BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

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
) Rulemaking
) 20-08-020
Net Energy Metering.
)

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
INDEX

WITNESSES: PAGE

CARLA PETERMAN
Direct Examination By Ms. Merlo 38
Cross-Examination By Ms. Koss 39
Cross-Examination By Mr. Armstrong 43
Cross-Examination By Mr. Stanton 79
Cross-Examination By ALJ Hymes 99

SUSAN TIERNEY
Direct Examination By Ms. Merlo 38
Cross-Examination By Ms. Koss 39
Cross-Examination By Ms. Armstrong 43
Cross-Examination By Mr. Boyd 61
Cross-Examination By Mr. Stanton 79
Examination By ALJ Hymes 99
Direct Examination By Ms. Merlo 100
Cross-Examination By Mr. Lindl 102
Cross-Examination By Ms. Armstrong 127
Redirect Examination By Ms. Merlo 158
Direct Examination By Mr. Boyd 160


AEC-01 and AEC-02 17
ASO-01 and ASO-02 17
CSA-01 thru CSA-06 18 181
CWA-01 18
CRE-01 thru CRE-08 19 179
CLC-01 and CLC-02 19
CUE-01 and CUE-02 19
CCS-01 thru CCS-04 19
EWG-01, EWG-02 20
FWP-01, FWP-02 20
GRD-01, GRD-02, 20
GRD-03, GRD-04
IOU-01, IOU-02 21
IVY-01, IVY-02 21
NRD-01, NRD-02 21
PCF-01 thru PCF-68 30
PAO-01 thru PAO-05 30
SCL-01, SCL-02, 31
SCL-03
SVL-09 31
SBU-01 thru SBU-08 31
SVS-01 thru SVS-07 32
TRN-01 thru TRN-05 33
WAL-01 thru WAL-04 34
PCF-67 and PCF-68  177
SVS-05  177
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
of all, for all of the hard work you put into this proceeding so far and I know much more work that will be going moving forward. I really appreciate the creative and thoughtful proposals, in particular, all of the unique proposals and their differences on their transitions and in their visions on what we're actually transitioning to.

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

I did want to highlight one particular one that's of interest to me, the guiding principle that states that the successor tariff should enhance consumer protections. I know that Judge Hymes directed your testimony to explain how the proposals meet that principle and all the guiding principles. So, of course, over these couple weeks I really would appreciate you drawing that out. I know some of you had much more creative recommendations here than
others. If others could respond to those, I think that's excellent also.

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

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

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

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

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

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

The Commission really has a difficult task ahead of us in structuring the tariff that aligns with the guiding principles adopted earlier this year and as Commissioner Guzman Aceves has noted.
The NEM program has, as many of you know, a long and storied history. Many of you have been active since the very early days of the solar industry in California. I hope you will share that expertise in a productive manner and as I'm sure you will over the next couple weeks.

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

Judge, thank you for the moment to comment. And, again, I so appreciate you and I so appreciate Commissioner Guzman Aceves.

Thank you.

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

Before we begin, I want to review some ground rules necessary due to the nature of a virtual evidentiary hearing. This evidentiary hearing is on the record, and a court reporter is transcribing the discussion for the official transcript. As such, the court reporter will interrupt a speaker, when possible to do so without disruption, when there is or are inaudible statements or
portions thereof. When disruption is not possible, the reporter will insert the word "inaudible" in the transcript when there is dropped, garbled, or otherwise indecipherable audio.

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

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

Speakers must have both audio and video on and activated because you need to be visible when testifying and when asking questions. Only the judge and parties expected to speak, such as attorneys during a particular portion of the hearing, should have their cameras on.
Speakers must speak slowly, clearly, and one at a time and should pause between statements, especially during the question-and-answer examination. If someone else is speaking, you must not interrupt. If you wish to speak, please raise your hand by using the raise-hand button on the Webex and speak when called upon by me unless you're making an objection to a question during the course of the examination of a witness.

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

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

Could I get IT to put up a copy of the attorney attestation. Thank you. So the
attestations state:

Do you attest that you agree to the

evidentiary hearing in this incident
proceeding being held via Webex;

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

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

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

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

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

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

Attest that during the evidentiary
hearing you will only use the exhibits
premarked and identified by the parties;

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

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

    Steve Frank?

    MR. FRANK: Thank you, your Honor.

Steve Frank. My employer is PG&E, but for
the most part will be appearing today here on
behalf of the Joint Utilities, and I do
attest to those statements you just made.

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

    If you don't mind, I'd like to also
turn it to my colleague Ashley Merlo for her
attestations as well.
ALJ HYMES: Thank you.

Ms. Merlo.

MS. MERLO: Good morning, your Honor.

Ashley Merlo, PG&E. I agree to the attestations.

ALJ HYMES: Thank you.

And next up is Gregory Barnes.

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

ALJ HYMES: Thank you.

Next up I have Rebecca Meiers-De Pastino.

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

ALJ HYMES: Thank you.

Ann Trowbridge.


ALJ HYMES: Tim Lindl.

MR. LINDL: Good morning, your Honor.
Thank you. My name is Tim Lindl, L-i-n-d-l, on behalf of the California Solar and Storage Association. I agree to those attestations.

   ALJ HYMES: Nancy Rader?
   MS. RADER: Nancy Rader, not an attorney, but representing the California Wind Energy Association. I agree to the attestations.

   ALJ HYMES: Michael Boyd?

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

   ALJ HYMES: Rachael Koss.
   MS. KOSS: Good morning. Rachael Koss on behalf of the Coalition of California Utility Employees. I agree to the attestations.

   ALJ HYMES: Joseph Wiedman?

   ALJ HYMES: Steve Sherr?
   MR. SHERR: Good morning, your Honor.
Steve Sherr from Foundation Wind Power. I agree to the attestation.

ALJ HYMES: Katie Ramsey?

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

ALJ HYMES: Brian Cragg?

MR. CRAGG: Good morning, your Honor.


ALJ HYMES: Allie Detrio?

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

ALJ HYMES: Frank Lindh?

MR. LINDH: Good morning, your Honor.

This is Frank Lindh for Natural Resources Defense Council, and we agree with the attestations. Thank you.

ALJ HYMES: Aaron Stanton?

MR. STANTON: Good morning, your Honor.

This is Aaron Stanton, counsel for Protect Our Communities Foundation. I agree to the attestations. I would ask that my colleague, Ellison Folk, also be asked about the
attestations at this time.

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

    MR. STANTON: Ellison Folk.

    ALJ HYMES: Ms. Folk?

    MS. FOLK: Good morning, your Honor.

Ellison Folk appearing on behalf of Protect
Our Communities Foundation, and I agree to
the attestation.

    ALJ HYMES: Wayne Parker?

    MR. PARKER: Thank you, your Honor.

Wayne Parker representing the Public
Advocates Office. I agree to the attorney
attestation.

    ALJ HYMES: Matt Vespa?

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

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

    (No response.)

    ALJ HYMES: Itzel Berrio Hayward?

    MS. HAYWARD: Good morning, your Honor.

Itzel Berrio Hayward representing Small
Business Utility Advocates, and I agree to
the attestation. Thank you.

    ALJ HYMES: Jeanne Armstrong?

    MS. ARMSTRONG: Yes. Good morning,
your Honor. Jeanne Armstrong on behalf of
the Solar Energy Industries Association and
Vote Solar, and I agree with the attestation.

   ALJ HYMES: Matthew Freedman?
   MR. FREEDMAN: Matthew Freedman on
behalf of The Utility Reform Network. I
agree to the attestation.

   ALJ HYMES: Daniel Douglass?
   MR. DOUGLASS: Daniel Douglass on
behalf of Walmart, Inc. I do so attest.

   ALJ HYMES: Thank you.
   That is all I have on my list. Are
there any other attorneys? If you could
raise your hand.

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

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

   ALJ HYMES: Ms. Kantor?
   MS. KANTOR: Yes. Thank you, your
Honor. Julia Kantor, attorney for CALSSA. I
agree to the attestation.

   ALJ HYMES: Thank you.
   Thank you, everyone. All right.
Moving on to exhibits. Prior to going on the
record, parties provided exhibits to be
identified and marked for the record. If I could have my proceeding analyst pull up that list for me, I will then read it into the record. Let's go off the record.

(Off the record.)

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

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

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

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

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

And ASO-02, Rebuttal Testimony of Aurora Solar.

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


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

CSA-04, People's Energy
Cooperative-DG, or Distributed Generation,
Tariff.

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

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

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

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

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

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

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

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

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

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

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

CRE-07, CAISO Station Power Program Overview.
CRE-08, Station Power Tariff
Proposed August 17, 2018, Tariff Amendment.
(Exhibit Nos. CRE-01 thru CRE-08 were marked for identification.)

ALJ HYMES: CLC-01, Prepared Rebuttal
Testimony B. Schwartz.
CLC-02, Prepared Direct Testimony B. Schwartz.
(Exhibit Nos. CLC-01 and CLC-02 were marked for identification.)

ALJ HYMES: CUE-01, Testimony R. Earle.
And CUE-02, Rebuttal Testimony R. Earle.
(Exhibit Nos. CUE-01 and CUE-02 were marked for identification.)

ALJ HYMES: CCS-01, Prepared Direct
Testimony of Brandon Smithwood on Behalf of the Coalition for Community Solar Access.
CCS-02, Prepared Testimony of Mark Fulmer on Behalf of the Coalition for Community Solar Access.
CCS-03, Rebuttal Testimony of Brandon Smithwood on behalf of the Coalition for Community Solar Access.
CCS-04, Rebuttal Testimony of Mark Fulmer on behalf of the Coalition for Community Solar Access.
(Exhibit Nos. CCS-01 thru CCS-04 were marked for identification.)

EWG-02, Cook Prepared Rebuttal Testimony 7-16-2021.

(Exhibit Nos. EWG-01, EWG-02 were marked for identification.)

ALJ HYMES: FWP-01, Prepared Direct Testimony of Kevin Hauck, H-a-u-c-k.


(Exhibit Nos. FWP-01, FWP-02 were marked for identification.)

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

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


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

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

ALJ HYMES: IOU-01, Joint IOU Opening Testimony of SCE, PG&E, and SDG&E on Issues 2
through 6 of Joint Assigned Commissioners' Scoping Memo and ALJ Ruling Directing Comments on Proposed Guiding Principles.

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

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

ALJ HYMES: IVE -- excuse me.


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


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

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

ALJ HYMES: PCF-01, Opening Testimony of Tyson Siegal on Behalf of Protect Our Communities Foundation.
PCF-02, Resume of T. Siegel.


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


PCF-010 -- excuse me.


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

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


PCF-21, SDG&E Schedule DR,
PCF-23, Rulemaking 18-12-006,
Comments of the Joint CCAs on Sections 6, 11.1, and 11.2 of the Draft Transportation Electrification Framework, August 21st, 202.
PCF-24, Rebuttal Testimony of Bill Powers on Behalf of Protect Our Communities Foundation.
PCF-25, Resume of B. Powers.
PCF-27, EIA, California Profile - 2019, November 2nd, 2020, Table 8.
PCF-28, January 1st, 2019, PG&E Residential Rate Sheet, in xls.
PCF-29, SCE and PRIME Joint Rate Comparison, effective January 1st, 2019.
Projects.


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

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


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

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


PCF-39, Hawaii PUC Press Release,


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

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

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

PCF-46, Rulemaking 14-10-003, Integrated Distributed Energy Resources,

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

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


PCF-51, PCF Rulemaking 18-10 -007, The Protect Our Communities Foundation Comments on the 2020 Wildfire Mitigation.
Plans Pursuant to Resolution WSD-001, April 7th, 2020.


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

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

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


PCF-58, Sempra Press Release, SDG&E's Sunrise Powerlink reaches 1,000 Megawatt Renewable Energy Goal,
December 18th, 2014.

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

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

PCF-61, ICSREE 2020, Capacity Factors of Solar Photovoltaic Energy

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


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


PCF-66, Rulemaking 20-08-022, Clean Energy Finance Workshop - Day 2,
January 28th, 2021.

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

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

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

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

PAO-02, Prepared Rebuttal Testimony, various.

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

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


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

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

SCL-02, Prepared Testimony of E. Camp.

SCL-03, Prepared Rebuttal Testimony
of M. Vespa.

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

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

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


SBU-02, Qualifications of Paul L Chernick.

SBU-03, Qualifications of John Wilson.

SBU-04, Summary Residential Results.

SBU-05, Summary Commercial results.

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

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

SBU-08, Rebuttal Testimony of Chernick Wilson.

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

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

SVS-02 is the Prepared Direct Testimony of W. Giese.
SVS-03, the Direct Testimony of R. Thomas Beach on Behalf of SEIA and Vote Solar in Rulemaking 20-08-020 - NEM 3 - Final 7-22-2021.

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

SVS-05, this is a cross exhibit,

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

SVS-07, also a cross exhibit,

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

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

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

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

TRN-03, Rebuttal Testimony of
Michelle Chait.

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

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

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

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

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

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

(Off the record.)

ALJ HYMES: Back on the record.

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

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

WAL-04, Attachment Estimated Annual Energy Rate Value Per Kilowatt of Installed Solar SCE TOU-8D, and TOU-B.
WAL-05, Rebuttal Testimony and Exhibits of Steve W. Chriss on Behalf of Walmart, Inc.

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

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

(Off the record)

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

Mr. Parker?

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

ALJ HYMES: Thank you.

MR. PARKER: Thank you, your Honor.

ALJ HYMES: So noted.

All right. That concludes the exhibits to be identified and marked for the record for today. So let's move on to witnesses. Our witness cross-examination schedule for today includes the cross-examination of witnesses Peterman and
Tierney for the Investor-Owned Utilities.

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

(Off the record.)

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

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

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

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

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

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

That you understand that any
recording of a proceeding held by Webex,
including screenshots or other visual copying
of a hearing, is absolutely prohibited;

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

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

Attest that if you experience any
ttempts to tamper with your witness
testimony, you will report the occurrence to
the presiding officer immediately?

Witness Peterman, do you agree to
these attestations?

WITNESS PETERMAN: Yes, I agree.

ALJ HYMES: Thank you.

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

WITNESS TIERNEY: I do agree as well.

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

SUSAN TIERNEY, called as a witness
by Pacific Gas & Electric Company, having been sworn, testified as follows:

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

(Off the record.)

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

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

MS. MERLO: Good morning, everyone.

Ashley Merlo for PG&E.

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

ALJ HYMES: Let's go off the record.

(Off the record.)

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

Counselor, your witness.

MS. MERLO: Good morning --

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

(Off the record.)

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

Counselor.

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

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

THE WITNESS: Thank you, your Honor.

DIRECT EXAMINATION

BY MS. MERLO:

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

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

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

A  Yes, they were.

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

A  No, I do not.

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

A  Yes, they are.

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

A  Yes, they do.
Q Thank you.
   Your Honor, Dr. Peterman is now available for cross-examination.

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

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

   CROSS-EXAMINATION

   BY MS. KOSS:

   Q Good morning, Dr. Peterman.

   A Good morning.

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

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

   Q I'm waving at you.

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

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

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

   Q Great. And then on line 22, you say -- and I'm going to quote you -- "The
total amount of the NEM subsidy is
$3.4 billion per year and growing."

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

A  That is correct.
Q  And this number will continue to
grow as rates increase; right?

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

MS. KOSS: Your Honor, may I respond?

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

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

ALJ HYMES: I'll allow it.

MS. KOSS: Thank you.

Q  Okay. So this number, 3.4 billion,
in your testimony, this number will continue
to grow as rates increase; right?

A Yes.

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

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

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

A That is correct.

Q And still in your rebuttal
testimony going back to page 3, line 22, and
then continuing to page 4, line 6, you say
that the solar industry proposals in this proceeding would perpetuate that cost shift which would be unfair particularly to low income consumers; is that right?

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

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

A I see that now. Thank you.

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

A That is correct.

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

A That is correct.

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

ALJ HYMES: Any redirect?

MS. MERLO: No, your Honor.
ALJ HYMES: Okay. Next up we have
SEIA, Vote Solar.

CROSS-EXAMINATION

BY MS. ARMSTRONG:

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

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

(Off the record.)

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

BY MS. ARMSTRONG:

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

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

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

Together these programs reinforce
the State's commitment to and
support for sustainable growth and
renewable energy, economic
development, consumer choice, and

clean energy outcomes.

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA
SAN FRANCISCO, CALIFORNIA
When you say "these programs," I'm assuming you're referring to the programs you list on pages 11 through 13 that immediately precedes that statement.

A That is correct.

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

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

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

Q Okay. So the current NEM program -- (inaudible) -- revised NEM program, SGIP, and enhanced interconnections
are the three that immediately come to your
mind?

A That is correct.

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

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

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

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

Q Okay.

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

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

A Yes, I am aware.

Q Okay. And have the utilities
determined whether their proposal for a NEM
successive tariff will render the solar
mandate uneconomic?
A I'm not aware if we've done that explicit analysis. Another witness might be able to speak to that.

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

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

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

A Sure.

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

A Not in the details of it.

Q Okay. Well, if I could have you look at what's been marked as exhibit SVS-05, this is the cross-examination exhibit which I had sent over to you guys on Friday. Do you have that in front of you?

A I do.

Q And this is Frequently Asked Questions 2019 Building Energy Efficiency Standards. If I present this to you, were you familiar with this document?
A I wasn't familiar, especially with this document, not before you sent it.

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

A Yeah --

Q It comes from this document?

(Crosstalk.)

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

BY MS. ARMSTRONG:

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

A I did.

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

A Yes.

Q And under that scenario, the New Home Solar Mandate wasn't effective in certain climate zones. Is that correct based
on this document?
   A Yes. That's what the answer is in
   the document to Question 10.
   Q Do you know what avoided costs the
   CEC utilized in their evaluation?
   A I do not.
   Q Do you know whether the CEC
   factored in a grid benefits charge into its
   analysis of cost effectiveness?
   A I do not.
   Q Okay. Still on page 13 --
   A In my opening testimony?
   Q Yeah. We're still on the same page
   we were before in your opening testimony,
   page 13, and it's on line 18. You state,
   "The combined effect of these policies and
   market conditions create a positive outlook
   for solar expansion in the state as seen in
   Figure 1-4 below."
   And when you say "these policies
   and market conditions," are you referring
   solely to the New Home Solar Mandate or are
   you referring to something in addition? ]
   A I'm referring to the combination of
   policies that were referenced on the previous
   pages, as well as market conditions, which
   are detailed more in the testimony of Dr.
   Tierney.
Q     Okay. And turning to page 2, that
Figure 1-4 which we discussed, which was
pulled out of the CEC document, do you know
when this figure was constructed originally?
A     I do not know when it was
constructed originally.
Q     But based on the document, was it
from the 2019 to 2020 time frame?
A     That would be my assumption. But I
can't speak to that, since I didn't create
the actual chart.
Q     Okay. The lines showing the
increase in behind-the-meter solar, which is
the blue line on the graph, do you know what
assumptions underlie that estimate?
A     I do not, beyond what you pointed
me to in the Q and A.
Q     Okay. Okay. So on page -- turning
to page 14. On page 14 farther down,
starting in the section marked E, you began
to list certain problems in the current NEM
program. Then if you could turn specifically
to one of the problems you list on page 16
lines 4 and 5.
A     Got it.
Q     Okay. You state, the existing NEM
program fails to provide sufficient price
signals to promote more modern technology and
uses.

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

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

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

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


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

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

And "them," when you state "them,"
you are referring to NEM customers; correct?
A That is correct.
Q Okay. So if I'm a NEM customer and I have on-site 5 kW, for example. But my system is only producing 3 kW. I (inaudible) kW off the grid; correct?
A Sorry, what was that? You said 3 kW system, but you are using 5 kW?
Q Yes.
A Correct.
Q Okay.
A It will be using power from the grid.
Q Is this a situation you are referring to when you state on line 9 through 10 that the customer doesn't have sufficient on-site. I'm sorry. When you say on line --
(Reporter clarification.)
BY MS. ARMSTRONG:
Q Okay. I'm going to start this whole line of questioning again. I lost track.
A No problem.
Q On-site usage 5 kW and 3 kW system, we've established they will be taking 2 kW off the grid; correct?
A Correct.
Q And in that situation, is that type
of customer the type of customer you are
referring to on line 9 through 10 of your
testimony when you state our grid charge is
designed to the recover the cost we incur to
serve them when they do not have sufficient
on-site supply?
    A  Yes. Although, I should clarify,
with the example that you gave, they would be
pulling 2 kW when their solar system was
producing. When their solar system is not
producing, they would be pulling more from
the grid. Yes, that is the type of customer
I was referring to.
    Q  For the 2 kW they pull when their
full system is producing, they pay full
retail rate for that kW; correct?
    A  Yes.
    Q  Okay. If you could then scroll to
page 19. And I'm looking at line 1. It
states, customers lock in a hedge against the
future rate increases while adding an on-site
source of backup power for their homes will
be motivated to add storage and solar
systems.
    A  I'm sorry, Ms. Armstrong, just give
me a second. I'm finding it a little harder
to track. Oh, on top of page 20?
    Q  Yes.
A: Okay. Please go ahead.
Q: With that statement at the top of page 20, do you mean that customers will gain more certainty over their energy costs, solar plus storage?
A: Yes.
Q: Okay. And is it your testimony that customers wanting to lock in a hedge against future rate increases by adding solar plus storage will be able to do so under the IOUs' proposal in this proceeding?
A: I think there is opportunity to do that. The grid benefit charge though includes other components as well like public purposes programs, for example, and so there is other elements to it.
Q: I guess I'm a little confused by that answer. I was just asking whether the IOUs' proposal would allow solar plus storage customers to get the type of certainty you are talking about on the top of page 20 of your testimony?
A: Yes. I do I think it provides some level of hedge when you are talking about time-of-use pricing.
Q: Okay. And isn't it a part of the IOUs' proposal to set the benefits charge for storage customers at the same level as solar
customers now but then increase it in a
couple of years?
   A Yes, I believe it is.
   Q Would that type of change alter the
solar plus storage customers' ability
to (inaudible) certainty or in their rate, in
their future rates?
   A I'm not sure if I understood your
question exactly. Is it the equivalency with
solar and customers now that you are
referring to or the fact that it will be
different in the future? I'm sorry. Could
you repeat the question?
   Q Well, you stated that you believe
that the fees proposed would allow a solar
storage customer to have hedge against future
rate increases; correct?
   A Correct.
   Q Okay. But it is also part of the
IOUs' proposal to increase the GBC group
benefits charge for solar plus storage
customers in a couple of years; correct?
   A Correct.
   Q So how does the solar plus storage
customer get a hedge against future rate
increases under the IOUs' proposal?
   A I think that is a question that
would be better answered by one of our rate
experts who will testify later. I don't have
the exact numbers in front of me, but I still
think it allows for some form of hedge.

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

   (Audio interruption.)

ALJ HYMES: Let's go off the record.

   (Off the record.)

ALJ HYMES: We will be back on the
record.

BY MS. ARMSTRONG:

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

   A    Yes.

   Q    This is going on to page 4 as well.
But you state that although most of the solar
industry advocates acknowledge that some
level of cost shift exists, the proposal
actually perpetuates the cost shift to a very
gradual transition away from the current NEM
model. And then at the top of the next page
you say, apparently, this (inaudible) of new
customers to purchase product and services
and/or their own customers' ability to adapt
to (inaudible) in the context of a changing
market.
Do you have any experience in marketing a solar product?  
   A   I do not.
   Q   Okay. And am I correct that even using the Joint IOUs' own numbers that if a customer invests in stand-alone solar, he will earn a zero percent internal rate of return over 19 years in PG&E's service territory?
   A   That is consistent with my recollection.
   Q   You think it may be difficult to convince a customer to invest in a product that provides the customer zero return on its investment for almost 20 years?
   A   I think there still remains a value proposition for solar, especially when you consider the life of that system. So it may be harder, but there is still value proposition. And in terms of our proposal, we really do think we want to be promoting and transitioning customers to invest in storage plus solar.
   Q   When you talk about solar value proposition in there, so does the -- does the average customer/person stay in their home for over 20 years these days?
   A   My parents do. They've got the
same house for over 20 years, so...

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

A Several, as a renter.

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

A I do.

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

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

A I would say "consumer."

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

A No.

Q Okay. And can you tell me what is confusing about a locked-in export
compensation rate that has been the same for 20 years?

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

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

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

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

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

I think the different vintaging levels, the drop-down between the different steps may go off target between the different
utilities. Those all lead to different
customer rates being different, depending on
obviously when they signed up and what
territory they are in, et cetera. And it is
hard to predict the times when those
transitions would happen. They are not
calendar based. They are based on getting to
certain megawatt levels.

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

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

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

A Ms. Armstrong, you cut out for a
minute. Would you remind repeating the
question?
Q Yes. Are you familiar with the Section of Dr. Tierney's testimony that talks about bookings to other sources besides rates for the funding of solar incentives?

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

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

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

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

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

Would you refer to the page again, please.

Q It is page 61, line 4 to 6.

A All right. Please go ahead.

Q Yeah. So in that section of your testimony you state the Commission should focus reducing the cost shift and then condition expansion of incentives to others besides qualified customers of the availability of funds from sources besides
utilities' electricity rates.

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

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

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

THE WITNESS: Thank you.

ALJ HYMES: Thank you. Any redirect?

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

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

(Off the record.)

ALJ HYMES: We will be back on the record.

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

ALJ HYMES: Okay. Thank you. Next up I believe is Mr. Boyd from CARE. Mr. Boyd, are you ready to proceed?

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

ALJ HYMES: Yes.

CROSS-EXAMINATION

BY MR. BOYD:
Q Hi Carla. I'm Mike Boyd from CARE.

A Hello.

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

A Thank you.

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

A Yes, I am.

MR. BOYD: Thank you.

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

ALJ HYMES: Mr. Boyd, we have provided all exhibits to all participants purely to not -- so that we don't have to share your screen, because that slows the -- it can cause technical difficulties.
MR. BOYD: Understood. Thank you for clarifying that.

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

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

Q  Okay. Sorry. It is page 19.

A  Okay.

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

A  Would you repeat your question, then?

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

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

Q  And when you say "avoided cost" you
are not talking about PURPA avoided cost, PURPA being Public Utilities Regulatory Policy Act, which is a federal statute?

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

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

A    Okay.

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

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

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

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

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA
SAN FRANCISCO, CALIFORNIA
referenced. I don't have 04 in front of me.

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

ALJ HYMES: Yes.

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

ALJ HYMES: Let's go off the record.

(Off the record.)

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


ALJ HYMES: Let's go off the record.

(Off the record.)

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

BY MR. BOYD:

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

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

MR. BOYD: This is Exhibit 4, yes.

THE WITNESS: And Figure 8, Mr. Boyd?

BY MR. BOYD:

Q What's that?

A Figure 8 is the title of it on --

Q Figure 8, yes, ma'am. Figure 8.
A     Okay.
Q     And the other one I'm referencing
is on page 5 -- page 4, excuse me, of my
opening testimony, the California ISO 2001
Summer Assessment, Version 1.0, which is
Exhibit 5. And I'm referencing -- when you
get that exhibit, I'm referencing page 9,
Figure 1-A on page 9.
A     I have them both pulled up now.
Thank you.
Q     So you can turn to that. Okay.
Let's go to -- so my first question has to
go -- let's look at -- on page 4, that figure
says, "2000 Peak Day Resource Summary" --
this is on Cal ISO. It's got the Cal ISO
mark on it -- Wednesday August 16, 2000.
Do you see that figure? It's the
colorful one. It's on --
A     In the second document in the --
okay. Yes.
Q     It's in the, yeah, the first
document, my --
A     Okay.
Q     -- opening testimony. Okay. Do
you see that?
A     I do.
Q     So my question is -- let's use
Doc Brown's a thousand megawatts is a
gigawatt. Remember Doc Brown from Back to the Future?
A I do. Good hair. Yeah.
Q So let's just use a -- so how many gigawatts do you see for peak on that August 16, 2000? What's your guesstimate?
A I will tell you, Mr. Boyd, the y-axis is a little blurry so I'm going to say it looks like 42, but I can't -- it's hard for me to precisely say.
Q Yeah. My guess was 43, but that's okay.
A Okay.
Q Not being correct. It's what the truth is. So go in -- now, let's go up to the Figure 8 and then look at the one that says "Cal ISO net load." It's like the second figure down.
Do you see that, ma'am?
A I do.
Q So now going over to 2019 on the far right, do you see that little peak there?
A I do.
Q And you see how that figure -- is it your understanding that's what's called a duck curve?
A Yeah. I would say this is consistent with what the duck curve is
supposed to represent.

    Q  Okay. Very good. So what would
you guesstimate in gigawatts peak the peak
was?
    A  I mean this is the net load so -- I
mean I'm just --
    Q  Got it.
    A  Yeah. I mean the net peak, you
know, everything on renewables looks to be
like 22 gigawatts but --
    Q  Okay.
    (Crosstalk.)

BY MR. BOYD:

    Q  I said 25 so...
    A  All right. 25 it is.
    Q  We're just guessing. I understand.
So but now would you agree that -- that
since -- assuming that the next figure above,
which shows solar penetration -- do you see
that one?
    A  I do.
    Q  Would you agree that the solar
penetration has reduced the peak demand by
roughly 18 gigawatts? Again, you don't have
to answer if you don't feel comfortable.
    I can't hear you.

ALJ HYMES: Ms. Peterman, you're on
mute. Let's go off the record.
(Off the record.)

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

Mr. Boyd.

BY MR. BOYD:

Q Okay, Carla, great to see you back.

What I was asking you about is solar
penetration that's shown in this Figure 8 on
page 3 of my -- of the opening testimony.

And what it goes to is on -- just for
information -- is on page 4 of your
testimony, line 3, you're talking about one
of the program's purpose is to encourage
reduction in peak demand. Okay.

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

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

THE WITNESS: -- immediate question --

BY MR. BOYD:

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

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

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

A  Yes.

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

A  Yes, I would.

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

Do you have that document, Carla?

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

Q  Okay.

A  Okay. I'm here.

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

A  I'm here.

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

A  Yeah, I do. So there's numbered
paragraph and then there's the second paragraph on page 10, so do you want me to go to number 2 or --

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

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

Petitioners have presented a strong case that the Alabama Commission failed to adhere to the regulations set forth in FERC Order No. 69 violating the requirements of PURPA Section 210. Section 210(c) of PURPA requires that the rates for utility sales to qualifying facilities, QF, be just and reasonable and in the public interest and not discriminate against QF. Order No. 69 implements these requirements. In Order No. 69, the Commission recognized that partial requirements, QF, are
likely to have the same
characteristics as the load of
other nongenerating customers of
the utility, in which case the
appropriate rates for sales to
such a facility is the rate that
would be charged to a comparable
customer.
To charge a different rate
consistent with Order No. 69, the
rate must be, 1, based on accurate
data; 2, be established using
consistent, system-wide costing
principles; and, 3, apply to the
utilities' other customers with
similar load or other cost-related
characteristics.
While a demonstration that the
Alabama Commission had violated
any single prong of these rules in
establishing rate rider RGB
tariffs would be enough to show
that it failed to adhere to Order
No. 69, petitioners present
arguments that none of these
prongs may have been met.
Number 3, most significantly,
petitioners argue that Alabama
Power did not apply the rate rider RGB or back-up service charge to its other customers with similar load or other cost-related characteristics.
The Alabama Commission and Alabama Power justified the charge as nondiscriminatory because a QF customer, as compared to a customer without on-site generation, may have lower volumetric usage but comparable peak usage that requires Alabama Power to have an adequate power supply ready for peak times. However, neither sufficiently demonstrate that QF customer load profiles are in fact different from those of customers without on-site generation who are not required to pay this rate rider RGB charge. If QF customer-usage patterns are comparable to those of customers without on-site generation to reduce volumetric consumption through other means, the current application of the rate rider RGB
charge may be discriminatory.

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

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

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

Q  Okay. Thank you for that answer.

Final question. It's just a general question
about the grid benefit charge. Would the NEM
customer generator grid benefit charge have a
fair or reasonable relationship to the
payor's burdens on or benefits from the
activity?
A: I believe it should.

Q: Okay. Thank you very much for your time.

I'm done, your Honor.

A: Thank you, Mr. Boyd.

ALJ HYMES: Thank you.

Any redirect? Can you not hear me?

MR. BOYD: I couldn't hear her.

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

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

(Off the record.)

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

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

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

(Off the record.)

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

Ms. Merlo please repeat that last statement.

MS. MERLO: This is Ashley Merlo. We
have no redirect for Dr. Peterman.

ALJ HYMES: Okay. Thank you.

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

(Off the record.)

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

We'll be off the record.

(Off the record.)

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

* * * * *
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
Honor.

ALJ HYMES: So, Ms. Peterman, I just want to remind you you are still under oath. Counsel for PCF, you may proceed.

MR. STANTON: Thank you, your Honor.

CROSS-EXAMINATION

BY MR. STANTON:

Q Dr. Peterman, can you hear me?

A I can.

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

A That is correct.

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

A I'm Executive Vice President of Corporate Affairs.

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

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

Q Thank you.

A 2021.

Q Oh, thank you. In addition to this proceeding, what other CPUC, California Public Utilities Commission, proceedings have
you worked on as the executive vice president for PG&E?

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

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

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

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

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

Q  Thank you. And was -- your
position at SCE, was that your position immediately prior to your current position at PG&E?

A  Yes, it was.

Q  When did you begin working at SCE?

A  October 2019.

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

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

Q  And what was your position title at SCE?

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

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

A  That is correct.

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

A  Again, there's another officer who's lead over regulatory affairs and so more of my time is spent looking
enterprise-wide more so than specific
ingagement at the PUC. In terms of share of
my time in terms of thinking about
PUC-related matters, maybe I would say
20 percent, 25 percent.

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

A That's correct.

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

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

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

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

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

A I would say I reviewed it all,
commented, had total editing rights over it, as well as supporting developing the concept. In terms of the initial pen to paper? Zero percent in terms of the initial pen to paper, but definitely a heavy hand in putting it together on behalf of us.

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

A I did not.

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

A I did not.

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

(Background noise Interruption.)

THE WITNESS: I did not.

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

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

A I'm on that page.

Q Okay. So line 8 of subsection E, this is the first bullet point that starts,
"The program is not cost effective."

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

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

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

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

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

A Yes.

Q Thank you. The second complete bullet point paragraph on page 15 of your opening testimony is the paragraph that says lower income customers are proportionately harmed. This paragraph asserts, quote, "The cost shift is particularly unjust and unreasonable because it is inequitable,"
closed quote. Later on in at paragraph that NEM, quote, "Is an income transfer from our poorer customers to wealthier ones," closed quote.

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

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

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

A  Yes. I would agree that it often does.

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

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

Q  So as a commissioner on the PUC, during your time as a commissioner, did you ever vote to approve rates that would shift
payments responsibility from the less wealthy
to wealthier customers for ratepayers that
you can recall?
A I'm sure that was a result of some
of the things I voted for.
Q And as a commissioner on the PUC,
did you ever vote to approve rates that would
shift costs from commercial customers through
residential customers?
A I imagine that happened sometimes
as well.
Q I would ask you now to turn to
page 18 line 21. This is Subsection F. I
will go there myself as well. This is the
bottom of the page. Are you ready?
A I think so.
Q Thank you.
Okay. So these -- the lines I'm
interested in states the IOUs' proposal,
quote, "is based on our cost to serve. This
is basic tenet of utility ratemaking, and it
is the foundation of the appropriate NEM
successor tariff," closed quote. Is that an
accurate reading of those lines?
A Those lines sound familiar. I'm
just trying to find where exactly -- oh, on
the -- the last bullet bolded. Is that where
you are reading?
Q Yes; that is correct.
A Yes.
Q Later on in this paragraph, I believe it is the last few words on the page, I'm going to read it. It says, designing reform tariff around having all customers pay their fair share of what it costs to serve them, and better aligns everyone's interests and needs. Is that accurate as well, the reading?
A It is.
Q Do you agree that the utilities' revenue requirement is the basis upon which customers' rates are established?
A Yes.
Q And do you agree that the cost of service of those customers is generally the metric used for establishing customer rates?
A It is a guiding principle. As you just talked about, it is oftentimes an aspiration. There is reasons why sometimes you don't do that.
Q And is the avoided cost calculator ever used to determine a utility's revenue requirement?
A Not explicitly.
Q And are these Joint IOU calculations of the purported NEM cost shift
based on the cost of service?

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

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

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

Q Thank you.

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

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

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

Q One second. I'm just looking at
some of my notes here.
The next question will relate to page 19 line 3 and 4. The next section right after the one that you were just talking about.

A I'm there.

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

A That is correct.

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

A No, we do not.

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

A I think they can.

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

A There are different elements to a contract that can affect that, and as the market rate does change, depending on the hour as well.
Q  So, yes; is that --
A  Yes.
Q  -- correct? I'm sorry. I think I talked over you.
A  No, no. I appreciate you getting to the point. I'll just say "yes."
Q  Thank you.
And do the IOUs pay suppliers different amounts based on the location of the energy that is being delivered?
A  Sometimes.
Q  So yes?
A  Yes.
Q  Thank you.
The next question is going to relate to page 21 lines 1 to 3. So page 21 lines 1 to 3 is your opening testimony, asserts that the Joint IOUs' proposal will allow customer-sited renewable generation to continue, I'm quoting these next three words, "to grow sustainability," closed quote; is that correct?
A  Yes, it is.
Q  Then the last sentence of Footnote 43, which is a footnote to that bullet point, and also a quote from the E3 successor RF options report. That sentence states, quote, "The choice of a rate framework that ensures
best practice must treat customer generators comfortably than nonparticipating, while at the same time maintaining a viable value proposition to customers investing in on-site renewable generation, as measured by providing a reasonable payback period."

Do you agree with that statement?

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

A  Yes, I agree with that sentence.

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

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

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

A  That is page 105, you said?

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

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

Q  Okay. Great.
So this paragraph or, sorry, this
Table IV-14 contains the illustrated
estimated payback periods of participating
PGSC customers; is that accurate?
   A  That is accurate.
   Q  So the table estimates that the
    payback periods, or stand-alone solar under
    the Joint IOUs' proposal, would range from 15
to 19 years, depending on the utility; is
    that correct?
   A  That is correct.
   Q  Would you consider 19 years to be a
    reasonable payback period?
   A  I would.
   Q  In your current role at PG&E, your
    responsibilities include developing and
    implementing strategies for charitable
giving; is that correct?
   A  Yes.
   Q  Are you familiar with the
    organization Affordable Clean Energy for All?
   A  I am.
   Q  And does PG&E donate to Affordable
    Clean Energy For All?
   A  Yes, it did.
   Q  And did PG&E donate to the
    Affordable Clean Energy for All Fix the Cost
    Shift campaign?
A    Yes.
Q    I would like to ask you to take a
look at the cross-examination exhibit served
this morning. If you could pull that up.
That is, let's see, it is titled -- where is
the title? Hang on one second. There we
are. Affordable Clean Energy for All
Coalition list.
A    Which number is that, 67?
Q    That is -- it is either 67 or 68.
I can't recall at the top of my head which
one it is first. It is Affordable Clean
Energy For All Coalition is the title.
A    Okay. I have it.
Q    Thank you. I will get to that in
one second.
But I want to ask you another
question about PG&E's donation to the
Affordable Clean Energy For All Fix the Cost
Shift campaign. Do you know how much PG&E
donated to this campaign?
MR. MERLO:  Your Honor, this is Ashley
Merlo. This is beyond the scope.
MR. STANTON:  May I respond to the
objection, your Honor?
ALJ HYMES:  You may respond.
MR. STANTON:  This line of questioning
is intended to -- as it relates to the equity
argument that is being advanced by the Joint
IOUs, and also whether that argument can
weather its support in terms of the
coalition, it being manufactured by the Joint
IOUs.

ALJ HYMES: I'll allow it.
MR. STANTON: Thank you.
Q I believe that my last question
was: Are you aware of how much money PG&E
donated to the Affordable Clean Energy for
All Fix the Cost Shift campaign?
A I am not. And I should also share
that, as you know, I recently started at
PG&E. So I wasn't at the company when they
initially contributed. And it also wasn't
instilled in my role at Edison, but I know
that information is publicly available.

Q Okay. Thank you. Just to confirm,
that information is beyond the scope of your
role at SCE?
A It was not in my scope of role at
SCE. I did not have that part of the
organization in my leadership role.

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

Q Understood.
Are you able to say where the information is publicly available?

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

ALJ HYMES: Let's go off the record.

(Off the record.)

ALJ HYMES: Back on the record.

MR. STANTON: Thank you, your Honor.

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

BY MR. STANTON: Thank you.

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

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

Q Thank you.

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

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

Q All right. Okay. Does PG&E donate
to the members of the Affordable Clean Energy
For All campaign, or organization?

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

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

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

BY

MR. STANTON: I will rephrase the
question.

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

A  I am not.

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

A  I can't.

Q  So not including the Joint IOUs
themselves, can you name any Affordable Clean
Energy For All coalition members that are not
receiving donations from the utilities?
A  I can't. It really gets to my
familiarity with the organization. And
the -- in charitable giving. As I said, I'm
new in the role, so this is not something I'm
aware of at this time.

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

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

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

A  I do not know.

Q  All right. Just a few more
questions.

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

A  I did send a letter on behalf of
the Joint Utilities raising some questions
about process as it relates to what was a
pending decision.
Q    Did the Commission issue any sort
of warning or other adverse action in
relation to that letter?
A    They did not. The letter was
served on the service list at the same time
it was provided to the Commission.
Q    Okay. I would like to take -- I'm
sorry. I realized I have another.
So speaking of that letter, you
mentioned that it included some objections to
process. Did it include any substantive
objections as well?
A    I don't have the letter in front of
me to recall.
Q    Okay.
A    It may have. I just don't have the
letter in front of me.
Q    I would just like to consult my
notes to see if I have any questions that
I've dropped. Thank you for your patience.
Do you recall if the letter on
February 10th objected to the use of the
total resource cost?
A    I recall it was mentioned, but I
don't remember the explicit objection. But
it was a letter that was getting at just a
question about the resource cost aspect being
appropriate impact that could be used as part
of the principles, I believe. I just don't recall the specifics.

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

A I am.

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

ALJ HYMES: Any redirect?

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

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

(Off the record.)

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

EXAMINATION

BY ALJ HYMES:

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

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

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

THE WITNESS: Thank you.

ALJ HYMES: You are excused.

THE WITNESS: Thank you, Judge Hymes.

Have a good afternoon.

ALJ HYMES: Thank you. All right.

Then let's go off the record.

(Off the record.)

ALJ HYMES: We'll be on the record.

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

THE WITNESS: Hello?

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

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

MS. MERLO: I apologize.

DIRECT EXAMINATION
BY MS. MERLO:

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

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

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

A  Yes.

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

A  No.

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

A  Yes.

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

A  Yes.

Q  Thank you.
Your Honor, Dr. Tierney is now available for cross-examination.

ALJ HYMES: Thank you.

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

MR. LINDL: Thank you, your Honor.

CROSS-EXAMINATION

BY MR. LINDL:

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

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

A Yes.

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

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

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

A No.
Q Have you ever reviewed a rooftop solar company's financial statements such as an income statement, a balance sheet, or a statement of cash flows?

A Ever? Yes.

Q In the past year?

A No.

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

A Yes.

Q All right.

A Okay. I am there.

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

A Yes.

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

A Yes.

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

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

A I am there.

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

A Yes.

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

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

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

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

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

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

Q  Okay.

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

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

A  I did that myself.

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

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

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

A  Yes.

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

A  Yes.
Q So if you had a 17-kilowatt system, the way you would calculate that fee is to multiply two kilowatts times the amount of the fee?

A That would be my understanding.

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

A Yes, I do.

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

A I have not looked at that question.

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

A I would have said 5 to 7.

Q Okay.

A Yeah.

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

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

Q Fair enough. Okay. Thank you. And in this case, the Joint IOUs are proposing a solar specific fee that would apply to all system sizes; correct?
A  Yes.
Q  Okay. Thanks. Okay. Let's move north. If you go to lines 13 to 15 in your rebuttal, please, on that same page.
A  I'm there.
Q  All right. And here you're talking about the New York capacity-based charge; is that correct?
A  I am, the customer benefit contribution charge.
Q  Right. Thank you. And that charge is calculated to recover funding for public benefit programs; correct?
A  Yes.
Q  Did you have a chance to review what's marked as CALSSA Exhibit 3, CSA-03, prior to testifying today?
A  I did.
Q  Okay. And at the bottom of page 26 going on to the top of page 27 in the highlighted language there, do you agree that that language discusses how the charge in New York is calculated to cover -- recover public benefit program costs such as low-income programs and energy-efficiency programs?
A  Yes, on a dollar-per-kW basis.
Q  Okay. Thank you.
A  Yes.
Q  And do you agree that that charge
is not intended to recover transmission or
distribution or generation costs; correct?
A  I would not say that. And the
reason I quibble is that the New York-Sun
program includes generation.
Q  Okay. But beyond the New
York-Sun --
    (Crosstalk.)
THE WITNESS: And the Green Bank does
as well.
BY MR. LINDL:
Q  I'm sorry, I talked over you there.
A  I talked over you. Sorry.
Q  So the New York-Sun and the Green
Bank programs. Besides those programs, the
charge does not recover distribution,
transmission, or generation costs. Is that
safe to say?
A  I still would -- there are elements
of the funding for low-income customers that
would be across those customers' bundled
bill.
Q  Okay. So it would be a subsidy for
the generation costs that those customers
would pay?
A  I don't know the nature and rate
design of the low-income support program in
New York. It could cover any part of the
bundled bill.
    Q  Okay. That sounds good. Thank
you. All right. And then do you agree that
customers on the Phase 1 Net Metering program
in New York would still have access to
monthly netting similar to the customers in
South Carolina?
    A  To the best of my recollection,
there's a chart in my testimony that I could
refer to to answer that question, but that's
consistent with my recollection.
    Q  Let's go to that chart. I think
it's in Appendix B on page B-29.
    A  That's not the chart I'm talking
about.
    Q  Oh, okay.
    A  I'm talking about Table 2-3 in the
opening testimony.
    Q  Okay. Can you go to --
    (Crosstalk.)
    THE WITNESS: Yes. Would you tell me
again.
    BY MR. LINDL:
    Q  Sure. It's Appendix B of IOU-01,
page B-29 -- or -- yes, page B-29.
    A  My --
    Q  It should --
Appendix B goes to page 21. Wait a sec, please. I'm sorry. Too many documents here.

Q    No problem.
A    All right.
Q    Are you there?
A    Yes.
Q    So Table 14. I believe it's on page B-29.
A    Yes.
Q    And the third row down says "Netting Interval."
A    Yes. And it says -- (Crosstalk.)

BY MR. LINDL:

Q    Okay. Thank you very much. Lastly, can we go to page 67 of your rebuttal.
A    Yes, page 67.
Q    Yes. At the top of page 67. On lines 1 through 3, you discuss the People's Energy Cooperative, which is a small electric cooperative serving about 19,000 customers in rural Minnesota; is that right?
A    Yes.
Q    Okay. Thank you. And on line 3, you state that the grid access fee there applies to facilities above 3.5 kilowatts; is
that correct?
   A Yes.
   Q And then you state that the maximum
   fee is $37 per month?
   A That's right.
   Q All right. Did you have a chance
   to review the exhibits that have been
   premarked as CSA-04?
   A Yes, I did.
   Q And in the highlighted language in
   the middle of that page, on page 27 there, do
   you agree that the maximum monthly fee not to
   exceed for residential customers is $22?
   A I do see that. And I note that
   this must be an updated version of the rate
   sheet compared to the one that I relied upon,
   which is cited in the footnote.
   Q Okay. So the maximum fee is no
   longer $37. It's $22 is what you would
   assume happened there?
   A Yes.
   Q Okay. Thank you. Do you agree
   that the People's Energy Cooperative in
   Minnesota is not allowed to charge both the
   grid access fee and the minimum bill?
   A I don't remember.
   Q So you don't recall if in a 2017
   decision the Minnesota PUC would disallow a
charging of both of those fees?

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

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

A Yes.

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

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

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

A Yes, I have it in front of me.

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

A Does a child need you?

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

A Page 41 of my direct?

Q Yes.

A I was looking for a section number,
but it must be on a prior page. Sorry.

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

A  I'm with you.

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

A  Yes. I think I even used that term.

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

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

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

A  That's my understanding, yes.
Q Okay. Thank you. So taking a look at the horizontal blue line in that figure, do you agree the forecasts for -- excuse me.

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

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

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

A Yes.

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

A I did.

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

A Yes. Among other things, but yes.

Q In the highlighted language on page 2, do you agree that the article states, "At the moment, the average cost of a lithium
ion battery pack is about $140 per kilowatt hour"?

A I do see that there.

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

A I do.

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

A Yes. You --

Q So a hundred and --

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

Q Yes.

A Yes.

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

A Yes.

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

A Yes.
Q  So considering that line, the blue
line, and the red line, is it fair to say
that there are a pretty wide range of
estimates of when batteries will reach
certain cost levels?
A  Yes. And that is indicated also in
the article that you asked me to review that
is CSA-05 exhibit.
Q  Okay. And at least some of these
articles are wrong with regard to when
storage would have reached certain levels;
correct?
A  Well, every prediction is wrong
until you come to see what happened. Some of
these are older studies that were projecting
things in a nearer term period of time such
as a study from 2009, 2015, 2018, and so
forth.
Q  Right. So but some of them are
wrong; is that right?
A  They did not predict where we are
actually today.
Q  Yeah. Okay. Thank you. All
right. Can we go to the next page, please,
Table 2-5.
A  Yes.
MS. MERLO: I'm sorry, which exhibit
are we looking at right now?
MR. LINDL: IOU-01 still for direct.

MS. MERLO: Thank you.

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

MS. MERLO: Thank you.

BY MR. LINDL:

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

A Yes.

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

A Yes.

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

A Yes.

Q Per megawatt hour; correct?

A Yes.

Q Okay.

A For behind-the-meter residential storage.

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

A Yes, 40.6.
Q  Do you agree that $506 per megawatt hour is equal to 50.6 cents per kilowatt hour?
A  Yes.
Q  So in 2020 battery storage cost customers between 40 and 50 cents per kilowatt hour according to this study; is that right?
A  Yes.
Q  Okay. Thank you. Is another way of saying that that it would cost a customer somewhere between 40 and 50 cents to shift load from one time-of-use period to a later time-of-use period?
A  Not necessarily.
Q  Well, if the cost of energy from a storage system is between 40 and 50 cents per kilowatt hour and the way that you would shift load from one TOU period to another TOU period is to absorb that load and then to have that load be produced at a different time, wouldn't the cost of shifting that load be between 40 and 50 cents?
A  Based on the assumptions here in this study, which are what would be the levelized cost to obtain this investment and then run it over its life at a certain set of injections and withdrawals, it would be
between 40 to 50 cents. That doesn't tell me that it's automatically the way that you're thinking about it.

Q  Why is it not automatically the way that I'm thinking about it?

A  Because the actual investment of having the storage provide optionality and other things that would not be monetized by the study for the consumer who's using it.

Q  Okay. So there are other benefits stored than just the energy that would come from the storage?

A  To the consumer, sure.

Q  Thank you. Can we take a look, please, still in IOU-01, so this is the Utilities' direct testimony at page 113.

A  I am there.

Q  All right. Can you take a look at Table 4-16, please.

A  I'm there.

Q  Okay. Now, I know you did not sponsor this part of the IOUs' testimony, but do you agree that Table 16 shows PG&E's E-DER rate, the default rate that a nonCARE customer would end up on if they signed up for the IOUs' successor tariff?

A  If approved by the Commission, yes.

Q  Yes. Okay. Thank you. And do you
agree that the biggest differential there
between the summer on-peak rate and the
summer off-peak rate is about 18 cents per
kilowatt hour --
  A Yes.
  Q -- 40 minus 22? Okay. Thank you.
So just to be clear because we talked over
each other for a second there.
  A I agree.
  Q Thank you. And can we go to
page 116, please.
  A Okay. Yes.
  Q And this is Table 4-17. That
should show the summer on-peak of 54 cents
and the summer off-peak of 22 cents, which is
about a difference of about 32 cents; is that
correct?
  A I do see that.
  Q Okay. So at least in terms of
speaking about energy, the cost of an energy
storage system is between 40 and 50 cents in
2020. And under this tariff, the benefit to
the customer for just the energy portion
would be between 18 and 32 cents; is that
correct?
  A Yes.
  Q So would you agree that the market
is getting closer to providing an economic
benefit for customers for load shifting, but that the cost of storage has not quite decreased to the point where the customer would see more value than cost when it comes to shifting load?

A You use the word "value," and I am aware that the analyses and surveys of what customers are looking for when they are obtaining storage is the ability to have back-up power. When the cost is -- there's -- they would have power at any cost in some sense because they're not being able to get it from the grid.

Q Right. If I had used the term economic benefit simply from energy, would you agree that storage has a little ways to go with regard to that narrowly-defined aspect or component from an energy storage system?

A If we're talking about electric energy, yes, a cent per kWh, yes.

Q Thank you, Dr. Tierney. All right. Can we move on, please, to your direct testimony at page 48. This is IOU-01, page 48.

A Okay.

Q Thank you. So I have it as line 7 to 8 in the corrected version of the IOUs'
testimony. It might be lines 3 to 4 if
you're using the original. So I'm just going
to read you the sentence and we'll try to
find it together. So you state:

   The cost trends in solar and solar
   paired with storage installations
   will tend to support households' 
   continued adoption of new solar 
   installations through small
   companies.

   Is that right? ]

A   I must be on an entirely wrong
page, could you tell me the page again? I
thought you said to go to rebuttal.

Q   I'm sorry, no. If I did, I
misspoke. I apologize. We should be at
IOU-1 the direct exhibit, at page 48.

A   I do apologize. Okay.

Q   All right. And again, either at
line 3 to 4 or lines 7 to 8, you state that
cost trends in solar and solar paired with
solar installation, will tend to support
confused options of new solar installation
through small companies; correct?

A   I do say that on lines 3 to 4 of
both of our documents.

Q   Thank you.

What is your definition of a small
company when you say "small companies"? What
do you mean by that?
   A  Twenty-five people, 50 people.
   Q  Okay. Thank you.

Now, in response to a Cal Serve
data request response, this was served as
impeachment exhibit this morning, so it is
Data Request 11.05, you explain a little bit
more about this statement and that it is
meant to apply more to solar-only systems
rather than solar plus storage systems; is
that right?
   A  Yes.
   Q  So small companies should be able
to install solar-only systems due to the cost
trends under the IOUs' tariff?
   A  Yes.
   Q  Okay. Did you rely on any
California-specific data or research to reach
that conclusion?
   A  I think that the literature that I
have reviewed includes California and other
states.
   Q  Okay. So it is national literature
that included California?
   A  Yes.
   Q  Okay. Thank you.

All right. Looking again at that
data request response, do you agree that smaller solar companies may have more difficulty in accessing supplies that introduce storage than larger solar companies?

A  Yes.

Q  Thank you.

And then you also state, I believe, right after that in that data request, that larger solar companies have been focused on developing relationships with providers of storage technologies; is that right?

A  Yes.

Q  Do you think that smaller companies have not been trying to establish those relationships or that smaller companies are at a disadvantage when trying to establish those relationships with energy storage manufacturers?

A  I think there could be disadvantages associated with volume.

Q  Yes. Okay. Thank you.

So at least in the near-term, do you agree that it would be more difficult for a smaller solar company to cope with a new tariff that is deemed at encouraging the inflation of energy storage systems as 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     A    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
bit better. But can we go back to your
rebuttal for just a moment, please --
(Crosstalk.)
A   Rebuttal, which page?
Q   Page 118, please.
A   I'm with you.
Q   Okay. Thank you.
On line 6 to 8 you are discussing a
study on lands use and the resources
California might rely on to reach its climate
goals, its clean energy goals; is that right?
A   Yes.
Q   Okay. And on line 9 you discuss
the study's conclusion that investing in, I'm
going to use the term "clean firm power,"
will reduce the footprint of the energy
systems necessary to achieve California's
climate goals; is that right?
A   Yup.
Q   Do you agree with the term "clean
firm power" as used in that paper includes
nuclear power, natural gas with carbon
capture sequestration, and hydrogen power?
A   Yes.
Q   And in your opinion are those
technologies currently viable paths to
decarbonization in a state like California?
A   They are not currently viable paths
yet in any state in the United States. These
are not ready for prime time.
    MR. LINDL: Thank you. Your Honor, I
don't have any further questions. Thank you,
Ms. Tierney.
    ALJ HYMES: Thank you. Any redirect?
    MS. MERLO: Your Honor, we may have
some. May I consult with the witness off the
record?
    ALJ HYMES: Okay. Off the record,
please.
(Off the record.)
    ALJ HYMES: Let's go back on the
record.
    Go ahead, please.
    MS. MERLO: This is Ashley Merlo for
PG&E. We have no redirect for Dr. Tierney.
    ALJ HYMES: Thank you. Ms. Armstrong?
    MS. ARMSTRONG: Yes.
CROSS-EXAMINATION
BY MS. ARMSTRONG:
    Q Dr. Tierney, I'm Jean Armstrong
here for the Solar Energy Industries
Association and Vote Solar. And I'm going to
do all your direct and then all your
rebuttal, so you won't be checking back and
forth.
    If I could get you to turn to
page 31 of your opening testimony, in particular line 13. Here you state -- here you state some utilities in other states, including some with much lower rooftop solar penetration rates in the Joint Utilities (inaudible) stressed such cost shift by adopting successor tariffs. Then you go on to state, notably adopted in Arizona, Hawaii, Nevada, New York and South Carolina.

Then if you go on to page 34 at line 1, you state, in improving (inaudible) successor tariffs, state regulators in Arizona, Hawaii, Nevada, New York, and South Carolina have approved rate mechanisms such as those included in the Joint Utilities' proposal.

I take it from that last sentence that you are familiar with the components of the IOUs' proposed successor tariffs?

A Yes.

Q Okay. I'm just going to put through a few of those. My understanding that each customer will be on a rate schedule with a fixed charge ranging from approximately $12 to $24, depending on the IOU?

A I thought it was a little less, but there is a range of approximately that
length.

Q  And each customer will receive an
export credit rate based on the ACC, the time
of export periods that match the TOU periods
of the underlying tariff?

A  There was a lot in that mouthful.
Would you please just say that again?

Q  Okay. I'll just break down.
Each customer will receive an
export credit based on the ACC; is that
correct?

A  The most current ACC, avoided cost
calculator, yeah.

Q  Right. And that export credit rate
would be updated annually?

A  Yeah.

Q  And each customer will pay a grid
access charge ranging from approximately $10
to $14 per kW?

A  Yes.

Q  Depending on the IOU? Okay.
And the grid access charge will
change annually; is that correct?

A  To the best of my recollection.

Q  And there will be instantaneous
netting under the IOUs' proposal?

A  Yes.

Q  Okay. So keeping all those
comments of the IOUs' proposal in mind, can
you tell me which of the states you
previously referenced, Hawaii, Nevada,
Arizona, New York, or South Carolina, have
all those elements in its successor tariffs?
   A    None of them have all of those
elements, and none of them have the situation
facing California right now.
   Q    Okay. So that is -- I just needed
that clarification.
   So going on to page 35 at lines 3
and 4.
   A    Yes.
   Q    You state as shown in Figure 2-10,
solar PV capacity has continued to increase
in the states before NEM tariffs even with --
I'm sorry -- longer payback periods.
   And so looking at Figure 2-10, I
want to ask you a few questions about this.
First, this figure is based on cumulative
capacity installed; correct?
   A    Yes.
   Q    Okay. And first, looking at Duke
Energy, which is the orangeish line near the
bottom. You have as sort of a milestone,
which is the orange circle, the legislation
that was passed in South Carolina in 2019;
correct?
A  Yes.
Q  Did that legislation actually change Duke Energy's NEM program?
A  Not yet, no.
Q  Okay. And isn't it true that the changes to Duke's Net Energy Metering Program are not slated to go into effect until January 2022?
A  That is my understanding, based on the approval.
Q  And this chart, this Figure 2-4 that we are looking at, it ends in October of 2020; correct?
A  Yes, it does.
Q  Okay. So this chart really doesn't show us the impact of the NEM reform for Duke Energy; does it?
A  Not precisely. The reason I answer that way is that the legislation created some signals to the market with regard to the ability to reconsider the structure and level of that successor tariff.
Q  But those changes have not yet gone into effect; correct?
A  That is correct.
Q  And in looking next at National Grid. This is New York, and they are the light blue line.
A Counsel, because I have a black and
white print, I need to just open the file. I
apologize.

Q Okay. That is fine.

A I know I was trying to be cost
conscious here. I will be with you in just
one minute, not a whole minute. There we go.

Thank you.

Q Okay. So we are talking about
National Grid New York, and there is a light
blue line in this figure. And you have
marked here sort of as a first benchmark some
time in 2017 the Phase 1 NEM VDER decision.

Do you see that?

A Yes.

Q Isn't it correct that that decision
determined that residential and small
commercial customers should remain on NEM and
not be transferred to the VDER tariff?

A It gave them the option to go to
the VDER tariff.

Q But you did not require; correct?

A Correct.

Q And then the second milestone you
have for National Grid New York is the New
York mass market decision that occurred in
July of 2020. Do you see that this?

A I do.
Q  Do you know whether the changes made though the NEM program in that decision have gone into effect yet?
A  They have not quite gone into effect yet. But there is signaling to the market, of course, with regard to the new dollar per kW charges that will be included.
Q  But it is correct that those changes will not go into effect until January 2022?
A  Correct.
Q  Okay. And then looking at the next one is Nevada, which is the green line. And here you have as a first sort of benchmark as the ND -- excuse me -- net billing tariff in 2016. Do you see that?
A  Yes.
Q  And based on this graph that you had, it seems like the market somewhat plateaued until 2017 when you have next benchmark NDNG net metering restored. Would that be an accurate assessment?
A  To me it looks like it has gone up 50 megawatts during that period.
Q  Okay. So a slow growth period?
A  There is additions of rooftop solar occurring during that period.
Q  But you would agree with me that
after the net energy metering was restored in Nevada that the market grew significantly more?

A Yes.

Q Okay. And then next you have SMUD, which is the black line. Isn't it true that SMUD has not implemented a NEM reform tariff yet?

A That is true. There are some charges that are indicative of time-of-use rates, as well as a fixed charge. But they have not -- they proposed but did not yet adopt the -- a formal NEM successor tariff.

Q Okay. Finally we have Hawaii. And if you look at that, move on for HECO Utilities, I apologize, the black line, SMUD was the gray line. But for HECO Utilities, it seems that between the time that the reform tariff was passed in 2015 and present October 2020 when you did -- the last thing on this chart, there was approximately 125 megawatts installed in Hawaii?

A Yes. And in Hawaii that is pretty big.

Q Do you know how much of that 125 megawatts was installed as a result of projects in the net energy metering queue when the decision came down in Hawaii in
2015?
   A I don't.
   Q Okay. So moving off this chart to page 36.
   A Yes.
   Q And here in Figure 2-4, you have charts, particularly payback period of solar investments in other states. And for those payback periods, did you rely on the February 2021 study review of net metering reforms across select U.S. jurisdictions compared by North Carolina State University? You said Footnote 27, so I'm assuming -- Footnote 40, I'm assuming you did or didn't?
   A I really apologize. That was a whole lot in your question. I wasn't sure --
   Q Okay.
   (Crosstalk.)
   Q Okay. At the top of 2-4, the table, you have listed several utilities and their estimated payback periods under the reform tariffs. Did you rely on the study prepared by North Carolina State University for the Joint IOUs for that information?
   A I was with you until you said "Joint IOUs." Are you asking me about the three rows at the bottom that are the three Joint IOUs?
Q   No. I'm asking if you relied on
the study that the Joint IOUs had prepared by
North Carolina State University in order to
get these numbers at the top of the chart of
2-4?
A   Yes.
Q   Okay. And I note that you actually
cite that study in Footnote 40 at page 27 of
your testimony.
A   Footnote 40 page 20?
Q   Seven, 27.
A   I must have different footnote
numbers. It is on page 27, and the footnote
begins, this will be referred to as the
FCC --
Q   Yes. I was just wondering: Are
you adopting that study as part of your
testimony?
A   In the sense that I included it as
an attachment. That sounds like a legal
question, so I --
Q   Well, let me ask you another way:
Are you the witness that can answer questions
as to the accuracy of the payback numbers
contained in that study?
A   I am familiar with their
methodology. I don't know the answer to your
question.
Q Well, did you do any analysis of your own to verify the accuracy of the result of that study?
A I did not.
Q Okay. So back on page 36 of your direct testimony.
A I'm with you.
Q Okay. You have listed for Duke South Carolina in Table 2-4 a payback period of 19.3 years. Do you see that?
A I do.
Q I take it from our decision that you did not do your own analysis to verify the accuracy of that number?
A Correct.
Q Have you reviewed the opening testimony of the Vote Solar witness Thomas Beach?
A I have read it, yes. I have not memorized it.
Q Neither have I.
He does testify as to the payback period for the Duke settlement. Are you aware of that?
A I didn't recall that.
Q Okay. As part of discovery request by the Joint IOUs, we provided workpapers of Mr. Beach's calculations of the payback
period dealing with the Duke settlement. Did you review the workpapers?

    A No.

    Q Okay. Turning to page 44?

    A I am there.

    Q Line 11-12, and here you state -- one moment. I think I've lost my place.

    Yes. It is line 10.

    You say solar industry trends that were not present 25 years ago will help guide distributed adoption of behind-the-meter programs.

    Is it your testimony that these trends will enable sustainable growth in the behind-the-meter solar market, even if the Commission adopts the Joint IOUs' proposal?

    A I haven't thought about this in terms of the language in AB 227, which is not precisely the language you asked me.

    Q I was just asking you -- okay. If the Commission adopts the Joint IOUs' proposal for successor tariffs, is it your opinion that the Commission will have met its obligation under AB 227 to ensure sustainable growth in the industry?

    A It is my opinion, which is not a legal opinion, of course, that these trends support a finding that customer-sited
generation facilities will grow sustainably
in California.

Q  And when you say "grow
sustainably," what do you mean?

A  Within the context of the
fundamental word of "sustainable," which is
living within your means, and being able to
afford your lifestyle, and so forth.

The situation for these three IOUs
that it is not, in my opinion, it is not
sustainable to have the level of cost shift
going on. So in that sense, for me it is
consistent with the phrase of sustain --
customer-sited meters -- excuse me --
customer-sited generation will grow
sustainably.

Q  So you are taking "sustainable" to
mean living within your means, not -- is that
what you are taking "sustainable" to mean in
the statute?

A  Yes, in the sense that there are
circumstances that are real in California
from the IOUs with regard to --

Q  Okay. Thank you. On page 44 at
line 15 to 16, you say:

Recent public communications from
the solar industry through SEIA
point to a number of drivers of
continued growth in the market for rooftop solar. And then you proceed to pull a number of statements off the SEIA website, which are just both in the rooftop solar market; is that correct?

A I missed the last 10 words that you said.

Q Okay. So you pulled a number of statements off the SEIA website; correct?

A Yes.

Q And these addressed growth in the rooftop solar market; correct?

A Yes, and in some circumstances, other portions of the solar industry as well.

Q Okay. And these statements from the SEIA website, are they limited to California or do they address the nationwide solar market?

A It depends upon the statement. Some of them address California, some of them are more broadly describing the industry across the country.

Q Okay. And did some of these statements -- let me rephrase. Do all these statements refer just to rooftop solar?

A No. Some of them are about both rooftop solar and utilities solar.
Q  Okay. Before replicating the
statements from the SEIA website in your
testimony, did you talk to anybody at SEIA
regarding these statements?
A  No, I didn't. I was taking them
for face value from reading the website.
Q  Do you know any of the assumptions
that go behind these statements?
A  I'm a little thrown off by the
question. Is that a technical question that
you're asking me with regard to assumptions
or --
Q  No. Let me rephrase.
(Crosstalk.)

BY MS. ARMSTRONG:
Q  Do you know whether, when these
statements were posted on the SEIA website,
they were taking -- they were assuming that
the Joint IOUs' net successive tariff
proposal would be adopted in California?
A  I don't have any idea what they
were assuming -- what SEIA was assuming when
it posted with regard to the Joint Utilities
proposal.
Q  Well, you're listing these things
as evidence from the industry that the
California market will continue to grow. I'm
just trying to determine whether these
statements were, to the best of your
knowledge, made assuming that the Commission
would adopt the Joint IOUs' proposal.

A    I think that's not what I'm saying.

That's not my testimony in this particular
portion of my testimony. I say that things
have changed in the industry broadly in the
25 years since California adopted the NEM
program, and I talk about a number of trends
going on in the industry about a much more
mature industry that exists in California and
elsewhere since 25 years ago.

Q    Okay. So these statements or
excerpts on SEIA's website weren't meant to
indicate that the rooftop solar market would
continue to grow in California if the Joint
IOUs' proposal was adopted?

A    My intention in including these was
to say this is a different industry --

Q    That's not my question.

A    -- in 2021. I thought I was trying
to answer it. Okay. So tell me again.

Q    I'm saying is it correct that these
excerpts from the SEIA website included in
your testimony were not meant to be an
indication of continued growth in the
California rooftop solar market if the
Commission adopted the Joint IOUs' proposal?
A Not exactly as you phrased it.
Q Thank you.
A No, it -- that -- I must have misspoken because that's not my -- what I meant to say was --
Q Well, if your attorney wants to ask you to clarify, she can do that on redirect; okay?
A Okay. I apologize.
Q That's okay. If we could go to page 46 and here starting at line 24.
A Yes.
Q You say, "Major solar companies anticipate growth in customer adoption of solar and other DERs considering several trends."

And then as support for that proposition, you cite to presentations to investors made by the three largest solar companies; is that accurate?

MS. MERLO: This is Ashley Merlo. Can I just interject for a moment? I think the lines you're referencing start at line 33 on page 46. I don't know if you're looking in the IOU Exhibit 1 or if you're in an earlier version of our testimony that was filed.

BY MS. ARMSTRONG:

Q Okay. I'm sorry. I might have
been in an earlier version. Do you see the
lines -- the sentence that starts "Second,
major solar companies anticipate"?
A  I do.
Q  And as support for that, that sort
of proposition, you cite to presentations to
investors made by three large solar
companies; is that correct?
A  Yes, from three large solar
companies.
Q  Okay. And these presentations, is
it correct they focused on the nationwide
market and not just the California market
exclusively?
A  Sure.
Q  Okay. And do any portions of the
presentation focus solely on California?
A  Not that I'm aware of.
Q  Okay. Thank you. Then going down
to page 61.
A   61?
Q   Yes, 61.
A   6, 1?
Q   6, 1. Actually -- yes. And this
was a section of your testimony that I spoke
with Dr. Peterman about this morning. I
don't know if you were on the Webex or not at
this time, but --
A    I did listen, yes.
Q    Okay. So you state -- and I
   apologize if I have the wrong copy, but it's
   on my page 61, line 4, in the sentence that
   starts, "In this proceeding."
   Do you see that?
A    I do see that paragraph.
Q    Okay. So you state:
   In this proceeding, the Commission
   should focus on reducing the cost
   shift and then condition the
   expansion of incentives to others
   besides income-qualified customers
   upon the availability of funds
   from sources other than utility
   rates.
   So are you supporting subsidies --
   I'm sorry. So you are supporting subsidies
   to income-qualified customers through utility
   rates; correct?
A    To a certain degree, yes, in order
   to accomplish a portion of the AB 327
   provision -- directive, I'll put it that way.
Q    And then if you could go back a
   page to page 60 at lines 8 through 10.
A    Could you just give me a sec to
   read this one. Okay. Thank you.
Q    Okay. And just to make sure we're
on the same line, it's the sentence that
starts, "First, embedding financial
subsidies."

Is that what you were reading?

A It was.

Q So you say:

Embedding financial subsidies for
adoption of rooftop solar - and
doing so without eliminating a
cost shift - has the effect of
increasing electricity rates and
undermining the goal of
electrification of buildings and
vehicles.

Don't low-income subsidies like
CARE also have the effect of increasing
electricity rates and undermining the goal of
electrification of buildings and vehicles?

A Yes. Those address a different
goal the Commission has, which is of course
equity and affordability.

Q Would you support shifting CARE
subsidies to be funded by nonutility funding
as well?

A You asked me about CARE. I am
aware of other subsidies for low-income
consumers' use of energy, and so I do support
that in a big way.
Q  Okay. I'm not sure I understand.
You know about the California CARE program to
provide lower rates to income-qualified
customers?
A  Yes, I do.
Q  Okay. And that's funded through
electric rates; correct?
A  Correct.
Q  I'm asking you if you would support
shifting that to being funded by non -- you
know, sources from other than electric rates?
A  That would be great. There are
other subsidies that support low-income
customers today that are funded by taxpayers.
Q  What about the above-market costs
for RPS resources? Should those be shifted
to nonutility funding sources?
A  They are indirectly funded by
nonutility sources through tax subsidies.
Q  Are you aware of the PCIA charge in
California?
A  I am.
Q  Is that not correct above-market
costs for RPS resources through utility
rates?
A  Yes.
Q  And would you support shifting that
over to funding outside of the utility rate
spectrum?
A  I haven't thought about that because those were costs incurred by the utility in anticipation of surveying electricity customers' needs. That seems to me to be appropriate cost-based cost-recovery mechanism through utility rates.
Q  Fair enough. If you could turn to rebuttal now.
A  And I can put this aside; right?
Q  Yep.
A  Okay.
Q  And here I'm looking at page 116.
A  I am with you.
Q  Yeah. Sorry. Starting at line 22, you state -- I'll make sure I'm on the right page. Hold on. Okay. Yeah. You state:
Indeed, both rooftop solar and utility-scale solar will be needed to help California meet its climate goals, even if it's not clear today how much will be deployed during different time periods or different periods of time.
Correct?
A  Yes.
Q  And then if you go to page 118 at
lines 3 to 4 -- wait. I'm sorry. I meant at
lines 4 to 5.

A Yes.

Q You state, "Either way, the study
identifies the need for substantial
deployment of rooftop and utility-scale solar
capacity in California."

And by "the study," you're
referring back to the Nature Conservancy
study called The Power of Place; is that
correct?

A Yes.

Q And from these two statements that
we've just gone through, I take it that you
agree that California will need the continued
deployment of a substantial amount of rooftop
solar in order to meet its GHG reduction
goals?

A Yes, and many other things as well.

Q Okay. If you can go to page 123 --

ALJ HYMES: Let me interrupt just a
moment. Could I double-check with everything
to make sure you're all muted. Thank you.

THE WITNESS: I'm on page 123.

BY MS. ARMSTRONG:

Q Yes. Okay. Here in section F, you
begin a discussion of what you state is a
false equivalence between the NEM and RPS
programs, which was offered by SEIA and Vote Solar. In particular, at line 14, you state:

Even though the NEM program supports a renewable resource; i.e., solar power, the NEM program neither technically nor practically advances the ability of the state to satisfy its RPS requirements.

Do you see that?

A I do.

Q Would you agree that a key constraint in the California Integrative Resource Plan is meeting the 2030 and 2045 greenhouse gas goals?

A Could you rephrase the question.

Q Are you aware -- let me take it a step back. Are you aware of California's Integrative Resource Plan -- Planning Proceeding?

A Generally, yes.

Q And are you aware that the Commission runs models in that proceeding to determine various resource mixes to meet its GHG goals?

A Generally, yes.

Q Based on that, would you agree that one of the key constraints in meeting -- one
of the key constraints in meeting -- in running that model is -- let me just -- let me just scrap that question. It's getting too in the weeds. Let's just scrap it and move on. Something similar -- simpler. Does MWh of rooftop solar produced between 4:00 and 5:00 p.m. have the same impact on reducing GHG emissions as the MWh of utility-scale solar produced in that same hour?

A It depends.
Q It depends on what?
A It depends upon the dispatch of the system and whether or not you're in a mode where you cannot curtail rooftop solar technically and you might have to curtail other resources on the system at that point in time. And those might include utility-scale solar that needs to be curtailed.

Q Okay. But I'm just asking. Let's say you do have a megawatt hour of rooftop solar produced between 4:00 and 5:00 and you do have one produced by rooftop solar at the same time. Don't they have the same impact on reducing GHG emissions?
A Yes. Generally, yes.
Q Yes. Okay. When a customer
install solar, does that customer generally
take less power from the utility?
    A Yes.
    Q Does that reduction result in lower
utility sales?
    A All else equal, yes.
    Q Is Utilities' RPS obligation based
on a percentage of its sales?
    A Yes.
    Q Okay. Going to page 124 near the
bottom, section G.
    A Yes.
    Q You begin a discussion of why you
believe that NEM systems aren't analogous to
energy efficiency. And on page 125 at lines
9 to 12, you state, "By serving a portion" --
are you there yet? I'm sorry.
    A Yeah.
    Q Okay. You state:
        By serving a portion of their own
energy requirements, NEM customers
avoid paying for and shift their
share of the cost of service to
nonparticipating customers
resulting unfairly in having
nonparticipating customers cover
NEM customers' share of critical
costs such as wildfire costs.
Correct?
A That's what it says.
Q Okay. If a customer reduces the load they place on the grid by 1 kWh in a particular hour, does it matter from a cost recovery perspective that the load reduction is due to energy efficiency or from a rooftop solar panel?
A For what purpose? Would you state the question again.
Q It's from a cost recovery purpose if that's what you're asking.
A I totally apologize, but would you say the whole question again.
Q Sure.
A Thank you.
Q If a customer reduces the load they place on the grid by 1 kWh in a particular hour, does it matter from a cost recovery perspective whether that load reduction is due to an energy efficiency measure or reduction from a rooftop solar panel?
A I would say it depends.
Q And why would it depend? Isn't the impact of each the same?
A Not necessarily from the point of view of the utility that needs to plan for handling that customer's load requirements.
going forward.

Q     I'm talking -- okay. But for that one hour in time that we're talking about, somebody reduces their load by 1 kWh for an energy efficiency, another person reduces it by use of rooftop solar. Are you saying those two reductions are not equivalent from a cost recovery perspective?

A     What I'm saying is that the utility has to plan for meeting customers' loads. And if the energy efficiency reduction is dependable during certain periods of time, that is inherently different from the intermittent nature of the rooftop solar load being supplied in that one hour.

Q     Well, can you give the example of an energy efficiency measure that is reliable, you know, every hour of the day, every day of the week.

A     Actually that's not what I was saying. I was saying in that hour, there are appliances and measures that you could install that dependably reduce loads in that hour.

Q     But as --

(Crosstalk.)

BY MS. ARMSTRONG:

Q     But as a utility, you wouldn't know
which hour of the day which appliance is being utilized by each customer who has one; is that correct?

A    Well, you know if you're installing a more efficient set of windows in an electric home, that might reliably reduce the air conditioning load or the heating load in that hour.

Q    That's true. But does the utility know I've installed energy efficient windows in my home? I don't call PG&E and tell them I've done that.

A    I thought we were talking here about energy efficiency measures in the context of utility programs that deliver energy efficiency, and those are the programs that are paid for --

Q    Okay.

A    -- by consumers, the customers --

Q    Well --

A    -- of the utility.

Q    Okay. So you're testifying that the utility, based on their programs that they implement, you know, for energy efficiency, they can estimate the amount of reduction in load that will occur on a reliable basis from those programs?

A    I am aware of multiple studies,
retrospective studies, that look at the
expected value of a particular energy
efficiency program in different hours of the
day across a body of customers, so, yes. I'm
sorry I didn't just say yes in the beginning.

Q  Okay. If you could turn to --
let's see, I think it might be the same page.
Hold on one moment. Yes, still on page 125
but down near the bottom at line 25, you
state, "By contrast, NEM customers do not
dependably reduce the load by relying on
on-site solar generation due to the
intermittency of solar resources."

And then on the next page, you have
an example, a Figure 6-13, that --

A  Yes.

Q  -- is entitled "Illustrative
Example of Intermittent Rooftop Solar." I
want to clarify, this figure, 6-13, is this
just based on one customer?

A  This is an illustrative customer,
yes.

Q  Okay. And have you presented any
analysis on the record of this proceeding
demonstrating the coincidence of this
intermittency of solar resources throughout
the state or in a regional planning area?

A  No, I have not.
Q  And are you aware that system operators have become better at forecasting solar output for large rates of solar and incorporating such forecasting into their operational and capacity planning?

A  Yes, generally.

Q  Okay. What is the biggest load during the peak load summer hours that you're aware of? What generally is the largest load?

A  Are we talking about California?

Q  Yes.

A  I don't know the answer to that.

Q  Would you take subject to check that it's probably the air conditioning load?

MS. MERLO: I'm going to object. This calls for speculation. She said she didn't know.

BY MS. ARMSTRONG:

Q  Okay. All I can tell you is I'm sitting here in Sacramento sweating in this jacket. It is air conditioned. Thank you. That's all the questions I have.

A  Thank you very much.

ALJ HYMES: Any redirect?

MS. MERLO: Can we have a moment, please, your Honor?

ALJ HYMES: Sure. We'll be off the
record.

    (Off the record.)

ALJ HYMES: We will be back on the record.

   Actually, let's hold off going back on the record.

    (Off the record.)

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

   Attorney for the utilities?

REDIRECT EXAMINATION

BY MS. MERLO:

    Q Good afternoon, Dr. Tierney.

    A Good afternoon.

    Q When Ms. Armstrong was asking you questions about the bullets on pages 44 to 45, excuse me, 45 to 46 in IOU Exhibit 1, I think you have something in addition to add to your response regarding the intent behind those bullets. Did you have something you wanted to add there?

    A Yes. I did want to add when I said "not exactly" on the record in response to her question. What I meant to convey was this trend five, which has to do with the maturation of the solar industry is part of my logic and understanding of why I think California can feel confident that the
customer-sited generation will continue to
grow sustainably for a variety of reasons,
including the fact that this industry has
come so far, both in California and in other
states around the country. And it is a
grownup industry at this point in time.

Q Ms. Armstrong also made reference
to above-market costs regarding PCIA. Do you
recall that line of questioning?

A I do.

Q Okay. Did you -- do you have an
opinion about whether these costs are above
market?

A No, I don't.

Q Do you believe that they are above
market?

A What I understand is that those
costs represent the -- today's dollars
associated with contracts that were put in
place at different periods of time to serve
customers' load based on conditions at the
time the contracts were put in place. And
there are today circumstances in which power
can be provided more economically than under
those prior contract terms.

MS. MERLO: No further questions, your
Honor.

MS. ARMSTRONG: Can you hear me?
THE WITNESS: (Witness nods.)

MS. ARMSTRONG: Can you hear me?

MS. MERLO: Yeah.

MS. ARMSTRONG: I have no questions based on that.

THE WITNESS: Thank you.

MR. AVILA: Your Honor, I believe you are on mute.

ALJ HYMES: I apologize. I have to look at it. Mr. Boyd, you are up next.

MR. BOYD: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. BOYD:

Q Hi, Susan. My name is Mike Boyd and I'm with CARE, Californians for Renewable Energy. All my questions are voluntary. If you don't feel comfortable with any of them, just tell me you don't feel comfortable and I'll move on --

(Crosstalk.)

Q My first -- I appreciate that. My first question has to do with page 57 lines 8 through 10. You say, utilities are purchasing power from NEM customers at a price much higher than what those utilities pay for supply, i.e., avoided cost from other sources of electricity, including other solar projects. And then on page 58 you make the
MS. MERLO: Mr. Boyd, one moment. I think the witness needs a second to orient herself.

THE WITNESS: I didn't hear which testimony we were talking about, so I wasn't sure where to go.

BY MR. BOYD:

Q I'm sorry. I don't do rebuttal testimony. It is all opening testimony. Rebuttal is like criticism, and I don't believe in criticism.

A Got you. I wish I could have grown up in your school, or something.

Q It is a tragic expression of an unmet need.

Tell me when you are ready.

A Got it.

Q On 57, I'm at pages 8 to 10. I read the utilities are purchasing power from NEM customers at a price much higher than what those utilities pay for supply, i.e., avoided cost from other sources of electricity, including other solar projects.

And then if you go to page 58 at lines 5 through 7 you say NEM 2.0 tariffs include evidence that utilities pay more to NEM customers than what they would pay to
other suppliers for the same amount of energy
and other electric grid benefits.

        Did I read that right?
        A    Yes. And just for the court
reporter, I think when we were talking about
the sentence that you quoted on page 57, that
was line 8 and 9 and 10, not page 8, 9 and
10, just FYI.

        Q    Thank you for that correction.
        So to address these two statements,
I would like to the ask you to go to two
exhibits. They are CRE-07 and then the other
one is number 8.
        A    I have them.
        Q    Okay. California ISO Station Power
Program Overview. I wanted you to go to the
first page on there, and then number H, just
to get you ready. On the sixth page there is
this paragraph where it starts with the word
"Sixth." If you could find that, then I
can...
        A    So I am on page 1 of CRE-07, it is
page 1, which is numerically numbered on the
bottom of page 1. Is that where I'm supposed
to be?
        Q    Correct, exactly.
        A    I don't know where I'm supposed to
be on CRE-08.
Q  Number 6, page 6 of the document.
    A  Okay. The sixth page is page 18 at
    the top?
    Q  Yeah, page 18 at the top.
    So what I'm going to ask you to do
first is read on Exhibit 7 page 1, the first
paragraph starting with the word "Station
Power." Do you see that there?
    A  I do. The very first paragraph.
    Q  Then I want you to skip the second
paragraph. And on the third paragraph I want
you to read it until the second footnote,
Footnote 2, and stop there.
    A  Okay.
    Q  Thank you.
    A  "Station Power is energy" --
    MS. MERLO: Your Honor, I'm going to
interject for a moment. The document speaks
for itself. Do we need to have this all read
into the record?
    MR. BOYD: Can I reply, your Honor?
    ALJ HYMES: Yes, you may.
    MR. BOYD: I'm doing it to provide
context to my question so that it is kind
of -- I feel it is important to provide that
context.
    ALJ HYMES: However, in the essence of
time, I believe that reading silently is
faster, just in the essence of time.

BY MR. BOYD:

Q Did you already have an opportunity to read this, Susan?

A Yes. Give me 30 more seconds, please.

Q Certainly.

A Okay.

Q You ready?

A Yes.

Q Okay. So what in your mind is this saying "station power" is?

A Station power is the energy used to operate axiliary equipment and other load directly related to the product of energy by a generating unit, and that includes some activities that are needed to support the purpose of generating electricity.

Q And would you consider that station power to be retail or wholesale power that is provided by a third party like a utility?

A In the context of this document or generally?

Q Both.

A Generally, there are lightbulbs being used in an office attached to a power plant. That office might be taking power at retail for the lightbulb.
Q  That is my understanding too,
Susan. That when we are talking about
station power, we are talking about retail
ergy, not wholesale energy, correct, in
general?

A  In general, yes.

Q  Okay. Would you -- now, and your
understanding of the NEM program, do we -- do
we net the retail? Do we net the energy at
retail, or do we net it at wholesale?

A  Right now?

Q  Yeah.

A  For NEM 2.0?

Q  Yeah.

A  We net it at retail.

Q  Okay. Am I correct to read that if
you read the last sentence in the first
paragraph there it says, Cal ISO station
power program generators convert their
station power from retail service to
wholesale service. Would that mean that they
are netting station power at wholesale as
opposed to retail?

A  That is what I'm interpreting this
document to be, this document to be saying.
I have not seen this document before you
provided it to me this weekend. So I'm just
attesting to the words that are on this
program -- on this document. I don't know
more about the program than this.

Q Thank you. I appreciate that. So
now let's move on to the Exhibit 8.

A I'm with you.

Q Okay. And then on page 6 would you
read that paragraph starting with six local
regulatory authorities such as CPUC allow
resources to receive wholesale treatment per
station power.

A I see that.

Q Would you agree that they are
paying a generator for their own storage
capacity at wholesale, not at retail?

MS. MERLO: I'm sorry. Can you -- if
the witness understood the question, that is
fine, but I did not understand the question.

BY MR. BOYD:

Q Would it help to repeat it, or you
just want to move on? If you are not
comfortable with me asking it, that is not a
problem.

A I'm comfortable with you asking it.
I truly did not totally follow the question.

Q Okay. So basically I'm asking
if -- so, for example, NEM, I'm assuming that
as a NEM customer generator with storage that
I would be compensated at retail, just like I
would be compensated for not having -- for not having storage. So what I'm trying to show is that on the generator side, they are getting compensated at wholesale, not at retail.

And there was a prior person that was asking you something about 50 cents a kilowatt-hour for storage. So that is what I'm trying the clarify. With station power are they, if assuming this tariff was approved by FERC, are they eligible to get compensated for their storage capacity at wholesale, as opposed to retail?

A What I understand from this proposal is that the California ISO has asked for station power to be compensated at wholesale for utility scale generation, period.

Q Okay. Thank you. So you are not answering the storage part that needs to be clarified?

A I didn't follow that part. I'm sorry.

Q Okay. That is fine. Just say -- well, okay, I'm going into my second question.

A Okay.

Q Okay. I'm referring to page 22 of
your opening testimony starting at line 10
and going to line 13. Tell me when you are
ready.

A Yes, I'm ready.

Q Okay. So I'm reading this, the
compensation was based on customers' full
retail rate, which is inherently more than
the value of an energy exported. This means
that a NEM customer does not pay the full
cost of using the grid, and thus the cost
avoided must be paid by the other retail
customers, that means there is a cost shift.
Did I read that correct?

A Yes.

Q My question is: When you are using
the term "full retail rate," are you
referring to the top tier of the retail rate
or the bottom tier of the retail rate?
Because there are three tiers.

A I'm talking about a bundled rate
that includes distribution, transmission,
energy, and capacity, and ancillary services.
And it doesn't matter what tier it is. But
specifically this would mean whatever is on
the margin in an hour, that would be the rate
as reflected.

Q So, for example, if I was --

A Actually, Mr. Boyd.
Q    Yes.
A    Can I please -- let me restate that. I apologize for interrupting you.
     You were asking me about today's rates, not proposed rates.
Q    Correct.
A    So today's rates are not typically on an hourly variable rate. So I misspoke there. So what I want to say is that it would be the full retail bundled rate at the level of use for that customer.
Q    So, for example, if I was using power during peak demand, peak demand period when we are in Tier 3, which is for PG&E, it is roughly 42 cents a kilowatt here. So what I'm asking is: If I exported power during that same time, would I be compensated at the 42 -- is that what you are saying when you say "full retail rate"? Are you saying that I would be compensated at the 42 cents if I produce our power on that peak period, or are you saying something different?
A    What I was saying in this paragraph is more generalized than what you are asking me about. This was with regard to the net energy metering programs that have existed around the country, and they vary on the dimension that you are describing across the
country, because rate designs differ across the country. And so what I was trying to say is that under traditional NEM rates, it is rewinding the meter. And so you are paying the full -- you are being compensated the full retail rate of the general proposition.

Q Would it surprise you to know that if I was using off-peak on the third tier that I would be paying retail of 42 cents? But under the NEM program, which uses the default load allocation point, which is an annual true-up of any excess I produce, is at 2 to 3 cents per kilowatt-hour? Not 42 cents, but 2 to 3 cents for any excess I produce. Would that surprise you?

A I don't know.

Q Okay. I request that you check that out and reconsider your -- that it is based on full retail rate statement.

Procurement -- then the other questions I have -- hold on. This one kind of surprised me. I felt surprised when I saw this. You state on page 49 at line 19, tell me when you are there.

A Go ahead.

Q Black people pay more for energy than White people. That surprised me. I'm curious if that is an opinion or a quotation...
from the report you are referencing?
   A It is the latter. That is a scholarly article written by a researcher after studying energy consumption, energy bills for Black people versus White people in different parts of the country, and includes California as part of that study.
   Q Okay. Very good. I appreciate that. I would request you put that in quotes, ma'am.
   A Fair enough.
   Q Let me see. I'm down here. You refer on page 53 line 16 -- you refer to PURPA contracts with eligible power producers. Do you see that?
   A Yes.
   Q Are you aware of any PURPA contracts for NEM customer generators in California right now?
   A I don't know one way or the other.
   Q Okay. Fair enough. And then just page 55 line 29 to 30. Tell me when you are there.
   A I'm there.
   Q Okay. You state after the number 4, the total benefits of the tariff to both the electric system and all customers are approximately equivalent to the cost. And
then in that light you also say on page 56, you talk, at line 9 to 10, you talk about unfair economic transfers from one group to another, e.g., from nonparticipants to participants. Do you see that?

A I do.

Q Okay. So my question goes that -- what they are calling the grid benefit charge. You understand that, right?

A I have read about it, yes.

Q Okay. Now I'm asking your opinion here. Would the NEM customer generator grid benefit charge have a fair or reasonable relationship to the payers' burden on or benefits from the activities?

A I think that is a question that you need to direct to one of the witnesses who have looked at the cost-based buildup and allocation of dollars between the different energy-related charges and different tiers as you described and then the resulting grid benefit charge.

Q So that is like a cost-of-service question, would you say?

A I would say it is a rate design and cost-of-service question. But again, I would encourage you to ask one of the utilities' witnesses.
Q Would you know by chance who the witness would be?
   A I would say Gwen Morien and/or Colin Kerrigan and/or Rob Thomas. That is my best guess.
   Q I got the second one. What was the first one?
   A Gwen Morien, M-o-r-i-e-n.
   Q I got --
   A Rob Thomas.
MR. BOYD: Rob? Rob Thomas. Okay. I'm all done, your Honor. Thank you for letting me go over a little bit extra. And I think I'm ready to move all my exhibits into evidence. The only two that we haven't talked about are Exhibit 2 and 3, which are the proposal and the presentation.]
ALJ HYMES: Okay. I will address that. Ms. Tierney, you will remain under oath and we'll see you in the morning. At this point -- oh, I'm sorry. I apologize. Any redirect?
MS. MERLO: Your Honor, may I have just a very brief moment?
ALJ HYMES: Okay.
MS. MERLO: Thank you.
MR. BOYD: Thank you, Susan.
THE WITNESS: Thank you, Mr. Boyd.
THE REPORTER: Off the record, your
Honor, or stay on?

ALJ HYMES: Thank you. Off the record.

(Off the record.)

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

Could the counsel for the Utilities
please restate.

MS. MERLO: Yes. Your Honor, we have
no redirect for Dr. Tierney.

ALJ HYMES: Thank you.

Ms. Tierney, we will see you in the
morning.

At this time I want to quickly go
over our schedule for tomorrow. We'll
continue with witness Tierney being
cross-examined by Protect Our Communities, so
we are a little over time. We'll see where
we go with this. Perhaps we can make up some
time tomorrow. We're about a half an hour
over time. And then we have the utility
panel. At this time that panel, it will be
crossed by CARE, then Clean Coalition,
Foundation Wind, and Protect Our Communities.

There was some discussion about
perhaps changing that. Does that schedule --
is that okay with everyone? Are there any
changes? Let me ask from the Utility
representative first.

MS. MERLO: Your Honor, the only thing I would note -- and this is Ashley Merlo -- we don't show in our matrix any time for CARE on the cross-examining IOU panel tomorrow.

ALJ HYMES: Mr. Boyd; is that correct?

MR. BOYD: No, your Honor. I specifically decreased some minutes and I believe I put -- I have to find the e-mail unfortunately, but I had -- it was somewhere between 15 and 20. That's what I remember.

ALJ HYMES: Let's go off the record for this moment.

(Off the record.)

ALJ HYMES: Let's go back on the record. While we were off the record, we discussed schedule. All parties seem to be on the same page with respect to cross-examination, the completion of witness Tierney, the IOU panel, and then Witness Wray tomorrow.

At this time I will take any motions. I think the easiest way to do this is to use your hand button, raise-hand button. So if you have exhibits that you would like to enter into the record today that have completed all cross-examination, I will take those now.
I'm just going straight down my
list, so I'll begin with Aaron Stanton.

Mr. Stanton.

MR. STANTON: Can you hear me, your
Honor?

ALJ HYMES: Barely, if you could speak
up just a bit.

MR. STANTON: How is this?

ALJ HYMES: Yes. And let me just
confirm with the court reporter that indeed
we are on the record and that you could hear
Mr. Stanton.

THE REPORTER: Yes.

ALJ HYMES: Then, Mr. Stanton, please
proceed.

MR. STANTON: Thank you. Protect Our
Communities Foundation, PCF-67 and PCF-68,
Affordable Clean Energy For All Coalition
Lists, and R.20-08-020, Notice of Ex Parte
Communication, abbreviating the titles
respectively.

ALJ HYMES: And just to confirm, that
was CCS-67 and CCS-68?

MR. STANTON: P as in Patrick; C as in
cat; F as in Frank, 67 and 68.

ALJ HYMES: I apologize. If there are
any objections, please voice those objections
by stating your name.
(No response.)

ALJ HYMES: Hearing no objections, PCF-67 and PCF-68 were received into the record.

(Exhibit Nos. PCF-67 and PCF-68 were received into evidence.)

ALJ HYMES: Thank you. And, Mr. Stanton, if you could click on the raise-hand button so that it deletes that. Next up is Jeanne Armstrong.

MS. ARMSTRONG: Yes. SEIA and Vote Solar would like to move into the record SVS-05. This is the cross-examination entitled Frequently Asked Questions 2019 Building Energy Efficiency Standards.

ALJ HYMES: At this time, are there any objections to SVS-05 being entered into the record? State your objection by stating your name.

(No response.)

ALJ HYMES: Hearing no objections, SVS-05 is received into the record.

(Exhibit No. SVS-05 was received into evidence.)

ALJ HYMES: Thank you. Next up is Mr. Boyd.

MR. BOYD: Yes, your Honor. I would like to move into the record CRE-01, CRE-02,
CRE-03, CRE-04, CRE-05, 06, 07, and 08. And I would like to clarify that 02 and 03 are the proposal of CARE and 03 is the presentation that CARE made. Those are -- I had them for reference purpose. There's no -- I don't believe there's any talk -- any crossover that is -- that I'm aware of.

ALJ HYMES: Okay. And let me just ask if there are any objections to CRE-01 being received into the record?

(No response.)

ALJ HYMES: Hearing no objections, CRE-01 is received into the record. Are there any objections to CRE-02?

(No response.)

ALJ HYMES: Hearing none, CRE-02 is received into the record. Any objections to CRE-03?

(No response.)

ALJ HYMES: Hearing none, CRE-03 is received into the record. Any objections to CRE-04?

(No response.)

ALJ HYMES: Hearing none, CRE-04 is received into the record. Any objections to CRE-05?

(No response.)

ALJ HYMES: Hearing none, CRE-05 is
received into the record. Any objections to CRE-06?

(No response.)

ALJ HYMES: Hearing none, CRE-06 is received into the record. Any objections to CRE-07?

(No response.)

ALJ HYMES: Hearing none, CRE-07 is received into the record. And then finally, any objections to CRE-08?

(No response.)

ALJ HYMES: Hearing none CRE-08 is received into the record.

(Exhibit Nos. CRE-01 thru CRE-08 were received into evidence.)

ALJ HYMES: Thank you.

MR. BOYD: Thank you, your Honor.

ALJ HYMES: Next up is Mr. Lindl.

MR. LINDL: Yes. Thank you, your Honor. Tim Lindl on behalf of CALSSA. Your Honor, are you comfortable with us moving in prepared direct and prepared rebuttal testimony at this time like you just did for Mr. Boyd?

ALJ HYMES: No, not at this time because you have not gone through cross-examination, so absolutely not.

MR. BOYD: That's what I thought, your
Honor, just wanted to double-check I wasn't missing an opportunity here to be efficient. So we would like to move in the various cross-exhibits and one impeachment exhibit today. So that would be Exhibit CSA-03, Pages from Order in New York Public Service Commission, Case 15-E-0751.

ALJ HYMES: Mr. Lindl, I'm going to interrupt you. Because we've already marked and identified all of these, just stating the exhibit number will be much more efficient for today.

MR. LINDL: Okay. Thank you, your Honor. CALSSA would like to move into evidence Exhibit CSA-04 -- excuse me. Now I need to start over.

CALSSA would like to move into evidence Exhibit CSA-03, 04, 05, and 06.

ALJ HYMES: Are there any objections to receiving CSA-03 into the record?

(No response.)

ALJ HYMES: Hearing none, CSA-03 is received into the record. Any objections to CSA-04?

(No response.)

ALJ HYMES: Hearing none, CSA-04 is received into the record. Any objections to CSA-05?
(No response.)

ALJ HYMES: Hearing none, CSA-05 is
received into the record. And finally, any
objections to CSA-06?

(No response.)

ALJ HYMES: Hearing none, CSA-06 is
received into the record.

MR. LINDL: Thank you.

(Exhibit Nos. CSA-01 thru CSA-06
were received into evidence.)

ALJ HYMES: I am not seeing any more
hands raised, so I believe that is all for
the day. We have gone through the schedule.
We have gone through the motions. All right.
Let me state again all parties who are
actively participating in tomorrow's hearing
should be present online by 9:30. I
appreciate everybody's being present at 9:30
this morning. Tomorrow there will be a
smaller number of people so it should go
cleaner.

There being nothing else to address
today, we are adjourned until 10:00 a.m.
tomorrow morning, Tuesday, July 27th.

We are off the record.

(Off the record.)

(Whereupon, at the hour of 5:06
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 COMPRIS 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

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA
SAN FRANCISCO, CALIFORNIA
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 COMPRIS 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.

ANDREA L. ROSS

CSR NO. 7896

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA

SAN FRANCISCO, CALIFORNIA
### EXAMINATIONS - CHRONOLOGICAL

#### VOLUME 1

**CARLA PETERMAN**
- Direct Examination by Ms. Merlo `v1:38`
- Cross-Examination by Ms. Koss `v1:39`
- Cross-Examination by Mr. Armstrong `v1:43`
- Cross-Examination by Mr. Stanton `v1:79`
- Cross-Examination by Alj Hymes `v1:99`

**SUSAN TIERNEY**
- Direct Examination by Ms. Merlo `v1:38`
- Cross-Examination by Ms. Koss `v1:39`
- Cross-Examination by Mr. Armstrong `v1:43`
- Cross-Examination by Mr. Boyd `v1:61`
- 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`

### EXAMINATIONS - ALPHABETICAL

**PETERMAN, CARLA**
- Direct Examination by Ms. Merlo `v1:38`
- Cross-Examination by Ms. Koss `v1:39`
- Cross-Examination by Mr. Armstrong `v1:43`
- Cross-Examination by Mr. Stanton `v1:79`
- Cross-Examination by Alj Hymes `v1:99`

**TIERNEY, SUSAN**
- Direct Examination by Ms. Merlo `v1:38`
- Cross-Examination by Ms. Koss `v1:39`
- Cross-Examination by Mr. Armstrong `v1:43`
- Cross-Examination by Mr. Boyd `v1:61`
- 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`

### EXHIBITS

| 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 |