

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA



**FILED**  
07/28/21  
04:59 PM

IN ATTENDANCE:      PRESIDENT MARYBEL BATJER  
                         COMMISSIONER MARTHA GUZMAN ACEVES

ADMINISTRATIVE LAW JUDGE KELLY A. HYMES, presiding

	)	EVIDENTIARY
	)	HEARING
Order Instituting Rulemaking to	)	
Revisit Net Energy Metering Tariffs	)	
Pursuant to Decision 16-01-044, and	)	
to Address Other Issues Related to	)	
Net Energy Metering.	)	Rulemaking
	)	20-08-020
	)	
	)	

REPORTERS' TRANSCRIPT  
Virtual Proceeding  
July 26, 2021  
Pages 1 - 183  
Volume 1

Reported by:    Ana M. Gonzalez, CSR No. 11320  
                     Andrea L. Ross, CSR No. 7896

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA  
SAN FRANCISCO, CALIFORNIA

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VIRTUAL PROCEEDING

JULY 26, 2021 - 10:33 A.M.

\* \* \* \* \*

ADMINISTRATIVE LAW JUDGE HYMES: We'll  
be on the record.

Good morning, everyone. This is the  
time and place for the evidentiary hearing  
for Rulemaking 20-08-020, the Order  
Instituting Rulemaking to Review Net Energy  
Metering Tariff Pursuant to Decision  
16-01-040 and to Address Other Issues Related  
to Net Energy Metering.

This evidentiary hearing is being  
held virtually through the use of the Webex  
platform as well as a telephone conference  
line. I am Kelly Hymes, the Administrative  
Law Judge to this proceeding. The assigned  
Commissioner is Martha Guzman Aceves.

Actually, let's go off the record.  
(Off the record.)

ALJ HYMES: We're back on the record.

The assigned Commissioner is Martha  
Guzman Aceves, who has joined us today.

Commissioner Guzman Aceves, would  
you like to make an opening statement?

COMMISSIONER GUZMAN ACEVES: Yes.  
Thank you, Judge Hymes.

And thank you, all, very much, first



1 of all, for all of the hard work you put into  
2 this proceeding so far and I know much more  
3 work that will be going moving forward. I  
4 really appreciate the creative and thoughtful  
5 proposals, in particular, all of the unique  
6 proposals and their differences on their  
7 transitions and in their visions on what  
8 we're actually transitioning to.

9           Clearly we need to meet NEM in this  
10 overall program of rooftop solar as necessary  
11 for our state goals, and also the challenge  
12 is how we really assure that there's a system  
13 benefit for all ratepayers. In order to do  
14 that, Judge Hymes has the excellent  
15 recommendation to develop guiding principles  
16 to try to drive us to a common understanding  
17 of where we want to head to.

18           I did want to highlight one  
19 particular one that's of interest to me, the  
20 guiding principle that states that the  
21 successor tariff should enhance consumer  
22 protections. I know that Judge Hymes  
23 directed your testimony to explain how the  
24 proposals meet that principle and all the  
25 guiding principles. So, of course, over  
26 these couple weeks I really would appreciate  
27 you drawing that out. I know some of you had  
28 much more creative recommendations here than

1 others. If others could respond to those, I  
2 think that's excellent also.

3 Finally, I just want to thank Judge  
4 Hymes for all of her work. Obviously this is  
5 a new process here. I just thank you for all  
6 of your organizational skills as well as your  
7 policy chops.

8 So thank you, Judge Hymes, and I  
9 look forward to these next few weeks.

10 ALJ HYMES: This is Judge Hymes. Thank  
11 you, President -- or thank you, Commissioner.  
12 As you heard, we are also joined today by  
13 President Marybel Batjer.

14 President Batjer, do you have some  
15 opening words for us?

16 PRESIDENT BATJER: Yes. Thank you,  
17 your Honor, and I'd like to thank  
18 Commissioner Guzman Aceves as well for all of  
19 her work. This is a tremendous effort, as my  
20 fellow Commissioner just stated.

21 And, Judge, I really want to thank  
22 you for this big lift, and we're just  
23 beginning the lift really.

24 The Commission really has a  
25 difficult task ahead of us in structuring the  
26 tariff that aligns with the guiding  
27 principles adopted earlier this year and as  
28 Commissioner Guzman Aceves has noted.

1           The NEM program has, as many of you  
2     know, a long and storied history. Many of  
3     you have been active since the very early  
4     days of the solar industry in California. I  
5     hope you will share that expertise in a  
6     productive manner and as I'm sure you will  
7     over the next couple weeks.

8           I'm looking forward to observing the  
9     hearings and learning from all of the parties  
10    here today. I know you are all in very good  
11    hands with Judge Hymes, who we are so  
12    extremely lucky to have guiding this  
13    proceeding.

14           Judge, thank you for the moment to  
15    comment. And, again, I so appreciate you and  
16    I so appreciate Commissioner Guzman Aceves.  
17    Thank you.

18           ALJ HYMES: This is Judge Hymes again.  
19    Thank you, President Batjer.

20           Before we begin, I want to review  
21    some ground rules necessary due to the nature  
22    of a virtual evidentiary hearing. This  
23    evidentiary hearing is on the record, and a  
24    court reporter is transcribing the discussion  
25    for the official transcript. As such, the  
26    court reporter will interrupt a speaker, when  
27    possible to do so without disruption, when  
28    there is or are inaudible statements or

1 portions thereof. When disruption is not  
2 possible, the reporter will insert the word  
3 "inaudible" in the transcript when there is  
4 dropped, garbled, or otherwise indecipherable  
5 audio.

6 I recognize that neither of these  
7 conditions are optimal, so to limit these  
8 conditions and ensure everyone is heard and  
9 the court reporter accurately transcribes  
10 statements made today and during the  
11 evidentiary hearing, participants shall  
12 adhere to the following rules:

13 All attendees must mute their  
14 telephone line when not speaking. Generally,  
15 participants should speak only when addressed  
16 by the judge. Speakers must identify  
17 themselves before speaking each time. During  
18 the course of direct and cross-examination of  
19 a witness, it is not necessary for the  
20 questioning attorney or the witness to  
21 restate their name each time.

22 Speakers must have both audio and  
23 video on and activated because you need to be  
24 visible when testifying and when asking  
25 questions. Only the judge and parties  
26 expected to speak, such as attorneys during a  
27 particular portion of the hearing, should  
28 have their cameras on.

1           Speakers must speak slowly, clearly,  
2           and one at a time and should pause between  
3           statements, especially during the  
4           question-and-answer examination. If someone  
5           else is speaking, you must not interrupt. If  
6           you wish to speak, please raise your hand by  
7           using the raise-hand button on the Webex and  
8           speak when called upon by me unless you're  
9           making an objection to a question during the  
10          course of the examination of a witness.

11          In such instances, the attorney may  
12          orally interject to provide his or her name  
13          and briefly state the objection. Crosstalk  
14          must always be avoided. If there is any  
15          crosstalk, the court reporter may insert the  
16          word "crosstalk" in the transcript.

17          During a July 12, 2021, status  
18          conference, I spoke about attestations for  
19          both witnesses and attorneys. The  
20          attestations address the virtual nature of  
21          this evidentiary hearing. I instructed all  
22          attorneys participating in the evidentiary  
23          hearing to be present today. I'm going to  
24          read through the attestations first and then  
25          go through the roll call of attorneys present  
26          today to ensure agreement.

27          Could I get IT to put up a copy of  
28          the attorney attestation. Thank you. So the

1       attestations state:

2               Do you attest that you agree to the  
3       evidentiary hearing in this incident  
4       proceeding being held via Webex;

5               Attest that you agree to the witness  
6       testimony and exhibits being presented via  
7       Webex;

8               Attest that you agree to the oaths  
9       of remote witnesses being received by Webex  
10      communication;

11              Attest that you agree to adhere to  
12      all formal rules of decorum, including the  
13      prohibition against coaching witnesses;

14              Attest that you agree to not make  
15      any recording of this proceeding;

16              Attest that you understand that any  
17      recording of a proceeding held by Webex  
18      and/or teleconference, including screenshots  
19      or other visual copying of a hearing, is  
20      absolutely prohibited;

21              Attest that you understand that a  
22      violation of these prohibitions may result in  
23      sanctions, restricted entry to future  
24      hearings, denial of entry to future hearings,  
25      or any other sanctions deemed necessary by  
26      the Commission;

27              Attest that during the evidentiary  
28      hearing you will only use the exhibits

1 premarked and identified by the parties;

2 And attest that you agree that  
3 during the evidentiary hearing you will not  
4 use documents not previously shared with the  
5 opposing party?

6 I'm now going to go through the list  
7 of attorneys who are present. When I call  
8 your name, please state your name, who you  
9 represent, and whether you agree to these  
10 attestations.

11 Steve Frank?

12 MR. FRANK: Thank you, your Honor.  
13 Steve Frank. My employer is PG&E, but for  
14 the most part will be appearing today here on  
15 behalf of the Joint Utilities, and I do  
16 attest to those statements you just made.

17 Before I close, your Honor, I'd also  
18 just like to mention today that on the Webex  
19 are two other attorneys that we didn't  
20 mention during roll call, Gregory Barnes, who  
21 works for San Diego Gas & Electric, and  
22 Rebecca Meiers-De Pastino, who works for  
23 Southern California Edison. And it may be  
24 wise or efficient to have them offer their  
25 attestations now as well.

26 If you don't mind, I'd like to also  
27 turn it to my colleague Ashley Merlo for her  
28 attestations as well.

1 ALJ HYMES: Thank you.

2 Ms. Merlo.

3 MS. MERLO: Good morning, your Honor.  
4 Ashley Merlo, PG&E. I agree to the  
5 attestations.

6 ALJ HYMES: Thank you.

7 And next up is Gregory Barnes.

8 MR. BARNES: Your Honor, Greg Barnes,  
9 and I agree to the attestation. I represent  
10 SDG&E and will on occasion be appearing on  
11 behalf of Joint IOUs as Mr. Frank has  
12 described.

13 ALJ HYMES: Thank you.

14 Next up I have Rebecca  
15 Meiers-De Pastino.

16 MS. MEIERS-DE PASTINO: Thank you, your  
17 Honor. Rebecca Meiers-De Pastino for  
18 Southern California Edison and, like my  
19 colleagues, at times on behalf of all three  
20 Joint IOUs. I do agree to the attestations.

21 ALJ HYMES: Thank you.

22 Ann Trowbridge.

23 MS. TROWBRIDGE: Thank you, your Honor.  
24 Ann Trowbridge for Agricultural Energy  
25 Consumers Association. I agree to the  
26 attestations.

27 ALJ HYMES: Tim Lindl.

28 MR. LINDL: Good morning, your Honor.



1 Thank you. My name is Tim Lindl, L-i-n-d-l,  
2 on behalf of the California Solar and Storage  
3 Association. I agree to those attestations.

4 ALJ HYMES: Nancy Rader?

5 MS. RADER: Nancy Rader, not an  
6 attorney, but representing the California  
7 Wind Energy Association. I agree to the  
8 attestations.

9 ALJ HYMES: Michael Boyd?

10 MR. BOYD: Yes, your Honor. Michael  
11 Boyd of Californians for Renewable Energy.  
12 And, yes, I agree to the attestations too.

13 ALJ HYMES: Ben Schwartz.

14 MR. SCHWARTZ: Good morning, your  
15 Honor. Ben Schwartz for the Clean Coalition  
16 here, and I agree to the attestations.

17 ALJ HYMES: Rachael Koss.

18 MS. KOSS: Good morning. Rachael Koss  
19 on behalf of the Coalition of California  
20 Utility Employees. I agree to the  
21 attestations.

22 ALJ HYMES: Joseph Wiedman?

23 MR. WIEDMAN: Good morning. Joseph  
24 Wiedman, attorney for the Coalition for  
25 Community Solar Access. I agree to the  
26 attestation.

27 ALJ HYMES: Steve Sherr?

28 MR. SHERR: Good morning, your Honor.

1 Steve Sherr from Foundation Wind Power. I  
2 agree to the attestation.

3 ALJ HYMES: Katie Ramsey?

4 MS. RAMSEY: Hello, ALJ. My name is  
5 Katie Ramsey. I am an attorney for the  
6 Sierra Club, and in this case I'll be  
7 assisting a coalition of Grid Alternatives,  
8 Vote Solar, and Sierra Club. I agree to the  
9 attestation.

10 ALJ HYMES: Brian Cragg?

11 MR. CRAGG: Good morning, your Honor.  
12 Brian Cragg for the Independent Energy  
13 Producers Association. I agree to the  
14 attestations.

15 ALJ HYMES: Allie Detrio?

16 MS. DETRIO: Hello. Allie Detrio with  
17 IV Energy and I agree to the attestations.

18 ALJ HYMES: Frank Lindh?

19 MR. LINDH: Good morning, your Honor.  
20 This is Frank Lindh for Natural Resources  
21 Defense Council, and we agree with the  
22 attestations. Thank you.

23 ALJ HYMES: Aaron Stanton?

24 MR. STANTON: Good morning, your Honor.  
25 This is Aaron Stanton, counsel for Protect  
26 Our Communities Foundation. I agree to the  
27 attestations. I would ask that my colleague,  
28 Ellison Folk, also be asked about the

1       attestations at this time.

2               ALJ HYMES:   And, I'm sorry, your  
3       colleague's name again?

4               MR. STANTON:   Ellison Folk.

5               ALJ HYMES:   Ms. Folk?

6               MS. FOLK:    Good morning, your Honor.  
7       Ellison Folk appearing on behalf of Protect  
8       Our Communities Foundation, and I agree to  
9       the attestation.

10              ALJ HYMES:   Wayne Parker?

11              MR. PARKER:   Thank you, your Honor.  
12       Wayne Parker representing the Public  
13       Advocates Office.   I agree to the attorney  
14       attestation.

15              ALJ HYMES:   Matt Vespa?

16              MR. VESPA:    Hi, your Honor.   Matt Vespa  
17       for Sierra Club.   I agree to the attestation.

18              ALJ HYMES:    I'm going to try one more  
19       time for Tim McRae.

20                       (No response.)

21              ALJ HYMES:    Itzel Berrio Hayward?

22              MS. HAYWARD:   Good morning, your Honor.  
23       Itzel Berrio Hayward representing Small  
24       Business Utility Advocates, and I agree to  
25       the attestation.   Thank you.

26              ALJ HYMES:    Jeanne Armstrong?

27              MS. ARMSTRONG:   Yes.   Good morning,  
28       your Honor.   Jeanne Armstrong on behalf of

1 the Solar Energy Industries Association and  
2 Vote Solar, and I agree with the attestation.

3 ALJ HYMES: Matthew Freedman?

4 MR. FREEDMAN: Matthew Freedman on  
5 behalf of The Utility Reform Network. I  
6 agree to the attestation.

7 ALJ HYMES: Daniel Douglass?

8 MR. DOUGLASS: Daniel Douglass on  
9 behalf of Walmart, Inc. I do so attest.

10 ALJ HYMES: Thank you.

11 That is all I have on my list. Are  
12 there any other attorneys? If you could  
13 raise your hand.

14 Mr. Lindl, I see your hand up. I  
15 thought I had called on you. Mr. Lindl?

16 MR. LINDL: Thank you, your Honor. Tim  
17 Lindl on behalf of CALSSA. You did call on  
18 me. We have another attorney here on behalf  
19 of CALSSA, Julia Kantor, that I forgot to ask  
20 you to have her attest at this time.

21 ALJ HYMES: Ms. Kantor?

22 MS. KANTOR: Yes. Thank you, your  
23 Honor. Julia Kantor, attorney for CALSSA. I  
24 agree to the attestation.

25 ALJ HYMES: Thank you.

26 Thank you, everyone. All right.  
27 Moving on to exhibits. Prior to going on the  
28 record, parties provided exhibits to be

1 identified and marked for the record. If I  
2 could have my proceeding analyst pull up that  
3 list for me, I will then read it into the  
4 record. Let's go off the record.

5 (Off the record.)

6 ALJ HYMES: Let's go back on the  
7 record. I'm now going to read the exhibits  
8 that have been premarked by parties.

9 The first is AEC-01, the  
10 Agricultural Parties' Opening Testimony of  
11 McCann.

12 Next is AEC-02, the Agricultural  
13 Parties' Rebuttal Testimony of McCann.

14 (Exhibit Nos. AEC-01 and AEC-02  
15 were marked for identification.)

16 ALJ HYMES: ASO-01, Opening Testimony  
17 of Aurora Solar.

18 And ASO-02, Rebuttal Testimony of  
19 Aurora Solar.

20 (Exhibit Nos. ASO-01 and ASO-02  
21 were marked for identification.)

22 ALJ HYMES: CSA-01, Prepared Direct  
23 Testimony of B. Heavner and J. Plaisted.

24 CSA-02, Prepared Rebuttal Testimony  
25 of B. Heavner and J. Plaisted.

26 CSA-03, Pages from Order in New York  
27 Public Service Commission.

28 CSA-04, People's Energy

1 Cooperative-DG, or Distributed Generation,  
2 Tariff.

3 CSA-05, Economist Article-Lithium  
4 battery costs have fallen by 98 percent in  
5 three decades.

6 CSA-06, Joint IOU's Data Response to  
7 CALSSA 11.5 and 11.5 Revised.

8 (Exhibit Nos. CSA-01 thru CSA-06  
9 were marked for identification.)

10 ALJ HYMES: CWA-01, Shirmohammadi  
11 Rebuttal Testimony 7-21-21.

12 (Exhibit No. CWA-01 was marked for  
13 identification.)

14 ALJ HYMES: CRE-01, Opening Testimony  
15 of M. Boyd.

16 CRE-02, Proposed QF NEM Successor to  
17 the Current NEM Tariff.

18 CRE-03, Presentation Slides for  
19 Proposed QF NEM Successor to Current NEM  
20 Tariff.

21 CRE-04, ED Staff Proposal for 2020  
22 Avoided Cost Calculator Update.

23 CRE-05, CAISO 2001 Summer Assessment  
24 v1.0.

25 CRE-06, Request for Official Notice  
26 Filed June 4, 2021, FERC Issuance.

27 CRE-07, CAISO Station Power Program  
28 Overview.

1 CRE-08, Station Power Tariff  
2 Proposed August 17, 2018, Tariff Amendment.  
3 (Exhibit Nos. CRE-01 thru CRE-08  
4 were marked for identification.)  
5 ALJ HYMES: CLC-01, Prepared Rebuttal  
6 Testimony B. Schwartz.  
7 CLC-02, Prepared Direct Testimony B.  
8 Schwartz.  
9 (Exhibit Nos. CLC-01 and CLC-02  
10 were marked for identification.)  
11 ALJ HYMES: CUE-01, Testimony R. Earle.  
12 And CUE-02, Rebuttal Testimony R.  
13 Earle.  
14 (Exhibit Nos. CUE-01 and CUE-02  
15 were marked for identification.)  
16 ALJ HYMES: CCS-01, Prepared Direct  
17 Testimony of Brandon Smithwood on Behalf of  
18 the Coalition for Community Solar Access.  
19 CCS-02, Prepared Testimony of Mark  
20 Fulmer on Behalf of the Coalition for  
21 Community Solar Access.  
22 CCS-03, Rebuttal Testimony of  
23 Brandon Smithwood on behalf of the Coalition  
24 for Community Solar Access.  
25 CCS-04, Rebuttal Testimony of Mark  
26 Fulmer on behalf of the Coalition for  
27 Community Solar Access.  
28 (Exhibit Nos. CCS-01 thru CCS-04  
were marked for identification.) ]

1           ALJ HYMES:   EWG-01, Cook Prepared  
2   Rebuttal Testimony 6-18-2021.  
3           EWG-02, Cook Prepared Rebuttal  
4   Testimony 7-16-2021.  
5           (Exhibit Nos. EWG-01, EWG-02 were  
6           marked for identification.)

7           ALJ HYMES:   FWP-01, Prepared Direct  
8   Testimony of Kevin Hauck, H-a-u-c-k.  
9           FWP-02, Foundation Windpower LLC  
10   Proposal for Successor to Current Net Energy  
11   Metering Tariff.  
12           (Exhibit Nos. FWP-01, FWP-02 were  
13           marked for identification.)

14           ALJ HYMES:   GRD-01, Prepared Direct  
15   Testimony of Stephen Campbell on Behalf of  
16   Joint Parties.

17           GRD-02, Prepared Rebuttal Testimony  
18   of Stephen Campbell on behalf of Joint  
19   Parties.

20           GRD-03, O'Shaughnessy, et al., Paper  
21   on Low-Income Solar.

22           GRD-04, Joint IOUs' Data Response to  
23   Joint Parties, June 16th, 2021.

24           (Exhibit Nos. GRD-01, GRD-02,  
25           GRD-03, GRD-04 were marked for  
26           identification.)

27           ALJ HYMES:   IOU-01, Joint IOU Opening  
28   Testimony of SCE, PG&E, and SDG&E on Issues 2



1 through 6 of Joint Assigned Commissioners'  
2 Scoping Memo and ALJ Ruling Directing  
3 Comments on Proposed Guiding Principles.

4 IOU-02, Joint IOU Rebuttal Testimony  
5 of SCE, PG&E, SDG&E on Issues 2 through 6 of  
6 Joint Assigned Commissioners' Scoping Memo  
7 and ALJ Ruling Directing Comments on Proposed  
8 Guiding Principles.

9 (Exhibit Nos. IOU-01, IOU-02 were  
10 marked for identification.)

11 ALJ HYMES: IVE -- excuse me.

12 IVY-01, Prepared Testimony of Allie  
13 Detrio on Ivy Energy Successor Tariff  
14 Proposal.

15 IVY-02, Prepared Rebuttal Testimony  
16 of Allie Detrio and Logan Carter on Ivy  
17 Energy Successor Tariff Proposal.

18 (Exhibit Nos. IVY-01, IVY-02 were  
19 marked for identification.)

20 ALJ HYMES: NRD-01, Opening Testimony  
21 Mohit Chhabra, July 22nd, '21.

22 And NRD-02, Rebuttal Testimony Mohit  
23 Chhabra, July 22nd, '21.

24 (Exhibit Nos. NRD-01, NRD-02 were  
25 marked for identification.)

26 ALJ HYMES: PCF-01, Opening Testimony  
27 of Tyson Siegal on Behalf of Protect Our  
28 Communities Foundation.

1 PCF-02, Resume of T. Siegel.

2 PCF-03, CAISO, Board Approves 2017  
3 to '18, CRR Rule Changes, March 23rd, 2018.

4 PCF-04, CAISO, 2017 to 2018 ISO  
5 Transmission Plan, March 22nd, 2018.

6 PCF-05, T&D World, SDG&E's Sunrise  
7 Powerlink Reaches 1,000 Megawatt Renewable  
8 Energy Goal, December 18th, 2014.

9 PCF-06, CAISO, California ISO Peak  
10 Load History 1998 through 2020.

11 PCF-07, Bloomberg, California  
12 Household Battery Sales to Quadruple in 2020,  
13 February 10th, 2020.

14 PCF-08, Electrek, Tesla Stops Taking  
15 Orders for Powerwall Without Solar Panels,  
16 March 15th, 2020.

17 PCF-09, Tesla, Tesla, Solar Panel  
18 Order Page, Last Accessed May 1st, 2021.

19 PCF-010 -- excuse me.

20 PCF-10, Tesla, Powerwall  
21 Specification Sheet, June 6th, 2019.

22 PCF-11, BloombergNEF, Battery Pack  
23 Prices Cited Below \$100 per Kilowatt-hour for  
24 the First Time in 2020, While Market Average  
25 Sits at \$137 per kilowatt-hour,  
26 December 16th, 2020.

27 PCF-12, Reuters, Exclusive: Tesla's  
28 Secrets, Batteries Aim to Rework the Math for

1 Electric Cars and the Grid, May 14th, 2020.

2 PCF-13, Washington Post, Biden Plan  
3 to Rev Up the Electric Car Market is  
4 Complicated by Battery Supplies, April 4th,  
5 2021.

6 PCF-14, PC Magazine, The Only Thing  
7 Stopping Tesla Semi Production is a Lack of  
8 Batteries, January 27th, 2021.

9 PCF-15, NEM 2.0 Lookback Study,  
10 January 21st, 2021.

11 PCF-16, CAISO, CAISO Energy Market  
12 Price Performance Report, September 23rd,  
13 2019.

14 PCF-17, CAISO, January 1st, 2021,  
15 TAC Rates, January 13th, 2021.

16 PCF-18, SDG&E, Schedule TOU-DR1  
17 Residential Time-of-Use Effective June 1st,  
18 2021, Submitted May 13, 2021.

19 PCF-19, SDG&E, Schedule TOU-A,  
20 Effective March 1st, 2021, submitted  
21 February 26th, 2021.

22 PCF-20, The University of Texas at  
23 Austin, Trends in Transmission, Distribution,  
24 and Administrative Costs for US  
25 investor-owned utilities -- excuse me --  
26 Investor-Owned Electricity Utilities,  
27 June 1st, 2016.

28 PCF-21, SDG&E Schedule DR,

1 Residential Service, Effective June 1st,  
2 2021, Submitted May 13th, 2021.

3 PCF-22, PG&E Press Release, PG&E,  
4 Tesla Break Ground on Landmark Battery Energy  
5 Storage System, July 29th, 2020.

6 PCF-23, Rulemaking 18-12-006,  
7 Comments of the Joint CCAs on Sections 6,  
8 11.1, and 11.2 of the Draft Transportation  
9 Electrification Framework, August 21st, 202.

10 PCF-24, Rebuttal Testimony of Bill  
11 Powers on Behalf of Protect Our Communities  
12 Foundation.

13 PCF-25, Resume of B. Powers.

14 PCF-26, E3, California Net Energy  
15 Metering Ratepayer Impacts Evaluation  
16 Prepared for CPUC, October 28th, 2013.

17 PCF-27, EIA, California Profile -  
18 2019, November 2nd, 2020, Table 8.

19 PCF-28, January 1st, 2019, PG&E  
20 Residential Rate Sheet, in xls.

21 PCF-29, SCE and PRIME Joint Rate  
22 Comparison, effective January 1st, 2019.

23 PCF-30, CPUC, 2019 Senate Bill 695  
24 Report - Actions to Limit Utility Cost and  
25 Rate Increases, May 2019.

26 PCF-31, California Distributed  
27 Generation Statistics, Statistics and Charts,  
28 Accessed June 4th, 2021, Number of IOU NEM

1 Projects.

2 PCF-31, Office of Ratepayer  
3 Advocates, Protest of the Office of Ratepayer  
4 Advocates, of SDG&E's Advice Letter 3137-E -  
5 Annual Electric Regulatory Account Update for  
6 Rates Effective January 1st, 2018, December  
7 4th, 2017.

8 PCF-33, Two-Tier Rate Restructuring  
9 Impact on SDG&E Ratepayers.

10 PCF-34, S. Borenstein, rationalizing  
11 California's Residential Electricity Rates,  
12 September 29th, 2014.

13 PCF-35, CPUC Utility Costs and  
14 Affordability of the Grid of the Future,  
15 February 20th 2021.

16 PCF-36, Environmental America  
17 Blocking the Sun - 12 Utilities and Fossil  
18 Fuel Interests that are Undermining American  
19 Solar Power, October 2015.

20 PCF-37, Energy and Policy Institute,  
21 the Campaign Against Net Metering: ALEC and  
22 Utility Interests' Next Attack on Clean  
23 Energy Surfaces in Arizona, November 18th,  
24 2013.

25 PCF-38, Greentech Media AB-327:  
26 From California Solar Killer to Net Metering  
27 Savior, September 3rd, 2014.

28 PCF-39, Hawaii PUC Press Release,

1 Hawaii PUC Approves Portfolio of Performance  
2 Mechanisms for Hawaiian Electric, June 1st,  
3 2021.

4 PCF-40, Public Service Commission of  
5 South Carolina, Docket No. 2019-182-E, Direct  
6 Testimony and Exhibits of Brian Horii, Senior  
7 Partner E3, on Behalf of the South Carolina  
8 Office of Regulatory Staff, October 8th,  
9 2020.

10 PCF-41, Application 09-05-027,  
11 Application of SCE for a Certificate of  
12 Public Convenience and Necessity for the El  
13 Dorado-Ivanpah Transmission Project -  
14 Rebuttal Testimony of Arne Olson, E3, on  
15 Behalf of Brightsource Energy, Inc., and  
16 First Solar, Inc., July 30th, 2019.

17 PCF-42, J. Firooz, P.E., Is the  
18 CAISO Bringing Benefits to California  
19 Consumers? 2019 Update to 2010 Assessment,  
20 January 8th, 2019.

21 PCF-43, J. Firooz, P.E.,  
22 January 8th, 2019 paper, Updated Table 1 and  
23 Figure 1, Data Through 2020.

24 PCF-44, SDG&E Schedule TOU-DR1,  
25 Residential Time-of-Use, Effective June 1st,  
26 2021.

27 PCF-45, CAISO Rulemaking 14-08-013  
28 Reply Comments of the California Independent

1 System Operator Corporation, August 23rd,  
2 2019.

3 PCF-46, Rulemaking 14-10-003,  
4 Integrated Distributed Energy Resources,  
5 Prepared Direct Testimony of R. Thomas Beach  
6 on Behalf of the Solar Industry -- excuse  
7 me -- Solar Energy Industries Association and  
8 Vote Solar, October 7th, 2019.

9 PCF-47, California Distributed  
10 Generation Statistics, Stats, and Charts,  
11 PG&E, Accessed June 18th, 2021.

12 PCF-48, California Energy  
13 Commission, Final California Energy Demand  
14 Update, CEDU, 2013 Forecast, PG&E  
15 Form 1-2-Mid, "PV," xls Spreadsheet,  
16 November 2013.

17 PCF-49, 2016 SDG&E CEC Form 10-K  
18 Annual Report Filed February 27th, 2017.

19 PCF-50, Application 12-09-010  
20 Protest By the Division of Ratepayer  
21 Advocates of the San Diego Gas and Electric  
22 Company's Application for a Permit to  
23 Construct a Cleveland National Forest Power  
24 Line Replacement Project, November 26th,  
25 2012.

26 PCF-51, PCF Rulemaking 18-10 -007,  
27 The Protect Our Communities Foundation  
28 Comments on the 2020 Wildfire Mitigation

1 Plans Pursuant to Resolution WSD-001,  
2 April 7th, 2020.

3 PCF-52, LAT, Another Summer of  
4 California Power Outages Poses Threat to  
5 Newsom as He Faces Recall, May 24th, 2021.

6 PCF-53, Greentech Media, Sunrun  
7 Deploys Record Solar Capacity in Q4 as  
8 Battery Interest Increases, February 27th,  
9 2020.

10 PCF-54, Email Communication Between  
11 B. Powers, and A. Singh, CPUC, Regarding  
12 Clarification on Relative Importance of  
13 60 Percent RPS by 2030 and MMT GHG Reduction  
14 Target, June 23rd, 2021.

15 PCF-55, E3 and B&V Summary of PV  
16 Potential Assessment in RETI and the  
17 33 percent.

18 PCF-56, A.08-03-015, Application of  
19 Southern California Edison Company (U 3338-E)  
20 For Authority to Implement and Recover in  
21 Rates the Cost of Its Proposed Solar Volume  
22 Photovoltaic (PV) Program, March 27th, 2008.

23 PCF-57, CPUC Press Release, CPUC  
24 Approves Edison Solar Roof Program,  
25 June 18th, 2009.

26 PCF-58, Sempra Press Release,  
27 SDG&E's Sunrise Powerlink reaches 1,000  
28 Megawatt Renewable Energy Goal,



1 December 18th, 2014.

2 PCF-59, SDG&E final 2019 RPS  
3 Procurement Plan, January 29th, 2020,  
4 Appendix 1, pages 15 and 17.

5 PCF-60, SDG&E Sunrise Powerlink Case  
6 Study Supporting Data.

7 PCF-61, ICSREE 2020, Capacity  
8 Factors of Solar Photovoltaic Energy  
9 Facilities in California, Annual Mean and  
10 Variability, 2020.

11 PCF-62, SCE Tehachapi Renewable  
12 Transmission Project Case Study Supporting  
13 Data.

14 PCF-63, CAISO 2020-2021 Transmission  
15 Plan, March 24th, 2021.

16 PCF-64, Comparison of PG&E's  
17 Five-Tier Rate Structure, and Professor  
18 Borenstein's Proposed Five-Tier Fixed Charge  
19 Rate Structure to Address the NEM Cost Shift.

20 PCF-65, CPUC Rulemaking 20-08-022,  
21 The Protect Our Communities Foundation  
22 Opening Comments to Assigned Commissioner's  
23 Ruling Seeking Party Feedback on Program 1  
24 Issues Related to California Hub for Energy  
25 Efficiency Financing Programs, April 16th,  
26 2021.

27 PCF-66, Rulemaking 20-08-022, Clean  
28 Energy Finance Workshop - Day 2,

1 January 28th, 2021.

2 PCF-67, this is a cross exhibit for  
3 Witness Peterman. It is the Affordable Clean  
4 Energy for All, Coalition List.

5 PCF-68, the cross exhibit for  
6 Peterman as well, Rulemaking 20-08-020,  
7 Notice of Ex Parte Communication for the  
8 IOUs, dated March 2nd, 2021.

9  
10 (Exhibit Nos. PCF-01 thru PCF-68  
11 were marked for identification.)

12 ALJ HYMES: PAO-01, Prepared Testimony,  
13 Various.

14 PAO-02, Prepared Rebuttal Testimony,  
15 various.

16 PAO-03, Errata Prepared Testimony,  
17 various, redline.

18 PAO-04, Comparison of Annual Solar  
19 PV Cost Savings.

20 PAO-05, Solar Panel Pricing in US  
21 States - Energy Sage.

22 (Exhibit Nos. PAO-01 thru PAO-05  
23 were marked for identification.)

24 ALJ HYMES: SCL-01, Prepared Testimony  
25 of M. Vespa.

26 SCL-02, Prepared Testimony of E.  
27 Camp.

28 SCL-03, Prepared Rebuttal Testimony

1 of M. Vespa.

2 (Exhibit Nos. SCL-01, SCL-02, SCL-03  
3 were marked for identification.)

4 ALJ HYMES: SVL-09 is Opening Testimony  
5 of McRae.

6 (Exhibit No. SVL-09 was marked for  
7 identification.)

8 ALJ HYMES: SBU-01, Prepared Testimony  
9 of Chernick Wilson.

10 SBU-02, Qualifications of Paul L  
11 Chernick.

12 SBU-03, Qualifications of John  
13 Wilson.

14 SBU-04, Summary Residential Results.

15 SBU-05, Summary Commercial results.

16 SBU-06, Residential Model. This is  
17 a link.

18 SBU-07, Commercial Model. This is  
19 also a link.

20 SBU-08, Rebuttal Testimony of  
21 Chernick Wilson.

22 (Exhibit Nos. SBU-01 thru SBU-08  
23 were marked for identification.)

24 ALJ HYMES: SVS-01, Prepared Direct  
25 Testimony. Let me clarify. That is Prepared  
26 Direct Testimony of S. Gallagher.

27 SVS-02 is the Prepared Direct  
28 Testimony of W. Giese.

1 SVS-03, the Direct Testimony of R.  
2 Thomas Beach on Behalf of SEIA and Vote Solar  
3 in Rulemaking 20-08-020 - NEM 3 - Final  
4 7-22-2021.

5 SVS-04, Rebuttal Testimony of R.  
6 Thomas Beach on behalf of SEIA and Vote  
7 Solar in Rulemaking 20-08-020 - NEM 3 - Final  
8 7-22-2021.

9 SVS-05, this is a cross exhibit,  
10 Frequently Asked Questions 2019 Building  
11 Energy Efficiency Standards.

12 SVS-06, 2021 Distributed Energy  
13 Resources Avoided Cost Calculator  
14 Documentation.

15 SVS-07, also a cross exhibit,  
16 Technical Support Document: Social Cost of  
17 Carbon, Methane and Nitrous Oxide Interim  
18 Estimates Under Executive Order 139908.

19 To be clear, the SVS-06 was also a  
20 cross exhibit.

21  
22 (Exhibit Nos. SVS-01 thru SVS-07  
23 were marked for identification.)

24 ALJ HYMES: TRN-01, the Direct  
25 Testimony of Michelle Chait.

26 TRN-02, Attachments to Direct  
27 Testimony of Michelle Chait.

28 TRN -03, Rebuttal Testimony of

1 Michelle Chait.

2 TRN-04, Attachments to Rebuttal  
3 Testimony of Michelle Chait.

4 TRN-05, TURN Successor Tariff  
5 Cost-Effectiveness Model.

6 (Exhibit Nos. TRN-01 thru TRN-05  
7 were marked for identification.)

8 ALJ HYMES: WAL-01, Direct Testimony  
9 and Exhibits of Steve W. Chriss on behalf of  
10 Walmart, Inc.

11 And I actually want to go back to  
12 the TURN exhibit. For the record, they  
13 should all be labelled with the initial T-R-N  
14 followed by the number, for the record.

15 Going back to Walmart. Let's go off  
16 the record.

17 (Off the record.)

18 ALJ HYMES: Back on the record.

19 WAL-02, Attachment Calc of Estimated  
20 Annual Energy Rate Value Per Kilowatt of  
21 Installed -- strike that -- Installed Solar  
22 and Estimated Annual Energy Rate Value.

23 WAL-03, Attachment Estimated Annual  
24 Energy Rate Value Per Kilowatt of Installed  
25 Solar PGE E-195 and B-195.

26 WAL-04, Attachment Estimated Annual  
27 Energy Rate Value Per Kilowatt of Installed  
28 Solar SCE TOU-8D, and TOU-B.

1                   WAL-05, Rebuttal Testimony and  
2 Exhibits of Steve W. Chriss on Behalf of  
3 Walmart, Inc.

4                   And I believe that is -- yes, that  
5 is our list of exhibits. Let's go off the  
6 record for one moment.

7                   (Exhibit Nos. WAL-01 thru WAL-04  
8 were marked for identification.)

9                   (Off the record) ]

10

11                  ALJ HYMES: Back on the record. My  
12 understanding is that Wayne Parker has a  
13 correction.

14                  Mr. Parker?

15                  MR. PARKER: Yes, your Honor. Wayne  
16 Parker for the Public Advocates Office. Yes,  
17 we'd like to make a small correction.  
18 Exhibits PAO-04 and PAO-05 should be marked  
19 as cross-exhibits.

20                  ALJ HYMES: Thank you.

21                  MR. PARKER: Thank you, your Honor.

22                  ALJ HYMES: So noted.

23                  All right. That concludes the  
24 exhibits to be identified and marked for the  
25 record for today. So let's move on to  
26 witnesses. Our witness cross-examination  
27 schedule for today includes the  
28 cross-examination of witnesses Peterman and

1 Tierney for the Investor-Owned Utilities.

2 Before we commence with the  
3 questioning of witness Peterman, I want to  
4 proceed with the attestations of both  
5 witnesses. Let's go off the record.

6 (Off the record.)

7 ALJ HYMES: Let's go back on the  
8 record.

9 Both of you please raise your right  
10 hand. Do you solemnly state under penalty of  
11 perjury that the testimony you give in the  
12 case now pending before this Commission shall  
13 be the truth, the whole truth, and nothing  
14 but the truth;

15 Do you attest that you will testify  
16 based on your own knowledge and memory free  
17 from external influences or pressures;

18 Attest that you will adhere to all  
19 formal requirements of testifying under oath,  
20 including the prohibition against being  
21 coached;

22 Attest that you will only refer to  
23 materials provided by the parties, exhibits  
24 premarked and identified by the parties and  
25 previously shared with the opposing parties;

26 Attest that you will not make any  
27 recording of the proceeding;

28 That you understand that any

1 recording of a proceeding held by Webex,  
2 including screenshots or other visual copying  
3 of a hearing, is absolutely prohibited;

4 Attest to understand that violations  
5 of these prohibitions may result in  
6 sanctions, including removal from the  
7 evidentiary hearing; restricted entry to  
8 future hearings, denial of entry to future  
9 hearings, or any other sanction deemed  
10 necessary by the Commission;

11 Attest that you will not engage in  
12 any private communications by phone, text, or  
13 e-mail, or any other mode of communication  
14 while under oath and being examined;

15 Attest that if you experience any  
16 attempts to tamper with your witness  
17 testimony, you will report the occurrence to  
18 the presiding officer immediately?

19 Witness Peterman, do you agree to  
20 these attestations?

21 WITNESS PETERMAN: Yes, I agree.

22 ALJ HYMES: Thank you.

23 And, Witness Tierney, do you agree  
24 to these attestations?

25 WITNESS TIERNEY: I do agree as well.

26 CARLA PETERMAN, called as a witness  
27 by Pacific Gas & Electric Company,  
28 having been sworn, testified as  
follows:

SUSAN TIERNEY, called as a witness



1           by Pacific Gas & Electric Company,  
2           having been sworn, testified as  
3           follows:

4           ALJ HYMES: Let's go off the record and  
5           just get everybody settled.

6                     (Off the record.)

7           ALJ HYMES: We'll be back on the  
8           record.

9                     Counsel for the Investor-Owned  
10           Utilities, you may proceed with your witness.

11           MS. MERLO: Good morning, everyone.  
12           Ashley Merlo for PG&E.

13                     Before we begin, are we going to be  
14           able to take a break or are we going right  
15           into testimony this morning?

16           ALJ HYMES: Let's go off the record.

17                     (Off the record.)

18           ALJ HYMES: We'll be back on the  
19           record.

20                     Counselor, your witness.

21           MS. MERLO: Good morning --

22           ALJ HYMES: Actually, let's go off the  
23           record.

24                     (Off the record.)

25           ALJ HYMES: Let's go back on the  
26           record.

27                     Counselor.

28           MS. MERLO: Ashley Merlo for PG&E, your  
Honor. PG&E calls its next witness,

1 Dr. Carla Peterman.

2 ALJ HYMES: And, Ms. Peterman, I just  
3 want to remind you that you are still under  
4 oath.

5 THE WITNESS: Thank you, your Honor.

6 DIRECT EXAMINATION

7 BY MS. MERLO:

8 Q Dr. Peterman, can you tell us what  
9 exhibits you are sponsoring in this  
10 proceeding.

11 A Yes. I'm sponsoring Chapter 1 of  
12 Exhibit IOU-01 and Chapter 1 of Exhibit  
13 IOU-02.

14 Q Were these materials prepared by  
15 you or under your supervision?

16 A Yes, they were.

17 Q Do you have any changes,  
18 corrections, or additions to make at this  
19 time?

20 A No, I do not.

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

24 A Yes, they are.

25 Q And do the opinions expressed  
26 therein represent your best professional  
27 judgment?

28 A Yes, they do.

1 Q Thank you.

2 Your Honor, Dr. Peterman is now  
3 available for cross-examination.

4 ALJ HYMES: Thank you. First up, we  
5 have the attorney for CUE.

6 MS. KOSS: Good morning your Honor,  
7 Rachael Koss for CUE.

8 CROSS-EXAMINATION

9 BY MS. KOSS:

10 Q Good morning, Dr. Peterman.

11 A Good morning.

12 Q Lucky us we get to kick off this  
13 hearing together. Let's start with your  
14 rebuttal testimony that is Exhibit IOU-02,  
15 page 2. Just let me know when you are ready  
16 and I'll start.

17 A I am actually trying to still find  
18 you on the video feed. Give me one second.  
19 I can hear your voice, but I don't see you.

20 Q I'm waving at you.

21 A Okay. I found you. Could you  
22 repeat the question.

23 Q Yeah. Sure. I'm just going to  
24 start in your rebuttal testimony on page 2.

25 A One second to pull that up. Yes,  
26 I'm here.

27 Q Great. And then on line 22, you  
28 say -- and I'm going to quote you -- "The

1 total amount of the NEM subsidy is  
2 \$3.4 billion per year and growing."

3 That subsidy that you're referring  
4 to, that's the cost shift from nonNEM  
5 customers to NEM 1.0 and NEM 2.0 customers;  
6 is that right?

7 A That is correct.

8 Q And this number will continue to  
9 grow as rates increase; right?

10 MS. ARMSTRONG: Your Honor, this is  
11 Jeanne Armstrong. I am going to object to  
12 this line of questioning. (Inaudible) --  
13 testimony shows that they are directly in  
14 line with the utilities with respect to this  
15 proceeding and especially on the amount of  
16 the cost shift.

17 MS. KOSS: Your Honor, may I respond?

18 ALJ HYMES: I'm sorry. Yes, please  
19 respond.

20 MS. KOSS: Thank you. So while we  
21 agree about the cost shift -- this is just  
22 setting up the rest of my questions, which  
23 actually CUE and the Joint IOUs are not  
24 aligned on -- so if you'd let me proceed, I  
25 think it will be teased out and clear.

26 ALJ HYMES: I'll allow it.

27 MS. KOSS: Thank you.

28 Q Okay. So this number, 3.4 billion,

1 in your testimony, this number will continue  
2 to grow as rates increase; right?

3 A Yes.

4 Q Okay. And then if you flip to  
5 page 4 of your rebuttal, line 15, you say  
6 that, continuing the, quote, "status quo" is  
7 contrary to AB 327 and is unreasonable  
8 because it will harm customers and undermine  
9 the State's environmental energy and equity  
10 goals. I paraphrased your words there. It's  
11 not verbatim. By "status quo," you're  
12 referring to that cost shift we just talked  
13 about; right?

14 A I'm directly referring to the way  
15 in which the NEM tariff is structured and  
16 provided so, yes, that subsidy.

17 Q Okay. And then on page 5 of your  
18 rebuttal, lines 6 through 10, you make the  
19 case for quick NEM reform because the cost  
20 burden from NEM 1.0 and NEM 2.0 drives up  
21 customer bills when they are already facing  
22 increased costs from things like grid  
23 modernization, wildfire prevention, and  
24 response to wildfires; is that correct?

25 A That is correct.

26 Q And still in your rebuttal  
27 testimony going back to page 3, line 22, and  
28 then continuing to page 4, line 6, you say

1     that the solar industry proposals in this  
2     proceeding would perpetuate that cost shift  
3     which would be unfair particularly to low  
4     income consumers; is that right?

5             A     It doesn't explicitly reference  
6     long-term consumers in that section, but what  
7     you said is generally consistent with our  
8     testimony.

9             Q     Okay. I apologize. On page 4,  
10    lines 5 and 6 where it continues, it talks  
11    about low-income customers in particular.

12            A     I see that now. Thank you.

13            Q     Okay. Thanks. The Joint IOUs  
14    don't propose transitioning NEM 1.0 and  
15    NEM 2.0 customers to the successor tariff;  
16    right?

17            A     That is correct.

18            Q     And so for the customers that  
19    remain on NEM 1.0 and NEM 2.0, until their  
20    20-year legacy period ends, the annual cost  
21    shift that you referred to earlier would also  
22    continue under the Joint IOU proposal; isn't  
23    that right?

24            A     That is correct.

25            Q     Thank you. I have no more  
26    questions. Thank you, Dr. Peterman.

27            ALJ HYMES: Any redirect?

28            MS. MERLO: No, your Honor.

1 ALJ HYMES: Okay. Next up we have  
2 SEIA, Vote Solar.

3 CROSS-EXAMINATION

4 BY MS. ARMSTRONG:

5 Q Yes. Good morning, Dr. Peterman.  
6 I'm Jeanne Armstrong with -- (inaudible.)

7 ALJ HYMES: Actually let's go off the  
8 record.

9 (Off the record.)

10 ALJ HYMES: We'll be back on the  
11 record.

12 BY MS. ARMSTRONG:

13 Q Okay. Anyway, I'm here on behalf  
14 of SEIA and Vote Solar today. If I could get  
15 you to go to your opening testimony, IOU-01,  
16 and particularly on page 13, lines 13 and 14.

17 A I am there. I'm assuming we have  
18 the same pagination, so if you could tell me  
19 specifically the text, that would be great.

20 Q Yeah. It's the sentence that  
21 starts "Together these programs." Okay. You  
22 state:

23 Together these programs reinforce  
24 the State's commitment to and  
25 support for sustainable growth and  
26 renewable energy, economic  
27 development, consumer choice, and  
28 clean energy outcomes.

1                   When you say "these programs," I'm  
2                   assuming you're referring to the programs you  
3                   list on pages 11 through 13 that immediately  
4                   precedes that statement.

5                   A     That is correct.

6                   Q     Okay. Could you look at this list  
7                   that starts at page 11 and tell me which of  
8                   those programs will help to ensure that  
9                   customer side of renewable generation will  
10                  continue to grow sustainably.

11                  A     I think there are several of these  
12                  that will allow us to do so. One is the NEM  
13                  program and we believe that our proposal will  
14                  allow for sustainable growth of solar.  
15                  There's also SGIP and the opportunity to have  
16                  energy storage and have energy storage paired  
17                  with solar, which we think is the best  
18                  approach to have it sustainably grow as well,  
19                  continued work to improve interconnection  
20                  standards, again making it easier for  
21                  customers to connect. We do some of those  
22                  soft costs.

23                  So those are a few of the ones that  
24                  I think are going to help NEM grow SRA solar  
25                  grow sustainably.

26                  Q     Okay. So the current NEM  
27                  program -- (inaudible) -- revised NEM  
28                  program, SGIP, and enhanced interconnections



1 are the three that immediately come to your  
2 mind?

3 A That is correct.

4 Q Okay. If you could -- and still on  
5 the same page going down to line 15 -- this  
6 is page 13, line 15, you state:

7 Going forward, the Title 24  
8 Building Energy Efficiency  
9 Standards will further drive  
10 deployment of solar systems on  
11 California rooftops by requiring  
12 all new homes in California  
13 include PV installation.

14 This Title 24, that's often called  
15 New Home Solar Mandate; is that correct?

16 A I'm assuming so. I usually call it  
17 just the Title 24 --

18 Q Okay.

19 A -- solar codes, but I'll defer to  
20 you if that's what it's called by others.

21 Q Fair enough. Are you aware that  
22 based on statutes, the New Home Solar Mandate  
23 must be cost effective?

24 A Yes, I am aware.

25 Q Okay. And have the utilities  
26 determined whether their proposal for a NEM  
27 successive tariff will render the solar  
28 mandate uneconomic?

1           A    I'm not aware if we've done that  
2 explicit analysis. Another witness might be  
3 able to speak to that.

4           Q    Could you point me to another  
5 witness or have your attorney do that?

6           A    Sure. I'm happy to. Give me a  
7 second. If I look at the witness list, I  
8 might be able to do that.

9           Q    I don't want to take up your time,  
10 Dr. Peterman. Maybe, you know, on a break  
11 your attorney could point me to that.

12          A    Sure.

13          Q    So you stated you were aware that  
14 the solar mandate had to undergo a cost  
15 effectiveness analysis by the CEC. Do you  
16 have any knowledge of that cost effectiveness  
17 analysis that the CEC performed?

18          A    Not in the details of it.

19          Q    Okay. Well, if I could have you  
20 look at what's been marked as exhibit SVS-05,  
21 this is the cross-examination exhibit which I  
22 had sent over to you guys on Friday.

23               Do you have that in front of you?

24          A    I do.

25          Q    And this is Frequently Asked  
26 Questions 2019 Building Energy Efficiency  
27 Standards. If I present this to you, were  
28 you familiar with this document?

1           A    I wasn't familiar, especially with  
2   this document, not before you sent it.

3           Q    Okay. Well, you are aware that  
4   Figure 1-4 that you have on page 14 of your  
5   testimony, of your opening testimony,  
6   contained that figure?

7           A    Yeah --

8           Q    It comes from this document?  
9                (Crosstalk.)

10          THE WITNESS: Yeah, I am familiar very  
11   much with the figure. I had the opportunity  
12   to read the whole Q and A after you sent it  
13   over. Thank you.

14   BY MS. ARMSTRONG:

15          Q    Okay. So looking at what's --  
16   unfortunately the page are (inaudible) --  
17   it's question 10 in the document. So you  
18   said you had an opportunity to review this  
19   after it was sent over; correct?

20          A    I did.

21          Q    And so you know that the CEC  
22   conducted several cost effectiveness tests,  
23   one where all the generation is credited with  
24   only avoided costs?

25          A    Yes.

26          Q    And under that scenario, the New  
27   Home Solar Mandate wasn't effective in  
28   certain climate zones. Is that correct based

1 on this document?

2 A Yes. That's what the answer is in  
3 the document to Question 10.

4 Q Do you know what avoided costs the  
5 CEC utilized in their evaluation?

6 A I do not.

7 Q Do you know whether the CEC  
8 factored in a grid benefits charge into its  
9 analysis of cost effectiveness?

10 A I do not.

11 Q Okay. Still on page 13 --

12 A In my opening testimony?

13 Q Yeah. We're still on the same page  
14 we were before in your opening testimony,  
15 page 13, and it's on line 18. You state,  
16 "The combined effect of these policies and  
17 market conditions create a positive outlook  
18 for solar expansion in the state as seen in  
19 Figure 1-4 below."

20 And when you say "these policies  
21 and market conditions," are you referring  
22 solely to the New Home Solar Mandate or are  
23 you referring to something in addition? ]

24 A I'm referring to the combination of  
25 policies that were referenced on the previous  
26 pages, as well as market conditions, which  
27 are detailed more in the testimony of Dr.  
28 Tierney.

1           Q    Okay. And turning to page 2, that  
2   Figure 1-4 which we discussed, which was  
3   pulled out of the CEC document, do you know  
4   when this figure was constructed originally?

5           A    I do not know when it was  
6   constructed originally.

7           Q    But based on the document, was it  
8   from the 2019 to 2020 time frame?

9           A    That would be my assumption. But I  
10   can't speak to that, since I didn't create  
11   the actual chart.

12          Q    Okay. The lines showing the  
13   increase in behind-the-meter solar, which is  
14   the blue line on the graph, do you know what  
15   assumptions underlie that estimate?

16          A    I do not, beyond what you pointed  
17   me to in the Q and A.

18          Q    Okay. Okay. So on page -- turning  
19   to page 14. On page 14 farther down,  
20   starting in the section marked E, you began  
21   to list certain problems in the current NEM  
22   program. Then if you could turn specifically  
23   to one of the problems you list on page 16  
24   lines 4 and 5.

25          A    Got it.

26          Q    Okay. You state, the existing NEM  
27   program fails to provide sufficient price  
28   signals to promote more modern technology and

1 uses.

2 Is that issue really a problem with  
3 the NEM program or problem with rate design?

4 A I think it is a missed opportunity  
5 with the NEM program.

6 Q Okay. Hypothetically though you  
7 could keep the basic construct of the NEM  
8 program that require NEM customers to go off  
9 on (inaudible) rates with higher between  
10 (inaudible) the period; correct?

11 A Well, NEM is a rate design. So, in  
12 that sense, it is one in the same. So that  
13 is what we are proposing in our proposal is  
14 the NEM tariff that has TOU-based rates, as  
15 well it has charges that allow for the  
16 collection of costs that NEM customers incur.

17 Q Okay. Moving on. Page 19.

18 A One second, please. Hold on to  
19 make sure I'm there. Give me a sec. I'm on  
20 page 19.

21 Q Okay. At line 9 you are talking --  
22 you state about the benefits charge. It  
23 says, (inaudible) benefits charge is designed  
24 to recover the cost we incur to serve them,  
25 and they do not have sufficient (inaudible)  
26 supply to cover their own electricity uses.

27 And "them," when you state "them,"  
28 you are referring to NEM customers; correct?

1           A     That is correct.

2           Q     Okay. So if I'm a NEM customer and  
3 I have on-site 5 kW, for example. But my  
4 system is only producing 3 kW. I (inaudible)  
5 kW off the grid; correct?

6           A     Sorry, what was that? You said 3  
7 kW system, but you are using 5 kW?

8           Q     Yes.

9           A     Correct.

10          Q     Okay.

11          A     It will be using power from the  
12 grid.

13          Q     Is this a situation you are  
14 referring to when you state on line 9  
15 through 10 that the customer doesn't have  
16 sufficient on-site. I'm sorry. When you say  
17 on line --

18                     (Reporter clarification.)

19 BY MS. ARMSTRONG:

20          Q     Okay. I'm going to start this  
21 whole line of questioning again. I lost  
22 track.

23          A     No problem.

24          Q     On-site usage 5 kW and 3 kW system,  
25 we've established they will be taking 2 kW  
26 off the grid; correct?

27          A     Correct.

28          Q     And in that situation, is that type

1 of customer the type of customer you are  
2 referring to on line 9 through 10 of your  
3 testimony when you state our grid charge is  
4 designed to the recover the cost we incur to  
5 serve them when they do not have sufficient  
6 on-site supply?

7 A Yes. Although, I should clarify,  
8 with the example that you gave, they would be  
9 pulling 2 kW when their solar system was  
10 producing. When their solar system is not  
11 producing, they would be pulling more from  
12 the grid. Yes, that is the type of customer  
13 I was referring to.

14 Q For the 2 kW they pull when their  
15 full system is producing, they pay full  
16 retail rate for that kW; correct?

17 A Yes.

18 Q Okay. If you could then scroll to  
19 page 19. And I'm looking at line 1. It  
20 states, customers lock in a hedge against the  
21 future rate increases while adding an on-site  
22 source of backup power for their homes will  
23 be motivated to add storage and solar  
24 systems.

25 A I'm sorry, Ms. Armstrong, just give  
26 me a second. I'm finding it a little harder  
27 to track. Oh, on top of page 20?

28 Q Yes.



1           A     Okay. Please go ahead.

2           Q     With that statement at the top of  
3 page 20, do you mean that customers will gain  
4 more certainty over their energy costs, solar  
5 plus storage?

6           A     Yes.

7           Q     Okay. And is it your testimony  
8 that customers wanting to lock in a hedge  
9 against future rate increases by adding solar  
10 plus storage will be able to do so under the  
11 IOUs' proposal in this proceeding?

12          A     I think there is opportunity to do  
13 that. The grid benefit charge though  
14 includes other components as well like public  
15 purposes programs, for example, and so there  
16 is other elements to it.

17          Q     I guess I'm a little confused by  
18 that answer. I was just asking whether the  
19 IOUs' proposal would allow solar plus storage  
20 customers to get the type of certainty you  
21 are talking about on the top of page 20 of  
22 your testimony?

23          A     Yes. I do I think it provides some  
24 level of hedge when you are talking about  
25 time-of-use pricing.

26          Q     Okay. And isn't it a part of the  
27 IOUs' proposal to set the benefits charge for  
28 storage customers at the same level as solar

1 customers now but then increase it in a  
2 couple of years?

3 A Yes, I believe it is.

4 Q Would that type of change alter the  
5 solar plus storage customers' ability  
6 to (inaudible) certainty or in their rate, in  
7 their future rates?

8 A I'm not sure if I understood your  
9 question exactly. Is it the equivalency with  
10 solar and customers now that you are  
11 referring to or the fact that it will be  
12 different in the future? I'm sorry. Could  
13 you repeat the question?

14 Q Well, you stated that you believe  
15 that the fees proposed would allow a solar  
16 storage customer to have hedge against future  
17 rate increases; correct?

18 A Correct.

19 Q Okay. But it is also part of the  
20 IOUs' proposal to increase the GBC group  
21 benefits charge for solar plus storage  
22 customers in a couple of years; correct?

23 A Correct.

24 Q So how does the solar plus storage  
25 customer get a hedge against future rate  
26 increases under the IOUs' proposal?

27 A I think that is a question that  
28 would be better answered by one of our rate

1 experts who will testify later. I don't have  
2 the exact numbers in front of me, but I still  
3 think it allows for some form of hedge.

4 Q Okay. If I could get you to look  
5 at the rebuttal testimony now. I just have a  
6 couple of questions there, and specific I'm  
7 looking at page 6.

8 (Audio interruption.)

9 ALJ HYMES: Let's go off the record.

10 (Off the record.)

11 ALJ HYMES: We will be back on the  
12 record.

13 BY MS. ARMSTRONG:

14 Q Okay. Ms. Peterman, I'm looking at  
15 page 3, at the become of page, 3 line 22.

16 A Yes.

17 Q This is going on to page 4 as well.  
18 But you state that although most of the solar  
19 industry advocates acknowledge that some  
20 level of cost shift exists, the proposal  
21 actually perpetuates the cost shift to a very  
22 gradual transition away from the current NEM  
23 model. And then at the top of the next page  
24 you say, apparently, this (inaudible) of new  
25 customers to purchase product and services  
26 and/or their own customers' ability to adapt  
27 to (inaudible) in the context of a changing  
28 market.

1                   Do you have any experience in  
2                   marketing a solar product?

3                   A     I do not.

4                   Q     Okay. And am I correct that even  
5                   using the Joint IOUs' own numbers that if a  
6                   customer invests in stand-alone solar, he  
7                   will earn a zero percent internal rate of  
8                   return over 19 years in PG&E's service  
9                   territory?

10                  A     That is consistent with my  
11                  recollection.

12                  Q     You think it may be difficult to  
13                  convince a customer to invest in a product  
14                  that provides the customer zero return on its  
15                  investment for almost 20 years?

16                  A     I think there still remains a value  
17                  proposition for solar, especially when you  
18                  consider the life of that system. So it may  
19                  be harder, but there is still value  
20                  proposition. And in terms of our proposal,  
21                  we really do think we want to be promoting  
22                  and transitioning customers to invest in  
23                  storage plus solar.

24                  Q     When you talk about solar value  
25                  proposition in there, so does the -- does the  
26                  average customer/person stay in their home  
27                  for over 20 years these days?

28                  A     My parents do. They've got the

1 same house for over 20 years, so...

2 Q I understand that. But how many  
3 homes have you lived in in the past 20 years?

4 A Several, as a renter.

5 Q Okay. And then going on to page 5,  
6 it is near the bottom, but (inaudible) there,  
7 for some reason. It is the paragraph that  
8 starts, the Commission should resist. It is  
9 near the bottom of the page. Do you see that  
10 paragraph?

11 A I do.

12 Q Okay. You state, the Commission  
13 should resist those proposals that add  
14 unnecessary, confusing, and administrative  
15 complex techniques, such as solar (inaudible)  
16 proposed entity of expert costs and trigger  
17 step down of composition level.

18 So when you say "confusing" and  
19 "complex," who are you proposing it is  
20 confusing to, the consumer or the IOU?

21 A I would say "consumer."

22 Q Okay. And what is that testimony  
23 (inaudible)? Have the IOUs done any customer  
24 surveys or focus groups on the various  
25 proposals in this proceeding?

26 A No.

27 Q Okay. And can you tell me what is  
28 confusing about a locked-in export

1 compensation rate that has been the same for  
2 20 years?

3 A Again, if you acknowledge I'm not  
4 the expert on this, but I will say what  
5 should be confusing is it is going to vary  
6 for different customers, depending on when  
7 they got their system, for example, as  
8 compared to everyone transitioning to the  
9 same type of rates. So I think some of those  
10 differences might be confusing for customers.

11 Q You are saying the fact that I  
12 might have a different locked-in  
13 (unintelligible) would be confusing?

14 A I think so. I think all reform  
15 tariffs are going to be a little bit more  
16 complicated than NEM 2.0. But I think that  
17 the one that is being proposed by the solar  
18 parties is more complicated than some of the  
19 others on the table before the Commission at  
20 this time.

21 Q Could you expand how it is more  
22 complicated than say the IOUs' proposal?

23 A As referenced here, I'm sorry, Ms.  
24 Armstrong, you went out on my camera, but you  
25 are back.

26 I think the different vintaging  
27 levels, the drop-down between the different  
28 steps may go off target between the different

1     utilities. Those all lead to different  
2     customer rates being different, depending on  
3     obviously when they signed up and what  
4     territory they are in, et cetera. And it is  
5     hard to predict the times when those  
6     transitions would happen. They are not  
7     calendar based. They are based on getting to  
8     certain megawatt levels.

9           Q     From your description here,  
10    complication sounds like for -- complexity  
11    for the utility, not the customer. Am I  
12    correct?

13           A     Again, I'm not the marketing  
14    expert. So as someone who could be a  
15    customer, I might find that confusing. But  
16    again, it might be a better question for a  
17    different witness.

18           Q     Okay. One more question, Dr.  
19    Peterman, and then I'm finished. This isn't  
20    part of your testimony, but since you are the  
21    policy witness and also an officer of  
22    Southern California Edison, I'm going to ask  
23    it of you: Are you familiar with the section  
24    of Dr. Tierney's testimony about other  
25    sources to subsidize this for -- for solar?

26           A     Ms. Armstrong, you cut out for a  
27    minute. Would you remind repeating the  
28    question?

1           Q    Yes.  Are you familiar with the  
2   Section of Dr. Tierney's testimony that talks  
3   about bookings to other sources besides rates  
4   for the funding of solar incentives?

5           A    It would be helpful if you can  
6   refer me to the exact page, because nothing  
7   is coming to mind.

8                   And I also -- I have to correct,  
9   I'm an officer of PG&E, not Edison.  I used  
10  to be.  So I wanted for the record to clarify  
11  that.  I switched jobs.

12          Q    That is okay.  Sorry about that.  I  
13  didn't keep up.

14                  This is on page 61, the opening  
15  testimony of Ms. Tierney, specifically lines  
16  4 to 6.

17          A    Give me a second to pull it up,  
18  please.

19                  Would you refer to the page again,  
20  please.

21          Q    It is page 61, line 4 to 6.

22          A    All right.  Please go ahead.

23          Q    Yeah.  So in that section of your  
24  testimony you state the Commission should  
25  focus reducing the cost shift and then  
26  condition expansion of incentives to others  
27  besides qualified customers of the  
28  availability of funds from sources besides



1       utilities' electricity rates.

2               Do you support that test -- section  
3       or statement in Ms. Tierney's testimony?

4               A     I am not recalling everything that  
5       went into Dr. Tierney making that statement.  
6       So I think it is most appropriate to ask her.

7               MS. ARMSTRONG:   Okay.   Thank you.   That  
8       is all the questions I have.

9               THE WITNESS:   Thank you.

10              ALJ HYMES:   Thank you.   Any redirect?

11              MR. MERLO:   May we have just a moment  
12       with the witness to discuss redirect and then  
13       start back in a couple of minutes?

14              ALJ HYMES:   Okay.   We will go off the  
15       record.

16                       (Off the record.)

17              ALJ HYMES:   We will be back on the  
18       record.

19              MS. MERLO:   We have no redirect, your  
20       Honor.

21              ALJ HYMES:   Okay.   Thank you.

22                       Next up I believe is Mr. Boyd from  
23       CARE.   Mr. Boyd, are you ready to proceed?

24              MR. BOYD:   Yes, your Honor.   Can you  
25       hear me okay?

26              ALJ HYMES:   Yes.

27                               CROSS-EXAMINATION

28       BY MR. BOYD:

1 Q Hi Carla. I'm Mike Boyd from CARE.

2 A Hello.

3 Q I have a few questions. First, I  
4 believe in nonviolent communication. That  
5 means my questions are voluntary. If you  
6 don't feel comfortable answering them, just  
7 tell me you don't feel comfortable and I'll  
8 move on.

9 A Thank you.

10 Q My first question is, I heard you  
11 mention that you were an officer for Edison,  
12 Southern California Edison, but you are now  
13 an officer for Pacific Gas and Electric. I'm  
14 curious: Are you in this case working for  
15 all three utilities, including San Diego Gas  
16 and Electric as a witness?

17 A Yes, I am.

18 MR. BOYD: Thank you.

19 Now, I have a kind of a question for  
20 you, your Honor. Is it okay or possible to  
21 share my screen? Because I have my exhibits  
22 up on the screen with the link to the exhibit  
23 list that is provided.

24 ALJ HYMES: Mr. Boyd, we have provided  
25 all exhibits to all participants purely to  
26 not -- so that we don't have to share your  
27 screen, because that slows the -- it can  
28 cause technical difficulties.

1 MR. BOYD: Understood. Thank you for  
2 clarifying that.

3 Q My first question, this is all in  
4 your opening testimony IOU-01 I believe is  
5 the number, this comes from page 19 lines 4  
6 to 5, you say that what you proposed to use  
7 are avoided costs as the basis for  
8 compensating exports to the grid. My  
9 question is: Are utilities proposing to  
10 separate the wholesale export of power from  
11 the retail import?

12 A Sorry, Mr. Boyd. I was still  
13 looking for the specific page reference. Can  
14 you tell me that again?

15 Q Okay. Sorry. It is page 19.

16 A Okay.

17 Q Near the top, lines 4 to 5. It is  
18 talking about how much -- the payment for  
19 exports.

20 A Would you repeat your question,  
21 then?

22 Q My question is: Are the IOUs  
23 advocating for the separation of wholesale  
24 power export from retail power import?

25 A We are explicitly advocating for  
26 using the avoided cost -- avoided cost  
27 calculator from the PUC to value exports.

28 Q And when you say "avoided cost" you

1 are not talking about PURPA avoided cost,  
2 PURPA being Public Utilities Regulatory  
3 Policy Act, which is a federal statute?

4 A I was directly referring to what is  
5 in the avoided cost calculator from the PUC.  
6 I don't know they entertain all the same  
7 elements of PURPA.

8 Q Okay. So that goes to my second  
9 question, which is: It is -- I'm going to be  
10 using my Exhibit CRE-01, and that also  
11 references two figures. The first one is on  
12 page 3 of the testimony. That is not  
13 counting the front page.

14 A Okay.

15 Q And that is coming from the 2020  
16 proposed avoided cost calculator, which is my  
17 Exhibit CRE-04, I believe -- let me check  
18 that -- titled Energy Division Staff Proposal  
19 for 2020 Avoided Cost Calculator Update.

20 Now, is that -- number 4, is that  
21 the avoided cost calculator you were  
22 referring to in answer to my previous  
23 question?

24 MS. MERLO: Your Honor, I don't know,  
25 does the witness have CRE-04? Do you have  
26 that in front of you?

27 THE WITNESS: I do not. I was looking  
28 at your CRE-01, Mr. Boyd, that you

1 referenced. I don't have 04 in front of me.

2 MS. MERLO: Your Honor, may I approach  
3 the witness to provide her the exhibit?

4 ALJ HYMES: Yes.

5 MR. BOYD: 05 is coming up after that,  
6 so...

7 ALJ HYMES: Let's go off the record.

8 (Off the record.) ]

9 ALJ HYMES: Let's go back on the  
10 record.

11 MR. BOYD: I'm sorry. It's page 95 --  
12 no. Sorry. Hold on. Okay.

13 ALJ HYMES: Let's go off the record.

14 (Off the record.)

15 ALJ HYMES: We'll be back on the  
16 record.

17 BY MR. BOYD:

18 Q So, Carla, what I'm referencing,  
19 the 2020 Staff Recommendation, page 19 is the  
20 figure that I'm using. Would you confirm  
21 that's the same figure.

22 MS. MERLO: Is this Exhibit 4, CRE-04?

23 MR. BOYD: This is Exhibit 4, yes.

24 THE WITNESS: And Figure 8, Mr. Boyd?

25 BY MR. BOYD:

26 Q What's that?

27 A Figure 8 is the title of it on --

28 Q Figure 8, yes, ma'am. Figure 8.

1           A     Okay.

2           Q     And the other one I'm referencing  
3     is on page 5 -- page 4, excuse me, of my  
4     opening testimony, the California ISO 2001  
5     Summer Assessment, Version 1.0, which is  
6     Exhibit 5. And I'm referencing -- when you  
7     get that exhibit, I'm referencing page 9,  
8     Figure 1-A on page 9.

9           A     I have them both pulled up now.  
10    Thank you.

11          Q     So you can turn to that. Okay.  
12    Let's go to -- so my first question has to  
13    go -- let's look at -- on page 4, that figure  
14    says, "2000 Peak Day Resource Summary" --  
15    this is on Cal ISO. It's got the Cal ISO  
16    mark on it -- Wednesday August 16, 2000.

17                  Do you see that figure? It's the  
18    colorful one. It's on --

19          A     In the second document in the --  
20    okay. Yes.

21          Q     It's in the, yeah, the first  
22    document, my --

23          A     Okay.

24          Q     -- opening testimony. Okay. Do  
25    you see that?

26          A     I do.

27          Q     So my question is -- let's use  
28    Doc Brown's a thousand megawatts is a

1 gigawatt. Remember Doc Brown from Back to  
2 the Future?

3 A I do. Good hair. Yeah.

4 Q So let's just use a -- so how many  
5 gigawatts do you see for peak on that  
6 August 16, 2000? What's your guesstimate?

7 A I will tell you, Mr. Boyd, the  
8 y-axis is a little blurry so I'm going to say  
9 it looks like 42, but I can't -- it's hard  
10 for me to precisely say.

11 Q Yeah. My guess was 43, but that's  
12 okay.

13 A Okay.

14 Q Not being correct. It's what the  
15 truth is. So go in -- now, let's go up to  
16 the Figure 8 and then look at the one that  
17 says "Cal ISO net load." It's like the  
18 second figure down.

19 Do you see that, ma'am?

20 A I do.

21 Q So now going over to 2019 on the  
22 far right, do you see that little peak there?

23 A I do.

24 Q And you see how that figure -- is  
25 it your understanding that's what's called a  
26 duck curve?

27 A Yeah. I would say this is  
28 consistent with what the duck curve is

1       supposed to represent.

2               Q     Okay. Very good. So what would  
3       you guesstimate in gigawatts peak the peak  
4       was?

5               A     I mean this is the net load so -- I  
6       mean I'm just --

7               Q     Got it.

8               A     Yeah. I mean the net peak, you  
9       know, everything on renewables looks to be  
10      like 22 gigawatts but --

11              Q     Okay.  
12                    (Crosstalk.)

13      BY MR. BOYD:

14              Q     I said 25 so...

15              A     All right. 25 it is.

16              Q     We're just guessing. I understand.  
17      So but now would you agree that -- that  
18      since -- assuming that the next figure above,  
19      which shows solar penetration -- do you see  
20      that one?

21              A     I do.

22              Q     Would you agree that the solar  
23      penetration has reduced the peak demand by  
24      roughly 18 gigawatts? Again, you don't have  
25      to answer if you don't feel comfortable.

26                    I can't hear you.

27              ALJ HYMES: Ms. Peterman, you're on  
28      mute. Let's go off the record.



1 (Off the record.)

2 ALJ HYMES: We'll be back on the  
3 record.

4 Mr. Boyd.

5 BY MR. BOYD:

6 Q Okay, Carla, great to see you back.  
7 What I was asking you about is solar  
8 penetration that's shown in this Figure 8 on  
9 page 3 of my -- of the opening testimony.  
10 And what it goes to is on -- just for  
11 information -- is on page 4 of your  
12 testimony, line 3, you're talking about one  
13 of the program's purpose is to encourage  
14 reduction in peak demand. Okay.

15 So what I was asking is if, based  
16 on our discussion earlier, would you agree  
17 that the peak demand due to solar penetration  
18 is roughly 18 gigawatts of reduction in  
19 demand?

20 A Mr. Boyd, I'm not clear where in my  
21 testimony, again, you were referencing. And  
22 the reason I ask is because I don't know if  
23 it was something related to energy storage,  
24 which would deal with the net peak, versus  
25 something that -- to go back to your  
26 question -- whether we're talking about  
27 solar's overall reduction of peak. But to  
28 your (inaudible) --

1 (Crosstalk.)

2 THE WITNESS: -- immediate question --  
3 BY MR. BOYD:

4 Q This is -- sorry to interrupt. I  
5 under -- I'm talking about as a general  
6 matter, nothing to do with the storage. But  
7 I was additionally referencing page 4,  
8 line 3, of your opening testimony. It talked  
9 about encouraging reduction in peak demand.  
10 And that's what our -- my discussion and  
11 my -- my question about the penetration of  
12 solar. It's -- basically I'm trying to see  
13 if you would agree that it's reduced peak  
14 demand.

15 A You know, honestly I think it  
16 depends on when the peak is, but I mean -- so  
17 I'm not as familiar with this chart to say,  
18 but I mean I will say this that solar does  
19 reduce demand.

20 Q Okay. And then -- I appreciate  
21 your concern about when it is because that --  
22 that -- if you look at that -- we're talking  
23 about the duck curve on 2019. The net load  
24 was like -- it -- it -- you can look at the  
25 duck curve -- basically if you go to 2011 on  
26 the left, you can see it's more like 20 --  
27 2000. That 2000 data, you see how there's  
28 like a -- the peak is earlier in the day.

1 Would you agree? So would you --

2 A Yes.

3 Q -- agree that the peak demand  
4 period used to be 10:00 to 6:00 p.m., okay,  
5 and it's currently 4:00 to 9:00. So would  
6 you agree that's a result of solar  
7 penetration as well?

8 A Yes, I would.

9 Q Okay. So now my last question has  
10 to do with Exhibit CRE-06, if you could pull  
11 that up. And this -- just for reference,  
12 this has to go with your opening testimony on  
13 18, page 18, line 6. We're talking about the  
14 grid benefit charge.

15 Do you have that document, Carla?

16 A I do, Mr. Boyd. And let me just go  
17 to that specific page of my testimony as  
18 well. Give me a sec.

19 Q Okay.

20 A Okay. I'm here.

21 Q So if you would go to the page 10  
22 of the document, which is the third to the  
23 last page. Let me know when you're there.

24 A I'm here.

25 Q And do you see that paragraph  
26 numbered 2? It's got the number 2 on it  
27 there?

28 A Yeah, I do. So there's numbered

1 paragraph and then there's the second  
2 paragraph on page 10, so do you want me to go  
3 to number 2 or --

4 Q Number 2. We're starting with the  
5 word "Petitioners." And what I'd like you to  
6 read is paragraphs 2 and 3 into the record  
7 without -- you don't have to read the  
8 footnotes obviously, but if you could just  
9 read those two paragraphs into the record, I  
10 would sincerely appreciate it.

11 A Well, this is not my testimony, but  
12 happy to read it:

13 Petitioners have presented a  
14 strong case that the Alabama  
15 Commission failed to adhere to the  
16 regulations set forth in FERC  
17 Order No. 69 violating the  
18 requirements of PURPA Section 210.  
19 Section 210(c) of PURPA requires  
20 that the rates for utility sales  
21 to qualifying facilities, QF, be  
22 just and reasonable and in the  
23 public interest and not  
24 discriminate against QF.  
25 Order No. 69 implements these  
26 requirements. In Order No. 69,  
27 the Commission recognized that  
28 partial requirements, QF, are

1           likely to have the same  
2           characteristics as the load of  
3           other nongenerating customers of  
4           the utility, in which case the  
5           appropriate rates for sales to  
6           such a facility is the rate that  
7           would be charged to a comparable  
8           customer.

9           To charge a different rate  
10          consistent with Order No. 69, the  
11          rate must be, 1, based on accurate  
12          data; 2, be established using  
13          consistent, system-wide costing  
14          principles; and, 3, apply to the  
15          utilities' other customers with  
16          similar load or other cost-related  
17          characteristics.

18          While a demonstration that the  
19          Alabama Commission had violated  
20          any single prong of these rules in  
21          establishing rate rider RGB  
22          tariffs would be enough to show  
23          that it failed to adhere to Order  
24          No. 69, petitioners present  
25          arguments that none of these  
26          prongs may have been met.

27          Number 3, most significantly,  
28          petitioners argue that Alabama

1                   Power did not apply the rate rider  
2                   RGB or back-up service charge to  
3                   its other customers with similar  
4                   load or other cost-related  
5                   characteristics.  
6                   The Alabama Commission and Alabama  
7                   Power justified the charge as  
8                   nondiscriminatory because a QF  
9                   customer, as compared to a  
10                  customer without on-site  
11                  generation, may have lower  
12                  volumetric usage but comparable  
13                  peak usage that requires Alabama  
14                  Power to have an adequate power  
15                  supply ready for peak times.  
16                  However, neither sufficiently  
17                  demonstrate that QF customer load  
18                  profiles are in fact different  
19                  from those of customers without  
20                  on-site generation who are not  
21                  required to pay this rate rider  
22                  RGB charge.  
23                  If QF customer-usage patterns are  
24                  comparable to those of customers  
25                  without on-site generation to  
26                  reduce volumetric consumption  
27                  through other means, the current  
28                  application of the rate rider RGB

1 charge may be discriminatory.

2 Q Okay. My question is do you  
3 consider the grid benefit charge to be the  
4 type of rate -- the type of charge that PURPA  
5 is talking about in the rate rider RGB  
6 charge? This is your opinion I'm asking.

7 A So I am personally not familiar  
8 with the Alabama Power proposal or the  
9 specifics of the rates. One take-away I see  
10 from here is a question about some customers  
11 paying for costs that other customers aren't  
12 paying for, and the grid benefit charge that  
13 the utilities are proposing is to actually  
14 recover costs from customers that also are  
15 being paid by other customers for their  
16 volumetric rates.

17 But, again, I'm not familiar with  
18 the explicit tariff FERC is reviewing, so I'm  
19 not able to answer that question specifically  
20 about if this was a type of charge they were  
21 considering.

22 Q Okay. Thank you for that answer.  
23 Final question. It's just a general question  
24 about the grid benefit charge. Would the NEM  
25 customer generator grid benefit charge have a  
26 fair or reasonable relationship to the  
27 payor's burdens on or benefits from the  
28 activity?

1           A    I believe it should.

2           Q    Okay. Thank you very much for your  
3 time.

4                   I'm done, your Honor.

5           A    Thank you, Mr. Boyd.

6           ALJ HYMES: Thank you.

7                   Any redirect? Can you not hear me?

8           MR. BOYD: I couldn't hear her.

9           THE REPORTER: This is the court  
10 reporter. I can hear you, Judge, and  
11 Mr. Boyd. Ms. Merlo is not coming in at all.  
12 Perhaps she is on mute?

13           ALJ HYMES: Okay. Let's go off the  
14 record while we address this.

15                   (Off the record.)

16           ALJ HYMES: Let's go back on the  
17 record. We hear you now, yes.

18           MS. MERLO: Can we just have a moment  
19 to speak with Dr. Peterman and then we'll be  
20 right back with you?

21           ALJ HYMES: Yes. Let's go off the  
22 record.

23                   (Off the record.)

24           ALJ HYMES: Let's go back on the  
25 record.

26                   Ms. Merlo please repeat that last  
27 statement.

28           MS. MERLO: This is Ashley Merlo. We



1 have no redirect for Dr. Peterman.

2 ALJ HYMES: Okay. Thank you.

3 At this time I want to take a lunch  
4 break. It's been a long morning. And thank  
5 you to the court reporter. Let's go off the  
6 record.

7 (Off the record.)

8 ALJ HYMES: Actually, let's go back on  
9 the record. We'll take a lunch break until  
10 2 o'clock and we'll figure out how to make up  
11 for the time; so 2:00 p.m. Thank you, all.  
12 We'll be off the record.

13 (Off the record.)

14 (Whereupon, at the hour of 1:03  
15 p.m., a recess was taken until 2:00  
p.m.) ]

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AFTERNOON SESSION - 2:00 P.M.

\* \* \* \* \*

ALJ HYMES: Let's go ahead and let's be on the record.

While we were off the record, I reviewed two requests this morning to change the schedule and I had a question. So the request was -- and this question will be for Jeanne Armstrong from SEIA, Vote Solar. She had requested to switch Will Giese to October(sic) 9th or a time certain on the current day, the 5th, and I just wanted to confirm that.

MS. ARMSTRONG: Yes. Either of those two options is fine. The preferable one is the 9th, but if he has to go on the 5th, so long as he has the time certain earlier in the day, that's fine.

ALJ HYMES: Okay. I will let you know. I will confirm with you tomorrow.

MS. ARMSTRONG: Thank you.

ALJ HYMES: And then the other request was from Foundation Wind Power to move ten minutes from Chou and ten minutes from Gutierrez to 20 minutes to Gutierrez/Chou. I can accommodate that. They're all three on the same day so that's not a problem.

UNIDENTIFIED SPEAKER: Thank you, your

1 Honor.

2 ALJ HYMES: So, Ms. Peterman, I just  
3 want to remind you you are still under oath.

4 Counsel for PCF, you may proceed.

5 MR. STANTON: Thank you, your Honor.

6 CROSS-EXAMINATION

7 BY MR. STANTON:

8 Q Dr. Peterman, can you hear me?

9 A I can.

10 Q Good. Good afternoon. My name is  
11 Aaron Stanton and I am counsel for Protect  
12 Our Communities Foundation in this  
13 proceeding. Your current employer is PG&E;  
14 is that correct?

15 A That is correct.

16 Q And what is your job title at PG&E?

17 A I'm Executive Vice President of  
18 Corporate Affairs.

19 Q And when did you accept the  
20 position at PG&E as Executive Vice President  
21 of Corporate Affairs?

22 A I accepted it in May and I began on  
23 June 1st.

24 Q Thank you.

25 A 2021.

26 Q Oh, thank you. In addition to this  
27 proceeding, what other CPUC, California  
28 Public Utilities Commission, proceedings have

1     you worked on as the executive vice president  
2     for PG&E?

3             A     As a part of my role within my  
4     organization, I have all of regulatory  
5     affairs, so the folks within my organization  
6     work on all PUC proceedings. In terms of my  
7     own specific engagement, this is the only one  
8     for which I'm providing testimony.

9             Q     Okay. And how much of your time,  
10    since you joined PG&E, has been focused on  
11    NEM-related issues?

12            A     Not much honestly. I did work on  
13    this matter when I was at Southern California  
14    Edison where I spent some more time. But as  
15    it relates to my current role, preparation of  
16    my testimony, preparing to speak before you  
17    all today, has been the primary amount of my  
18    involvement.

19            Q     And just following up. How much of  
20    your time did you spend on NEM-related issues  
21    at SCE?

22            A     Again, not a significant percentage  
23    of time, but I was involved in developing the  
24    Joint Utilities' position in our work with  
25    other stakeholders leading up to the  
26    proceeding, but in terms of a percentage of  
27    time, very small relative to all my duties.

28            Q     Thank you. And was -- your

1 position at SCE, was that your position  
2 immediately prior to your current position at  
3 PG&E?

4 A Yes, it was.

5 Q When did you begin working at SCE?

6 A October 2019.

7 Q How long before that did you accept  
8 the position at SCE?

9 A I think it was late August,  
10 beginning of September 2019.

11 Q And what was your position title at  
12 SCE?

13 A I was Senior Vice President of  
14 Strategy and Regulatory Affairs.

15 Q So your current responsibilities  
16 include -- correct me if I'm wrong -- in  
17 addition to working on CPUC proceedings,  
18 working on federal and local governmental  
19 relations, public policy, and charitable  
20 giving; is that correct?

21 A That is correct.

22 Q So in your current role at PG&E,  
23 approximately what percentage of your time do  
24 you spend on CPUC regulatory proceedings  
25 versus your other responsibilities?

26 A Again, there's another officer  
27 who's lead over regulatory affairs and so  
28 more of my time is spent looking

1 enterprise-wide more so than specific  
2 engagement at the PUC. In terms of share of  
3 my time in terms of thinking about  
4 PUC-related matters, maybe I would say  
5 20 percent, 25 percent.

6 Q Thank you. Switching topics  
7 slightly. You sponsored Chapter 1 of the  
8 Joint IOU opening testimony in this  
9 proceeding; is that correct?

10 A That's correct.

11 Q And did you perform any of the  
12 calculations that are contained in the  
13 Joint IOU opening testimony?

14 A No. I was not the primary subject  
15 matter expert to perform the calculations.

16 Q Was any portion of Chapter 1 of the  
17 opening testimony that you sponsored drafted  
18 by another person?

19 A It was a joint effort so it's a  
20 joint filing from the utilities and so we had  
21 input, you know, I had input with the chapter  
22 I sponsored from staff at all the utilities  
23 as well as support from our consultant,  
24 Dr. Tierney.

25 Q And approximately what percentage  
26 of Chapter 1, if you were able to guess,  
27 would you say that you drafted personally?

28 A I would say I reviewed it all,

1     commented, had total editing rights over it,  
2     as well as supporting developing the concept.  
3     In terms of the initial pen to paper? Zero  
4     percent in terms of the initial pen to paper,  
5     but definitely a heavy hand in putting it  
6     together on behalf of us.

7             Q     And so did you personally create  
8     any of the figures in Chapter 1?

9             A     I did not.

10            Q     Chapter 1 references a cost shift  
11     multiple times. Did you perform the  
12     calculations to determine the size of the  
13     cost shift asserted by the Joint IOUs?

14            A     I did not.

15            Q     Did you personally develop the  
16     formula used to estimate the size of the cost  
17     shift asserted by the Joint IOUs?

18                     (Background noise Interruption.)

19            THE WITNESS: I did not.

20            MR. STANTON: I'm sorry, was there a --  
21     I thought I heard some additional talking.

22            Q     Thank you. Subsection E of  
23     Chapter 1, I'll direct your attention to  
24     page 14 of the opening testimony, line 8. If  
25     you'd let me know when you are ready.

26            A     I'm on that page.

27            Q     Okay. So line 8 of subsection E,  
28     this is the first bullet point that starts,

1 "The program is not cost effective."

2 Do you agree that this first bullet  
3 point is discussing the Joint IOUs'  
4 application of the total resource cost test  
5 and the ratepayer impact measure test?

6 A To the NEM 2.0 tariff? Yes, I'd  
7 agree with that.

8 Q Did you personally perform the cost  
9 effectiveness tests discussed in the first  
10 bullet point in subsection E? ]

11 A If I may, just looking at the  
12 footnote here, this was on my mind as well,  
13 it actually references back to the NEM 2.0  
14 lookback study as a source for this analysis.  
15 I know the utilities have done our own  
16 analysis, but that particular bullet refers  
17 to the NEM 2.0.

18 Q Okay. Thank you. So the  
19 conclusions in that bullet point are gone  
20 from the NEM 2.0 lookback study?

21 A Yes.

22 Q Thank you. The second complete  
23 bullet point paragraph on page 15 of your  
24 opening testimony is the paragraph that says  
25 lower income customers are proportionately  
26 harmed. This paragraph asserts, quote, "The  
27 cost shift is particularly unjust and  
28 unreasonable because it is inequitable,"



1 closed quote. Later on in at paragraph that  
2 NEM, quote, "Is an income transfer from our  
3 poorer customers to wealthier ones," closed  
4 quote.

5 Are you saying there that you are  
6 opposed to transfers of money from less  
7 wealthy individuals to wealthy individuals?

8 A Not necessarily. I think it is  
9 just stating how the analysis ends up working  
10 out in the end.

11 Q Would you say, or would you agree,  
12 rather, that ratemaking generally involves  
13 transfers of wealth from one customer class  
14 to another?

15 A Yes. I would agree that it often  
16 does.

17 Q And, generally speaking, would you  
18 support transfers of wealth among groups of  
19 residential customers if it advanced  
20 important state policy interests?

21 A I would. We are proposing some  
22 transfer of wealth as it relates to  
23 increasing the amount of adoption of solar  
24 low-income customers. That is a part of the  
25 Joint IOU proposal.

26 Q So as a commissioner on the PUC,  
27 during your time as a commissioner, did you  
28 ever vote to approve rates that would shift

1 payments responsibility from the less wealthy  
2 to wealthier customers for ratepayers that  
3 you can recall?

4 A I'm sure that was a result of some  
5 of the things I voted for.

6 Q And as a commissioner on the PUC,  
7 did you ever vote to approve rates that would  
8 shift costs from commercial customers through  
9 residential customers?

10 A I imagine that happened sometimes  
11 as well.

12 Q I would ask you now to turn to  
13 page 18 line 21. This is Subsection F. I  
14 will go there myself as well. This is the  
15 bottom of the page. Are you ready?

16 A I think so.

17 Q Thank you.

18 Okay. So these -- the lines I'm  
19 interested in states the IOUs' proposal,  
20 quote, "is based on our cost to serve. This  
21 is basic tenet of utility ratemaking, and it  
22 is the foundation of the appropriate NEM  
23 successor tariff," closed quote. Is that an  
24 accurate reading of those lines?

25 A Those lines sound familiar. I'm  
26 just trying to find where exactly -- oh, on  
27 the -- the last bullet bolded. Is that where  
28 you are reading?

1 Q Yes; that is correct.

2 A Yes.

3 Q Later on in this paragraph, I  
4 believe it is the last few words on the page,  
5 I'm going to read it. It says, designing  
6 reform tariff around having all customers pay  
7 their fair share of what it costs to serve  
8 them, and better aligns everyone's interests  
9 and needs. Is that accurate as well, the  
10 reading?

11 A It is.

12 Q Do you agree that the utilities'  
13 revenue requirement is the basis upon which  
14 customers' rates are established?

15 A Yes.

16 Q And do you agree that the cost of  
17 service of those customers is generally the  
18 metric used for establishing customer rates?

19 A It is a guiding principle. As you  
20 just talked about, it is oftentimes an  
21 aspiration. There is reasons why sometimes  
22 you don't do that.

23 Q And is the avoided cost calculator  
24 ever used to determine a utility's revenue  
25 requirement?

26 A Not explicitly.

27 Q And are these Joint IOU  
28 calculations of the purported NEM cost shift

1 based on the cost of service?

2 A You know, I'm not -- I don't have  
3 top of mind exact details of the cost shift  
4 calculations, so I can't speak to that. But  
5 it is a value principle of ours to look at  
6 the cost of service.

7 Q And is there a witness that you can  
8 name in particular that would be better  
9 suited to address that question?

10 A Yes. I mean I think you can  
11 address it to probably Rob Thomas, who is our  
12 witness on our IOU proposal.

13 Q Thank you.

14 Can you think of a time when the  
15 avoided cost calculator was used to set  
16 rates?

17 A I'm trying to think about that. I  
18 hope its used in this case. That is what we  
19 are recommending. But I can't think of a  
20 specific time.

21 I will say one of the things that I  
22 had appreciated is the evolution of the  
23 avoided cost calculator and how that has  
24 really been formed by the work in the DRP and  
25 IDR and IRP, which is why I'm comfortable  
26 with using it in this case.

27 Q One second. I'm just looking at  
28 some of my notes here.

1                   The next question will relate to  
2 page 19 line 3 and 4. The next section right  
3 after the one that you were just talking  
4 about.

5           A     I'm there.

6           Q     Great. So those lines state that  
7 the IOU proposal, quote, "pay customers for  
8 the power they supply to the grid at the same  
9 rates we pay to other suppliers. There I'm  
10 assuming "we" is the Joint IOUs; is that  
11 correct?

12          A     That is correct.

13          Q     So is the Joint IOUs, for each  
14 individual IOUs, pay each of the suppliers  
15 the same rates for energy? Among the  
16 suppliers, that is, not among the utilities.

17          A     No, we do not.

18          Q     Do the Joint IOUs pay energy  
19 suppliers different amounts based on the type  
20 of generations?

21          A     I think they can.

22          Q     And do the Joint IOUs pay energy  
23 suppliers different amounts based on the time  
24 of day that the energy is being supplied?

25          A     There are different elements to a  
26 contract that can affect that, and as the  
27 market rate does change, depending on the  
28 hour as well.

1 Q So, yes; is that --

2 A Yes.

3 Q -- correct? I'm sorry. I think I  
4 talked over you.

5 A No, no. I appreciate you getting  
6 to the point. I'll just say "yes."

7 Q Thank you.

8 And do the IOUs pay suppliers  
9 different amounts based on the location of  
10 the energy that is being delivered?

11 A Sometimes.

12 Q So yes?

13 A Yes.

14 Q Thank you.

15 The next question is going to  
16 relate to page 21 lines 1 to 3. So page 21  
17 lines 1 to 3 is your opening testimony,  
18 asserts that the Joint IOUs' proposal will  
19 allow customer-sited renewable generation to  
20 continue, I'm quoting these next three words,  
21 "to grow sustainability," closed quote; is  
22 that correct?

23 A Yes, it is.

24 Q Then the last sentence of Footnote  
25 43, which is a footnote to that bullet point,  
26 and also a quote from the E3 successor RF  
27 options report. That sentence states, quote,  
28 "The choice of a rate framework that ensures

1 best practice must treat customer generators  
2 comfortably than nonparticipating, while at  
3 the same time maintaining a viable value  
4 proposition to customers investing in on-site  
5 renewable generation, as measured by  
6 providing a reasonable payback period."

7 Do you agree with that statement?

8 It is a long sentence, so I'll give you a  
9 second.

10 A Yes, I agree with that sentence.

11 Q Do you agree that sustainable  
12 growth of distributed solar requires a  
13 reasonable payback period?

14 A I think it is a good indicator that  
15 it is sustainable, for sure. Yes, I do agree  
16 with that.

17 Q So I'm going to ask you about a  
18 different page of the Joint IOU testimony  
19 that is not in your section. It is Table  
20 IV-14 on the page 105 of the Joint IOUs'  
21 testimony.

22 A That is page 105, you said?

23 Q Page 105, yes. I will go there  
24 myself. So that is on pdf page 123, if that  
25 helps.

26 A Yes. Thank you very much. Give me  
27 a -- all right. I'm with you.

28 Q Okay. Great.

1                   So this paragraph or, sorry, this  
2 Table IV-14 contains the illustrated  
3 estimated payback periods of participating  
4 PGSC customers; is that accurate?

5                   A     That is accurate.

6                   Q     So the table estimates that the  
7 payback periods, or stand-alone solar under  
8 the Joint IOUs' proposal, would range from 15  
9 to 19 years, depending on the utility; is  
10 that correct?

11                  A     That is correct.

12                  Q     Would you consider 19 years to be a  
13 reasonable payback period?

14                  A     I would.

15                  Q     In your current role at PG&E, your  
16 responsibilities include developing and  
17 implementing strategies for charitable  
18 giving; is that correct?

19                  A     Yes.

20                  Q     Are you familiar with the  
21 organization Affordable Clean Energy for All?

22                  A     I am.

23                  Q     And does PG&E donate to Affordable  
24 Clean Energy For All?

25                  A     Yes, it did.

26                  Q     And did PG&E donate to the  
27 Affordable Clean Energy for All Fix the Cost  
28 Shift campaign?



1           A     Yes.

2           Q     I would like to ask you to take a  
3     look at the cross-examination exhibit served  
4     this morning.  If you could pull that up.  
5     That is, let's see, it is titled -- where is  
6     the title?  Hang on one second.  There we  
7     are.  Affordable Clean Energy for All  
8     Coalition list.

9           A     Which number is that, 67?

10          Q     That is -- it is either 67 or 68.  
11     I can't recall at the top of my head which  
12     one it is first.  It is Affordable Clean  
13     Energy For All Coalition is the title.

14          A     Okay.  I have it.

15          Q     Thank you.  I will get to that in  
16     one second.

17                     But I want to ask you another  
18     question about PG&E's donation to the  
19     Affordable Clean Energy For All Fix the Cost  
20     Shift campaign.  Do you know how much PG&E  
21     donated to this campaign?

22           MR. MERLO:  Your Honor, this is Ashley  
23     Merlo.  This is beyond the scope.

24           MR. STANTON:  May I respond to the  
25     objection, your Honor?

26           ALJ HYMES:  You may respond.

27           MR. STANTON:  This line of questioning  
28     is intended to -- as it relates to the equity

1 argument that is being advanced by the Joint  
2 IOUs, and also whether that argument can  
3 weather its support in terms of the  
4 coalition, it being manufactured by the Joint  
5 IOUs.

6 ALJ HYMES: I'll allow it.

7 MR. STANTON: Thank you.

8 Q I believe that my last question  
9 was: Are you aware of how much money PG&E  
10 donated to the Affordable Clean Energy for  
11 All Fix the Cost Shift campaign?

12 A I am not. And I should also share  
13 that, as you know, I recently started at  
14 PG&E. So I wasn't at the company when they  
15 initially contributed. And it also wasn't  
16 instilled in my role at Edison, but I know  
17 that information is publicly available.

18 Q Okay. Thank you. Just to confirm,  
19 that information is beyond the scope of your  
20 role at SCE?

21 A It was not in my scope of role at  
22 SCE. I did not have that part of the  
23 organization in my leadership role.

24 And then at PG&E, I do have  
25 charitable giving as part of my organization,  
26 but the formula coalition was before my time  
27 of joining PG&E.

28 Q Understood.

1                   Are you able to say where the  
2 information is publicly available?

3           A     I can. Give me -- give me a  
4 second.

5           ALJ HYMES: Let's go off the record.

6                   (Off the record.)

7           ALJ HYMES: Back on the record.

8           MR. STANTON: Thank you, your Honor.

9           THE WITNESS: You can find the  
10 information on the Secretary of State website  
11 where there is reporting of lobbying  
12 expenditures.

13 BY MR. STANTON: Thank you.

14           Q     Are you aware of whether PG&E's  
15 donations to the Affordable Clean Energy For  
16 All Fix the Cost Shift campaign used  
17 ratepayer funds?

18           A     Yes, I'm aware. It was all  
19 shareholder funding and that is the same for  
20 all the Joint Utilities.

21           Q     Thank you.

22                   I think now I would like you to  
23 take a look at the Affordable Clean Energy  
24 For All Coalition list.

25           A     Hold on for one second so I get  
26 that piece of paper back. All right. I have  
27 it now.

28           Q     All right. Okay. Does PG&E donate

1 to the members of the Affordable Clean Energy  
2 For All campaign, or organization?

3 A Looking at the list, I think it is  
4 possible that some charitable donations have  
5 gone to these organizations at some point in  
6 time. I don't know what is currently.

7 Q Looking at the list, can you take a  
8 guess about what approximate percentages of  
9 the members of this Affordable Clean Energy  
10 For All received contributions from PG&E?

11 MS. MERLO: Objection. This is Ashley  
12 Merlo. I object to asking the witness to  
13 guess about something. It is not relevant.  
14 BY

15 MR. STANTON: I will rephrase the  
16 question.

17 Q Are you aware of what percentage of  
18 the members of the Affordable Clean Energy  
19 For All organization received donations from  
20 PG&E?

21 A I am not.

22 Q Can you make a best estimate based  
23 on your knowledge?

24 A I can't.

25 Q So not including the Joint IOUs  
26 themselves, can you name any Affordable Clean  
27 Energy For All coalition members that are not  
28 receiving donations from the utilities?

1           A    I can't. It really gets to my  
2 familiarity with the organization. And  
3 the -- in charitable giving. As I said, I'm  
4 new in the role, so this is not something I'm  
5 aware of at this time.

6           Q    Is there anybody at PG&E who you  
7 think would be able to answer these  
8 questions?

9           A    I don't believe we have any  
10 witnesses who would be in a position to  
11 answer these questions, but I'm just not  
12 sure.

13          Q    Do you know if you would be able to  
14 answer with additional time?

15          A    I do not know.

16          Q    All right. Just a few more  
17 questions.

18                On February 10th, 2021, earlier  
19 this year, February 10th, did you send a  
20 letter on behalf of the Joint Utilities to  
21 the Public Utilities Commission commissioners  
22 opposing parts of the proposed decision that  
23 would be considered at a Commission meeting  
24 the following day?

25          A    I did send a letter on behalf of  
26 the Joint Utilities raising some questions  
27 about process as it relates to what was a  
28 pending decision.

1           Q    Did the Commission issue any sort  
2 of warning or other adverse action in  
3 relation to that letter?

4           A    They did not. The letter was  
5 served on the service list at the same time  
6 it was provided to the Commission.

7           Q    Okay. I would like to take -- I'm  
8 sorry. I realized I have another.

9                    So speaking of that letter, you  
10 mentioned that it included some objections to  
11 process. Did it include any substantive  
12 objections as well?

13           A    I don't have the letter in front of  
14 me to recall.

15           Q    Okay.

16           A    It may have. I just don't have the  
17 letter in front of me.

18           Q    I would just like to consult my  
19 notes to see if I have any questions that  
20 I've dropped. Thank you for your patience.

21                    Do you recall if the letter on  
22 February 10th objected to the use of the  
23 total resource cost?

24           A    I recall it was mentioned, but I  
25 don't remember the explicit objection. But  
26 it was a letter that was getting at just a  
27 question about the resource cost aspect being  
28 appropriate impact that could be used as part

1 of the principles, I believe. I just don't  
2 recall the specifics.

3 Q And are you aware of the  
4 Commission's quiet period rule laid out in  
5 Rule 8 of the Rules of Practice and  
6 Procedure?

7 A I am.

8 MR. STANTON: Thank you. I have no  
9 further questions.

10 ALJ HYMES: Any redirect?

11 MS. MERLO: Your Honor, if we could  
12 just have a moment to speak with the witness  
13 and be back on in just a minute to address  
14 any redirect?

15 ALJ HYMES: Okay. We will be off the  
16 record.

17 (Off the record.)

18 ALJ HYMES: Let's go back on the  
19 record.

20 EXAMINATION

21 BY ALJ HYMES:

22 Q Ms. Peterman, in your Exhibit  
23 IOU-01 on page 19, you wrote that  
24 compensating exports according to their  
25 actual value to the system is common among  
26 other jurisdictions and utilities. Can you  
27 provide some specific examples of those other  
28 jurisdictions or utilities that have similar

1 compensation levels?

2 A Yes. Judge, I will say that Sue  
3 Tierney, the next witness, has more of this  
4 in her section. But specifically Hawaii, for  
5 example, is an example of one those  
6 utilities. I believe there is some reform in  
7 South Carolina as well. She would be able to  
8 give you a more thorough accounting of that.

9 ALJ HYMES: Okay. Thank you. Then  
10 that is all. Thank you very your time.

11 THE WITNESS: Thank you.

12 ALJ HYMES: You are excused.

13 THE WITNESS: Thank you, Judge Hymes.  
14 Have a good afternoon.

15 ALJ HYMES: Thank you. All right.  
16 Then let's go off the record.

17 (Off the record.) ]

18 ALJ HYMES: We'll be on the record.

19 MS. MERLO: PG&E calls its next  
20 witness, Dr. Susan Tierney.

21 THE WITNESS: Hello?

22 MS. MERLO: Your Honor, will you be  
23 swearing in the witness?

24 ALJ HYMES: Ms. Tierney, you were  
25 already sworn in this morning. Remember you  
26 are under oath.

27 MS. MERLO: I apologize.

28 DIRECT EXAMINATION



1 BY MS. MERLO:

2 Q Good afternoon, Dr. Tierney, can  
3 you tell us what exhibits you are sponsoring  
4 in this proceeding.

5 A Yes. I am sponsoring Exhibit  
6 IOU-01, Chapters 2 and 7, and Exhibit IOU-02,  
7 Chapter 2, Sections A.1.B through A.2.B;  
8 Chapter 3, Section B; Chapter 4, Section  
9 A.4.C, Section C.1 in that same Chapter 4;  
10 and Chapter 6, Sections B.1.A through  
11 B.1.A -- excuse me. Let me start over in  
12 Chapter 6. It's Section B.1.A through G.

13 Q Were these materials prepared by  
14 you or under your supervision?

15 A Yes.

16 Q Do you have any changes or  
17 corrections or additions to make at this  
18 time?

19 A No.

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

23 A Yes.

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

27 A Yes.

28 Q Thank you.

1           Your Honor, Dr. Tierney is now  
2     available for cross-examination.

3           ALJ HYMES: Thank you.

4           First up, we have attorney Tim  
5     Lindl. Please proceed.

6           MR. LINDL: Thank you, your Honor.

7                   CROSS-EXAMINATION

8     BY MR. LINDL:

9           Q     Good afternoon, Dr. Tierney. My  
10    name is Tim Lindl, L-i-n-d-l. I'm the  
11    attorney for the California Solar and Storage  
12    Association, or CALSSA, in this proceeding.

13           First, I kind of want to offer you  
14    congratulations on what is a very impressive  
15    career. I was reviewing your qualifications  
16    and that is an impressive resume that you  
17    have. Your qualifications state that you  
18    have consulted to businesses since leaving  
19    government in the mid-1990s; is that right?

20           A     Yes.

21           Q     Okay. Did you consult with any  
22    rooftop solar companies during that time?

23           A     I consulted to a trade association  
24    that included rooftop solar companies.

25           Q     Okay. Thanks. Do you have any  
26    current clients that are rooftop solar  
27    companies?

28           A     No.

1           Q    Have you ever reviewed a rooftop  
2 solar company's financial statements such as  
3 an income statement, a balance sheet, or a  
4 statement of cash flows?

5           A    Ever?  Yes.

6           Q    In the past year?

7           A    No.

8           Q    Okay.  Thanks.  All right.  Can we  
9 start with your rebuttal at page 43, please.

10          A    Yes.

11          Q    All right.

12          A    Okay.  I am there.

13          Q    Okay.  Thank you.  And on page 43,  
14 you discuss a recent settlement in South  
15 Carolina including different elements of that  
16 settlement; is that correct?

17          A    Yes.

18          Q    Okay.  There on line 6, you state  
19 that the customers under the utility that is  
20 part of that settlement, which is Duke  
21 Carolinas, those customers would still have  
22 access to monthly netting in South Carolina  
23 under that settlement; is that correct?

24          A    Yes.

25          Q    Okay.  And do you agree that there  
26 would not be monthly netting if the Joint  
27 IOUs' tariff proposal in this proceeding was  
28 adopted?

1           A    Yes.

2           Q    Okay.  Can you turn to page 66 now,  
3 please.

4           A    I am there.

5           Q    Thank you.  And on this page you  
6 discussed other examples where you believe  
7 states have adopted solar fees like the grid  
8 benefits charge; is that correct?

9           A    Yes.

10          Q    Why did you use the term "examples"  
11 on line 8 there?

12          A    I did not do an exhaustive search  
13 and, therefore, I was using these as  
14 examples.

15          Q    Okay.  Thank you.  Is it safe to  
16 say that these were the examples of these  
17 fees that you could find during your  
18 exhaustive search?

19          A    No.  These were the examples that  
20 were, first of all, consistent with the ones  
21 that the Joint Utilities had asked the North  
22 Carolina Clean Energy Technology -- there's  
23 another word after that, but I don't remember  
24 what the rest of the acronym is.  They  
25 performed a study, and some of these  
26 utilities were part of that study.  
27 Additionally, I did a search recently to see  
28 if I could discover others, but it was not

1 exhaustive.

2 Q Okay. And when you did that search  
3 to try to find others, were there others that  
4 you found beyond the North Carolina survey,  
5 North Carolina state survey?

6 A Well, I stopped with these so I --  
7 the answer is no.

8 Q Okay.

9 A But I didn't see any other ones  
10 because I did not keep looking.

11 Q And did you conduct that search  
12 yourself or did you use an outside service or  
13 something like that to help with the search?

14 A I did that myself.

15 Q Okay. Thank you. So on line 12 on  
16 page 66, you discuss the grid access fee in  
17 South Carolina; correct?

18 A I must have different pagination --  
19 oh, no, line 12, grid access fee, yes.

20 Q Okay. Great. Thank you. And  
21 there you state that the grid access fee in  
22 South Carolina would apply to systems greater  
23 than 15 kilowatts DC; right?

24 A Yes.

25 Q And do you agree that the grid  
26 access fee in South Carolina would only apply  
27 to the capacity beyond 15 kilowatts?

28 A Yes.

1           Q    So if you had a 17-kilowatt system,  
2   the way you would calculate that fee is to  
3   multiply two kilowatts times the amount of  
4   the fee?

5           A    That would be my understanding.

6           Q    Okay. Thank you. Do you agree  
7   that 15 kilowatts DC is a pretty large system  
8   for a residential customer?

9           A    Yes, I do.

10          Q    Okay. And do you agree that most  
11   residential customers in South Carolina that  
12   install solar would not have to pay the fee?

13          A    I have not looked at that question.

14          Q    Okay. Do you agree that typically  
15   a 6- to 7-kilowatt system is about average  
16   for a residential customer?

17          A    I would have said 5 to 7.

18          Q    Okay.

19          A    Yeah.

20          Q    So this fee would apply to systems  
21   that are twice the average sized solar  
22   system?

23          A    Yes. I have somebody down the road  
24   who's probably got one. Yes.

25          Q    Fair enough. Okay. Thank you.  
26   And in this case, the Joint IOUs are  
27   proposing a solar specific fee that would  
28   apply to all system sizes; correct?

1           A     Yes.

2           Q     Okay.  Thanks.  Okay.  Let's move  
3 north.  If you go to lines 13 to 15 in your  
4 rebuttal, please, on that same page.

5           A     I'm there.

6           Q     All right.  And here you're talking  
7 about the New York capacity-based charge; is  
8 that correct?

9           A     I am, the customer benefit  
10 contribution charge.

11          Q     Right.  Thank you.  And that charge  
12 is calculated to recover funding for public  
13 benefit programs; correct?

14          A     Yes.

15          Q     Did you have a chance to review  
16 what's marked as CALSSA Exhibit 3, CSA-03,  
17 prior to testifying today?

18          A     I did.

19          Q     Okay.  And at the bottom of page 26  
20 going on to the top of page 27 in the  
21 highlighted language there, do you agree that  
22 that language discusses how the charge in New  
23 York is calculated to cover -- recover public  
24 benefit program costs such as low-income  
25 programs and energy-efficiency programs?

26          A     Yes, on a dollar-per-kW basis.

27          Q     Okay.  Thank you.

28          A     Yes.

1           Q    And do you agree that that charge  
2   is not intended to recover transmission or  
3   distribution or generation costs; correct?

4           A    I would not say that. And the  
5   reason I quibble is that the New York-Sun  
6   program includes generation.

7           Q    Okay. But beyond the New  
8   York-Sun --

9                   (Crosstalk.)

10           THE WITNESS: And the Green Bank does  
11   as well.

12   BY MR. LINDL:

13           Q    I'm sorry, I talked over you there.

14           A    I talked over you. Sorry.

15           Q    So the New York-Sun and the Green  
16   Bank programs. Besides those programs, the  
17   charge does not recover distribution,  
18   transmission, or generation costs. Is that  
19   safe to say?

20           A    I still would -- there are elements  
21   of the funding for low-income customers that  
22   would be across those customers' bundled  
23   bill.

24           Q    Okay. So it would be a subsidy for  
25   the generation costs that those customers  
26   would pay?

27           A    I don't know the nature and rate  
28   design of the low-income support program in



1 New York. It could cover any part of the  
2 bundled bill.

3 Q Okay. That sounds good. Thank  
4 you. All right. And then do you agree that  
5 customers on the Phase 1 Net Metering program  
6 in New York would still have access to  
7 monthly netting similar to the customers in  
8 South Carolina?

9 A To the best of my recollection,  
10 there's a chart in my testimony that I could  
11 refer to to answer that question, but that's  
12 consistent with my recollection.

13 Q Let's go to that chart. I think  
14 it's in Appendix B on page B-29.

15 A That's not the chart I'm talking  
16 about.

17 Q Oh, okay.

18 A I'm talking about Table 2-3 in the  
19 opening testimony.

20 Q Okay. Can you go to --

21 (Crosstalk.)

22 THE WITNESS: Yes. Would you tell me  
23 again.

24 BY MR. LINDL:

25 Q Sure. It's Appendix B of IOU-01,  
26 page B-29 -- or -- yes, page B-29.

27 A My --

28 Q It should --

1           A    Appendix B goes to page 21.  Wait a  
2   sec, please.  I'm sorry.  Too many documents  
3   here.

4           Q    No problem.

5           A    All right.

6           Q    Are you there?

7           A    Yes.

8           Q    So Table 14.  I believe it's on  
9   page B-29.

10          A    Yes.

11          Q    And the third row down says  
12   "Netting Interval."

13          A    Yes.  And it says --  
14               (Crosstalk.)

15   BY MR. LINDL:

16          Q    Okay.  Thank you very much.  
17   Lastly, can we go to page 67 of your  
18   rebuttal.

19          A    Yes, page 67.

20          Q    Yes.  At the top of page 67.  On  
21   lines 1 through 3, you discuss the People's  
22   Energy Cooperative, which is a small electric  
23   cooperative serving about 19,000 customers in  
24   rural Minnesota; is that right?

25          A    Yes.

26          Q    Okay.  Thank you.  And on line 3,  
27   you state that the grid access fee there  
28   applies to facilities above 3.5 kilowatts; is

1       that correct?

2               A     Yes.

3               Q     And then you state that the maximum  
4       fee is \$37 per month?

5               A     That's right.

6               Q     All right. Did you have a chance  
7       to review the exhibits that have been  
8       premarked as CSA-04?

9               A     Yes, I did.

10              Q     And in the highlighted language in  
11       the middle of that page, on page 27 there, do  
12       you agree that the maximum monthly fee not to  
13       exceed for residential customers is \$22?

14              A     I do see that. And I note that  
15       this must be an updated version of the rate  
16       sheet compared to the one that I relied upon,  
17       which is cited in the footnote.

18              Q     Okay. So the maximum fee is no  
19       longer \$37. It's \$22 is what you would  
20       assume happened there?

21              A     Yes.

22              Q     Okay. Thank you. Do you agree  
23       that the People's Energy Cooperative in  
24       Minnesota is not allowed to charge both the  
25       grid access fee and the minimum bill?

26              A     I don't remember.

27              Q     So you don't recall if in a 2017  
28       decision the Minnesota PUC would disallow a

1 charging of both of those fees?

2 A I am not aware that the Minnesota  
3 Public Utilities Commission has jurisdiction  
4 over this co-op.

5 Q Okay. Thank you. Lastly, in this  
6 section of your testimony on page 67,  
7 Footnote 190, there you're citing to that  
8 Minnesota statute, 261B.164(sic).

9 A Yes.

10 Q Do you agree that that provision  
11 only applies to municipal utilities and  
12 co-ops and it does not apply to  
13 Investor-Owned Utilities?

14 A That is my understanding based on  
15 that reference that I pulled off of that  
16 citation.

17 Q Okay. Thank you very much. Can we  
18 please next go to your direct testimony.

19 A Yes, I have it in front of me.

20 Q Okay. Thank you. I just need one  
21 second, please. Thank you very much. I had  
22 a child knocking on my door.

23 A Does a child need you?

24 Q We're okay. So on page 41 of your  
25 direct looking at figure Roman numeral 2-13.

26 A Page 41 of my direct?

27 Q Yes.

28 A I was looking for a section number,

1 but it must be on a prior page. Sorry.

2 Q The section number would be on  
3 page 39. The heading of the section is  
4 "Residential storage has experienced cost  
5 declines and offers a powerful combination  
6 when paired with solar."

7 A I'm with you.

8 Q Okay. This is a pretty busy  
9 figure; right?

10 A Yes. I think I even used that  
11 term.

12 Q Yeah. I agree with you. So what  
13 this shows, though, is price decreases in  
14 lithium ion batteries from a variety of  
15 different studies, both historical, which are  
16 the shapes in the figure, and then projected,  
17 which are the dotted lines in the figure; is  
18 that correct?

19 A Yes. This is from a review of all  
20 of those studies that are listed over on the  
21 right of Figure 2-13.

22 Q Okay. Thank you. And these are  
23 battery cell costs; right? These are not  
24 market-ready energy storage products like  
25 Sunrun's Brightbox or Tesla's Powerwall?  
26 This is the cost of the battery cells  
27 themselves?

28 A That's my understanding, yes.

1           Q    Okay. Thank you. So taking a look  
2   at the horizontal blue line in that figure,  
3   do you agree the forecasts for -- excuse me.

4                   Let's take a look at the blue line  
5   in that figure. Do you agree that the range  
6   for when the cost of capacity from energy  
7   storage would reach \$75 per kilowatt hour is  
8   between the years 2009 and 2027?

9           A    Yes, based on those studies and  
10   that simple projection by the authors of this  
11   study.

12          Q    Right. And when the cost of  
13   capacity from an energy storage system would  
14   reach \$20 based on those projections is  
15   between 2015 and 2042, a 27-year range; is  
16   that right?

17          A    Yes.

18          Q    Okay. Thank you. Did you have a  
19   chance to review what's been premarked as  
20   CALSSA Exhibit 5, CSA-05?

21          A    I did.

22          Q    Okay. And this is an article from  
23   The Economist that's discussing this study;  
24   is that right?

25          A    Yes. Among other things, but yes.

26          Q    In the highlighted language on  
27   page 2, do you agree that the article states,  
28   "At the moment, the average cost of a lithium

1     ion battery pack is about \$140 per kilowatt  
2     hour"?

3             A     I do see that there.

4             Q     Okay. Now, if we return to  
5     Figure 2-13, when you look at the left side  
6     of the diagram there, do you agree that \$100  
7     is represented by the 10 squared numeral on  
8     the left side?

9             A     I do.

10            Q     Okay. And do you agree that \$200  
11     would be the next hash mark up from the \$100  
12     hash mark?

13            A     Yes. You --

14            Q     So a hundred and --

15            A     -- mean the one that is right word  
16     of the letter D in USD in the axis title?

17            Q     Yes.

18            A     Yes.

19            Q     Okay. So \$140 is somewhere close  
20     to the middle between those two hash marks?

21            A     Yes.

22            Q     And if you draw in your mind a  
23     horizontal line across from where \$140 would  
24     be, do you agree that most studies included  
25     in this article predicted battery cell costs  
26     would have been \$140 well before the year  
27     2021?

28            A     Yes.

1           Q    So considering that line, the blue  
2   line, and the red line, is it fair to say  
3   that there are a pretty wide range of  
4   estimates of when batteries will reach  
5   certain cost levels?

6           A    Yes. And that is indicated also in  
7   the article that you asked me to review that  
8   is CSA-05 exhibit.

9           Q    Okay. And at least some of these  
10  articles are wrong with regard to when  
11  storage would have reached certain levels;  
12  correct?

13          A    Well, every prediction is wrong  
14  until you come to see what happened. Some of  
15  these are older studies that were projecting  
16  things in a nearer term period of time such  
17  as a study from 2009, 2015, 2018, and so  
18  forth.

19          Q    Right. So but some of them are  
20  wrong; is that right?

21          A    They did not predict where we are  
22  actually today.

23          Q    Yeah. Okay. Thank you. All  
24  right. Can we go to the next page, please,  
25  Table 2-5.

26          A    Yes.

27          MS. MERLO: I'm sorry, which exhibit  
28  are we looking at right now?



1 MR. LINDL: IOU-01 still for direct.

2 MS. MERLO: Thank you.

3 MR. LINDL: Yeah. Table 2-5 on  
4 page 42.

5 MS. MERLO: Thank you.

6 BY MR. LINDL:

7 Q Okay. Here you discuss Lazard's  
8 Levelized Cost of Storage; is that correct?

9 A Yes.

10 Q All right. And in the right-hand  
11 column under the year 2020, there is provided  
12 a low range of prices and a high range of  
13 prices for energy coming from energy storage  
14 systems; is that correct?

15 A Yes.

16 Q Okay. And those two figures, the  
17 low range is \$406 and the high range is \$506;  
18 correct?

19 A Yes.

20 Q Per megawatt hour; correct?

21 A Yes.

22 Q Okay.

23 A For behind-the-meter residential  
24 storage.

25 Q Thank you. And do you agree that  
26 \$400 per megawatt hour is equivalent to 40  
27 cents per kilowatt hour?

28 A Yes, 40.6.

1           Q    Do you agree that \$506 per megawatt  
2   hour is equal to 50.6 cents per kilowatt  
3   hour?

4           A    Yes.

5           Q    So in 2020 battery storage cost  
6   customers between 40 and 50 cents per  
7   kilowatt hour according to this study; is  
8   that right?

9           A    Yes.

10          Q    Okay. Thank you. Is another way  
11   of saying that that it would cost a customer  
12   somewhere between 40 and 50 cents to shift  
13   load from one time-of-use period to a later  
14   time-of-use period?

15          A    Not necessarily.

16          Q    Well, if the cost of energy from a  
17   storage system is between 40 and 50 cents per  
18   kilowatt hour and the way that you would  
19   shift load from one TOU period to another TOU  
20   period is to absorb that load and then to  
21   have that load be produced at a different  
22   time, wouldn't the cost of shifting that load  
23   be between 40 and 50 cents?

24          A    Based on the assumptions here in  
25   this study, which are what would be the  
26   levelized cost to obtain this investment and  
27   then run it over its life at a certain set of  
28   injections and withdrawals, it would be

1 between 40 to 50 cents. That doesn't tell me  
2 that it's automatically the way that you're  
3 thinking about it.

4 Q Why is it not automatically the way  
5 that I'm thinking about it?

6 A Because the actual investment of  
7 having the storage provide optionality and  
8 other things that would not be monetized by  
9 the study for the consumer who's using it.

10 Q Okay. So there are other benefits  
11 stored than just the energy that would come  
12 from the storage?

13 A To the consumer, sure.

14 Q Thank you. Can we take a look,  
15 please, still in IOU-01, so this is the  
16 Utilities' direct testimony at page 113.

17 A I am there.

18 Q All right. Can you take a look at  
19 Table 4-16, please.

20 A I'm there.

21 Q Okay. Now, I know you did not  
22 sponsor this part of the IOUs' testimony, but  
23 do you agree that Table 16 shows PG&E's E-DER  
24 rate, the default rate that a nonCARE  
25 customer would end up on if they signed up  
26 for the IOUs' successor tariff?

27 A If approved by the Commission, yes.

28 Q Yes. Okay. Thank you. And do you

1 agree that the biggest differential there  
2 between the summer on-peak rate and the  
3 summer off-peak rate is about 18 cents per  
4 kilowatt hour --

5 A Yes.

6 Q -- 40 minus 22? Okay. Thank you.  
7 So just to be clear because we talked over  
8 each other for a second there.

9 A I agree.

10 Q Thank you. And can we go to  
11 page 116, please.

12 A Okay. Yes.

13 Q And this is Table 4-17. That  
14 should show the summer on-peak of 54 cents  
15 and the summer off-peak of 22 cents, which is  
16 about a difference of about 32 cents; is that  
17 correct?

18 A I do see that.

19 Q Okay. So at least in terms of  
20 speaking about energy, the cost of an energy  
21 storage system is between 40 and 50 cents in  
22 2020. And under this tariff, the benefit to  
23 the customer for just the energy portion  
24 would be between 18 and 32 cents; is that  
25 correct?

26 A Yes.

27 Q So would you agree that the market  
28 is getting closer to providing an economic

1 benefit for customers for load shifting, but  
2 that the cost of storage has not quite  
3 decreased to the point where the customer  
4 would see more value than cost when it comes  
5 to shifting load?

6 A You use the word "value," and I am  
7 aware that the analyses and surveys of what  
8 customers are looking for when they are  
9 obtaining storage is the ability to have  
10 back-up power. When the cost is --  
11 there's -- they would have power at any cost  
12 in some sense because they're not being able  
13 to get it from the grid.

14 Q Right. If I had used the term  
15 economic benefit simply from energy, would  
16 you agree that storage has a little ways to  
17 go with regard to that narrowly-defined  
18 aspect or component from an energy storage  
19 system?

20 A If we're talking about electric  
21 energy, yes, a cent per kWh, yes.

22 Q Thank you, Dr. Tierney. All right.  
23 Can we move on, please, to your direct  
24 testimony at page 48. This is IOU-01,  
25 page 48.

26 A Okay.

27 Q Thank you. So I have it as line 7  
28 to 8 in the corrected version of the IOUs'

1 testimony. It might be lines 3 to 4 if  
2 you're using the original. So I'm just going  
3 to read you the sentence and we'll try to  
4 find it together. So you state:

5 The cost trends in solar and solar  
6 paired with storage installations  
7 will tend to support households'  
8 continued adoption of new solar  
9 installations through small  
10 companies.

11 Is that right? ]

12 A I must be on an entirely wrong  
13 page, could you tell me the page again? I  
14 thought you said to go to rebuttal.

15 Q I'm sorry, no. If I did, I  
16 misspoke. I apologize. We should be at  
17 IOU-1 the direct exhibit, at page 48.

18 A I do apologize. Okay.

19 Q All right. And again, either at  
20 line 3 to 4 or lines 7 to 8, you state that  
21 cost trends in solar and solar paired with  
22 solar installation, will tend to support  
23 confused options of new solar installation  
24 through small companies; correct?

25 A I do say that on lines 3 to 4 of  
26 both of our documents.

27 Q Thank you.

28 What is your definition of a small

1 company when you say "small companies"? What  
2 do you mean by that?

3 A Twenty-five people, 50 people.

4 Q Okay. Thank you.

5 Now, in response to a Cal Serve  
6 data request response, this was served as  
7 impeachment exhibit this morning, so it is  
8 Data Request 11.05, you explain a little bit  
9 more about this statement and that it is  
10 meant to apply more to solar-only systems  
11 rather than solar plus storage systems; is  
12 that right?

13 A Yes.

14 Q So small companies should be able  
15 to install solar-only systems due to the cost  
16 trends under the IOUs' tariff?

17 A Yes.

18 Q Okay. Did you rely on any  
19 California-specific data or research to reach  
20 that conclusion?

21 A I think that the literature that I  
22 have reviewed includes California and other  
23 states.

24 Q Okay. So it is national literature  
25 that included California?

26 A Yes.

27 Q Okay. Thank you.

28 All right. Looking again at that

1 data request response, do you agree that  
2 smaller solar companies may have more  
3 difficulty in accessing supplies that  
4 introduce storage than larger solar  
5 companies?

6 A Yes.

7 Q Thank you.

8 And then you also state, I believe,  
9 right after that in that data request, that  
10 larger solar companies have been focused on  
11 developing relationships with providers of  
12 storage technologies; is that right?

13 A Yes.

14 Q Do you think that smaller companies  
15 have not been trying to establish those  
16 relationships or that smaller companies are  
17 at a disadvantage when trying to establish  
18 those relationships with energy storage  
19 manufacturers?

20 A I think there could be  
21 disadvantages associated with volume.

22 Q Yes. Okay. Thank you.

23 So at least in the near-term, do  
24 you agree that it would be more difficult for  
25 a smaller solar company to cope with a new  
26 tariff that is deemed at encouraging the  
27 inflation of energy storage systems as  
28 opposed to -- as opposed to just simply solar



1 systems?

2 A It is possible. And there is still  
3 a market for solar stand-alone.

4 Q Okay. Do you agree there might be  
5 some other challenges beyond just supply  
6 chain for small companies looking to install  
7 storage?

8 A There could be technical issues  
9 associated with installation.

10 Q Yeah, right. Okay. So I do agree  
11 that, for example, it takes longer to get an  
12 energy storage system permitted in California  
13 than just a simple solar system?

14 A In the past that has been the case.  
15 I don't know how it is going to go in the  
16 future, especially with Title 24.

17 MR. LINDL: Okay. Thank you. One last  
18 section here.

19 Am I okay on time, your Honor?

20 ALJ HYMES: Yes, you are.

21 MR. LINDL: Okay. Thank you.

22 ALJ HYMES: You have about  
23 five minutes.

24 MR. LINDL: Thank you, your Honor.  
25 That will be plenty.

26 Q Sorry to keep going back and forth  
27 between direct and rebuttal. I probably  
28 could have organized these questions a little

1 bit better. But can we go back to your  
2 rebuttal for just a moment, please --

3 (Crosstalk.)

4 A Rebuttal, which page?

5 Q Page 118, please.

6 A I'm with you.

7 Q Okay. Thank you.

8 On line 6 to 8 you are discussing a  
9 study on lands use and the resources  
10 California might rely on to reach its climate  
11 goals, its clean energy goals; is that right?

12 A Yes.

13 Q Okay. And on line 9 you discuss  
14 the study's conclusion that investing in, I'm  
15 going to use the term "clean firm power,"  
16 will reduce the footprint of the energy  
17 systems necessary to achieve California's  
18 climate goals; is that right?

19 A Yup.

20 Q Do you agree with the term "clean  
21 firm power" as used in that paper includes  
22 nuclear power, natural gas with carbon  
23 capture sequestration, and hydrogen power?

24 A Yes.

25 Q And in your opinion are those  
26 technologies currently viable paths to  
27 decarbonization in a state like California?

28 A They are not currently viable paths

1 yet in any state in the United States. These  
2 are not ready for prime time.

3 MR. LINDL: Thank you. Your Honor, I  
4 don't have any further questions. Thank you,  
5 Ms. Tierney.

6 ALJ HYMES: Thank you. Any redirect?

7 MS. MERLO: Your Honor, we may have  
8 some. May I consult with the witness off the  
9 record?

10 ALJ HYMES: Okay. Off the record,  
11 please.

12 (Off the record.)

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

15 Go ahead, please.

16 MS. MERLO: This is Ashley Merlo for  
17 PG&E. We have no redirect for Dr. Tierney.

18 ALJ HYMES: Thank you. Ms. Armstrong?

19 MS. ARMSTRONG: Yes.

20 CROSS-EXAMINATION

21 BY MS. ARMSTRONG:

22 Q Dr. Tierney, I'm Jean Armstrong  
23 here for the Solar Energy Industries  
24 Association and Vote Solar. And I'm going to  
25 do all your direct and then all your  
26 rebuttal, so you won't be checking back and  
27 forth.

28 If I could get you to turn to

1 page 31 of your opening testimony, in  
2 particular line 13. Here you state -- here  
3 you state some utilities in other states,  
4 including some with much lower rooftop solar  
5 penetration rates in the Joint Utilities  
6 (inaudible) stressed such cost shift by  
7 adopting successor tariffs. Then you go on  
8 to state, notably adopted in Arizona, Hawaii,  
9 Nevada, New York and South Carolina.

10 Then if you go on to page 34 at  
11 line 1, you state, in improving (inaudible)  
12 successor tariffs, state regulators in  
13 Arizona, Hawaii, Nevada, New York, and South  
14 Carolina have approved rate mechanisms such  
15 as those included in the Joint Utilities'  
16 proposal.

17 I take it from that last sentence  
18 that you are familiar with the components of  
19 the IOUs' proposed successor tariffs?

20 A Yes.

21 Q Okay. I'm just going to put  
22 through a few of those. My understanding  
23 that each customer will be on a rate schedule  
24 with a fixed charge ranging from  
25 approximately \$12 to \$24, depending on the  
26 IOU?

27 A I thought it was a little less, but  
28 there is a range of approximately that

1 length.

2 Q And each customer will receive an  
3 export credit rate based on the ACC, the time  
4 of export periods that match the TOU periods  
5 of the underlying tariff?

6 A There was a lot in that mouthful.  
7 Would you please just say that again?

8 Q Okay. I'll just break down.

9 Each customer will receive an  
10 export credit based on the ACC; is that  
11 correct?

12 A The most current ACC, avoided cost  
13 calculator, yeah.

14 Q Right. And that export credit rate  
15 would be updated annually?

16 A Yeah.

17 Q And each customer will pay a grid  
18 access charge ranging from approximately \$10  
19 to \$14 per kW?

20 A Yes.

21 Q Depending on the IOU? Okay.

22 And the grid access charge will  
23 change annually; is that correct?

24 A To the best of my recollection.

25 Q And there will be instantaneous  
26 netting under the IOUs' proposal?

27 A Yes.

28 Q Okay. So keeping all those

1     comments of the IOUs' proposal in mind, can  
2     you tell me which of the states you  
3     previously referenced, Hawaii, Nevada,  
4     Arizona, New York, or South Carolina, have  
5     all those elements in its successor tariffs?

6             A     None of them have all of those  
7     elements, and none of them have the situation  
8     facing California right now.

9             Q     Okay. So that is -- I just needed  
10    that clarification.

11            So going on to page 35 at lines 3  
12    and 4.

13            A     Yes.

14            Q     You state as shown in Figure 2-10,  
15    solar PV capacity has continued to increase  
16    in the states before NEM tariffs even with --  
17    I'm sorry -- longer payback periods.

18            And so looking at Figure 2-10, I  
19    want to ask you a few questions about this.  
20    First, this figure is based on cumulative  
21    capacity installed; correct?

22            A     Yes.

23            Q     Okay. And first, looking at Duke  
24    Energy, which is the orangeish line near the  
25    bottom. You have as sort of a milestone,  
26    which is the orange circle, the legislation  
27    that was passed in South Carolina in 2019;  
28    correct?

1           A    Yes.

2           Q    Did that legislation actually  
3 change Duke Energy's NEM program?

4           A    Not yet, no.

5           Q    Okay.  And isn't it true that the  
6 changes to Duke's Net Energy Metering Program  
7 are not slated to go into effect until  
8 January 2022?

9           A    That is my understanding, based on  
10 the approval.

11          Q    And this chart, this Figure 2-4  
12 that we are looking at, it ends in October of  
13 2020; correct?

14          A    Yes, it does.

15          Q    Okay.  So this chart really doesn't  
16 show us the impact of the NEM reform for Duke  
17 Energy; does it?

18          A    Not precisely.  The reason I answer  
19 that way is that the legislation created some  
20 signals to the market with regard to the  
21 ability to reconsider the structure and level  
22 of that successor tariff.

23          Q    But those changes have not yet gone  
24 into effect; correct?

25          A    That is correct.

26          Q    And in looking next at National  
27 Grid.  This is New York, and they are the  
28 light blue line.

1           A     Counsel, because I have a black and  
2     white print, I need to just open the file. I  
3     apologize.

4           Q     Okay. That is fine.

5           A     I know I was trying to be cost  
6     conscious here. I will be with you in just  
7     one minute, not a whole minute. There we go.  
8     Thank you.

9           Q     Okay. So we are talking about  
10    National Grid New York, and there is a light  
11    blue line in this figure. And you have  
12    marked here sort of as a first benchmark some  
13    time in 2017 the Phase 1 NEM VDER decision.  
14    Do you see that?

15          A     Yes.

16          Q     Isn't it correct that that decision  
17    determined that residential and small  
18    commercial customers should remain on NEM and  
19    not be transferred to the VDER tariff?

20          A     It gave them the option to go to  
21    the VDER tariff.

22          Q     But you did not require; correct?

23          A     Correct.

24          Q     And then the second milestone you  
25    have for National Grid New York is the New  
26    York mass market decision that occurred in  
27    July of 2020. Do you see that this?

28          A     I do.



1           Q    Do you know whether the changes  
2   made though the NEM program in that decision  
3   have gone into effect yet?

4           A    They have not quite gone into  
5   effect yet.  But there is signaling to the  
6   market, of course, with regard to the new  
7   dollar per kW charges that will be included.

8           Q    But it is correct that those  
9   changes will not go into effect until  
10  January 2022?

11          A    Correct.

12          Q    Okay.  And then looking at the next  
13  one is Nevada, which is the green line.  And  
14  here you have as a first sort of benchmark as  
15  the ND -- excuse me -- net billing tariff in  
16  2016.  Do you see that?

17          A    Yes.

18          Q    And based on this graph that you  
19  had, it seems like the market somewhat  
20  plateaued until 2017 when you have next  
21  benchmark NDNG net metering restored.  Would  
22  that be an accurate assessment?

23          A    To me it looks like it has gone up  
24  50 megawatts during that period.

25          Q    Okay.  So a slow growth period?

26          A    There is additions of rooftop solar  
27  occurring during that period.

28          Q    But you would agree with me that

1 after the net energy metering was restored in  
2 Nevada that the market grew significantly  
3 more?

4 A Yes.

5 Q Okay. And then next you have SMUD,  
6 which is the black line. Isn't it true that  
7 SMUD has not implemented a NEM reform tariff  
8 yet?

9 A That is true. There are some  
10 charges that are indicative of time-of-use  
11 rates, as well as a fixed charge. But they  
12 have not -- they proposed but did not yet  
13 adopt the -- a formal NEM successor tariff.

14 Q Okay. Finally we have Hawaii. And  
15 if you look at that, move on for HECO  
16 Utilities, I apologize, the black line, SMUD  
17 was the gray line. But for HECO Utilities,  
18 it seems that between the time that the  
19 reform tariff was passed in 2015 and present  
20 October 2020 when you did -- the last thing  
21 on this chart, there was approximately  
22 125 megawatts installed in Hawaii?

23 A Yes. And in Hawaii that is pretty  
24 big.

25 Q Do you know how much of that  
26 125 megawatts was installed as a result of  
27 projects in the net energy metering queue  
28 when the decision came down in Hawaii in

1 2015?

2 A I don't.

3 Q Okay. So moving off this chart to  
4 page 36.

5 A Yes.

6 Q And here in Figure 2-4, you have  
7 charts, particularly payback period of solar  
8 investments in other states. And for those  
9 payback periods, did you rely on the  
10 February 2021 study review of net metering  
11 reforms across select U.S. jurisdictions  
12 compared by North Carolina State University?  
13 You said Footnote 27, so I'm assuming --  
14 Footnote 40, I'm assuming you did or didn't?

15 A I really apologize. That was a  
16 whole lot in your question. I wasn't sure --

17 Q Okay.  
18 (Crosstalk.)

19 Q Okay. At the top of 2-4, the  
20 table, you have listed several utilities and  
21 their estimated payback periods under the  
22 reform tariffs. Did you rely on the study  
23 prepared by North Carolina State University  
24 for the Joint IOUs for that information?

25 A I was with you until you said  
26 "Joint IOUs." Are you asking me about the  
27 three rows at the bottom that are the three  
28 Joint IOUs?

1           Q    No.  I'm asking if you relied on  
2   the study that the Joint IOUs had prepared by  
3   North Carolina State University in order to  
4   get these numbers at the top of the chart of  
5   2-4?

6           A    Yes.

7           Q    Okay.  And I note that you actually  
8   cite that study in Footnote 40 at page 27 of  
9   your testimony.

10          A    Footnote 40 page 20?

11          Q    Seven, 27.

12          A    I must have different footnote  
13   numbers.  It is on page 27, and the footnote  
14   begins, this will be referred to as the  
15   FCC --

16          Q    Yes.  I was just wondering:  Are  
17   you adopting that study as part of your  
18   testimony?

19          A    In the sense that I included it as  
20   an attachment.  That sounds like a legal  
21   question, so I --

22          Q    Well, let me ask you another way:  
23   Are you the witness that can answer questions  
24   as to the accuracy of the payback numbers  
25   contained in that study?

26          A    I am familiar with their  
27   methodology.  I don't know the answer to your  
28   question.

1           Q    Well, did you do any analysis of  
2   your own to verify the accuracy of the result  
3   of that study?

4           A    I did not.

5           Q    Okay. So back on page 36 of your  
6   direct testimony.

7           A    I'm with you.

8           Q    Okay. You have listed for Duke  
9   South Carolina in Table 2-4 a payback period  
10   of 19.3 years. Do you see that?

11          A    I do.

12          Q    I take it from our decision that  
13   you did not do your own analysis to verify  
14   the accuracy of that number?

15          A    Correct.

16          Q    Have you reviewed the opening  
17   testimony of the Vote Solar witness Thomas  
18   Beach?

19          A    I have read it, yes. I have not  
20   memorized it.

21          Q    Neither have I.

22                He does testify as to the payback  
23   period for the Duke settlement. Are you  
24   aware of that?

25          A    I didn't recall that.

26          Q    Okay. As part of discovery request  
27   by the Joint IOUs, we provided workpapers of  
28   Mr. Beach's calculations of the payback

1 period dealing with the Duke settlement. Did  
2 you review the workpapers?

3 A No.

4 Q Okay. Turning to page 44?

5 A I am there.

6 Q Line 11-12, and here you state --  
7 one moment. I think I've lost my place.  
8 Yes. It is line 10.

9 You say solar industry trends that  
10 were not present 25 years ago will help guide  
11 distributed adoption of behind-the-meter  
12 programs.

13 Is it your testimony that these  
14 trends will enable sustainable growth in the  
15 behind-the-meter solar market, even if the  
16 Commission adopts the Joint IOUs' proposal?

17 A I haven't thought about this in  
18 terms of the language in AB 227, which is not  
19 precisely the language you asked me.

20 Q I was just asking you -- okay. If  
21 the Commission adopts the Joint IOUs'  
22 proposal for successor tariffs, is it your  
23 opinion that the Commission will have met its  
24 obligation under AB 227 to ensure sustainable  
25 growth in the industry?

26 A It is my opinion, which is not a  
27 legal opinion, of course, that these trends  
28 support a finding that customer-sited

1 generation facilities will grow sustainably  
2 in California.

3 Q And when you say "grow  
4 sustainably," what do you mean?

5 A Within the context of the  
6 fundamental word of "sustainable," which is  
7 living within your means, and being able to  
8 afford your lifestyle, and so forth.

9 The situation for these three IOUs  
10 that it is not, in my opinion, it is not  
11 sustainable to have the level of cost shift  
12 going on. So in that sense, for me it is  
13 consistent with the phrase of sustain --  
14 customer-sited meters -- excuse me --  
15 customer-sited generation will grow  
16 sustainably.

17 Q So you are taking "sustainable" to  
18 mean living within your means, not -- is that  
19 what you are taking "sustainable" to mean in  
20 the statute?

21 A Yes, in the sense that there are  
22 circumstances that are real in California  
23 from the IOUs with regard to -- ]

24 Q Okay. Thank you. On page 44 at  
25 line 15 to 16, you say:

26 Recent public communications from  
27 the solar industry through SEIA  
28 point to a number of drivers of

1 continued growth in the market for  
2 rooftop solar.

3 And then you proceed to pull a  
4 number of statements off the SEIA website,  
5 which are just both in the rooftop solar  
6 market; is that correct?

7 A I missed the last 10 words that you  
8 said.

9 Q Okay. So you pulled a number of  
10 statements off the SEIA website; correct?

11 A Yes.

12 Q And these addressed growth in the  
13 rooftop solar market; correct?

14 A Yes, and in some circumstances,  
15 other portions of the solar industry as well.

16 Q Okay. And these statements from  
17 the SEIA website, are they limited to  
18 California or do they address the nationwide  
19 solar market?

20 A It depends upon the statement.  
21 Some of them address California, some of them  
22 are more broadly describing the industry  
23 across the country.

24 Q Okay. And did some of these  
25 statements -- let me rephrase. Do all these  
26 statements refer just to rooftop solar?

27 A No. Some of them are about both  
28 rooftop solar and utilities solar.



1           Q    Okay.  Before replicating the  
2 statements from the SEIA website in your  
3 testimony, did you talk to anybody at SEIA  
4 regarding these statements?

5           A    No, I didn't.  I was taking them  
6 for face value from reading the website.

7           Q    Do you know any of the assumptions  
8 that go behind these statements?

9           A    I'm a little thrown off by the  
10 question.  Is that a technical question that  
11 you're asking me with regard to assumptions  
12 or --

13          Q    No.  Let me rephrase.

14                   (Crosstalk.)

15 BY MS. ARMSTRONG:

16          Q    Do you know whether, when these  
17 statements were posted on the SEIA website,  
18 they were taking -- they were assuming that  
19 the Joint IOUs' net successive tariff  
20 proposal would be adopted in California?

21          A    I don't have any idea what they  
22 were assuming -- what SEIA was assuming when  
23 it posted with regard to the Joint Utilities  
24 proposal.

25          Q    Well, you're listing these things  
26 as evidence from the industry that the  
27 California market will continue to grow.  I'm  
28 just trying to determine whether these

1 statements were, to the best of your  
2 knowledge, made assuming that the Commission  
3 would adopt the Joint IOUs' proposal.

4 A I think that's not what I'm saying.  
5 That's not my testimony in this particular  
6 portion of my testimony. I say that things  
7 have changed in the industry broadly in the  
8 25 years since California adopted the NEM  
9 program, and I talk about a number of trends  
10 going on in the industry about a much more  
11 mature industry that exists in California and  
12 elsewhere since 25 years ago.

13 Q Okay. So these statements or  
14 excerpts on SEIA's website weren't meant to  
15 indicate that the rooftop solar market would  
16 continue to grow in California if the Joint  
17 IOUs' proposal was adopted?

18 A My intention in including these was  
19 to say this is a different industry --

20 Q That's not my question.

21 A -- in 2021. I thought I was trying  
22 to answer it. Okay. So tell me again.

23 Q I'm saying is it correct that these  
24 excerpts from the SEIA website included in  
25 your testimony were not meant to be an  
26 indication of continued growth in the  
27 California rooftop solar market if the  
28 Commission adopted the Joint IOUs' proposal?

1           A    Not exactly as you phrased it.

2           Q    Thank you.

3           A    No, it -- that -- I must have  
4 misspoken because that's not my -- what I  
5 meant to say was --

6           Q    Well, if your attorney wants to ask  
7 you to clarify, she can do that on redirect;  
8 okay?

9           A    Okay. I apologize.

10          Q    That's okay. If we could go to  
11 page 46 and here starting at line 24.

12          A    Yes.

13          Q    You say, "Major solar companies  
14 anticipate growth in customer adoption of  
15 solar and other DERs considering several  
16 trends."

17                   And then as support for that  
18 proposition, you cite to presentations to  
19 investors made by the three largest solar  
20 companies; is that accurate?

21          MS. MERLO: This is Ashley Merlo. Can  
22 I just interject for a moment? I think the  
23 lines you're referencing start at line 33 on  
24 page 46. I don't know if you're looking in  
25 the IOU Exhibit 1 or if you're in an earlier  
26 version of our testimony that was filed.

27          BY MS. ARMSTRONG:

28          Q    Okay. I'm sorry. I might have

1     been in an earlier version. Do you see the  
2     lines -- the sentence that starts "Second,  
3     major solar companies anticipate"?

4             A     I do.

5             Q     And as support for that, that sort  
6     of proposition, you cite to presentations to  
7     investors made by three large solar  
8     companies; is that correct?

9             A     Yes, from three large solar  
10    companies.

11            Q     Okay. And these presentations, is  
12    it correct they focused on the nationwide  
13    market and not just the California market  
14    exclusively?

15            A     Sure.

16            Q     Okay. And do any portions of the  
17    presentation focus solely on California?

18            A     Not that I'm aware of.

19            Q     Okay. Thank you. Then going down  
20    to page 61.

21            A     61?

22            Q     Yes, 61.

23            A     6, 1?

24            Q     6, 1. Actually -- yes. And this  
25    was a section of your testimony that I spoke  
26    with Dr. Peterman about this morning. I  
27    don't know if you were on the Webex or not at  
28    this time, but --

1           A    I did listen, yes.

2           Q    Okay.  So you state -- and I  
3 apologize if I have the wrong copy, but it's  
4 on my page 61, line 4, in the sentence that  
5 starts, "In this proceeding."

6                   Do you see that?

7           A    I do see that paragraph.

8           Q    Okay.  So you state:

9                   In this proceeding, the Commission  
10                  should focus on reducing the cost  
11                  shift and then condition the  
12                  expansion of incentives to others  
13                  besides income-qualified customers  
14                  upon the availability of funds  
15                  from sources other than utility  
16                  rates.

17                  So are you supporting subsidies --  
18 I'm sorry.  So you are supporting subsidies  
19 to income-qualified customers through utility  
20 rates; correct?

21           A    To a certain degree, yes, in order  
22 to accomplish a portion of the AB 327  
23 provision -- directive, I'll put it that way.

24           Q    And then if you could go back a  
25 page to page 60 at lines 8 through 10.

26           A    Could you just give me a sec to  
27 read this one.  Okay.  Thank you.

28           Q    Okay.  And just to make sure we're

1 on the same line, it's the sentence that  
2 starts, "First, embedding financial  
3 subsidies."

4 Is that what you were reading?

5 A It was.

6 Q So you say:

7 Embedding financial subsidies for  
8 adoption of rooftop solar - and  
9 doing so without eliminating a  
10 cost shift - has the effect of  
11 increasing electricity rates and  
12 undermining the goal of  
13 electrification of buildings and  
14 vehicles.

15 Don't low-income subsidies like  
16 CARE also have the effect of increasing  
17 electricity rates and undermining the goal of  
18 electrification of buildings and vehicles?

19 A Yes. Those address a different  
20 goal the Commission has, which is of course  
21 equity and affordability.

22 Q Would you support shifting CARE  
23 subsidies to be funded by nonutility funding  
24 as well?

25 A You asked me about CARE. I am  
26 aware of other subsidies for low-income  
27 consumers' use of energy, and so I do support  
28 that in a big way.

1           Q    Okay.  I'm not sure I understand.  
2    You know about the California CARE program to  
3    provide lower rates to income-qualified  
4    customers?

5           A    Yes, I do.

6           Q    Okay.  And that's funded through  
7    electric rates; correct?

8           A    Correct.

9           Q    I'm asking you if you would support  
10   shifting that to being funded by non -- you  
11   know, sources from other than electric rates?

12          A    That would be great.  There are  
13   other subsidies that support low-income  
14   customers today that are funded by taxpayers.

15          Q    What about the above-market costs  
16   for RPS resources?  Should those be shifted  
17   to nonutility funding sources?

18          A    They are indirectly funded by  
19   nonutility sources through tax subsidies.

20          Q    Are you aware of the PCIA charge in  
21   California?

22          A    I am.

23          Q    Is that not correct above-market  
24   costs for RPS resources through utility  
25   rates?

26          A    Yes.

27          Q    And would you support shifting that  
28   over to funding outside of the utility rate

1 spectrum?

2 A I haven't thought about that  
3 because those were costs incurred by the  
4 utility in anticipation of surveying  
5 electricity customers' needs. That seems to  
6 me to be appropriate cost-based cost-recovery  
7 mechanism through utility rates.

8 Q Fair enough. If you could turn to  
9 rebuttal now.

10 A And I can put this aside; right?

11 Q Yep.

12 A Okay.

13 Q And here I'm looking at page 116.

14 A I am with you.

15 Q Yeah. Sorry. Starting at line 22,  
16 you state -- I'll make sure I'm on the right  
17 page. Hold on. Okay. Yeah. You state:

18 Indeed, both rooftop solar and  
19 utility-scale solar will be needed  
20 to help California meet its  
21 climate goals, even if it's not  
22 clear today how much will be  
23 deployed during different time  
24 periods or different periods of  
25 time.

26 Correct?

27 A Yes.

28 Q And then if you go to page 118 at



1 lines 3 to 4 -- wait. I'm sorry. I meant at  
2 lines 4 to 5.

3 A Yes.

4 Q You state, "Either way, the study  
5 identifies the need for substantial  
6 deployment of rooftop and utility-scale solar  
7 capacity in California."

8 And by "the study," you're  
9 referring back to the Nature Conservancy  
10 study called The Power of Place; is that  
11 correct?

12 A Yes.

13 Q And from these two statements that  
14 we've just gone through, I take it that you  
15 agree that California will need the continued  
16 deployment of a substantial amount of rooftop  
17 solar in order to meet its GHG reduction  
18 goals?

19 A Yes, and many other things as well.

20 Q Okay. If you can go to page 123 --

21 ALJ HYMES: Let me interrupt just a  
22 moment. Could I double-check with everything  
23 to make sure you're all muted. Thank you.

24 THE WITNESS: I'm on page 123.

25 BY MS. ARMSTRONG:

26 Q Yes. Okay. Here in section F, you  
27 begin a discussion of what you state is a  
28 false equivalence between the NEM and RPS

1 programs, which was offered by SEIA and Vote  
2 Solar. In particular, at line 14, you state:

3 Even though the NEM program  
4 supports a renewable resource;  
5 i.e., solar power, the NEM program  
6 neither technically nor  
7 practically advances the ability  
8 of the state to satisfy its RPS  
9 requirements.

10 Do you see that?

11 A I do.

12 Q Would you agree that a key  
13 constraint in the California Integrative  
14 Resource Plan is meeting the 2030 and 2045  
15 greenhouse gas goals?

16 A Could you rephrase the question.

17 Q Are you aware -- let me take it a  
18 step back. Are you aware of California's  
19 Integrative Resource Plan -- Planning  
20 Proceeding?

21 A Generally, yes.

22 Q And are you aware that the  
23 Commission runs models in that proceeding to  
24 determine various resource mixes to meet its  
25 GHG goals?

26 A Generally, yes.

27 Q Based on that, would you agree that  
28 one of the key constraints in meeting -- one

1 of the key constraints in meeting -- in  
2 running that model is -- let me just -- let  
3 me just scrap that question. It's getting  
4 too in the weeds. Let's just scrap it and  
5 move on. Something similar -- simpler.

6 Does MWh of rooftop solar produced  
7 between 4:00 and 5:00 p.m. have the same  
8 impact on reducing GHG emissions as the MWh  
9 of utility-scale solar produced in that same  
10 hour?

11 A It depends.

12 Q It depends on what?

13 A It depends upon the dispatch of the  
14 system and whether or not you're in a mode  
15 where you cannot curtail rooftop solar  
16 technically and you might have to curtail  
17 other resources on the system at that point  
18 in time. And those might include  
19 utility-scale solar that needs to be  
20 curtailed.

21 Q Okay. But I'm just asking. Let's  
22 say you do have a megawatt hour of rooftop  
23 solar produced between 4:00 and 5:00 and you  
24 do have one produced by rooftop solar at the  
25 same time. Don't they have the same impact  
26 on reducing GHG emissions?

27 A Yes. Generally, yes.

28 Q Yes. Okay. When a customer

1 installs solar, does that customer generally  
2 take less power from the utility?

3 A Yes.

4 Q Does that reduction result in lower  
5 utility sales?

6 A All else equal, yes.

7 Q Is Utilities' RPS obligation based  
8 on a percentage of its sales?

9 A Yes.

10 Q Okay. Going to page 124 near the  
11 bottom, section G.

12 A Yes.

13 Q You begin a discussion of why you  
14 believe that NEM systems aren't analogous to  
15 energy efficiency. And on page 125 at lines  
16 9 to 12, you state, "By serving a portion" --  
17 are you there yet? I'm sorry.

18 A Yeah.

19 Q Okay. You state:

20 By serving a portion of their own  
21 energy requirements, NEM customers  
22 avoid paying for and shift their  
23 share of the cost of service to  
24 nonparticipating customers  
25 resulting unfairly in having  
26 nonparticipating customers cover  
27 NEM customers' share of critical  
28 costs such as wildfire costs.

1 Correct?

2 A That's what it says.

3 Q Okay. If a customer reduces the  
4 load they place on the grid by 1 kWh in a  
5 particular hour, does it matter from a cost  
6 recovery perspective that the load reduction  
7 is due to energy efficiency or from a rooftop  
8 solar panel?

9 A For what purpose? Would you state  
10 the question again.

11 Q It's from a cost recovery purpose  
12 if that's what you're asking.

13 A I totally apologize, but would you  
14 say the whole question again.

15 Q Sure.

16 A Thank you.

17 Q If a customer reduces the load they  
18 place on the grid by 1 kWh in a particular  
19 hour, does it matter from a cost recovery  
20 perspective whether that load reduction is  
21 due to an energy efficiency measure or  
22 reduction from a rooftop solar panel?

23 A I would say it depends.

24 Q And why would it depend? Isn't the  
25 impact of each the same?

26 A Not necessarily from the point of  
27 view of the utility that needs to plan for  
28 handling that customer's load requirements

1 going forward.

2 Q I'm talking -- okay. But for that  
3 one hour in time that we're talking about,  
4 somebody reduces their load by 1 kWh for an  
5 energy efficiency, another person reduces it  
6 by use of rooftop solar. Are you saying  
7 those two reductions are not equivalent from  
8 a cost recovery perspective?

9 A What I'm saying is that the utility  
10 has to plan for meeting customers' loads.  
11 And if the energy efficiency reduction is  
12 dependable during certain periods of time,  
13 that is inherently different from the  
14 intermittent nature of the rooftop solar load  
15 being supplied in that one hour.

16 Q Well, can you give the example of  
17 an energy efficiency measure that is  
18 reliable, you know, every hour of the day,  
19 every day of the week.

20 A Actually that's not what I was  
21 saying. I was saying in that hour, there are  
22 appliances and measures that you could  
23 install that dependably reduce loads in that  
24 hour.

25 Q But as --

26 (Crosstalk.)

27 BY MS. ARMSTRONG:

28 Q But as a utility, you wouldn't know

1     which hour of the day which appliance is  
2     being utilized by each customer who has one;  
3     is that correct?

4             A     Well, you know if you're installing  
5     a more efficient set of windows in an  
6     electric home, that might reliably reduce the  
7     air conditioning load or the heating load in  
8     that hour.

9             Q     That's true. But does the utility  
10    know I've installed energy efficient windows  
11    in my home? I don't call PG&E and tell them  
12    I've done that.

13            A     I thought we were talking here  
14    about energy efficiency measures in the  
15    context of utility programs that deliver  
16    energy efficiency, and those are the programs  
17    that are paid for --

18            Q     Okay.

19            A     -- by consumers, the customers --

20            Q     Well --

21            A     -- of the utility.

22            Q     Okay. So you're testifying that  
23    the utility, based on their programs that  
24    they implement, you know, for energy  
25    efficiency, they can estimate the amount of  
26    reduction in load that will occur on a  
27    reliable basis from those programs?

28            A     I am aware of multiple studies,

1 retrospective studies, that look at the  
2 expected value of a particular energy  
3 efficiency program in different hours of the  
4 day across a body of customers, so, yes. I'm  
5 sorry I didn't just say yes in the beginning.

6 Q Okay. If you could turn to --  
7 let's see, I think it might be the same page.  
8 Hold on one moment. Yes, still on page 125  
9 but down near the bottom at line 25, you  
10 state, "By contrast, NEM customers do not  
11 dependably reduce the load by relying on  
12 on-site solar generation due to the  
13 intermittency of solar resources."

14 And then on the next page, you have  
15 an example, a Figure 6-13, that --

16 A Yes.

17 Q -- is entitled "Illustrative  
18 Example of Intermittent Rooftop Solar." I  
19 want to clarify, this figure, 6-13, is this  
20 just based on one customer?

21 A This is an illustrative customer,  
22 yes.

23 Q Okay. And have you presented any  
24 analysis on the record of this proceeding  
25 demonstrating the coincidence of this  
26 intermittency of solar resources throughout  
27 the state or in a regional planning area?

28 A No, I have not.



1           Q    And are you aware that system  
2 operators have become better at forecasting  
3 solar output for large rates of solar and  
4 incorporating such forecasting into their  
5 operational and capacity planning?

6           A    Yes, generally.

7           Q    Okay. What is the biggest load  
8 during the peak load summer hours that you're  
9 aware of? What generally is the largest  
10 load?

11          A    Are we talking about California?

12          Q    Yes.

13          A    I don't know the answer to that.

14          Q    Would you take subject to check  
15 that it's probably the air conditioning load?

16          MS. MERLO: I'm going to object. This  
17 calls for speculation. She said she didn't  
18 know.

19 BY MS. ARMSTRONG:

20          Q    Okay. All I can tell you is I'm  
21 sitting here in Sacramento sweating in this  
22 jacket. It is air conditioned. Thank you.  
23 That's all the questions I have.

24          A    Thank you very much.

25          ALJ HYMES: Any redirect?

26          MS. MERLO: Can we have a moment,  
27 please, your Honor?

28          ALJ HYMES: Sure. We'll be off the

1 record.

2 (Off the record.) ]

3 ALJ HYMES: We will be back on the  
4 record.

5 Actually, let's hold off going back  
6 on the record.

7 (Off the record.)

8 ALJ HYMES: Let's go back on the  
9 record.

10 Attorney for the utilities?

11 REDIRECT EXAMINATION

12 BY MS. MERLO:

13 Q Good afternoon, Dr. Tierney.

14 A Good afternoon.

15 Q When Ms. Armstrong was asking you  
16 questions about the bullets on pages 44 to  
17 45, excuse me, 45 to 46 in IOU Exhibit 1, I  
18 think you have something in addition to add  
19 to your response regarding the intent behind  
20 those bullets. Did you have something you  
21 wanted to add there?

22 A Yes. I did want to add when I said  
23 "not exactly" on the record in response to  
24 her question. What I meant to convey was  
25 this trend five, which has to do with the  
26 maturation of the solar industry is part of  
27 my logic and understanding of why I think  
28 California can feel confident that the

1 customer-sited generation will continue to  
2 grow sustainably for a variety of reasons,  
3 including the fact that this industry has  
4 come so far, both in California and in other  
5 states around the country. And it is a  
6 grownup industry at this point in time.

7 Q Ms. Armstrong also made reference  
8 to above-market costs regarding PCIA. Do you  
9 recall that line of questioning?

10 A I do.

11 Q Okay. Did you -- do you have an  
12 opinion about whether these costs are above  
13 market?

14 A No, I don't.

15 Q Do you believe that they are above  
16 market?

17 A What I understand is that those  
18 costs represent the -- today's dollars  
19 associated with contracts that were put in  
20 place at different periods of time to serve  
21 customers' load based on conditions at the  
22 time the contracts were put in place. And  
23 there are today circumstances in which power  
24 can be provided more economically than under  
25 those prior contract terms.

26 MS. MERLO: No further questions, your  
27 Honor.

28 MS. ARMSTRONG: Can you hear me?

1 THE WITNESS: (Witness nods.)

2 MS. ARMSTRONG: Can you hear me?

3 MS. MERLO: Yeah.

4 MS. ARMSTRONG: I have no questions  
5 based on that.

6 THE WITNESS: Thank you.

7 MR. AVILA: Your Honor, I believe you  
8 are on mute.

9 ALJ HYMES: I apologize. I have to  
10 look at it. Mr. Boyd, you are up next.

11 MR. BOYD: Thank you, your Honor.

12 DIRECT EXAMINATION

13 BY MR. BOYD:

14 Q Hi, Susan. My name is Mike Boyd  
15 and I'm with CARE, Californians for Renewable  
16 Energy. All my questions are voluntary. If  
17 you don't feel comfortable with any of them,  
18 just tell me you don't feel comfortable and  
19 I'll move on --

20 (Crosstalk.)

21 Q My first -- I appreciate that. My  
22 first question has to do with page 57 lines 8  
23 through 10. You say, utilities are  
24 purchasing power from NEM customers at a  
25 price much higher than what those utilities  
26 pay for supply, i.e., avoided cost from other  
27 sources of electricity, including other solar  
28 projects. And then on page 58 you make the

1 statement NEM --

2 MS. MERLO: Mr. Boyd, one moment. I  
3 think the witness needs a second to orient  
4 herself.

5 THE WITNESS: I didn't hear which  
6 testimony we were talking about, so I wasn't  
7 sure where to go.

8 BY MR. BOYD:

9 Q I'm sorry. I don't do rebuttal  
10 testimony. It is all opening testimony.  
11 Rebuttal is like criticism, and I don't  
12 believe in criticism.

13 A Got you. I wish I could have grown  
14 up in your school, or something.

15 Q It is a tragic expression of an  
16 unmet need.

17 Tell me when you are ready.

18 A Got it.

19 Q On 57, I'm at pages 8 to 10. I  
20 read the utilities are purchasing power from  
21 NEM customers at a price much higher than  
22 what those utilities pay for supply, i.e.,  
23 avoided cost from other sources of  
24 electricity, including other solar projects.

25 And then if you go to page 58 at  
26 lines 5 through 7 you say NEM 2.0 tariffs  
27 include evidence that utilities pay more to  
28 NEM customers than what they would pay to

1 other suppliers for the same amount of energy  
2 and other electric grid benefits.

3 Did I read that right?

4 A Yes. And just for the court  
5 reporter, I think when we were talking about  
6 the sentence that you quoted on page 57, that  
7 was line 8 and 9 and 10, not page 8, 9 and  
8 10, just FYI.

9 Q Thank you for that correction.

10 So to address these two statements,  
11 I would like to the ask you to go to two  
12 exhibits. They are CRE-07 and then the other  
13 one is number 8.

14 A I have them.

15 Q Okay. California ISO Station Power  
16 Program Overview. I wanted you to go to the  
17 first page on there, and then number H, just  
18 to get you ready. On the sixth page there is  
19 this paragraph where it starts with the word  
20 "Sixth." If you could find that, then I  
21 can...

22 A So I am on page 1 of CRE-07, it is  
23 page 1, which is numerically numbered on the  
24 bottom of page 1. Is that where I'm supposed  
25 to be?

26 Q Correct, exactly.

27 A I don't know where I'm supposed to  
28 be on CRE-08.

1 Q Number 6, page 6 of the document.

2 A Okay. The sixth page is page 18 at  
3 the top?

4 Q Yeah, page 18 at the top.

5 So what I'm going to ask you to do  
6 first is read on Exhibit 7 page 1, the first  
7 paragraph starting with the word "Station  
8 Power." Do you see that there?

9 A I do. The very first paragraph.

10 Q Then I want you to skip the second  
11 paragraph. And on the third paragraph I want  
12 you to read it until the second footnote,  
13 Footnote 2, and stop there.

14 A Okay.

15 Q Thank you.

16 A "Station Power is energy" --

17 MS. MERLO: Your Honor, I'm going to  
18 interject for a moment. The document speaks  
19 for itself. Do we need to have this all read  
20 into the record?

21 MR. BOYD: Can I reply, your Honor?

22 ALJ HYMES: Yes, you may.

23 MR. BOYD: I'm doing it to provide  
24 context to my question so that it is kind  
25 of -- I feel it is important to provide that  
26 context.

27 ALJ HYMES: However, in the essence of  
28 time, I believe that reading silently is

1 faster, just in the essence of time.

2 BY MR. BOYD:

3 Q Did you already have an opportunity  
4 to read this, Susan?

5 A Yes. Give me 30 more seconds,  
6 please.

7 Q Certainly.

8 A Okay.

9 Q You ready?

10 A Yes.

11 Q Okay. So what in your mind is this  
12 saying "station power" is?

13 A Station power is the energy used to  
14 operate axiliary equipment and other load  
15 directly related to the product of energy by  
16 a generating unit, and that includes some  
17 activities that are needed to support the  
18 purpose of generating electricity.

19 Q And would you consider that station  
20 power to be retail or wholesale power that is  
21 provided by a third party like a utility?

22 A In the context of this document or  
23 generally?

24 Q Both.

25 A Generally, there are lightbulbs  
26 being used in an office attached to a power  
27 plant. That office might be taking power at  
28 retail for the lightbulb.



1           Q     That is my understanding too,  
2     Susan.  That when we are talking about  
3     station power, we are talking about retail  
4     energy, not wholesale energy, correct, in  
5     general?

6           A     In general, yes.

7           Q     Okay.  Would you -- now, and your  
8     understanding of the NEM program, do we -- do  
9     we net the retail?  Do we net the energy at  
10    retail, or do we net it at wholesale?

11          A     Right now?

12          Q     Yeah.

13          A     For NEM 2.0?

14          Q     Yeah.

15          A     We net it at retail.

16          Q     Okay.  Am I correct to read that if  
17    you read the last sentence in the first  
18    paragraph there it says, Cal ISO station  
19    power program generators convert their  
20    station power from retail service to  
21    wholesale service.  Would that mean that they  
22    are netting station power at wholesale as  
23    opposed to retail?

24          A     That is what I'm interpreting this  
25    document to be, this document to be saying.  
26    I have not seen this document before you  
27    provided it to me this weekend.  So I'm just  
28    attesting to the words that are on this

1 program -- on this document. I don't know  
2 more about the program than this.

3 Q Thank you. I appreciate that. So  
4 now let's move on to the Exhibit 8.

5 A I'm with you.

6 Q Okay. And then on page 6 would you  
7 read that paragraph starting with six local  
8 regulatory authorities such as CPUC allow  
9 resources to receive wholesale treatment per  
10 station power.

11 A I see that.

12 Q Would you agree that they are  
13 paying a generator for their own storage  
14 capacity at wholesale, not at retail?

15 MS. MERLO: I'm sorry. Can you -- if  
16 the witness understood the question, that is  
17 fine, but I did not understand the question.  
18 BY MR. BOYD:

19 Q Would it help to repeat it, or you  
20 just want to move on? If you are not  
21 comfortable with me asking it, that is not a  
22 problem.

23 A I'm comfortable with you asking it.  
24 I truly did not totally follow the question.

25 Q Okay. So basically I'm asking  
26 if -- so, for example, NEM, I'm assuming that  
27 as a NEM customer generator with storage that  
28 I would be compensated at retail, just like I

1 would be compensated for not having -- for  
2 not having storage. So what I'm trying to  
3 show is that on the generator side, they are  
4 getting compensated at wholesale, not at  
5 retail.

6 And there was a prior person that  
7 was asking you something about 50 cents a  
8 kilowatt-hour for storage. So that is what  
9 I'm trying to clarify. With station power  
10 are they, if assuming this tariff was  
11 approved by FERC, are they eligible to get  
12 compensated for their storage capacity at  
13 wholesale, as opposed to retail?

14 A What I understand from this  
15 proposal is that the California ISO has asked  
16 for station power to be compensated at  
17 wholesale for utility scale generation,  
18 period.

19 Q Okay. Thank you. So you are not  
20 answering the storage part that needs to be  
21 clarified?

22 A I didn't follow that part. I'm  
23 sorry.

24 Q Okay. That is fine. Just say --  
25 well, okay, I'm going into my second  
26 question.

27 A Okay.

28 Q Okay. I'm referring to page 22 of

1 your opening testimony starting at line 10  
2 and going to line 13. Tell me when you are  
3 ready.

4 A Yes, I'm ready.

5 Q Okay. So I'm reading this, the  
6 compensation was based on customers' full  
7 retail rate, which is inherently more than  
8 the value of an energy exported. This means  
9 that a NEM customer does not pay the full  
10 cost of using the grid, and thus the cost  
11 avoided must be paid by the other retail  
12 customers, that means there is a cost shift.  
13 Did I read that correct?

14 A Yes.

15 Q My question is: When you are using  
16 the term "full retail rate," are you  
17 referring to the top tier of the retail rate  
18 or the bottom tier of the retail rate?  
19 Because there are three tiers.

20 A I'm talking about a bundled rate  
21 that includes distribution, transmission,  
22 energy, and capacity, and ancillary services.  
23 And it doesn't matter what tier it is. But  
24 specifically this would mean whatever is on  
25 the margin in an hour, that would be the rate  
26 as reflected.

27 Q So, for example, if I was --

28 A Actually, Mr. Boyd.

1 Q Yes.

2 A Can I please -- let me restate  
3 that. I apologize for interrupting you.

4 You were asking me about today's  
5 rates, not proposed rates.

6 Q Correct.

7 A So today's rates are not typically  
8 on an hourly variable rate. So I misspoke  
9 there. So what I want to say is that it  
10 would be the full retail bundled rate at the  
11 level of use for that customer.

12 Q So, for example, if I was using  
13 power during peak demand, peak demand period  
14 when we are in Tier 3, which is for PG&E, it  
15 is roughly 42 cents a kilowatt here. So what  
16 I'm asking is: If I exported power during  
17 that same time, would I be compensated at the  
18 42 -- is that what you are saying when you  
19 say "full retail rate"? Are you saying that  
20 I would be compensated at the 42 cents if I  
21 produce our power on that peak period, or are  
22 you saying something different?

23 A What I was saying in this paragraph  
24 is more generalized than what you are asking  
25 me about. This was with regard to the net  
26 energy metering programs that have existed  
27 around the country, and they vary on the  
28 dimension that you are describing across the

1 country, because rate designs differ across  
2 the country. And so what I was trying to say  
3 is that under traditional NEM rates, it is  
4 rewinding the meter. And so you are paying  
5 the full -- you are being compensated the  
6 full retail rate of the general proposition.

7 Q Would it surprise you to know that  
8 if I was using off-peak on the third tier  
9 that I would be paying retail of 42 cents?  
10 But under the NEM program, which uses the  
11 default load allocation point, which is an  
12 annual true-up of any excess I produce, is at  
13 2 to 3 cents per kilowatt-hour? Not 42  
14 cents, but 2 to 3 cents for any excess I  
15 produce. Would that surprise you?

16 A I don't know.

17 Q Okay. I request that you check  
18 that out and reconsider your -- that it is  
19 based on full retail rate statement.

20 Procurement -- then the other  
21 questions I have -- hold on. This one kind  
22 of surprised me. I felt surprised when I saw  
23 this. You state on page 49 at line 19, tell  
24 me when you are there.

25 A Go ahead.

26 Q Black people pay more for energy  
27 than White people. That surprised me. I'm  
28 curious if that is an opinion or a quotation

1 from the report you are referencing?

2 A It is the latter. That is a  
3 scholarly article written by a researcher  
4 after studying energy consumption, energy  
5 bills for Black people versus White people in  
6 different parts of the country, and includes  
7 California as part of that study.

8 Q Okay. Very good. I appreciate  
9 that. I would request you put that in  
10 quotes, ma'am.

11 A Fair enough.

12 Q Let me see. I'm down here. You  
13 refer on page 53 line 16 -- you refer to  
14 PURPA contracts with eligible power  
15 producers. Do you see that?

16 A Yes.

17 Q Are you aware of any PURPA  
18 contracts for NEM customer generators in  
19 California right now?

20 A I don't know one way or the other.

21 Q Okay. Fair enough. And then just  
22 page 55 line 29 to 30. Tell me when you are  
23 there.

24 A I'm there.

25 Q Okay. You state after the number  
26 4, the total benefits of the tariff to both  
27 the electric system and all customers are  
28 approximately equivalent to the cost. And

1     then in that light you also say on page 56,  
2     you talk, at line 9 to 10, you talk about  
3     unfair economic transfers from one group to  
4     another, e.g., from nonparticipants to  
5     participants. Do you see that?

6             A     I do.

7             Q     Okay. So my question goes that --  
8     what they are calling the grid benefit  
9     charge. You understand that, right?

10            A     I have read about it, yes.

11            Q     Okay. Now I'm asking your opinion  
12     here. Would the NEM customer generator grid  
13     benefit charge have a fair or reasonable  
14     relationship to the payers' burden on or  
15     benefits from the activities?

16            A     I think that is a question that you  
17     need to direct to one of the witnesses who  
18     have looked at the cost-based buildup and  
19     allocation of dollars between the different  
20     energy-related charges and different tiers as  
21     you described and then the resulting grid  
22     benefit charge.

23            Q     So that is like a cost-of-service  
24     question, would you say?

25            A     I would say it is a rate design and  
26     cost-of-service question. But again, I would  
27     encourage you to ask one of the utilities'  
28     witnesses.



1           Q    Would you know by chance who the  
2 witness would be?

3           A    I would say Gwen Morien and/or  
4 Colin Kerrigan and/or Rob Thomas. That is my  
5 best guess.

6           Q    I got the second one. What was the  
7 first one?

8           A    Gwen Morien, M-o-r-i-e-n.

9           Q    I got --

10          A    Rob Thomas.

11          MR. BOYD: Rob? Rob Thomas. Okay.

12                I'm all done, your Honor. Thank you  
13 for letting me go over a little bit extra.

14                And I think I'm ready to move all my  
15 exhibits into evidence. The only two that we  
16 haven't talked about are Exhibit 2 and 3,  
17 which are the proposal and the presentation.]

18          ALJ HYMES: Okay. I will address that.

19                Ms. Tierney, you will remain under  
20 oath and we'll see you in the morning. At  
21 this point -- oh, I'm sorry. I apologize.

22                Any redirect?

23          MS. MERLO: Your Honor, may I have just  
24 a very brief moment?

25          ALJ HYMES: Okay.

26          MS. MERLO: Thank you.

27          MR. BOYD: Thank you, Susan.

28          THE WITNESS: Thank you, Mr. Boyd.

1 THE REPORTER: Off the record, your  
2 Honor, or stay on?

3 ALJ HYMES: Thank you. Off the record.  
4 (Off the record.)

5 ALJ HYMES: Let's go back on the  
6 record.

7 Could the counsel for the Utilities  
8 please restate.

9 MS. MERLO: Yes. Your Honor, we have  
10 no redirect for Dr. Tierney.

11 ALJ HYMES: Thank you.

12 Ms. Tierney, we will see you in the  
13 morning.

14 At this time I want to quickly go  
15 over our schedule for tomorrow. We'll  
16 continue with witness Tierney being  
17 cross-examined by Protect Our Communities, so  
18 we are a little over time. We'll see where  
19 we go with this. Perhaps we can make up some  
20 time tomorrow. We're about a half an hour  
21 over time. And then we have the utility  
22 panel. At this time that panel, it will be  
23 crossed by CARE, then Clean Coalition,  
24 Foundation Wind, and Protect Our Communities.

25 There was some discussion about  
26 perhaps changing that. Does that schedule --  
27 is that okay with everyone? Are there any  
28 changes? Let me ask from the Utility

1 representative first.

2 MS. MERLO: Your Honor, the only thing  
3 I would note -- and this is Ashley Merlo --  
4 we don't show in our matrix any time for CARE  
5 on the cross-examining IOU panel tomorrow.

6 ALJ HYMES: Mr. Boyd; is that correct?

7 MR. BOYD: No, your Honor. I  
8 specifically decreased some minutes and I  
9 believe I put -- I have to find the e-mail  
10 unfortunately, but I had -- it was somewhere  
11 between 15 and 20. That's what I remember.

12 ALJ HYMES: Let's go off the record for  
13 this moment.

14 (Off the record.)

15 ALJ HYMES: Let's go back on the  
16 record. While we were off the record, we  
17 discussed schedule. All parties seem to be  
18 on the same page with respect to  
19 cross-examination, the completion of witness  
20 Tierney, the IOU panel, and then Witness Wray  
21 tomorrow.

22 At this time I will take any  
23 motions. I think the easiest way to do this  
24 is to use your hand button, raise-hand  
25 button. So if you have exhibits that you  
26 would like to enter into the record today  
27 that have completed all cross-examination, I  
28 will take those now.

1 I'm just going straight down my  
2 list, so I'll begin with Aaron Stanton.

3 Mr. Stanton.

4 MR. STANTON: Can you hear me, your  
5 Honor?

6 ALJ HYMES: Barely, if you could speak  
7 up just a bit.

8 MR. STANTON: How is this?

9 ALJ HYMES: Yes. And let me just  
10 confirm with the court reporter that indeed  
11 we are on the record and that you could hear  
12 Mr. Stanton.

13 THE REPORTER: Yes.

14 ALJ HYMES: Then, Mr. Stanton, please  
15 proceed.

16 MR. STANTON: Thank you. Protect Our  
17 Communities Foundation, PCF-67 and PCF-68,  
18 Affordable Clean Energy For All Coalition  
19 Lists, and R.20-08-020, Notice of Ex Parte  
20 Communication, abbreviating the titles  
21 respectively.

22 ALJ HYMES: And just to confirm, that  
23 was CCS-67 and CCS-68?

24 MR. STANTON: P as in Patrick; C as in  
25 cat; F as in Frank, 67 and 68.

26 ALJ HYMES: I apologize. If there are  
27 any objections, please voice those objections  
28 by stating your name.

1 (No response.)

2 ALJ HYMES: Hearing no objections,  
3 PCF-67 and PCF-68 were received into the  
4 record.

5 (Exhibit Nos. PCF-67 and PCF-68  
6 were received into evidence.)

7 ALJ HYMES: Thank you. And,  
8 Mr. Stanton, if you could click on the  
9 raise-hand button so that it deletes that.

10 Next up is Jeanne Armstrong.

11 MS. ARMSTRONG: Yes. SEIA and Vote  
12 Solar would like to move into the record  
13 SVS-05. This is the cross-examination  
14 entitled Frequently Asked Questions 2019  
15 Building Energy Efficiency Standards.

16 ALJ HYMES: At this time, are there any  
17 objections to SVS-05 being entered into the  
18 record? State your objection by stating your  
19 name.

20 (No response.)

21 ALJ HYMES: Hearing no objections,  
22 SVS-05 is received into the record.

23 (Exhibit No. SVS-05 was received  
24 into evidence.)

25 ALJ HYMES: Thank you. Next up is  
26 Mr. Boyd.

27 MR. BOYD: Yes, your Honor. I would  
28 like to move into the record CRE-01, CRE-02,

1 CRE-03, CRE-04, CRE-05, 06, 07, and 08. And  
2 I would like to clarify that 02 and 03 are  
3 the proposal of CARE and 03 is the  
4 presentation that CARE made. Those are -- I  
5 had them for reference purpose. There's  
6 no -- I don't believe there's any talk -- any  
7 crossover that is -- that I'm aware of.

8 ALJ HYMES: Okay. And let me just ask  
9 if there are any objections to CRE-01 being  
10 received into the record?

11 (No response.)

12 ALJ HYMES: Hearing no objections,  
13 CRE-01 is received into the record. Are  
14 there any objections to CRE-02?

15 (No response.)

16 ALJ HYMES: Hearing none, CRE-02 is  
17 received into the record. Any objections to  
18 CRE-03?

19 (No response.)

20 ALJ HYMES: Hearing none, CRE-03 is  
21 received into the record. Any objections to  
22 CRE-04?

23 (No response.)

24 ALJ HYMES: Hearing none, CRE-04 is  
25 received into the record. Any objections to  
26 CRE-05?

27 (No response.)

28 ALJ HYMES: Hearing none, CRE-05 is

1 received into the record. Any objections to  
2 CRE-06?

3 (No response.)

4 ALJ HYMES: Hearing none, CRE-06 is  
5 received into the record. Any objections to  
6 CRE-07?

7 (No response.)

8 ALJ HYMES: Hearing none, CRE-07 is  
9 received into the record. And then finally,  
10 any objections to CRE-08?

11 (No response.)

12 ALJ HYMES: Hearing none CRE-08 is  
13 received into the record.

14 (Exhibit Nos. CRE-01 thru CRE-08  
15 were received into evidence.)

16 ALJ HYMES: Thank you.

17 MR. BOYD: Thank you, your Honor.

18 ALJ HYMES: Next up is Mr. Lindl.

19 MR. LINDL: Yes. Thank you, your  
20 Honor. Tim Lindl on behalf of CALSSA. Your  
21 Honor, are you comfortable with us moving in  
22 prepared direct and prepared rebuttal  
23 testimony at this time like you just did for  
24 Mr. Boyd?

25 ALJ HYMES: No, not at this time  
26 because you have not gone through  
27 cross-examination, so absolutely not.

28 MR. BOYD: That's what I thought, your

1 Honor, just wanted to double-check I wasn't  
2 missing an opportunity here to be efficient.  
3 So we would like to move in the various  
4 cross-exhibits and one impeachment exhibit  
5 today. So that would be Exhibit CSA-03,  
6 Pages from Order in New York Public Service  
7 Commission, Case 15-E-0751.

8 ALJ HYMES: Mr. Lindl, I'm going to  
9 interrupt you. Because we've already marked  
10 and identified all of these, just stating the  
11 exhibit number will be much more efficient  
12 for today.

13 MR. LINDL: Okay. Thank you, your  
14 Honor. CALSSA would like to move into  
15 evidence Exhibit CSA-04 -- excuse me. Now I  
16 need to start over.

17 CALSSA would like to move into  
18 evidence Exhibit CSA-03, 04, 05, and 06.

19 ALJ HYMES: Are there any objections to  
20 receiving CSA-03 into the record?

21 (No response.)

22 ALJ HYMES: Hearing none, CSA-03 is  
23 received into the record. Any objections to  
24 CSA-04?

25 (No response.)

26 ALJ HYMES: Hearing none, CSA-04 is  
27 received into the record. Any objections to  
28 CSA-05?



1 (No response.)

2 ALJ HYMES: Hearing none, CSA-05 is  
3 received into the record. And finally, any  
4 objections to CSA-06?

5 (No response.)

6 ALJ HYMES: Hearing none, CSA-06 is  
7 received into the record.

8 MR. LINDL: Thank you.

9 (Exhibit Nos. CSA-01 thru CSA-06  
10 were received into evidence.)

11 ALJ HYMES: I am not seeing any more  
12 hands raised, so I believe that is all for  
13 the day. We have gone through the schedule.  
14 We have gone through the motions. All right.  
15 Let me state again all parties who are  
16 actively participating in tomorrow's hearing  
17 should be present online by 9:30. I  
18 appreciate everybody's being present at 9:30  
19 this morning. Tomorrow there will be a  
20 smaller number of people so it should go  
21 faster.

22 There being nothing else to address  
23 today, we are adjourned until 10:00 a.m.  
24 tomorrow morning, Tuesday, July 27th.

25 We are off the record.

26 (Off the record.)

27 (Whereupon, at the hour of 5:06  
28 p.m., this matter having been continued  
to Tuesday, July 27, 2021, at 10:00  
a.m. the Commission then adjourned.)

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, ANA M. GONZALEZ, CERTIFIED SHORTHAND REPORTER  
NO. 11320, IN AND FOR THE STATE OF CALIFORNIA, DO  
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT  
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT  
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN  
THIS MATTER ON JULY 26, 2021.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE  
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED JULY 28, 2021.

  
\_\_\_\_\_  
ANA M. GONZALEZ  
CSR NO. 11320

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, ANDREA L. ROSS, CERTIFIED SHORTHAND REPORTER  
NO. 7896, IN AND FOR THE STATE OF CALIFORNIA, DO  
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT  
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT  
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN  
THIS MATTER ON JULY 26, 2021.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE  
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED JULY 28, 2021.

A handwritten signature in black ink, reading "Andrea L. Ross". The signature is written in a cursive style with a large, looped "R".

---

ANDREA L. ROSS  
CSR NO. 7896

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**EXAMINATIONS - CHRONOLOGICAL**

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**VOLUME 1**

**CARLA PETERMAN**

Direct Examination by Ms. Merlo	v1:38
Cross-Examination by Ms. Koss	v1:39
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**SUSAN TIERNEY**

Direct Examination by Ms. Merlo	v1:38
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**EXAMINATIONS - ALPHABETICAL**

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**PETERMAN, CARLA**

Direct Examination by Ms. Merlo	v1:38
Cross-Examination by Ms. Koss	v1:39
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Cross-Examination by Mr. Stanton	v1:79
Cross-Examination by Alj Hymes	v1:99

**TIERNEY, SUSAN**

Direct Examination by Ms. Merlo	v1:38
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Cross-Examination by Mr. Stanton	v1:79
Examination by Alj Hymes	v1:99
Direct Examination by Ms. Merlo	v1:100
Cross-Examination by Mr. Lindl	v1:102
Cross-Examination by Ms. Armstrong	v1:127
Redirect Examination by Ms. Merlo	v1:158
Direct Examination by Mr. Boyd	v1:160

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**EXHIBITS**

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EXHIBIT CRE-01 thru CRE-08 - 19	EV	v1:179
EXHIBIT CSA-01 thru CSA-06 - 18	EV	v1:181
EXHIBIT PCF-67 and PCF-68	EV	v1:177
EXHIBIT SVS-05	EV	v1:177