:21 96:24 98:15,24 99:4 100:10 102:12 105:10 107:16 109:18 110:10 111:3 113:14 114:3,6 125:10 130:25 131:3,10,12,14 134:16,17 136:4 139:15,16,18 140:22,24 141:20,25 143:16,19 144:12 145:15,16,17, 21,22 154:5 155:7 156:23 157:24 160:8 163:4,14,18,20,25 164:9,15,20 165:24 166:6 167:25 168:2,4,5, 9,10
<b>community</b> 61:20 62:22,23,24,25 63:1,3, 12 64:7,14 68:8 74:22, 23 122:17 127:19 128:10 129:7,15,16,17 141:5,14,24 142:3,7	<b>concludes</b> 46:23 48:5 82:12,18 115:10,17 146:16 169:18	<b>consultation</b> 169:6	
<b>Company</b> 13:16 14:20 15:2 16:5 26:17,24 116:10	<b>conclusion</b> 47:4 58:13,16 60:2,3 73:25 131:18	<b>context</b> 45:3 69:15 99:8	
<b>compare</b> 97:5 115:4 141:15 145:16	<b>conditions</b> 157:3	<b>contextual</b> 126:12	
<b>compared</b> 48:20	<b>conduct</b> 10:11 41:23 104:11 106:6 112:1 114:6 146:24	<b>continue</b> 34:3 36:6,13 46:24 59:18 111:13 122:14 161:23	
<b>comparing</b> 140:14,15	<b>conducted</b> 105:14 106:22	<b>continued</b> 72:1 110:14	
<b>comparison</b> 60:7,9,12, 15,16 61:11 140:3	<b>conducting</b> 50:21 51:7	<b>continuing</b> 122:11 161:12	
<b>comparisons</b> 61:7 127:22	<b>confer</b> 6:2 8:6	<b>continuously</b> 109:11	
<b>compensated</b> 76:9	<b>confidential</b> 7:7,10,11, 12,13,25	<b>contracts</b> 99:5	
<b>compensation</b> 140:25 141:10,23 142:3,6 157:22,25 158:9,13,23 159:3,6,11,13,20 160:3, 11,16 168:15,18 169:3	<b>confirm</b> 100:19	<b>contribute</b> 139:2 161:25	
<b>completed</b> 155:5	<b>confirmed</b> 59:4	<b>contribution</b> 22:18 147:25	
<b>complex</b> 97:4 146:5	<b>confuse</b> 68:12	<b>contributor</b> 46:25 147:23 148:1	
<b>complexity</b> 75:15,18, 21,23,24	<b>connected</b> 76:22	<b>conversation</b> 114:12	
<b>complicated</b> 69:25 79:24	<b>connection</b> 107:6 108:10,13,22 138:7 149:15	<b>coordinate</b> 8:17	
<b>comply</b> 44:16	<b>consideration</b> 57:13 72:5,12 131:2 163:13	<b>coordinated</b> 162:21	
<b>component</b> 152:6,9 163:15	<b>considerations</b> 96:5	<b>copies</b> 6:18 7:6	
<b>compound</b> 48:13 129:23	<b>considered</b> 47:2,15 56:10 62:12,19 64:16, 25 66:23 68:20 69:11 70:12 76:3 142:23 144:1 166:1 168:1	<b>copy</b> 6:21,24 7:4	
<b>computation</b> 81:13	<b>considers</b> 55:4,12 56:14 67:12 114:25	<b>core</b> 133:9	
<b>computer</b> 9:10,13	<b>consistent</b> 89:8 107:20,21	<b>correct</b> 7:15 14:11 27:25 28:4 31:19 34:8 35:25 36:6 41:1 50:8 53:5,9,10 56:3 72:5 87:25 89:20 91:4,14 96:6,16,17,22 100:21, 22 117:24 119:20 120:8,9 122:9 127:25 131:4,7 132:5,12 134:24 135:22 136:2 147:16,17 151:24 161:5,9,15,16	
<b>concerns</b> 7:12 10:21 11:1 28:10,15 30:23 32:3,5 62:8	<b>constituted</b> 110:3 113:14	<b>corrected</b> 7:5 31:24	
<b>conclude</b> 169:11	<b>constitutes</b> 157:3	<b>corrections</b> 7:3 31:19 34:14 117:20	
<b>concluded</b> 57:20	<b>constraint</b> 124:23	<b>correctly</b> 27:23	
	<b>constraints</b> 124:14,15	<b>correlation</b> 149:16	
	<b>constructed</b> 103:15 161:20	<b>cost</b> 4:11 20:4 21:23 22:3,7 26:17,24 31:10, 11,22 32:1 43:16 47:13 48:20,25 51:23 53:25 55:2,8,9 56:6,24 57:9, 13,21 58:2,4,14 59:24 60:5,11,13 67:14 68:12 70:10 76:2,14 77:17,25 78:1 80:8 89:19 91:9, 15,17,23,24 92:5,8,10, 14,16 95:21 96:24 98:15,24 99:4 100:10 102:12 105:10 107:16 109:18 110:10 111:3 113:14 114:3,6 125:10 130:25 131:3,10,12,14 134:16,17 136:4 139:15,16,18 140:22,24 141:20,25 143:16,19 144:12 145:15,16,17, 21,22 154:5 155:7 156:23 157:24 160:8 163:4,14,18,20,25 164:9,15,20 165:24 166:6 167:25 168:2,4,5, 9,10	
		<b>cost-effective</b> 68:3,8 75:3 156:18 162:22 164:21	
		<b>cost-effectiveness</b> 4:8 22:12 53:4 60:15 66:24 67:19,23 143:20, 21 144:9 145:24 153:25 154:9 155:9 164:16	
		<b>cost-ineffective</b> 164:22	
		<b>costs</b> 21:18 36:20 37:2, 10 38:13 56:4 58:21,22 59:3 60:13 62:9,15 68:17,20,21 69:7,11 75:15 77:3,5,9,12 78:15,24 79:7,16 89:24 91:3 92:5 96:25 97:18, 22 98:6,11,19,20,23 99:15,21,23,25 100:2 101:7,10,14,19,22 104:3 105:7 106:4 108:4,8 109:25 110:1,4, 6,19,20,22,23 111:2 114:22 131:2 132:3,7 134:21 135:9,12,13 136:5,9 137:8,15,24 138:5,17,25 144:5,20 145:18 151:6 153:18 155:20,21 156:1,5,23 161:21,22 162:4 167:6,	

14 168:1,3	146:20,24 147:3,10,11 153:5,6	<b>dangers</b> 145:7	<b>deferrable</b> 115:6
<b>coun</b> 8:25	<b>cross-examine</b> 29:9 32:13 146:19	<b>Daniel</b> 16:24 17:1,4	<b>deferral</b> 92:19 93:13
<b>Council</b> 86:10 87:3	<b>cross-examiners</b> 12:12	<b>Danryd</b> 26:16,23	<b>deferred</b> 92:13 93:22 110:1,4,20 115:8
<b>counsel</b> 9:1,2 11:14 15:1 16:19,21 17:4,7,16 18:3,10 27:13,24 30:22 32:3,12,13,14 33:14 34:3,19 35:12,23 37:12 41:20 42:9 49:6 63:16, 20 71:16 83:20 84:2 102:11 105:22 108:9 114:9 126:14,18	<b>cross-examining</b> 9:2 147:5	<b>Darcie</b> 4:16	<b>definition</b> 101:25 102:1,2 150:16 151:17, 23
<b>counsels</b> 50:24	<b>Cross-exhibit</b> 25:23 26:4,9	<b>date</b> 49:22	<b>degrading</b> 136:23
<b>count</b> 49:13	<b>cross-exhibits</b> 30:6	<b>dated</b> 22:25 23:5,15 26:11	<b>degree</b> 56:13
<b>counterfactual</b> 97:25	<b>crossing</b> 7:12	<b>David</b> 16:9,11,15,17	<b>deliberately</b> 130:21
<b>counterfactuals</b> 100:6	<b>Crosstalk</b> 38:23 61:12 63:10 112:9	<b>day</b> 4:18 5:1,2,3,4,6,7,9, 11,12,13 51:4,14,15 52:11 83:22,24	<b>delivering</b> 149:23
<b>country</b> 100:14	<b>CUE</b> 19:21,25 34:1 36:2,8 127:12	<b>days</b> 8:5	<b>demand</b> 76:1,6,9,15, 17,19 77:18,20,21,22, 23 98:8 144:12,18 153:24,25 155:8 165:8
<b>couple</b> 114:18	<b>CUE-01</b> 19:20,22 33:20 34:5	<b>dead</b> 71:1	<b>demand-driven</b> 36:20
<b>Court</b> 87:18	<b>CUE-02</b> 19:24 20:1 33:22 34:5 36:7,12	<b>dealing</b> 81:13	<b>demand-side</b> 23:15 97:6,23
<b>covers</b> 135:2	<b>CUE-02-E</b> 36:7,9	<b>deaths</b> 46:13,17 60:24 61:17,21 127:16 128:9	<b>depend</b> 97:22 128:15 165:19
<b>CPUC</b> 21:18,23 22:2,7, 12 23:13 31:21,25 110:14 114:21,24 134:8 155:2	<b>CUE-1</b> 34:2	<b>decarbonization</b> 165:7 166:14	<b>dependent</b> 128:14
<b>CPUC's</b> 112:20 141:5	<b>CUE-2</b> 34:2	<b>decarbonize</b> 166:6	<b>depending</b> 64:5 149:4
<b>create</b> 136:20 140:2,7	<b>current</b> 49:12 65:12 105:16 134:23 135:1,2, 3,7,8 136:1 137:9,17 138:3 142:20	<b>decent</b> 70:14	<b>depends</b> 46:5 128:18
<b>created</b> 70:13 136:23 138:13	<b>customer</b> 50:3,16 120:18 133:20,21 134:11,15 145:15 151:11	<b>decision</b> 49:21,22,25 50:1,10,13,23 51:2,20 52:9,20 83:9 84:17 105:13,15 106:8 119:5, 6 120:11,14,15,25 121:1,3 122:12,24 123:15 125:11 126:12 133:11 144:24 154:2,3, 14 160:16 164:19	<b>deployment</b> 89:7 99:17,19 115:9
<b>credited</b> 157:21	<b>customers</b> 45:9 141:18 142:6 148:23 152:11 159:2,5	<b>decision-makers</b> 165:12	<b>DER</b> 4:7 22:12 48:20 49:10 53:4 58:13 68:5 89:6,7,8 93:10,11,14, 17,18 96:13,16 104:10 110:1,4,21,24 111:1 113:11,21,25 115:9 132:4 133:19 134:11,14 137:25 145:15,22,23 155:19 167:9,11
<b>credits</b> 142:6	<b>cut</b> 58:10	<b>decisions</b> 68:21 69:11 72:21 83:4,9 84:6 160:19	<b>DER's</b> 89:3
<b>criteria</b> 53:18,22 123:4, 6 124:7 128:23		<b>decommission</b> 163:5	<b>DER-SPECIFIC</b> 142:11
<b>critical</b> 126:2	<hr/> <b>D</b> <hr/>	<b>decommissioned</b> 161:10	<b>DERS</b> 57:2 58:7,12,17, 22 59:1,6,10,14,16,23 60:4,7 62:18 63:25 64:21 70:13 73:6,8,14, 18,21,23,24 74:2,13,14, 19,23,24 75:6 76:5,24 77:9,11,19,20,21,22 78:3,6,10,14,21 79:3,6, 7 92:13,15,19,21,23
<b>critically</b> 125:15	<b>D-O-U-G-L-A-S-S</b> 17:5	<b>decommissioning</b> 162:1,4 165:22	
<b>cross</b> 6:17,22,23 8:23 30:19 36:6 83:2,16 84:3,15 118:12,15 146:18	<b>D-U-T-T-A</b> 28:18	<b>decrease</b> 98:17 161:5	
<b>cross-examination</b> 9:25 29:2 30:10 34:18, 21 35:2 41:24 42:5,6 51:3,11 52:4 71:20 72:1 82:19 83:11 84:8 88:10, 12,16 95:2,9,10 115:21 118:9,20 119:4,13,15	<b>daily</b> 12:12	<b>Defense</b> 16:19 86:10 87:3	
	<b>damaged</b> 128:8		
	<b>damaging</b> 129:20		

93:24 94:2 97:1 98:1, 12,15 100:2 107:15 115:6 132:19,23 133:2, 17 134:21 135:5,9,14 136:7 137:7,10,16 138:6,18 139:1,4,5,8 140:2 141:8,15,18 142:18 144:5,22 145:9 166:1,8,17 169:1	143:14	<b>disproportionately</b> 44:4,17 70:21,22	<b>drop</b> 96:16,17
<b>DERS'</b> 60:13	<b>difficulties</b> 41:20	<b>disrupt</b> 128:25	<b>due</b> 92:19,21,23 93:24 100:2 110:23
<b>describe</b> 72:21 91:14 108:5 122:16 150:17,19 162:25	<b>difficulty</b> 66:10	<b>disruptions</b> 156:25 157:6	<b>Dutta</b> 14:10,12,13,16, 17 28:11,13,14,16,18 30:5,21
<b>design</b> 109:12 110:10	<b>dioxide</b> 53:14 123:3	<b>distortion</b> 37:25	<hr/> <b>E</b> <hr/>
<b>desirable</b> 70:15	<b>direct</b> 8:25 18:25 19:8, 13 21:8 25:4,14 26:15 27:19 28:2 33:14,16 87:7,9 111:18,22,23 112:8,15 113:1,2,3 117:2,7 126:14 149:15 153:9	<b>distributed</b> 4:7 21:23 22:2,7 31:21,25 95:22 98:7 99:17,19 101:8,11, 16 104:2 151:21 154:6, 8,21	<b>E-A-R-L-E</b> 33:1
<b>desire</b> 29:14,16,21	<b>directed</b> 154:25	<b>distribution</b> 36:20 74:25 75:15,25 76:14, 16,18,20,23 78:2,8,9,24 79:4 99:21 100:2 101:19 104:5 106:3,4, 24 109:10 161:4	<b>e-t-t-i-t</b> 16:18
<b>desiring</b> 30:3	<b>directly</b> 59:23 95:18,24 154:1 158:19 160:3 161:6	<b>distributive</b> 72:15, 20 101:6 102:21 103:3 104:12,14 105:6,20 106:20 107:3	<b>e-z</b> 18:8
<b>detailed</b> 8:10,15	<b>disadvantage</b> 146:1,4	<b>dive</b> 57:7	<b>Earle</b> 32:11,12,14,18,25 33:3,7,19 34:17,21,24 35:6 36:18 37:8,19 38:11 39:11,20 40:2,4, 13,22 41:5,24 42:5,8,10 43:9,19 44:10,23 45:13, 21 46:1,22 47:10,17,19, 23,24 49:6,18 50:9,17, 22 51:12,13,18 52:8,11 53:2 54:11 55:9,20 57:5,24 63:15,18 66:18 67:3 68:17 70:17 71:5, 20,24 72:3,11 73:12 77:4 80:16,20,23 82:11, 19,20
<b>determination</b> 64:18, 19 67:23 164:3 165:18	<b>disadvantaged</b> 42:14 43:7,18 44:5,10,13 50:3,4,8,15,16 53:18,23 54:6,14,22 55:5,24 56:16 70:23 102:4 120:17,19,21 121:10,13 122:6,8,17 123:6,10,12, 18,25 124:18 129:19, 21,25 134:1,7	<b>diversity</b> 14:3 19:9 41:23 42:3 118:17 129:8	<b>Earle's</b> 35:11 44:7 45:5 46:19 47:9 50:19 51:21 52:1 54:4
<b>determinations</b> 67:19	<b>disadvantages</b> 55:22	<b>doable/practical</b> 84:7	<b>earlier</b> 5:13 8:20 18:5 66:21 109:21
<b>determine</b> 48:25 66:14 96:23,24 99:24 100:3 114:22 142:2 164:6	<b>disagree</b> 59:7 70:20 132:18 136:25 138:21	<b>document</b> 84:7	<b>early</b> 5:4,5,8 30:25
<b>determined</b> 99:16	<b>disagreement</b> 28:24	<b>documentation</b> 21:24 22:3,8 31:10,12,22 32:1 161:3	<b>earn</b> 145:11
<b>determining</b> 92:8 99:20	<b>disaster</b> 130:6	<b>documents</b> 34:15 50:22 87:23 105:25 118:23	<b>economic</b> 23:14 140:7 143:1,4
<b>devastated</b> 60:23	<b>disasters</b> 130:5	<b>double</b> 7:14,23	<b>economics</b> 93:3 109:24 110:19 160:15, 17
<b>developed</b> 83:23 112:22	<b>discuss</b> 29:11 40:3 42:19 46:7 107:7	<b>Douglass</b> 16:24 17:1, 3,4	<b>economist</b> 66:10 68:22 69:6
<b>developing</b> 102:7 155:14	<b>discussed</b> 31:18	<b>downsized</b> 92:22 93:18,24	<b>Economy</b> 24:6
<b>development</b> 143:4 148:8,16	<b>discusses</b> 60:19 90:23 97:17 113:3 130:25	<b>downsizing</b> 93:2 94:2	<b>Edison</b> 15:2
<b>developments</b> 143:2	<b>discussing</b> 77:5 89:17, 22 93:21 101:14	<b>downstream</b> 155:8	<b>Edward</b> 16:3,4 25:4,9 27:20
<b>devices</b> 151:22	<b>discussion</b> 56:2,23 74:8 91:1,2	<b>draft</b> 5:17	<b>EE</b> 150:15
<b>DG</b> 111:16	<b>disengage</b> 129:10	<b>draw</b> 126:6	
<b>DIDF</b> 78:6	<b>disparate</b> 67:15 68:3, 11	<b>drive</b> 90:11	
<b>Diego</b> 13:15	<b>disproportionate</b> 42:12,14 43:6 134:1	<b>driven</b> 114:23 115:1	
<b>difference</b> 67:8,13 99:16,18			
<b>difficult</b> 62:16 66:14 97:3,16 99:20,24 100:3, 10,17,18 110:16 140:20			



<b>effect</b> 83:4	<b>emit</b> 138:14,15	95:18,24 96:1,3,5	<b>exact</b> 81:12 131:5
<b>effective</b> 48:20 67:14 145:22 163:4	<b>emphasis</b> 123:11	101:15,25 104:12,14	<b>examination</b> 33:15,16 87:8,9 103:25 117:2,7
<b>effectively</b> 134:16 166:6	<b>employees</b> 15:20 33:2, 5,21,24 140:22	105:1,6,21 106:20,24	<b>examine</b> 4:10 101:16 102:25 103:3 104:4
<b>effectiveness</b> 60:13 68:13 70:11 131:14 141:21,25 144:13 145:15 156:24 165:24	<b>end</b> 4:21,22 5:10,13,19, 20 6:1 151:2 163:6	107:3,5 109:20	<b>examines</b> 103:25
<b>effects</b> 163:9,10	<b>end-all</b> 110:9	<b>Eric</b> 14:18,19 86:4,9 87:1 115:25	<b>examining</b> 8:23
<b>effectuate</b> 145:19	<b>end-use</b> 45:9 150:10	<b>errata</b> 20:19 24:15 33:23 35:18,24 36:2,4, 8,12	<b>examples</b> 70:25 165:3
<b>efficiency</b> 144:10,18	<b>endless</b> 144:3	<b>erratas</b> 6:22,25	<b>exceeds</b> 137:13
<b>effort</b> 79:25 108:7 154:8 155:3 163:3	<b>energy</b> 4:7 13:2 21:23 22:2,7 26:10 31:22,25 54:20 61:8,23 67:2,4,12 70:22 71:1 75:19 88:18 90:3,6 95:22 98:7,9 104:2 114:23 115:1 127:23 128:12 134:11 140:21 141:16 143:23 144:7,10,18 147:8 148:24 154:7,9,21 158:8,10	<b>essential</b> 62:22,24 127:19 129:16	<b>exception</b> 84:10
<b>efforts</b> 62:15 78:11 122:16 162:20,21 165:10	<b>energy-related</b> 166:23 167:7	<b>essentially</b> 80:22 92:21 100:11 105:15 128:10 129:14 136:7 149:22 156:11 162:13	<b>Excerpts</b> 21:18 23:24
<b>Eighty</b> 125:19	<b>engagement</b> 159:21	<b>established</b> 168:8	<b>exciting</b> 10:19
<b>elaborate</b> 40:5 80:5	<b>engineering</b> 141:20	<b>estimate</b> 100:15 114:4 165:13	<b>exclude</b> 36:19 37:1,9, 20 38:12
<b>elaborates</b> 39:14	<b>ensure</b> 44:16 108:7	<b>estimated</b> 98:22,24,25 156:5	<b>excuse</b> 19:9 43:1 105:22
<b>Elaine</b> 4:14	<b>enter</b> 6:3 29:11	<b>estimates</b> 98:5,10 142:16	<b>Executive</b> 23:25 25:24 26:5
<b>elections</b> 59:19	<b>entered</b> 6:13 84:16	<b>Etchissa</b> 6:14 11:5 12:16	<b>exercises</b> 166:12
<b>electric</b> 13:15 14:20 58:7 116:10,24 131:22 143:17 150:10,12 155:22 161:21 163:6	<b>entering</b> 5:21,24 29:5, 12,20,23 84:19	<b>evaluate</b> 141:20 168:9	<b>exhibit</b> 5:17,23 6:22 7:5,8 18:18,20,22,24 19:1,3,5,7,10,12,14,16, 18,20,22,24 20:1,3,6,8, 11,13,16,18,21,23 21:1, 3,5,7,10,12,15,17,20,22 22:4,9,11,14,16,21,23 23:1,3,6,8,11,13,17,19, 22,24 24:2,4,8,10,12, 14,17,19,22,24 25:1,3, 6,8,11,13,15,17,20,22 26:1,3,6,8,12,14,19,21 27:1,3,5,7,10 28:4 29:1, 10,24 30:14,18 31:9,10, 19,20,24 33:20,22 36:4, 9 51:3,11 52:5 83:11,19 117:10,12 119:4,10 120:10,13 150:1
<b>electricity</b> 45:8,10 48:10 58:6 126:6 148:5, 12,14,18,21 150:18,22	<b>entire</b> 120:14 129:1	<b>evaluating</b> 60:13 65:19 145:14 168:6	<b>exhibits</b> 5:14,16,22,24 6:3,4,6,9,13,22,23,24 7:9,25 10:20 18:17,18 27:12,25 28:23 29:6,20 30:3 31:20 34:5 83:21 84:15 117:23 118:20 123:16 124:6
<b>electrification</b> 150:13 151:5,7,8,13,18,22,24 152:1,3 161:14 162:11, 14,23 163:9 164:14,17 165:16,21 167:10	<b>entities</b> 50:2,14 53:12, 17,20 120:16,18 121:9 122:15,19 123:5 168:24	<b>evaluation</b> 53:5 57:3, 10 58:2,4,12 59:5,24 66:24 80:9,10 131:1,10 163:18 167:24 168:14	<b>exist</b> 62:16 138:20
<b>elevate</b> 32:11	<b>entitled</b> 102:20 150:4	<b>evaluations</b> 144:9	<b>exists</b> 138:13 144:16
<b>eliminate</b> 161:11	<b>entity</b> 86:7	<b>event</b> 5:3 28:23	
<b>eliminating</b> 43:14	<b>environment</b> 135:19	<b>events</b> 127:15,23 128:7	
<b>email</b> 105:13,23 106:4	<b>environmental</b> 124:7 130:14 134:6	<b>eventually</b> 162:14	
<b>emailed</b> 118:19	<b>equal</b> 57:2	<b>evidence</b> 5:22,24 6:3, 13 29:11,12,20,24 30:3 73:19 74:14 75:4,5,9 78:4 84:16,19 87:21 99:23	
<b>emergency</b> 46:13	<b>equipment</b> 4:9 61:2,18 127:18	<b>evidentiary</b> 4:5,10 169:19	
<b>emissions</b> 50:7 62:3 120:21 121:12 122:5 147:22 165:16	<b>equity</b> 43:18 53:3 66:23 67:3,5,7,12,21,23 68:12 70:18,19 72:5,12,19,22	<b>ex-ante</b> 102:21 103:10	
		<b>ex-post</b> 102:21 103:10	

<b>expansion</b> 78:8 124:13,22,24 125:3 126:23	<b>fall</b> 70:21,22	<b>flag</b> 117:21	<b>front</b> 59:12
<b>expansive</b> 122:15	<b>familiar</b> 44:25 45:14,21 46:2,5 49:19,20 51:22 58:1 64:23 69:6 70:25 91:6 112:19 120:10,13 124:2 125:6 127:4 131:17 141:1,4,11 155:21,25	<b>flexibility</b> 169:4	<b>fuel</b> 24:5 65:11 148:11 150:5,7,14,18,22 151:10
<b>expect</b> 7:13 122:14	<b>familiarity</b> 112:19	<b>flies</b> 44:14	<b>fuels</b> 44:3 148:10,17 150:21
<b>expenses</b> 107:14	<b>fashion</b> 97:19,20	<b>flips</b> 80:16	<b>full</b> 9:17 10:7 51:16 70:17 86:18 116:18
<b>experience</b> 5:18 100:1 145:5,6	<b>fatalities</b> 130:6	<b>flow</b> 84:12 155:7	<b>fully</b> 36:2 169:9
<b>expert</b> 47:19 53:12 54:11 67:3 84:12	<b>fault</b> 108:5	<b>focused</b> 95:21,23,25 124:12 145:14 164:14 165:21	<b>function</b> 11:4
<b>explained</b> 97:2	<b>fear</b> 169:2	<b>focusing</b> 61:14 69:18 139:25	<b>Fund</b> 69:4,14
<b>export</b> 141:22 142:3,6 152:10 157:20,22,25 158:3,8,13,23 159:2,6, 11,13,19 160:3,11,16	<b>federal</b> 59:6,10 132:19, 22,25	<b>folks</b> 61:18 166:16	<b>funded</b> 58:12 59:1 62:8 104:6
<b>exposed</b> 129:20	<b>feel</b> 119:22	<b>follow</b> 4:24 5:1,3 70:2 139:12 169:9	<b>funding</b> 58:7,16 60:1 106:6,8,9 132:22 133:1
<b>extent</b> 103:6 145:20	<b>fewer</b> 162:16,17	<b>follow-up</b> 30:6 132:13	<b>funds</b> 133:4
<b>externalities</b> 68:19 69:10,19,20,21,24,25 70:11,21 71:4	<b>figure</b> 48:19	<b>footnote</b> 163:21,24	<b>furnace</b> 150:11
	<b>figured</b> 69:6	<b>forecast</b> 104:7	<b>future</b> 21:19 59:16,20 75:6 96:3 141:21
	<b>file</b> 120:12	<b>forecasted</b> 89:8 90:17 113:22	<b>future-oriented</b> 115:3
<b>F</b>	<b>filing</b> 74:4	<b>forecasting</b> 100:11	
	<b>fill</b> 106:12	<b>forgot</b> 39:7 52:16	<b>G</b>
<b>face</b> 129:21	<b>filters</b> 127:1	<b>form</b> 56:24	
<b>facilities</b> 54:17 61:20 148:13 168:15	<b>final</b> 68:16 70:20 80:14 159:4	<b>format</b> 83:23	<b>gas</b> 13:15 14:20 16:5 26:16,23 116:10,23 136:2,4,8,10 137:18 143:17 147:19 148:4, 12,14,17,20 149:8,14, 20,23 150:10,11,22 161:4,10,22,25 162:3, 10 163:5 165:21
<b>facing</b> 156:13	<b>financially</b> 82:5	<b>formatting</b> 118:22	<b>gases</b> 136:20
<b>fact</b> 56:9 64:10,24 66:8, 15 74:3 78:25 101:1	<b>financing</b> 145:18	<b>forthcoming</b> 109:1	<b>gather</b> 71:8
<b>factor</b> 76:2 153:22	<b>find</b> 45:2 60:17 70:8 125:23 138:24	<b>forward</b> 84:22	<b>gathering</b> 148:3
<b>factors</b> 135:4,8 137:5, 6,9,17,21 138:1,2,3 155:7	<b>finding</b> 46:15 60:22	<b>fossil</b> 44:3 138:20	<b>Gautam</b> 14:10,13 28:18 29:14
<b>facts</b> 4:11 93:1	<b>finds</b> 47:14	<b>found</b> 79:2 88:24 131:11	<b>gave</b> 51:6
<b>factual</b> 117:24	<b>fine</b> 111:11	<b>foundation</b> 15:8 21:9, 14 34:23 35:14 41:21 71:17,23 95:5 153:3	<b>geared</b> 134:12,15
<b>failure</b> 37:3,11,22 41:16	<b>finish</b> 5:4 49:6,7 55:14 63:19 112:7,11 119:9 132:12	<b>fraction</b> 113:22,25	<b>gee</b> 81:21
<b>fair</b> 59:15,17 60:15 81:1 101:9,13 124:20 129:22 132:21 139:24 141:13	<b>finishing</b> 5:8	<b>framed</b> 56:22	<b>gen</b> 92:9
<b>fairly</b> 109:11 110:11 145:13 146:4	<b>Fiona</b> 61:4	<b>framework</b> 42:20 43:15 60:11 70:16 107:4 143:21 145:25 167:24	<b>general</b> 52:24 91:8 98:15 104:16,25 134:4 167:5
<b>faithfully</b> 93:4	<b>fit</b> 168:8	<b>Frank</b> 18:8	
	<b>Fitich</b> 119:6	<b>frankly</b> 110:14 126:13	
	<b>fits</b> 168:5	<b>free</b> 119:22	

<b>generalized</b> 163:1 167:13	<b>goods</b> 68:19 69:9	<b>happy</b> 69:1	<b>home</b> 150:11
<b>generally</b> 53:8 91:8 106:25 107:1 124:20 130:2 134:5 145:25 149:5 157:5 161:9 166:4,11 168:22	<b>Google</b> 17:4	<b>hard</b> 6:18,21,24 7:4,6 65:21 66:1,4,5 132:11	<b>homes</b> 61:4 127:19 128:9
<b>generates</b> 98:8	<b>granted</b> 106:8	<b>header</b> 150:3	<b>Hon</b> 46:22
<b>generation</b> 46:25 48:10 90:12 91:23,25 92:9 112:24 126:7 128:10 129:1,2 148:9, 12,16,18 149:14 168:6	<b>Great</b> 131:17 147:13	<b>heading</b> 134:20 135:3 142:25	<b>honestly</b> 104:21
<b>generic</b> 140:24 143:15	<b>greenhouse</b> 136:20 147:19	<b>headphones</b> 38:3	<b>Honor</b> 7:19,24 8:18 10:3,6 13:14,22 14:1, 12,17,19 15:1,7,18,24 16:4,10,17,23 17:3,10, 12 18:5 27:16 28:11,16, 20,21,25 29:3 30:5,8,21 31:2,7 33:10,18 34:22 35:9,16 36:1,15 38:4,21 39:3 40:10 41:1,12 42:2 43:12 44:12 47:7,12 49:8 50:9 51:19 54:2 55:19 71:21 82:12,17 87:11,17,18 88:9 94:11 95:6,12 111:6 115:15 116:1,8 117:6 118:8,16, 19 119:14 126:11 130:18 137:5,13 146:14 152:17 156:7 169:16
<b>generically</b> 140:21	<b>grid</b> 21:19 62:4 156:20 157:2 167:22	<b>health</b> 44:14 129:20 130:2,4	<b>hope</b> 4:21 5:5 29:14,16, 21 115:22
<b>Genesis</b> 6:14 11:6 12:17	<b>ground</b> 126:3	<b>hear</b> 29:23 37:5,13 40:11 55:16	<b>hoping</b> 30:3
<b>get alignment</b> 53:8	<b>grounds</b> 47:8	<b>heard</b> 39:9	<b>hospital</b> 63:25 64:5,14, 21
<b>GGL-01</b> 20:3,6	<b>groundwater</b> 125:15 126:7,9 127:1	<b>hearing</b> 4:5,10,23 5:19, 21 6:1 9:3,4,8,18 10:25 11:24 18:15 29:15 32:9 37:14 50:21,25 51:1,7 83:12 84:24 132:11	<b>hospitals</b> 62:23 63:3, 12
<b>GH</b> 139:14	<b>group</b> 22:18 128:17	<b>hearings</b> 50:24 74:9 83:20 84:13 169:19	<b>Houck</b> 4:16
<b>GHG</b> 50:7 89:23 90:13 91:11,12,16,18 97:18 120:20 121:12 122:5 136:24 139:15,18	<b>groups</b> 64:13 101:17	<b>heat</b> 150:12 151:22	<b>hour</b> 4:19 5:18 84:10 85:4
<b>GHGS</b> 136:22 137:19 138:13,14 139:11,13	<b>grow</b> 68:17 69:7	<b>heavily</b> 92:25	<b>hourly</b> 136:5 161:21
<b>give</b> 7:17 8:8 10:1 17:18,21 18:12 57:2,4 81:3 82:2 141:18 151:16	<b>growth</b> 69:17 145:8	<b>helpful</b> 39:23 51:1 57:8 72:21 81:17 161:7	<b>hours</b> 5:4 51:12 52:5 76:10 83:13,14
<b>giving</b> 55:25	<b>guard</b> 42:13	<b>Herbert</b> 7:19 10:3 11:5 16:23 17:10,20,25 28:11 31:2	<b>housekeeping</b> 4:17
<b>Global</b> 42:10,21 43:5 66:20	<b>guess</b> 35:4 84:21 94:15 99:10 103:15 105:4 107:9 108:14 114:20 134:14 166:11 169:22	<b>high-fire</b> 157:3	<b>Howard</b> 27:22 28:2,6
<b>goal</b> 57:2 91:12,16,18 97:4 150:17,18	<b>guessing</b> 40:24 106:10	<b>high-level</b> 168:22 169:3	<b>Hsu</b> 16:3,4,5,8
<b>goals</b> 90:13 133:25 134:6,8,13,16	<b>guidance</b> 153:14 154:13,15,17 155:1,6	<b>higher</b> 129:21 164:18	<b>hurricane</b> 60:23 61:3, 17,19 127:15,19 128:7, 9
<b>good</b> 4:13 6:15 12:9 13:14 14:1,12,19 15:1, 7,18 16:4,16 17:3 27:24 30:2,16 32:18,19 34:24 35:1 37:24 42:8 55:25 70:15 71:6,10 81:21 87:12,13 116:4,8 146:15 147:14 153:12 164:19	<b>guiding</b> 119:17 120:6 137:3	<b>historical-type</b> 115:2	<b>Hydrogen</b> 24:5,6
	<b>H</b>	<b>historically</b> 115:7 129:20	<b>hypothetical</b> 30:16 93:2 129:4
	<b>H-A-F</b> 18:8	<b>History</b> 23:21	<b>hypothetically</b> 30:12
	<b>H-S-U</b> 16:5	<b>hit</b> 61:4,19 130:14	
	<b>habitats</b> 135:21	<b>hoc</b> 97:20	
	<b>Hafez</b> 18:5,7	<b>hold</b> 12:13 55:13 63:15 146:17	
	<b>Haga</b> 12:9,10 15:24,25	<b>holistic</b> 105:3 166:12	
	<b>hand</b> 7:16 10:3,22 11:1 17:19,23,25 18:13 27:13 28:9,12 31:2 32:4 101:11 168:17,18	<b>holistically</b> 96:3	
	<b>handle</b> 28:25 29:1		
	<b>hands</b> 7:18,20 10:2 17:22 30:24		
	<b>happen</b> 75:6 157:6		

164:18	<b>impeachment</b> 83:19, 24 84:1	<b>inclusive</b> 145:18	<b>informational</b> 164:1,5, 25 165:1
<b>I</b>	<b>imperative</b> 47:1	<b>income</b> 101:17	<b>informational-use</b> 164:11
<b>idea</b> 78:23 81:21 82:2,6	<b>implement</b> 51:20	<b>incomplete</b> 108:6	<b>informative</b> 165:12
<b>ideally</b> 6:10	<b>implementation</b> 81:10 131:3	<b>inconsistent</b> 35:7	<b>infrastructure</b> 78:9 124:16 129:22 136:2,4, 8,11 137:18
<b>identification</b> 19:2,6, 11,15,19,23 20:2,7,12, 17,22 21:2,6,11,16,21 22:5,10,15,22 23:2,7, 12,18,23 24:3,9,13,18, 23 25:2,7,12,16,21 26:2,7,13,20 27:2,6,11 36:10 119:11	<b>implemented</b> 80:25	<b>incorporate</b> 105:1 125:14	<b>initiatives</b> 155:17
<b>identified</b> 6:13 19:24 27:7 29:10 36:12	<b>implements</b> 45:1,23	<b>incorporated</b> 167:4	<b>input</b> 40:8,24 41:7
<b>identifies</b> 90:12	<b>implies</b> 127:2	<b>Incorporating</b> 126:2	<b>installed</b> 61:5 64:1
<b>identify</b> 5:16 18:24 91:7 101:20 119:4	<b>important</b> 69:9 72:19 91:22 92:10 96:25 101:15 104:13 159:18, 22,23 160:2,6,10,15,18, 20,22	<b>incorrectly</b> 114:17	<b>instance</b> 62:2,3 65:7 70:3 110:21
<b>identifying</b> 18:17,18, 23 119:9	<b>impossible</b> 62:16	<b>increase</b> 57:13,22 58:14,21 59:3 60:5 79:13 98:13 131:15,21, 25 132:3,8 156:19	<b>instances</b> 61:22 71:2 141:14 165:23
<b>illnesses</b> 46:13	<b>improve</b> 18:20 38:3	<b>increased</b> 57:12,20 58:5 77:23 100:15 131:2,11 132:3,7	<b>Instituting</b> 4:6
<b>illustrations</b> 76:11	<b>improved</b> 110:7 113:18	<b>increases</b> 68:18 69:7 79:14,19 80:7	<b>intends</b> 45:7
<b>imagine</b> 74:22	<b>improving</b> 48:14	<b>increasing</b> 144:5,21 145:8 156:25	<b>intent</b> 44:14
<b>immediately</b> 6:11 83:16	<b>inaccurate</b> 105:17	<b>increasingly</b> 97:4	<b>interactions</b> 9:7
<b>impact</b> 26:10 43:6 44:5, 18 50:7 57:9 58:1,2,4, 12 59:4 72:14 80:1 81:25 98:23 103:3 111:19,22,23 112:8,15 120:21 121:12 124:23 131:1,10 137:20 157:5	<b>inaudible</b> 67:7 74:16	<b>incremental</b> 89:3 92:15	<b>interactive</b> 90:18
<b>impacted</b> 61:21 80:9	<b>incentives</b> 76:5 77:1 133:12 151:20	<b>incurred</b> 68:21 69:12 77:3	<b>interest</b> 103:12,14
<b>impacts</b> 42:12,14 47:2, 5,21 48:9 50:4,14 54:21,22 55:4,5,12,22, 23 56:15 67:15 68:4,11 79:13,22 80:6 95:22 98:18 100:15 101:6 102:3,21 104:6 120:18 121:10 122:17,21 123:12,24 124:5,10,12, 18,20,23 125:2 126:8 127:3 130:15 131:25 134:1,7 135:19,21 137:20,21 142:17,22 157:7	<b>incentivize</b> 151:10	<b>indecipherable</b> 28:22 78:7 129:10 140:16	<b>interesting</b> 70:9
	<b>include</b> 60:12 62:21,23 67:23 79:25 91:23 92:10 129:15 135:7 140:23 155:15 163:14 165:23 167:17	<b>independent</b> 90:20 114:2	<b>Intergovernmental</b> 22:19
	<b>included</b> 36:4 62:11 77:9,12 80:3 89:24 92:3,4,6,14,16 96:5 104:14 135:8,12 144:9 145:21 166:24 167:15	<b>indirectly</b> 50:5	<b>International</b> 69:4,14
	<b>includes</b> 6:22,24 82:9 123:1 124:22 134:23 135:4 136:1 154:5	<b>individual</b> 62:13 68:5 96:2 107:6 123:1 168:24	<b>interprets</b> 102:23
	<b>including</b> 89:18 122:6 123:2,3,18 124:15 132:1,2 134:11 135:19 139:6 140:11,12 143:14 151:3 161:13 163:8 167:12	<b>individuals</b> 128:17 145:9	<b>interrupt</b> 132:9
	<b>inclusion</b> 57:11	<b>Industrial</b> 136:20	<b>interrupting</b> 105:23
		<b>industrialized</b> 112:23	<b>interruptions</b> 132:16
		<b>Industries</b> 13:2 88:19 90:4,6 147:8	<b>introduce</b> 11:15 12:23 18:4 28:14 31:6 32:20 34:20 41:25 71:18,19 86:6 88:13 94:25 116:5 118:13,19 147:6 152:25
		<b>industry</b> 75:19 159:1	<b>introduction</b> 42:18 95:2
		<b>information</b> 7:10 125:15 126:2,25 164:19,23	<b>intuitively</b> 76:12
			<b>investment</b> 78:2 100:9 134:11 145:17,19,21
			<b>investments</b> 124:16 145:9,10

<b>Investor-owned</b> 20:9, 14,20 117:11,13	<b>item</b> 8:3	<b>kind</b> 8:12 9:7 12:7 39:25 84:10 99:6 100:16 112:5 126:18 130:16	30:16,22 31:4,13,17 32:9,20 33:7,11,13 34:1,19,24 35:12,23 36:5,11 37:12 38:5,8 39:5,7,16,25 40:20 41:4,9,13,17,19 42:4, 23,25 43:11,17,22 44:9, 19 45:4,18,25 46:20 47:10,23 49:6,14,16 50:20 52:3,12,15,23 54:9 55:13 57:16 63:13, 15,18 71:7,10,15 72:7,9 73:10 80:16 82:13,18 86:3,11,17,20 87:5 88:11 90:1,7 93:5 94:6, 9,12,21,23 95:8 105:13 106:2,13 111:7,11 112:4,7,10 113:2,7 114:18 115:12,16 116:2,11,17,20 117:1 118:10,25 119:2,12,22 120:24 121:5,16,18,23 122:1 125:24 126:17 127:8 130:7,19 132:9 136:15 137:11 138:7 145:1 146:6,11,15 147:2,9 152:15,18,23 153:4 156:9 169:14,17
<b>involved</b> 155:22 156:1	<b>J</b>	<b>knowledge</b> 34:9 47:24 52:2,20 53:11,12 60:9 84:12 107:21 124:25 148:6 155:4 156:4 159:6	54:9 55:13 57:16 63:13, 15,18 71:7,10,15 72:7,9 73:10 80:16 82:13,18 86:3,11,17,20 87:5 88:11 90:1,7 93:5 94:6, 9,12,21,23 95:8 105:13 106:2,13 111:7,11 112:4,7,10 113:2,7 114:18 115:12,16 116:2,11,17,20 117:1 118:10,25 119:2,12,22 120:24 121:5,16,18,23 122:1 125:24 126:17 127:8 130:7,19 132:9 136:15 137:11 138:7 145:1 146:6,11,15 147:2,9 152:15,18,23 153:4 156:9 169:14,17
<b>involves</b> 90:10 91:3	<b>Jaime</b> 27:4,8	<b>Koss</b> 10:5,6,10,17 15:17,18,19,22 32:12 33:14,17 34:4,17,25 35:9 36:1 38:21,24 39:16,19 40:10,17 41:3 43:2,8 44:6 45:13 46:18 47:7 50:9,18 51:11 52:7,10 71:7,9 82:14,16	54:9 55:13 57:16 63:13, 15,18 71:7,10,15 72:7,9 73:10 80:16 82:13,18 86:3,11,17,20 87:5 88:11 90:1,7 93:5 94:6, 9,12,21,23 95:8 105:13 106:2,13 111:7,11 112:4,7,10 113:2,7 114:18 115:12,16 116:2,11,17,20 117:1 118:10,25 119:2,12,22 120:24 121:5,16,18,23 122:1 125:24 126:17 127:8 130:7,19 132:9 136:15 137:11 138:7 145:1 146:6,11,15 147:2,9 152:15,18,23 153:4 156:9 169:14,17
<b>IO</b> 162:8	<b>January</b> 4:2 49:22	<b>Koss'</b> 10:3 39:10	
<b>IOU</b> 35:7 76:10	<b>Jeanne</b> 12:17,22,25 88:18 147:7	<b>L</b>	
<b>IOU's</b> 75:16,18 76:4,7 119:17 147:15 150:1	<b>Jennifer</b> 16:24 17:11, 12 27:16	<b>L-I-N</b> 14:2	
<b>IOU-01</b> 20:8,11 117:10 150:1	<b>jerk</b> 114:14	<b>Laboratory</b> 106:19	
<b>IOU-02</b> 20:13,16 117:12	<b>Jersey</b> 142:16	<b>lack</b> 66:9	
<b>IOU-03</b> 20:18,21	<b>job</b> 70:8 139:25 140:1, 4,16,17	<b>land</b> 54:16 124:4,5,7,8, 9,10,12,15,19,23 125:1, 8,20	<b>land-use</b> 54:20,21 55:4,21 56:10,15 126:23 137:20
<b>IOUS</b> 120:6 133:10 135:11 137:24 151:3 153:13 158:17 162:9 167:23	<b>jobs</b> 26:11 70:13 140:8 143:7,9	<b>large</b> 102:9 135:20 154:2 156:17	<b>larger</b> 103:6 165:10
<b>IOUS'</b> 140:1	<b>Joe</b> 12:9 15:24,25	<b>late</b> 4:21 7:1	<b>latest</b> 96:12
<b>IPCC</b> 22:17	<b>joining</b> 4:16	<b>Lau</b> 4:4,14 7:21 8:1,3, 19 10:5,9,11,18,24 12:9,13,15,19,21 13:3, 7,10,17,20,24 14:4,7,9, 15,18,22,24 15:5,11,14, 16,22 16:2,8,14,21 17:1,7,16,21 18:1,10,15 19:3,7,12,16,20,24 20:3,8,13,18,23 21:3,7, 12,17,22 22:6,11,16,23 23:3,8,13,19,24 24:4, 10,14,19,24 25:3,8,13, 17,22 26:3,8,14,21 27:3,7,12,24 28:13 29:5	
<b>IRP</b> 48:16,24 49:20 50:1,23 51:2,19,21,22, 24,25 53:8,11,12,20,25 54:5,11,12,22 55:3,4,7, 11,21 56:7,10,13,14,23, 25 57:3,6 80:1,3,11 83:5 89:9,25 90:12,16, 20 91:7 97:20 119:18, 20 120:7,11 123:9,12, 22 124:4,9 125:3 126:5, 8 127:2,4 139:16 166:4, 10,12	<b>Jonathan</b> 13:12,15		
<b>IRP's</b> 91:12 96:12 124:11	<b>Joseph</b> 86:11 87:6		
<b>IRPS</b> 123:1 125:14	<b>Judge</b> 4:4,13 32:19		
<b>island</b> 129:11	<b>judgment</b> 34:12 83:19		
<b>ISO</b> 23:20	<b>jump</b> 130:22		
<b>issue</b> 8:14 30:16 48:15 55:25 56:22 77:17,25 84:18 89:17 90:10 100:5 108:18 115:5 128:4 148:11	<b>jurisdictions</b> 142:12, 19 143:3		
<b>issued</b> 106:5,7	<b>justice</b> 130:14		
<b>issues</b> 4:8 26:17,24 30:11,12,13 53:3 56:2 62:2 67:7,12,22,24 68:12 109:19 110:11,15 127:5 138:24	<b>K</b>		
	<b>K-O-S-S</b> 15:19		
	<b>keeping</b> 78:13		
	<b>key</b> 46:24 47:13 51:22		
	<b>kicking</b> 144:2		
	<b>kilowatt</b> 79:4		
	<b>kilowatts</b> 79:3		

<b>legacy</b> 141:21	<b>living</b> 70:14	<b>low-serving</b> 122:15,19 140:24 143:16 161:22 167:13	
<b>legislation</b> 83:3,7 84:4, 18	<b>load</b> 23:20 50:1,14 53:12,16,20 98:13,16, 17 100:16 110:24 138:25 151:12	<b>lower</b> 77:22,23 79:8	<b>Maria</b> 60:23
<b>legislative</b> 148:25 149:4	<b>load-serving</b> 120:16, 18 121:9 123:5 168:24	<b>lowering</b> 139:2	<b>mark</b> 5:16 18:24 119:4
<b>legislature</b> 70:1	<b>Loading</b> 145:25	<b>LSE</b> 168:7	<b>marked</b> 19:1,5,10,14, 18,22 20:1,6,11,16,21 21:1,5,10,15,20 22:4,9, 14,21 23:1,6,11,17,22 24:2,8,12,17,22 25:1,6, 11,15,20 26:1,6,12,19 27:1,5,10 33:20,22 36:9,11 87:19 117:9,11 119:10
<b>less-accelerated</b> 70:7	<b>local</b> 43:14,25 44:3,12 46:16 50:6 53:13,21 54:6 62:5 63:4 120:20 121:12 122:4 123:2,9, 24 128:10 129:1,2 136:11,23 140:7 143:1, 3	<b>LSES</b> 50:2,4 121:9 122:3,19,25 123:4 168:25 169:4	
<b>letter</b> 159:9	<b>located</b> 64:6,14	<b>lunch</b> 4:19 82:23 85:2 86:3 118:20	
<b>letters</b> 158:14	<b>location</b> 78:22 128:18 151:11	<hr/> <b>M</b> <hr/>	
<b>level</b> 68:17 69:7 81:11 89:6,8	<b>locational</b> 155:16	<b>machinery</b> 80:4	<b>marking</b> 10:20 18:16, 17,23 119:9
<b>levels</b> 68:19 69:8,21	<b>locations</b> 123:20	<b>made</b> 18:11 69:22 79:13 88:2 97:7 108:7 145:9 165:12	<b>material</b> 117:18,23 118:1
<b>leverage</b> 104:17 106:18	<b>logic</b> 98:10	<b>Magana</b> 26:15,22	<b>materials</b> 51:10 104:17
<b>life-saving</b> 127:17,18	<b>logical</b> 96:14	<b>mail</b> 6:19,20,21 7:1	<b>matter</b> 30:13 44:4 53:14 62:20 73:9 74:21 75:2 87:15 88:6 109:24 110:18 136:22
<b>lifesaving</b> 61:2,3,18	<b>long</b> 61:10 76:22 148:19 162:7	<b>maintain</b> 6:12 8:21 9:6 18:22	<b>matters</b> 4:18 119:7
<b>limited</b> 163:25	<b>long-term</b> 161:13 163:9,17 165:1,5,15 166:1,9	<b>maintaining</b> 6:15	<b>McGovern</b> 27:4,9
<b>Lin</b> 13:25 14:1,2,6,8 19:8 41:22,25 42:2,4,7 43:2,4,12,21,23 44:8, 12,20,22 45:4,6,17,19, 20 46:9,21 47:12 48:4 49:15,16,17 50:11,22 51:8,19 52:7,16,19 53:1 54:10 55:13,17,19 57:16,18 61:13 63:11, 17 65:2 68:15 71:12 117:3 118:11,12,16 119:3,12,14,16,24 120:4,24 121:2,5,8 122:7 125:24 126:1,21 127:8,11 130:7,10,18, 20 132:9,15 136:17 137:4,13 138:10 145:1, 3 146:8,20 147:3	<b>longstanding</b> 60:25	<b>make</b> 7:3 9:21,23 11:18 18:19 27:18,21,22 29:17,19 32:5 34:14 54:7,9 64:8,17 65:17 67:18 69:2 84:9 87:6 96:19 99:19 102:7,9 104:13 120:7 126:5 130:21 132:10 133:10 144:17 145:11 156:14 160:19 165:22	<b>meaningsless</b> 143:15
<b>lines</b> 73:1,15 77:14 96:9 99:3 107:12 109:23 113:20 135:20 139:24 155:12 158:16	<b>looked</b> 99:13 108:19,20 109:4,7,11,19 110:11 156:22	<b>makers</b> 133:11 164:20	<b>means</b> 30:10 59:22
<b>link</b> 36:3	<b>lose</b> 61:6 127:21	<b>makes</b> 66:14 97:21 160:23	<b>meant</b> 104:4 111:4 167:13
<b>linked</b> 137:9,21	<b>losing</b> 128:11	<b>making</b> 144:24 160:16	<b>measure</b> 72:14 80:1
<b>list</b> 5:17,23 6:4,5,8,12, 15 7:8 11:3 12:3 16:15 18:18,22 31:19 36:4 157:23	<b>loss</b> 153:22 155:4,6	<b>manner</b> 134:17	<b>measures</b> 64:2 132:4
<b>listen</b> 18:21	<b>losses</b> 154:6,11,17,20	<b>Manual</b> 23:14	<b>mechanics</b> 160:21
	<b>lost</b> 114:12 130:8 137:11	<b>mapping</b> 54:12 123:17, 20	<b>medical</b> 61:2,18 127:18
	<b>lot</b> 6:19 50:22 61:25 75:7 83:2 114:3 126:13 130:11 137:19	<b>March</b> 22:25 23:5	<b>medicine</b> 61:3 127:18
	<b>lots</b> 71:2	<b>margin</b> 153:23	<b>medicines</b> 61:19
	<b>low</b> 78:4,25 79:5	<b>marginal</b> 91:15,17 98:8 109:25 110:3,6,10,20, 22,25 111:1 136:5 138:25 139:15,18	<b>meet</b> 6:2 8:6 42:20 46:25 71:6 90:13 91:12, 16,18 111:16 144:21 151:17 169:1,5
	<b>low-income</b> 44:18 144:10		<b>meeting</b> 134:12,16 145:22
			<b>meets</b> 165:6
			<b>mentioned</b> 28:20,21 30:8 36:17 40:7 65:4 80:9 93:10 103:5 108:24 110:15

<b>mentions</b> 154:20	<b>mitigation</b> 128:15 129:8 155:23 156:2	<b>multiple</b> 65:6 128:25 133:17 144:8 164:10	15,19,20,22
<b>metering</b> 71:1 158:8,10	<b>mitigations</b> 129:6	<b>mute</b> 9:10,12 13:10,11, 24 14:9 17:16 112:4 152:19 169:20,22	<b>newly</b> 54:19
<b>methane</b> 24:6,7 38:16, 17 147:15,18,22 148:2 149:12,17,24 150:5 151:4 152:5,9 161:1,5, 11,14,19 162:3,15 163:10,11,14 165:16,23 166:2,9,17	<b>model</b> 89:18 91:6,22 96:25 124:22,24 159:4	<b>muted</b> 13:19,20 39:5 112:3	<b>news</b> 74:4
<b>method</b> 65:10 66:11 165:17	<b>modeling</b> 89:25 90:12, 14,16 91:9 97:3,17 124:13 125:3,6 158:7	<hr/>	
<b>methodologies</b> 108:21	<b>models</b> 80:11 126:23	<b>N</b>	
<b>methodology</b> 65:12, 16,20 95:19 96:18 110:6 113:17 142:21 143:10	<b>modification</b> 40:15 109:3 119:8	<hr/>	
<b>metrics</b> 123:4 144:20	<b>modifications</b> 18:19 38:20 39:13,18 40:2,5, 23	<b>N-E-W-L-A-N-D-E-R</b> 13:16	<b>non-attainment</b> 123:19
<b>microgrid</b> 74:22	<b>modifiers</b> 98:16	<b>names</b> 11:12 16:24 18:20	<b>non-coincident</b> 76:1, 9,17 77:5,18,19,23 79:9
<b>microgrids</b> 62:3	<b>moment</b> 9:18 32:22 71:7	<b>narrow</b> 70:9	<b>non-coincidental</b> 76:6
<b>middle</b> 83:12	<b>monetary</b> 69:4,14 140:11	<b>nation</b> 46:12	<b>non-energy</b> 79:16 167:7
<b>mile</b> 156:6	<b>money</b> 67:21,25 145:10	<b>National</b> 106:19	<b>non-ratepayer</b> 133:1
<b>mileage</b> 149:22	<b>monitoring</b> 11:2	<b>natural</b> 16:18 86:10 87:2 130:5,6 136:2,10 137:18 148:4,11,14,17, 20 149:8,14,20,23 150:10,22 161:4,22 162:10 163:5	<b>non-targeted</b> 78:20
<b>mimic</b> 9:7	<b>monthly</b> 161:22	<b>nature</b> 117:24 155:16	<b>noncoincident</b> 36:19
<b>mind</b> 12:2,6 39:25 67:11 76:6 78:13 102:1, 2 150:16	<b>more-accelerated</b> 70:6	<b>NDT</b> 157:13	<b>nonenergy</b> 37:1,9,21 38:12 143:4 144:4,8,14, 20 166:22
<b>mine</b> 135:10	<b>morning</b> 4:13 5:9 12:9 13:14 14:1,12,19 15:1, 7,18 16:4,16 17:3 32:18,19 34:24 35:1 42:8 82:21	<b>NEB</b> 143:1	<b>nontargeted</b> 151:6,8, 18,24 152:1,2 155:18 163:1
<b>minimization</b> 53:25 55:2 56:25 123:6	<b>motion</b> 29:12,17,19	<b>necessarily</b> 65:18 101:24 103:25 131:24 133:2 138:22 139:12 143:12 160:1 163:2 166:11 168:25	<b>noo</b> 4:19
<b>minimize</b> 54:6 123:9	<b>motions</b> 5:21 7:13 29:5,23 30:18	<b>needed</b> 7:3 89:2 90:11, 13 91:18	<b>noon</b> 4:19
<b>minimizing</b> 53:17,21 134:7	<b>motivations</b> 104:1,4	<b>negative</b> 68:19 69:10, 19,20 79:22 80:6 98:14	<b>Nora</b> 15:23,25 18:6
<b>minute</b> 28:9 30:24 32:5	<b>move</b> 18:15 28:8 32:6 44:20 79:10 87:21 98:2 103:18 107:9 113:5 115:21 130:18 155:11 156:11 157:9 160:24 166:18 167:20	<b>NEM</b> 141:19 142:2 158:24	<b>note</b> 30:25 87:17
<b>minutes</b> 5:20 29:25 111:7,9 114:18 121:24 145:2	<b>moved</b> 83:23	<b>NEM-3</b> 26:10	<b>notes</b> 155:2
<b>mispronounced</b> 16:25	<b>moving</b> 57:9 75:10 77:7 96:7 99:14 102:5 111:14 123:15 124:4 127:6 133:6 139:19 163:10,20 168:11	<b>net</b> 141:1,14,19,23 142:6 151:25 152:11 157:19,20,25 158:7,10, 14	<b>notice</b> 50:21 51:6 84:20
<b>missed</b> 17:22,23 90:14		<b>Network</b> 108:20	<b>notify</b> 11:3,4
<b>mistake</b> 68:13		<b>Neutrality</b> 24:1	<b>November</b> 26:11
<b>mitigate</b> 122:20		<b>Newlander</b> 13:12,14,	<b>NOX</b> 53:13 123:2
<b>mitigating</b> 156:24,25			<b>NRDC</b> 20:24 21:4 86:4 101:2 107:13,17,23 109:19

<b>numbers</b> 75:25	<b>opine</b> 106:6		118:24 143:22 146:18 164:10
<b>numerical</b> 80:10	<b>opinion</b> 47:19 48:8 54:11 67:3 74:20 75:22 93:16 96:24 102:6 109:14 118:3 149:18 150:20 157:2 158:21 164:24 165:14 167:1 168:16 169:7	<b>P</b>	<b>parties'</b> 11:12
<b>O</b>		<b>P.E.</b> 21:8,13	<b>parts</b> 35:11 46:6 59:8 76:13,14,16,23 161:10
<b>object</b> 30:7 35:9 38:25 40:18 43:8 44:6 45:16 46:18 47:8 50:9,18 92:24 112:25	<b>opinions</b> 118:2	<b>p.m.</b> 4:21 85:4,5 86:1	<b>party</b> 11:13,14,15 12:16,24 30:13,15 32:21 42:1 76:18
<b>objection</b> 39:10,20 40:11 44:9,20 45:25 46:20 50:20 126:11,17 130:16 136:12 137:1 146:3,6 156:7	<b>opportunity</b> 11:16,18 17:23 29:7 86:17 116:17 144:16 159:12	<b>Pacific</b> 14:20 116:10,23	<b>party's</b> 11:10 35:15
<b>objections</b> 28:24 66:21	<b>oppose</b> 75:16	<b>pages</b> 39:14 80:16 91:1 123:16 124:6	<b>passed</b> 56:12
<b>obtain</b> 41:6	<b>opposite</b> 59:25	<b>paid</b> 59:23 131:22 132:4,7 152:10	<b>past</b> 67:6 107:18,20,23 108:19 109:7
<b>occur</b> 97:1 162:10	<b>optimal</b> 69:21,22	<b>pair</b> 61:3	<b>pathway</b> 162:12
<b>occurred</b> 115:9	<b>optimization</b> 56:6 80:4	<b>panel</b> 12:3 22:19	<b>pathways</b> 165:6 166:13
<b>October</b> 23:15 123:17	<b>optimize</b> 97:24	<b>panelists</b> 8:23 11:3	<b>Paul</b> 14:24 15:2 16:18
<b>offer</b> 61:8,23 88:9 122:20 127:24 128:13 132:13	<b>optimized</b> 97:19	<b>par</b> 164:16	<b>pay</b> 70:13
<b>offered</b> 119:3	<b>order</b> 4:5,6 8:21 11:7,9 18:16 23:25 32:6 73:22 97:6 105:17 145:25	<b>paragraph</b> 42:19 43:20 44:11 93:9 143:1	<b>PB</b> 125:13
<b>Office</b> 24:11,16,21,25	<b>ordered</b> 105:8	<b>parallel</b> 47:20 159:4	<b>PCF</b> 31:8,10,20
<b>officer</b> 4:14 82:25	<b>orders</b> 105:14	<b>paraphrase</b> 131:7	<b>PCF-01</b> 21:10 100:21
<b>official</b> 84:20	<b>organization</b> 65:9 82:4,9 88:14 95:1 116:7 118:13 152:25	<b>Pardon</b> 105:23	<b>PCF-02</b> 21:15
<b>one-appliance-in</b> 151:14	<b>original</b> 36:3 87:14	<b>parlance</b> 150:15	<b>PCF-03</b> 21:20
<b>one-appliance-out</b> 151:14	<b>outages</b> 60:25 127:16 129:2 130:5	<b>parsing</b> 83:9	<b>PCF-04</b> 22:4 31:9,21
<b>one-size-fits-all</b> 64:18	<b>outcome</b> 73:23 80:24 82:4	<b>part</b> 37:23 42:20 43:14 46:10 48:7,17 49:2 50:3,16 53:2,4,25 54:15,16,22,24 55:1,3 56:24 57:15,23 58:9 59:11 60:21 65:18 66:23,25 69:9 70:15 71:2 76:1,2,16 77:13,16 78:5 90:15 97:4 99:12, 13 101:24 105:6 108:16 109:8,12,19 111:17 114:23 120:17 125:17 133:13 135:23 143:19, 20 145:24,25 160:17 161:3,9,20 163:10	<b>PCF-05</b> 22:9 31:24
<b>Oops</b> 81:22	<b>outline</b> 8:4,7,9,13	<b>partially</b> 89:21	<b>PCF-06</b> 22:14
<b>opening</b> 19:21 20:9,24 24:11,15,20 44:23 53:7 66:22 70:18 80:14 87:23 88:22 89:12 95:13 96:8 98:3 99:3 101:5 102:19 104:10 117:10 119:19 130:23 133:5,7 134:19 142:10, 15 150:1 153:9 157:10 160:24 166:19 167:20 168:12	<b>output</b> 55:7 157:13,16, 23 158:3	<b>participants</b> 82:7	<b>PCF-07</b> 22:21
<b>Operator</b> 90:20	<b>overdrafted</b> 125:15 126:3,7 127:1	<b>participation</b> 82:20 104:5	<b>PCF-08</b> 23:1
	<b>overproduced</b> 68:20 69:10	<b>particulate</b> 44:4 53:14 136:21	<b>PCF-09</b> 23:6
	<b>overrepresented</b> 101:20,21	<b>parties</b> 6:2,21 7:10 8:6, 12 11:12 29:7,8,15,17, 18,19,22 30:2,24 106:5	<b>PCF-1</b> 21:7
	<b>overrule</b> 45:25		<b>PCF-10</b> 23:8,11
	<b>Overview</b> 22:12		<b>PCF-11</b> 23:13,17
			<b>PCF-12</b> 23:19,22
			<b>PCF-13</b> 23:24 24:2
			<b>PCF-14</b> 24:4,8
			<b>PCF-2</b> 21:12
			<b>PCF-3</b> 21:17
			<b>PCF-4</b> 21:22 22:1
			<b>PCF-5</b> 22:6
			<b>PCF-6</b> 22:11



<b>PCF-7</b> 22:16	<b>pipelines</b> 149:22	<b>populations</b> 102:4	<b>presented</b> 160:18
<b>PCF-8</b> 22:23	<b>place</b> 18:7 49:12 130:22 134:3	<b>portal</b> 118:23	<b>presiding</b> 4:14 82:25
<b>PCF-9</b> 23:3	<b>placement</b> 54:17	<b>portion</b> 50:12 83:8 84:17 121:7	<b>pretty</b> 92:25 146:7
<b>peak</b> 23:20 79:8,9	<b>places</b> 123:22 157:8 165:11	<b>portions</b> 51:19 123:8	<b>prevent</b> 43:6 46:17
<b>peanut</b> 136:6 139:7	<b>plan</b> 5:15 22:24 23:4 25:24 26:4 49:21 77:5 89:4 96:13 165:10 166:13	<b>posit</b> 66:13	<b>previous</b> 84:5 127:14
<b>Pennsylvania</b> 142:16	<b>planned</b> 111:2	<b>positing</b> 68:9	<b>previously</b> 86:15 108:19 110:18 158:6
<b>people</b> 5:6 6:16,17 7:17 9:5,11 10:1 12:7 28:8 55:14,16,17 61:1 64:13 127:17 132:10 141:10	<b>planning</b> 47:2,13,15,20 48:7,8,16,17,18 91:22 97:8,13 111:17,19,21 112:10,16 153:23 162:24 165:5 166:5,12 168:13,17,22 169:3,7,9	<b>position</b> 101:3 107:17, 19,22,24 138:12	<b>price</b> 65:11 89:23 91:12,15
<b>people's</b> 9:7	<b>plans</b> 78:8 119:7	<b>positive</b> 132:2	<b>priced</b> 69:20
<b>percent</b> 45:7,9 91:19 148:23 150:17	<b>plants</b> 124:18	<b>posted</b> 11:20	<b>primarily</b> 165:21
<b>percentage</b> 147:25	<b>PM</b> 123:3	<b>potent</b> 147:18	<b>primary</b> 143:23
<b>Performance</b> 4:9	<b>point</b> 30:20 35:13 48:19 57:16 75:9 76:7 84:9 100:4 120:24 123:11 125:25 128:25 130:12 140:1 143:24 144:6 162:5	<b>potential</b> 48:15 112:24 129:5 159:2	<b>principles</b> 119:18 120:6 133:9 137:3
<b>periodic</b> 110:16	<b>points</b> 125:10,22	<b>potentially</b> 122:3 168:23	<b>prior</b> 9:17 83:3,7 127:12
<b>permitting</b> 47:3 48:18	<b>poke</b> 80:22	<b>power</b> 50:6 61:6 62:5 63:4 74:24 76:23 77:1,2 120:20 121:11 122:4 127:21 128:11 130:5 149:9,14	<b>priorities</b> 123:20
<b>person</b> 12:4 18:11 83:20	<b>poles</b> 76:20	<b>Power's</b> 100:20	<b>prioritize</b> 12:11 123:5
<b>personally</b> 110:13	<b>policies</b> 67:2	<b>Powers</b> 21:8,13	<b>priority</b> 54:12 123:23
<b>perspective</b> 160:4,6	<b>policy</b> 43:13 59:21 67:12 69:23 72:21 82:5 133:6,25 141:22 165:11	<b>practical</b> 75:1,2	<b>private</b> 60:20 63:6 64:11,12 68:20 69:11 127:13 128:2 129:12
<b>petitions</b> 119:8	<b>policy-driven</b> 90:23	<b>practice</b> 23:14 83:24	<b>problem</b> 24:6 65:18 81:3 105:24 107:2 130:10 156:13,17
<b>Pettit</b> 16:15,16,17 87:7, 10,17 88:9 92:24 94:9, 11 102:11,15,24 105:22 108:9 112:25 114:8,13 115:13,15,20	<b>policy-related</b> 90:10 91:3,24 115:6	<b>precise</b> 100:12	<b>problematic</b> 30:15 76:12
<b>PG&amp;E</b> 6:1,8,12 7:22 8:8 18:19,21 29:16 115:25 116:12 138:15 145:7 165:25 166:15	<b>pollutants</b> 50:7 53:13, 18,22 120:20 121:12 122:5 123:2,19 129:20	<b>predecessor</b> 74:11	<b>procedural</b> 118:18
<b>PG&amp;E's</b> 122:9 138:12	<b>pollution</b> 43:6,14 44:3 46:16 53:21 54:6,13 55:23 68:18 69:7 123:6, 9,12,23 134:1 136:11	<b>prefer</b> 8:10 81:16	<b>proceed</b> 30:19 41:11 52:18 71:25 72:17 84:22 118:15 147:9
<b>phrase</b> 92:7 125:5	<b>Poore</b> 24:5	<b>preference</b> 8:15	<b>proceeding</b> 4:1,15 6:14 11:2 16:1 56:5 62:3 67:14 68:5 74:11 83:1 105:18 117:16 118:6 120:11 141:5,16, 20,24 142:7 154:10,22 155:6 158:8
<b>phrased</b> 114:17	<b>poorest</b> 71:3	<b>preferences</b> 8:22 11:19	<b>proceedings</b> 6:14 49:10,11 62:13,20 64:16,23 82:7 83:1 96:2 100:14 109:13 113:19 144:1,4,19 162:2
<b>phrasing</b> 126:15		<b>preferred</b> 11:17 32:23 49:21 119:7 120:12	<b>process</b> 10:19 22:13 38:20 39:13 40:6,15,23,
<b>Physical</b> 22:17		<b>premature</b> 46:12,17	
<b>piece</b> 52:3 164:19		<b>prepared</b> 5:10 19:8 20:4 25:14,18 26:15,22 27:4 29:10 34:5 87:14, 24 117:18	
<b>pig</b> 80:21		<b>prescribe</b> 168:25	
<b>pin</b> 28:13 31:4		<b>presence</b> 78:3	
<b>pinned</b> 8:24 9:5		<b>present</b> 83:21 102:20 112:23	
<b>pipeline</b> 148:3			

25 41:6 48:17,18 49:3 54:5,16,23,25 55:3,11, 21,24 56:1,14,24 70:8, 10 78:7 80:10,24 81:25 83:5,24 90:19 111:17, 19,21 112:16 123:9 125:3 158:20,22 159:7, 10,16 160:13 166:5,10	<b>programs-specific</b> 144:1	<b>prospective</b> 160:14	92:12 94:17 115:23 116:2,3 118:21
<b>processes</b> 47:3,14,16 48:7,8 136:20 143:20	<b>progress</b> 8:8 26:11	<b>Protect</b> 15:8 21:9,14 34:23 41:21 71:16,22 95:5 153:3	<hr/> <b>Q</b> <hr/>
<b>processing</b> 148:3	<b>prohibition</b> 125:9	<b>protocols</b> 144:13	<b>qualified</b> 168:15
<b>procured</b> 45:10	<b>prohibitions</b> 126:25	<b>provide</b> 6:8 35:6 51:18 52:4 54:2 62:25 63:1 64:21 70:14 84:7 98:5 103:25 110:12 121:5 128:16,21 129:6,17 130:8 141:18 142:5,22 148:20 153:14 154:13, 15,16 155:1,6 158:13 159:8 168:8	<b>qualitatively</b> 142:23
<b>procurement</b> 58:5,13 59:16 60:4 132:23 134:10,15 166:5 168:6, 14,17 169:2,6,8,10	<b>project</b> 102:7,8 103:6 108:10,13	<b>provided</b> 11:23 83:10 96:1 153:24 159:16 164:10 165:4	<b>quality</b> 43:25 44:13 46:11 47:1,5,15,21 48:6,10,15 49:1,9 126:8 127:2,5 136:23 137:20 142:17 143:9
<b>procurements</b> 57:12 131:22	<b>projects</b> 23:15 73:5,7, 13,17,20,22 74:2,15,19 92:21,22 93:10,12,14, 15,17,21,24 94:2 103:2, 4,12,15 104:1 111:17 113:23 114:25 115:6,8 135:20 140:21 148:9 156:22	<b>proving</b> 143:16	<b>quantified</b> 80:6 131:25 142:23 144:23
<b>procuring</b> 133:16 167:22	<b>Prolong</b> 24:5	<b>proxy</b> 110:13	<b>quantify</b> 79:19,21 140:20 162:2
<b>produce</b> 148:5,13 149:8 158:8	<b>prompt</b> 5:5,15	<b>pruned</b> 161:10	<b>quantities</b> 144:14
<b>produced</b> 159:3	<b>pronounce</b> 115:22	<b>pruning</b> 162:9 163:2	<b>quantity</b> 47:2,15 48:7 126:8 127:3 128:19 142:17
<b>producing</b> 149:13	<b>pronounced</b> 14:11 116:5	<b>PSP</b> 97:12	<b>quest</b> 8:14
<b>production</b> 68:18 69:8, 17 91:9 148:3 149:20 150:22	<b>pronouncing</b> 32:21	<b>PSPS</b> 96:21	<b>question</b> 28:20 35:5 36:16,25 37:5,13,15,19, 24 38:9 39:9,10 40:11, 12,13,21 41:4 43:3,17 44:21 45:18 46:22 47:16 48:3,13 52:17 55:18,20 56:1,17 58:11 62:1,7,10 63:20,22 65:3 67:1 68:16 69:1 70:20 71:23 72:9,24 73:11 75:10 77:7 79:10,18 80:14,18 82:2 89:11 91:10 93:4 96:7,23 97:15 98:2 99:22 100:19 102:13 103:18 105:5 106:25 107:9 109:22 112:7,11,12,14 113:6 114:9,20 118:18 125:11 126:12,19 127:14 128:5,20 129:23 130:8,9 134:4 135:6 137:12,14 138:8,9 143:6,7,8 145:3 157:15 160:9 163:8
<b>professional</b> 34:11 118:3	<b>pronouns</b> 11:17 14:2 15:9 32:23	<b>public</b> 24:11,15,21,25 130:2,4 159:17,21 160:19	
<b>profile</b> 151:12	<b>proposal</b> 36:19,23 40:25 75:16,18 76:4,7 79:12 81:10 104:7 108:23,25 152:5,7 155:23	<b>publish</b> 161:24	
<b>profit</b> 102:8,9	<b>proposals</b> 39:2,21 40:9,18 65:19 81:6 109:20 140:7 141:4,12 156:2 158:10	<b>published</b> 158:6 159:12 160:12	
<b>profits</b> 103:7	<b>propose</b> 65:10 101:19 143:22 144:14,16	<b>Puerto</b> 60:23 61:4,14 127:15,23	
<b>prognosticate</b> 59:21	<b>proposed</b> 38:16 49:21, 22,25 50:1,10,13 51:20 52:9,20 65:22 66:1 80:24 81:25 96:17 101:6 119:5,17 120:6, 11,15 121:1,2 122:12, 24 123:15 125:11 133:9	<b>pull</b> 125:21	
<b>program</b> 4:7 144:7 145:15 151:8,17,18,20, 24 152:1,3 164:2,3,6,13 165:17,18,19,20,24 168:25	<b>proposing</b> 101:9 102:10,16 103:10	<b>pulled</b> 95:15	
<b>program-specific</b> 162:2	<b>proposition</b> 50:14 130:13 132:6	<b>pump</b> 150:12	
<b>programs</b> 23:15 73:24 89:7 101:7 102:22 104:6,11 105:2 122:20 133:20,21 134:12,15 142:1 144:10 150:6,8,9 151:7,9,13 161:25 164:14,22	<b>propositions</b> 51:23	<b>pumps</b> 151:22	
		<b>purely</b> 74:21	
		<b>purpose</b> 47:20 48:24 113:19 138:18,22 140:9 164:24,25 165:1	
		<b>purposes</b> 164:1,5	
		<b>pursue</b> 162:22	
		<b>put</b> 6:3 10:13,14 11:25 17:20 18:1 27:14 51:3, 10 77:1 78:10 86:11,12	

<b>questions</b> 10:20 11:1 28:10 30:23 32:4 35:10 41:10 45:16 51:9 52:20 66:17 70:18 71:8 82:12, 15 84:2 88:21 94:7,10 106:12 115:11 126:14 132:13 139:19 152:14 157:10 162:17 169:12	25 132:3,4,5,7,8 133:3 152:10 158:9,13,23 159:3,6,12,14,20 160:3, 12,17 161:24	<b>recommendation</b> 104:16,25	<b>referencing</b> 43:20 44:10,13 51:10 52:21 83:2,6,17 84:3,4 161:7
<b>quick</b> 30:5 118:18	<b>read</b> 9:17 10:7,12 16:19 17:15 18:9 46:6 69:5 120:13 121:6 126:13 131:5 161:6	<b>recommendations</b> 95:17 96:2,19	<b>referred</b> 50:22,23 102:19 116:11 150:14 151:20
<b>quickly</b> 100:24	<b>reading</b> 121:21 128:4	<b>recommending</b> 106:17 107:4 155:1	<b>referring</b> 39:18 40:19 43:24 72:13 90:5 96:8 102:12 105:10 111:20 121:7 129:25 133:16,19 134:3 143:2,3 148:25 149:5 150:24 151:9 153:17,20,22 157:19,22 161:15 166:8 167:6 168:4
<b>quote</b> 69:4 131:5,15 142:25 154:2,3,19 155:2 161:3,6,8 162:18	<b>ready</b> 121:23	<b>record</b> 8:21 9:19,20 10:25 11:10 12:13,14, 15,19,20,21 22:1 27:18, 21,23,25 31:9,14,15,16, 17,18,20 36:6 38:6,7,8 41:17,18,19 52:13,14, 15 54:8 55:15 71:13,14, 15 85:3 87:18 90:1 94:21,22,23 116:12 118:25 119:1,2,3 121:6 146:25 147:1,2 152:21, 22,23	<b>refers</b> 36:16,25 72:25 77:7 79:11 80:14 109:22 131:9
<b>quoted</b> 110:18 154:14	<b>real</b> 62:7,10 81:19	<b>recover</b> 130:6	<b>refine</b> 154:10
<b>quotes</b> 129:14 131:11	<b>realistic</b> 75:1,3 97:25	<b>redirect</b> 71:8,9 82:14, 15,16 94:9,11 115:13, 15 146:12 152:15 169:14	<b>refinement</b> 154:23 155:3
<b>quoting</b> 58:19 69:2 75:19 161:2 162:8	<b>realistically</b> 165:7	<b>redo</b> 122:25	<b>reflect</b> 34:11 78:3 134:20 135:9,13 137:15
<b>R</b>			
<b>R-O-G-E-R</b> 14:2	<b>realized</b> 167:9	<b>reduce</b> 60:11 100:8 113:11 159:12 161:14	<b>reflected</b> 56:12 103:8 139:18
<b>R.22-11-013</b> 4:6	<b>reason</b> 66:14 74:6 75:16 103:16,17 105:5 109:5	<b>reduced</b> 100:15 151:4, 5 162:3	<b>reflective</b> 155:19
<b>Ra</b> 97:14	<b>reasonable</b> 64:18 110:5,12 113:17	<b>reduces</b> 98:8	<b>reflects</b> 27:19,21
<b>Rachael</b> 10:3 15:17,19 32:12 36:1	<b>reasons</b> 68:13 73:5,14 93:3,12 97:21	<b>reducing</b> 113:15 165:16	<b>Reform</b> 108:20
<b>raise</b> 7:15,17 10:1,22 11:1 17:22,23 18:12 28:9 30:24 32:4	<b>rebalancing</b> 89:2,6	<b>reduction</b> 110:24 139:1 149:18,19 156:15 166:2,9,17	<b>reframe</b> 52:19 67:1
<b>raised</b> 7:20 10:4 17:19, 25 27:13 28:12 29:12	<b>rebut</b> 100:20	<b>refer</b> 90:5 99:4 110:22 157:16,18 158:25	<b>refrigerate</b> 61:2,19 127:18
<b>range</b> 62:15 64:9	<b>rebuttal</b> 19:4,17,25 20:14,19 21:4,13 24:25 25:9,18 26:22 27:8,19 28:5 33:23 35:18,22,24 36:3,8 39:14 43:24 44:1 53:7 57:10,18,19 60:18 65:8 72:3,25 73:15 75:11 87:14,24 89:13 91:2 93:9 100:20 101:2 107:12 108:2 109:23 111:14 113:1,9 117:12 127:7 139:20 142:9 155:11	<b>reference</b> 45:2,5 49:20 51:18 59:9 63:4 66:21 74:4 83:10 84:4 88:24 92:20 99:20,22 119:25 120:24 121:6 154:19 167:16	<b>regular</b> 109:12
<b>rate</b> 79:14,19 80:6 109:12 110:10 145:20 157:22,25 158:4	<b>recall</b> 57:15,23 60:21 74:9	<b>referenced</b> 43:9 45:15, 22,23 62:23 129:13 144:19 162:18	<b>regularly</b> 110:11
<b>ratepayer</b> 59:3 72:14 95:22 131:13	<b>receive</b> 7:24 141:10	<b>references</b> 35:13 46:6 49:19 51:3 52:5 57:11 83:8	<b>regulation</b> 49:12
<b>ratepayers</b> 58:13,17, 23 59:2,17,23 62:10 98:6,11,21,23 101:8,11, 15,17,21 102:4 103:4,7, 11,16 132:24 156:13 158:24 159:13,19,24 160:5,11	<b>received</b> 6:19		<b>regulations</b> 165:11
<b>ratepayers'</b> 60:1 160:6	<b>recent</b> 49:20 120:11		<b>reinforced</b> 128:1
<b>rates</b> 57:14,22 58:7,14 60:5 79:13 131:2,15,23,	<b>recently</b> 105:8		<b>reiterate</b> 39:19
	<b>recess</b> 85:4 86:4		<b>relate</b> 126:19
	<b>recognizing</b> 28:17		<b>related</b> 4:11 26:17,24 38:17 40:23 43:18 52:2 76:19 90:17 95:18,24 96:1 99:22 109:20 119:7 126:9 143:24 157:1 160:3
	<b>recommend</b> 159:11		<b>relates</b> 35:15 92:4

<b>relationship</b> 94:1 168:16,19,21	<b>reporting</b> 53:16 54:3 123:2	23 104:3 113:12,15,22 114:1 123:21,25 124:14 125:7 127:24 128:13,21 133:16,17 134:11 140:4,11,12,13 141:16 153:24 154:7,9,21 165:8,9	<b>revisit</b> 66:19
<b>relative</b> 131:12	<b>represent</b> 88:5		<b>Rico</b> 60:24 61:4,14 127:15,23
<b>released</b> 136:22	<b>representation</b> 104:23		<b>right-size</b> 133:10,11
<b>relevancy</b> 137:14	<b>representing</b> 11:14 13:1 16:11,18 32:12,22 42:1 86:8 88:14 95:1 116:7,9 118:14 153:1,3		<b>right-sizing</b> 133:15
<b>relevant</b> 43:15 47:16 49:2 56:5 60:9 114:15	<b>request</b> 6:20 7:10 84:14,15 153:13	<b>respect</b> 48:16 54:16 63:22 92:8 147:15 154:17	<b>RIM</b> 72:13,19
<b>reliability</b> 157:2	<b>requested</b> 118:22	<b>respond</b> 108:14	<b>risk</b> 24:6 129:21 130:2, 3 156:15
<b>reliable</b> 46:24,25	<b>requesting</b> 7:9	<b>responded</b> 74:1	<b>risks</b> 129:25
<b>reliance</b> 50:6 120:19 121:11 122:3 129:5	<b>require</b> 43:13 54:19 110:16	<b>responding</b> 114:10 140:7	<b>road</b> 144:2
<b>rely</b> 148:13,14	<b>required</b> 32:24 52:21 54:3 91:25 145:19 158:12	<b>response</b> 10:23 18:14 32:8 57:8 77:4 89:20 144:12,18 153:24,25 155:8 158:15	<b>roadmap</b> 70:2
<b>relying</b> 80:8	<b>requirements</b> 51:21, 25 54:18 114:23 115:1 133:3 145:6	<b>responsibilities</b> 122:16	<b>Robert</b> 32:11,12,25 33:3
<b>remain</b> 28:25	<b>requires</b> 122:25	<b>rest</b> 84:24 128:5	<b>robustly</b> 67:21
<b>remaining</b> 29:22	<b>research</b> 130:11	<b>restate</b> 45:18	<b>Roger</b> 13:25 14:1 19:8 41:22 42:2 118:16
<b>remember</b> 63:18	<b>reserve</b> 153:23	<b>resubmit</b> 122:25	<b>roll</b> 12:7
<b>removed</b> 94:15 152:10	<b>resiliency</b> 60:19,20 61:8,24 62:7,15,17 63:2,5,6,22,23,24 64:1, 3,4,11,16,19,20 65:7 127:6,13,24 128:2,13, 16,21 129:6 155:16 156:19,25	<b>result</b> 30:4 41:22 50:5 74:14 77:19,20,21,22 93:18 98:14 120:19 121:10 122:4,24 131:25 148:9,16,20 151:6 162:11 166:17 167:11	<b>rooftop</b> 61:5 63:24 112:23 127:20 141:21
<b>renewable</b> 26:10 148:8,10,11,16,17	<b>resilient</b> 63:5 129:22	<b>resulted</b> 60:24 61:21 127:16	<b>room</b> 9:8 46:13
<b>renewables</b> 70:4	<b>resolution</b> 159:16	<b>resulting</b> 46:12	<b>Rosalinda</b> 26:15,22
<b>repeat</b> 37:7,12,15 38:9 39:9,10 43:2 53:19 55:20 63:20 68:24 71:23 72:9 73:10 80:18 112:12 120:2 125:24 135:6 143:6	<b>resolve</b> 89:18 91:6,12, 22 92:3 124:24	<b>results</b> 77:24 80:12 98:18 152:9	<b>rough</b> 8:9
<b>rephrase</b> 40:20,21 41:4 58:11 107:1 126:19 130:7 138:4 152:6 160:9	<b>resource</b> 4:7 57:12 58:5 59:16 91:21 98:7 99:4,8,17,19 124:24 131:22 132:23 145:16, 17 164:15 168:2,5,8,9	<b>retail</b> 45:8 148:23 149:3	<b>round</b> 70:18
<b>replace</b> 113:21,25 163:6	<b>resources</b> 16:19 21:23 22:2,7 31:22 32:1 54:13 57:3 58:21 59:1 60:8, 10,14,17 61:8,23 74:7 86:10 87:2 91:7,15,24 92:1,9,11 95:22 97:6,9,	<b>return</b> 145:12,20	<b>Rulemaking</b> 4:6 119:6
<b>replaces</b> 36:3		<b>revenue</b> 116:18 133:3 145:6	<b>rules</b> 11:24
<b>report</b> 22:19 45:1,14,22 46:10,15,23 47:11,14 48:5 53:13,21 54:25 57:20 58:20 59:5 76:11 131:10,11,16,19		<b>review</b> 4:17 51:9,18 52:5 84:2,11 86:18 110:16 121:24	<b>ruling</b> 10:15 11:23 33:9 51:5 106:5 123:17 125:14 164:8
<b>reporter</b> 9:3,4 12:18 38:1 55:16 67:9 112:2 132:11		<b>resulting</b> 46:12	<b>run</b> 46:6 61:2,18 81:14 127:17 137:16
<b>Reporter's</b> 23:9		<b>retail</b> 45:8 148:23 149:3	<b>running</b> 80:11
<b>reporters</b> 37:15		<b>return</b> 145:12,20	<b>runs</b> 36:22 77:13 81:19
		<b>revenue</b> 116:18 133:3 145:6	
		<b>review</b> 4:17 51:9,18 52:5 84:2,11 86:18 110:16 121:24	
		<b>reviewed</b> 16:6 17:5 49:24 50:10	
		<b>reviewing</b> 169:23	
		<b>revised</b> 7:5	
			<b>S</b>
			<b>S-E-I-A</b> 90:4
			<b>S-E-Z-G-E-N</b> 14:21
			<b>S-U-N-G</b> 15:3
			<b>Sadly</b> 131:20
			<b>safely</b> 129:10

<b>Safety</b> 44:14	<b>screening</b> 54:12,16 55:1	<b>sensitive</b> 135:21	<b>short</b> 84:21
<b>sale</b> 149:4	<b>screens</b> 54:20 112:20 124:8,10 125:8 126:23 127:1	<b>sentence</b> 10:10 36:21 77:13 89:5 110:17	<b>show</b> 58:18 101:10 137:8
<b>sales</b> 45:8	<b>SCT</b> 131:14	<b>separate</b> 64:17 136:5,7 158:1,3	<b>showed</b> 166:16
<b>Sam</b> 115:21 116:9,22	<b>SDG&amp;E</b> 13:13	<b>separately</b> 159:8	<b>shown</b> 16:6 57:21 131:12
<b>Samir</b> 18:7	<b>SDG&amp;E's</b> 156:1	<b>separating</b> 75:14	<b>shows</b> 94:1 142:19
<b>San</b> 13:15	<b>secondary</b> 75:15,25	<b>serve</b> 51:3,11 64:13 83:11 84:8 120:17	<b>shutdown</b> 161:4
<b>satisfied</b> 135:2	<b>seconds</b> 7:17 10:1 17:22 18:12	<b>served</b> 6:25 36:2 83:12 118:21,24 148:23 158:18	<b>side</b> 48:20,21
<b>satisfies</b> 135:3	<b>section</b> 44:15 79:15 102:20,23 122:12,22,23 124:6 138:19 140:6 150:4 152:5,8 157:12 158:16 160:25	<b>serves</b> 64:7	<b>sight</b> 165:8
<b>save</b> 131:8	<b>sections</b> 135:10 163:5	<b>service</b> 45:10 50:2 122:9,18 143:17 157:6	<b>significant</b> 112:23 147:22
<b>saving</b> 144:7	<b>sector</b> 46:25	<b>services</b> 61:5 62:22,25 127:20 128:10 129:15, 17	<b>significantly</b> 149:12
<b>savings</b> 141:8 142:4	<b>seek</b> 119:18 120:6	<b>servicing</b> 50:2,14 53:12, 17,20 83:24	<b>similar</b> 46:22 126:25 127:12 137:1 142:3 164:15
<b>SB</b> 44:24,25 45:1,2,12, 14,21,23 46:2,25 50:24 70:19 150:17	<b>seeks</b> 53:8	<b>SESSION</b> 86:1	<b>similarly</b> 141:24 164:21
<b>SBUA</b> 27:13,17	<b>SEI</b> 25:13	<b>set</b> 5:19 8:21 9:15,17 10:14 11:20,23,25 13:3, 7,8,17,18 14:4 15:11,12 32:16 33:7,8 35:14 56:4 86:20 116:3,14 157:9 169:3,19	<b>simple</b> 50:13
<b>SBUA-01</b> 25:6	<b>SEIA</b> 25:14,19 89:24 90:2,3,5 93:21 108:4,5	<b>sets</b> 6:16 168:22	<b>simplifying</b> 158:22
<b>SBUA-02</b> 25:11	<b>SEIA's</b> 74:1 89:20,22	<b>setting</b> 11:23	<b>simply</b> 62:4 71:3 73:23
<b>SBUA-1</b> 25:3 28:1	<b>SEIA-01</b> 25:15	<b>Sezgen</b> 7:22,24 8:2,16, 18 14:18,19,20,22,23 115:25 116:1,2 117:5,6, 8 118:8 126:11 130:16 136:12 137:1 146:3,12, 14 152:15,17 156:7 169:14,16	<b>single</b> 39:21 62:17 128:25 137:25
<b>SBUA-2</b> 25:8 28:1,5	<b>SEIA-02</b> 25:20	<b>shadow</b> 89:23 91:12,14	<b>sir</b> 134:22
<b>scenario</b> 96:13,16 97:9,12,25	<b>SEIA-03</b> 26:1	<b>shareholder</b> 103:7 146:4	<b>site</b> 46:2
<b>schedule</b> 4:23 5:1,8 12:12 30:25 85:1 169:23	<b>SEIA-04</b> 26:6	<b>shareholders</b> 101:12, 20 102:7,8 103:13,16 145:8,12 146:2	<b>situation</b> 63:2,7,9 78:19
<b>scheduled</b> 32:13 88:12 169:25	<b>SEIA-05</b> 26:12	<b>sheet</b> 157:17,23 158:3	<b>situational</b> 128:14
<b>Science</b> 22:17	<b>SEIA-1</b> 25:13	<b>Sheriff</b> 15:23,25 18:6	<b>Sixth</b> 22:18
<b>scientist</b> 147:24	<b>SEIA-2</b> 25:17	<b>Sheriff's</b> 18:7	<b>size</b> 64:7
<b>scope</b> 43:9 44:7 46:19 47:8 50:19 99:12 109:8, 15,16,19 113:1 136:13, 16,19 137:2,14 145:13 146:5,7 156:8	<b>SEIA-3</b> 25:22		<b>skew</b> 140:10
<b>scoping</b> 165:10 166:13	<b>SEIA-4</b> 26:3		<b>slight</b> 18:19
<b>scores</b> 164:15	<b>SEIA-5</b> 26:8		<b>small</b> 17:14 25:5,10 28:2,6 102:8
<b>scoring</b> 123:4	<b>select</b> 8:22 51:1,2		<b>smooth</b> 84:23
<b>screen</b> 8:25 10:13,14 11:21 12:1 13:4,8,18 14:5 15:12 17:2,17 18:2,3 27:15 33:8 86:13 116:15 141:25 152:20	<b>selected</b> 145:23		<b>snapped</b> 81:8
	<b>send</b> 7:4 52:9		<b>Socalgas-01</b> 26:19
	<b>sense</b> 64:12 96:19 97:8,21 98:14 144:17 156:14 160:23 165:22		<b>Socalgas-02</b> 27:1
			<b>Socalgas-1</b> 26:14
			<b>Socalgas-2</b> 26:21

<b>social</b> 37:2,10 38:13 49:1,9 58:22 68:17 69:6 79:16 131:2 137:19 144:5,20	<b>Southern</b> 15:2 16:5 26:16,23	<b>stakeholders</b> 40:8 80:20,23 81:17 104:23 158:17,22 162:21	<b>steps</b> 79:18,21
<b>societal</b> 46:16 47:4,21 48:9 57:9,13,21 58:2,4, 14 59:24 60:5,11,12 63:5,7 65:13,14 130:25 131:3,10,12 132:1,2 142:22 143:4,11,12 163:14,18,20,25 164:9, 12,18,20 165:13	<b>speak</b> 47:11,17	<b>stand</b> 5:7,12 7:4 51:13 83:6,15,22	<b>sticking</b> 65:3 133:5
<b>society</b> 48:15 67:20 80:8 131:13	<b>SPEAKER</b> 112:9	<b>standalone</b> 136:8	<b>stipulate</b> 6:2,8 28:22
<b>solar</b> 13:1 26:9,11 63:24 68:8 75:19 88:18 90:3,6 99:7 112:24 127:20 128:2 129:7 141:5,14,21,24 142:3,7 147:8 148:13 158:24 159:2 160:14 167:17	<b>speaking</b> 8:23 9:9,12 55:17 91:8 132:12	<b>Standard</b> 23:14	<b>stipulated</b> 5:24 6:4,7,9 29:20
<b>solar-plus-storage</b> 61:20	<b>specific</b> 35:11,13 39:1, 4,22 62:13 73:21 78:14, 22,23 83:6 100:4 101:1 107:3 119:25 123:4 128:16 138:23 143:25 144:6,15 148:25 151:17 156:22 166:15,16,24 167:2,9,11,22	<b>standardized</b> 157:16, 23	<b>stipulating</b> 30:2
<b>solely</b> 141:22	<b>specifically</b> 44:15 50:2 72:13 112:19 120:16 154:19 155:12 157:12 165:25	<b>Standards</b> 4:9	<b>stipulation</b> 29:8 87:20
<b>solicitation</b> 168:14	<b>speculation</b> 92:25 136:13 146:3	<b>standpoint</b> 164:16	<b>stop</b> 138:4
<b>solicitations</b> 78:16 168:18 169:2	<b>speculative</b> 130:17	<b>stands</b> 72:13	<b>storage</b> 26:9 61:6 63:24 68:8 99:7 127:20 128:2,11 129:7 148:9, 11 167:17
<b>solution</b> 48:25 67:20, 24,25 68:3,9 145:23 156:15,20,21	<b>spell</b> 12:24 13:16 16:17 86:6	<b>started</b> 67:6 106:10,11, 16	<b>streams</b> 132:22
<b>solutions</b> 42:11,13,21 43:5 48:20 66:20 138:24 156:19	<b>spelled</b> 15:3,9 16:11 17:5,13 18:8 116:9	<b>starting</b> 88:23 89:16 93:9 99:15 101:5 104:11 114:21 127:7 133:6 139:23 151:1 153:10 161:1 162:6 166:20 167:21 168:12	<b>stricter</b> 125:9
<b>solve</b> 139:5	<b>spend</b> 29:25	<b>state</b> 9:21 40:14 45:10 46:17 47:6 48:11 59:6, 10 67:6,11 79:12 88:14 89:1 105:15 114:23 116:12 122:18 127:12 132:19,22 133:6 134:8 151:2,15,21 158:16 162:19 163:21,24 164:5 165:11 166:22 167:21	<b>strongly</b> 107:13
<b>someplace</b> 58:24	<b>spending</b> 67:25 99:17, 18 133:1	<b>state's</b> 67:2,4 90:13 133:24 150:17 162:11 168:23	<b>structures</b> 140:22
<b>sooner</b> 159:5	<b>sponsor</b> 150:4	<b>stated</b> 68:14 147:20 163:12	<b>studies</b> 110:10 142:11 143:2 165:6
<b>sort</b> 8:13 70:1 81:11 90:21 97:19,25 131:9 137:2 151:14 157:23 164:20 165:4,9	<b>sponsored</b> 20:24 21:4	<b>statement</b> 55:7 59:17 69:13,16 70:24 73:16 75:17 79:6 120:23 121:14 122:2	<b>study</b> 79:1,2 105:8,10, 12,14,18 106:7,9,11,16, 22 108:24 109:1 110:16 123:12 144:6 154:10,23 155:3,4
<b>sorts</b> 62:1 64:24	<b>sponsoring</b> 8:24 9:1 33:19 42:1 115:24 117:15	<b>states</b> 44:15 46:10 50:1 51:21 53:3 120:15 128:1 137:6 142:15 154:3	<b>subject</b> 37:24 74:8
<b>sounds</b> 56:17 71:10 81:21 125:9 146:15 149:3,5	<b>spring</b> 78:21,23	<b>stating</b> 166:12	<b>submitted</b> 8:13 29:9
<b>source</b> 100:4	<b>staff</b> 40:9 75:4 79:1 96:17 97:2,17	<b>step</b> 94:14	<b>subsidiaries</b> 75:7
<b>sources</b> 138:20,23	<b>staff's</b> 74:6 96:18 108:23,25 109:20		<b>subsidies</b> 59:6,10,13, 15,18,22 60:1,10 132:19,23
	<b>stage</b> 8:22 9:6 12:5,22 17:9 28:13 31:5 32:10, 15,17 71:11 86:5 94:15, 16,17,24 115:18,20,23 116:2,3 117:4 118:11		<b>substantially</b> 149:8
	<b>stakeholder</b> 40:24 41:6 159:21		<b>substitute</b> 150:9

<b>suggest</b> 35:13 114:21 135:11 160:12	<b>sworn</b> 33:6 87:3 116:24 118:5	<b>tariff</b> 141:1,2,14,23 142:7 151:25 152:11 157:19,20,21,25 158:14 159:9	22 40:16,19 42:10,16 43:1,24 44:1,7,11,23,24 45:3,5,15,23,24 46:2,8, 19 47:9 49:19 50:19 51:21 52:2 53:3,7 54:5 57:10,15,17,18,19,23 60:17,18,21 63:19 65:4, 7,8 66:22 67:1 69:1 72:4 73:1,15 74:4 75:11 80:15 81:4,9 84:5 87:15,24 88:5,23 89:12, 14,20 91:2 92:4,20 93:6 95:14 96:8 98:4 99:3, 13,24 100:20,21 101:5 102:19 104:10 107:7,12 108:3,23 109:16,23 111:14 113:1,3 115:17 117:10,12,15 118:5,6 119:19 126:20 127:7 128:1,4 129:14 130:23, 25 131:9 133:6 134:3, 19 135:10,23 136:14,16 137:2,6,15,23 138:17 139:20 140:5,6,9 142:9, 10,15 145:5 146:5,7,17 147:20 150:1,25 151:1 152:4,8 153:9 155:11 156:8 158:25 160:25 163:12 166:19 167:21 168:12 169:19
<b>suggested</b> 159:15 161:19	<b>Synapse</b> 104:18 106:18	<b>taxpayers</b> 59:2 62:10	
<b>suggesting</b> 80:3	<b>system</b> 49:21 50:6 60:25 61:1,16 70:22 74:25 75:1,25 76:1,14, 16,18,20,23 77:1,2 78:2 90:20 93:19 96:12 97:8 98:1,18 99:21,23,25 100:16 111:1 119:7 120:12,20 121:11 122:3 127:17 128:8,24 129:1, 3,5 133:17 157:7 161:4, 10 162:10 163:5 167:7, 14	<b>team</b> 8:16 18:21	
<b>suggestions</b> 38:16 40:14		<b>Tech</b> 151:20	
<b>suitable</b> 140:23		<b>technical</b> 41:20 125:6	
<b>suited</b> 163:17		<b>techno-economic</b> 112:20	
<b>sulfur</b> 53:14 123:2		<b>technology</b> 166:24 167:2,16,18	
<b>summarize</b> 40:1		<b>Ted</b> 25:4,9 27:20,22 28:2,6	
<b>summarizes</b> 123:16 125:13		<b>ten</b> 73:1,16	
<b>Summary</b> 25:24 26:5	<b>system-wide</b> 155:14, 20,21 156:1,13,15,16 157:4	<b>term</b> 69:18 162:7 167:25	
<b>sun</b> 148:10,13 150:21		<b>terms</b> 7:7 54:25 55:7 56:4 59:13 69:17,19 76:5 77:17,25 101:21, 22 110:10	
<b>Sung</b> 14:25 15:1,2,5	<b>systems</b> 157:21	<b>territory</b> 122:9	
<b>super</b> 104:21		<b>test</b> 57:9,13,21 58:2,4, 14 59:24 60:5 72:13 131:1,3,10 163:14,20 164:15,21	
<b>supplant</b> 78:10 145:10	<b>T</b>	<b>testified</b> 33:1,6 48:1 73:4,12 75:14 79:22 87:3 95:17 96:11 98:3 116:24 168:12	<b>tests</b> 131:12 163:19,25 164:9
<b>supplied</b> 45:11	<b>T&amp;d</b> 106:3	<b>testifies</b> 80:20	<b>theoretical</b> 74:21 103:1
<b>supply</b> 46:24 47:5,22 48:10,21,22 76:23 165:8	<b>tackle</b> 156:17	<b>testify</b> 77:8 79:19 99:15 104:10 107:13 108:3 109:24 111:15 113:10, 21	<b>theoretically</b> 103:1
<b>supply-side</b> 58:21 59:1 60:10,14 90:12 91:15,21 97:5,9,23 113:11,15,22,25 145:17,21	<b>takes</b> 109:18 163:2	<b>testimony</b> 8:13 18:25 19:4,8,13,17,21,25 20:4,9,14,19,24 21:4,8, 13 24:11,15,20,25 25:4, 9,14,18 26:15,22 27:4, 8,19,20 28:2,5 29:10 33:20,23 35:7,8,11,14, 15,18,22,25 36:8 39:15,	<b>theory</b> 76:24
<b>support</b> 36:19 38:15,19 72:4,11 97:5 99:24 103:17 151:3 161:13 163:8	<b>taking</b> 9:18 11:8		<b>there'll</b> 149:7
<b>supporting</b> 24:20 118:23	<b>talk</b> 5:14 8:3 9:14 29:7 48:14 88:6 93:13 133:9 139:23		<b>thing</b> 6:18 81:14 100:17,18 120:15 127:25 151:14 166:8
<b>supportive</b> 110:14	<b>talked</b> 82:8 92:18		<b>things</b> 5:15 40:7 56:6,7 64:8,15,24 65:11 73:25 82:24 97:17 99:12 104:24 109:10 110:7 166:14
<b>suppose</b> 30:6 46:4	<b>talking</b> 39:23 51:20,25 55:9,11 60:7 63:16 65:14 74:13 78:19,20 81:4,19 109:21 125:4 132:11 143:8 150:13		<b>thinking</b> 102:3 104:2 105:1 115:2,7
<b>supposed</b> 95:6 143:16	<b>talks</b> 65:9		<b>thinks</b> 40:5
<b>sustain</b> 46:20 50:20	<b>tantum</b> 68:18 69:8		<b>thirty</b> 29:25
<b>sustained</b> 44:9,19 47:10 66:21 146:6 156:9	<b>target</b> 42:21 148:22 149:1,5 163:3		<b>thorny</b> 100:5
<b>switched</b> 38:2	<b>targeted</b> 53:17,21 73:22 78:6,14 151:11 162:20 164:17		
<b>switching</b> 24:5 60:16 150:11 163:1	<b>targeting</b> 139:5		
	<b>targets</b> 43:13 44:17 67:4 70:4,5 165:7 168:23 169:4,5		

<b>thought</b> 30:17	<b>transcribe</b> 55:16	104:24 115:8 128:20 140:22	<b>updating</b> 79:1 124:6 159:11
<b>thousands</b> 46:13	<b>transcript</b> 23:9 37:14		<b>upgrade</b> 78:14
<b>thread</b> 114:12	<b>Transition</b> 25:23	<b>typically</b> 29:25 83:19 84:15 169:2	<b>uploaded</b> 118:22
<b>threat</b> 156:12 157:3	<b>transmission</b> 22:24		<b>utilities</b> 20:10,15,20 36:19 37:8,20 38:11,15, 19 39:2 72:18 77:6 78:7 81:24 82:10 97:13 100:12 102:20 117:11, 13 144:11,21 155:22 158:12 159:8
<b>Thursday</b> 5:19,21,25 6:9,10 8:7 29:4,6,12,16 30:9	23:4 26:4 54:18 55:1 73:4,7,13,17,20,22 74:15,19 75:1 89:19,24 90:11,24 91:3,25 92:11, 12,19,22 93:17 99:21, 23,25 100:2 105:7,8,10, 12,14,16,18 106:3 107:14 108:4,8,21 109:2,3,10,25 110:4,6, 19 111:17,19,20 112:1, 10,15 114:22,25 135:18,20 137:18 153:17,22 154:6,20 167:3,5	<b>U</b>	<b>utilities'</b> 39:12 40:16, 18,25 156:5
<b>Thursday's</b> 51:1	<b>transmissions</b> 90:22	<b>UDR</b> 81:22	<b>utility</b> 15:20 17:14 21:18 25:5,10 28:3,6 33:2,5,21,24 48:21 61:1 99:17,18 100:7,8 101:20 103:12 108:20 124:16 133:3 145:8,11 146:1,4 168:14,17
<b>tie</b> 93:6	<b>transparently</b> 160:18	<b>ultimate</b> 138:8 163:8	<b>utility's</b> 72:4,11
<b>tiebreaker</b> 164:21 165:5	<b>transportation</b> 148:4 149:20	<b>unable</b> 79:14 127:17	<b>utilization</b> 96:12
<b>ties</b> 106:23	<b>transporting</b> 149:13	<b>uncertainty</b> 65:11	<b>utilize</b> 124:7
<b>time</b> 7:15 9:22 10:19,25 29:1,24 37:15 66:18 69:5 71:5 79:11 82:15 83:22 84:24,25 87:22 111:6 119:23 121:22 126:13 130:17 131:8 145:1,2,4 146:8 148:19	<b>TRC</b> 131:12	<b>unclear</b> 102:16	<b>utilized</b> 159:25 165:2
<b>timely</b> 104:19	<b>treat</b> 156:14	<b>underground</b> 76:21	<b>utilizing</b> 167:2
<b>timetable</b> 70:5,6,7	<b>treated</b> 99:7 144:20 156:12	<b>undergrounding</b> 156:5	<b>V</b>
<b>timing</b> 78:22 128:18	<b>treatment</b> 7:11,14	<b>understand</b> 65:21 82:8 83:15 97:15 154:25 156:23 159:24 160:7, 11,15,20	<b>vacuum</b> 138:14
<b>Title</b> 119:6	<b>true</b> 34:8 62:6 69:19 91:11	<b>understanding</b> 104:22	<b>valuation</b> 65:10
<b>titled</b> 18:25 19:4,8,13, 16,17,20,21,25 20:4,8, 9,14,19 21:7,12,17,22 22:1,2,6,12,16,24 23:3, 8,20,24 24:4,10,15,19, 24 25:4,9,18,23 26:3,8, 15 27:4,8 28:1,5 31:21, 25 36:7,8 79:15 119:5	<b>truth</b> 139:3	<b>undertaken</b> 44:16	<b>values</b> 56:11,12 57:4 64:9 65:3,4,7 104:14 105:16 107:6 108:21 144:16,23 155:4 157:24 158:19 164:12
<b>today</b> 12:4,8 78:11 82:21 169:18,23	<b>turn</b> 7:22 9:12 13:11 16:11 35:17 149:25 169:20,22	<b>undertaking</b> 154:8 155:2	<b>variety</b> 73:5,13 93:12 164:11 165:6
<b>today's</b> 9:18 12:11 29:15 50:25	<b>TURN-01</b> 27:5	<b>unfair</b> 130:12	<b>venues</b> 162:24 166:5
<b>tomorrow</b> 50:25 51:15 52:8 169:23,24	<b>TURN-02</b> 27:10	<b>unfortunate</b> 60:24 127:22 128:8	<b>version</b> 7:5 31:9,11,23 32:1
<b>tool</b> 54:12 141:8	<b>TURN-1</b> 27:3	<b>UNIDENTIFIED</b> 112:9	<b>versus</b> 60:7 97:19 129:1 144:21
<b>top</b> 93:13 98:4 111:15	<b>TURN-2</b> 27:8	<b>unilaterally</b> 157:6	<b>verus</b> 63:6
<b>topic</b> 28:20 104:18	<b>turning</b> 101:4 107:11 157:12	<b>unit</b> 98:9 110:24	<b>vetting</b> 40:9
<b>topics</b> 109:18	<b>type</b> 97:3 103:2 128:15 166:24 167:2,9,11,16, 18	<b>univer</b> 135:3	<b>view</b> 89:5 122:15
<b>total</b> 164:15	<b>types</b> 92:5 101:17	<b>universal</b> 139:3	
<b>toxic</b> 53:22		<b>universally</b> 134:21 135:4,8,9,13 137:16 138:5,18	
		<b>unmute</b> 39:7	
		<b>unspecified</b> 73:23 74:7,13	
		<b>update</b> 4:12 8:8 38:20 39:13 40:6,15,23 41:6 158:20,23	
		<b>updated</b> 36:4 54:19	
		<b>updates</b> 109:8 123:16	



<b>virtual</b> 4:1 7:15,17 10:2,22 11:1 17:23 18:13 28:9 30:24 32:4 83:23	111:5,9,12 112:3,6,13 113:2,5,8 114:10,17,19 115:10,12,20 152:20,24 153:2,4,7 156:10 169:11,21	<b>Wray's</b> 126:20 136:16 137:2,6,14,23 146:5,7 156:8
<b>visits</b> 46:14	<b>White's</b> 40:21	<b>wrong</b> 14:11 115:22 116:6 122:13 129:14 146:17
<b>voidance</b> 78:1	<b>wholesale</b> 109:3	<hr/> <b>Y</b> <hr/>
<b>Volume</b> 23:9	<b>wholly</b> 43:15	
<b>vulnerable</b> 102:4	<b>wide</b> 62:15 64:9	<b>year</b> 46:14 49:23
<hr/> <b>W</b> <hr/>	<b>wildfire</b> 155:22 156:1, 12,14,15	<b>years</b> 67:7 74:1 100:1 108:22
<b>W-E-B-E-R-S-K-I</b> 17:13	<b>wildfires</b> 157:5	<b>yesterday</b> 4:23 7:1
<b>W-H-I-T-E</b> 15:9	<b>wind</b> 133:18 150:21	<hr/> <b>Z</b> <hr/>
<b>W-R-A-Y</b> 116:9	<b>wires</b> 76:21	
<b>wage</b> 70:14	<b>wise</b> 82:5	<b>zonal</b> 151:5 162:22 164:17
<b>wait</b> 32:5 35:23 55:13 86:12 132:12 159:7	<b>witness's</b> 84:5	<b>zone</b> 165:21
<b>wanted</b> 28:21 31:8 105:17 154:25 157:17	<b>witnesses</b> 5:9,12 9:16, 23 12:11 169:25	<b>zones</b> 123:19
<b>Warming</b> 42:11,21 43:5 66:20	<b>wondering</b> 73:16 93:16	
<b>water</b> 46:24 47:1,5,14, 21 48:6,9,15 49:1,9 55:23 123:23 126:3,8 127:2,5 137:20 142:17 143:9	<b>word</b> 84:7	
<b>ways</b> 165:3 166:6	<b>words</b> 78:21 96:15 123:22 125:1 126:5	
<b>Weberski</b> 16:25 17:11, 12,13 27:16,17	<b>work</b> 100:11 104:21,22 106:18	
<b>website</b> 7:2	<b>worked</b> 108:19	
<b>week</b> 36:2	<b>working</b> 22:18 70:16 86:10	
<b>weight</b> 54:4	<b>works</b> 67:18 81:15	
<b>whatnot</b> 52:17	<b>world</b> 69:23,25 98:1	
<b>White</b> 15:6,7,8,13,15 31:3,4,6,7,8 32:14 34:20,22,23 35:3,12,16 36:14,15 37:6,17 38:2, 9,10 39:3,6,11,17,25 40:4,13,22 41:1,9,11, 14,20 71:11,18,21,22 72:2,7,10 73:10,12 74:17 80:16,19 82:11, 13 94:16,17,18,19,20, 24,25 95:4,11 102:14, 18 106:10,13,15 108:11	<b>worse</b> 103:7 130:15	
	<b>worst</b> 46:11	
	<b>worth</b> 64:4	
	<b>worthwhile</b> 79:24	
	<b>Wray</b> 115:22,24 116:4, 9,14,22 117:2,9 118:8 119:13,17,22,25 120:1 121:14 127:8 130:12,13 132:12,16 138:9,11 145:4 146:9,13,16 147:3,5,14 152:16 153:5,8 165:14 169:12, 15,17	