

STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

MAR 31 '17 PM 3:22

March 27, 2017 - 9:12 a.m.
Concord, New Hampshire

DAY 1
MORNING SESSION
ONLY

RE: DE 16-576
ELECTRIC DISTRIBUTION UTILITIES:
Development of New Alternative Net
Metering Tariffs and/or Other
Regulatory Mechanisms and Tariffs
for Customer-Generators.
(Hearing on the Merits)

PRESENT: Chairman Martin P. Honigberg, Presiding
Commissioner Robert R. Scott
Commissioner Kathryn M. Bailey

Sandy Deno, Clerk

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Reptg. Liberty Utilities (Granite
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Michael J. Sheehan, Esq.

Reptg. Eversource Energy:
Matthew J. Fossum, Esq.

Court Reporter: Steven E. Patnaude, LCR No. 52

CERTIFIED
ORIGINAL TRANSCRIPT

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	FORTUNAT MUELLER	
	NATHAN PHELPS	
	KARL R. RABAGO	
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2	EFC Testimony Exhibit 1 (Settlement Terms Outline)	premarked
3	EFC Testimony Exhibit 2 (Bill Impact Model Results)	premarked
4	EFC Supplemental Settlement Testimony of Paul Chernick and Ellen Hawes	premarked
5	Utility Coalition Settlement Agreement	premarked
6	Utility Coalition Technical Statement	premarked
7	OCA Statement in Support of Partial Settlement	premarked
8	Unitil Direct Testimony of Thomas Meissner	premarked
9	Unitil Direct Testimony of H. Edwin Overcast	premarked
10	Unitil Direct H. Edwin Overcast Schedules	premarked
11	Unitil Direct Attachments of H. Edwin Overcast	premarked
12	Unitil Supplemental Direct Testimony of H. Edwin Overcast	premarked

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P R O C E E D I N G

1
2 CHAIRMAN HONIGBERG: Good morning,
3 everyone. We're here in Docket 16-576, which
4 is the net metering docket open pursuant to
5 legislative directive, but an interesting topic
6 nonetheless, as evidenced by all the people who
7 are here today.

8 We have a number of things to do. I
9 know we have a panel that's going to be
10 testifying. We have dueling settlements, that
11 may or may not be true settlements, but they
12 are what they are. I know that most of the
13 Parties are on one or the other of those
14 documents. There are some people who are not
15 on either, as I understand it.

16 Let's put one thing on the record up
17 front. For those who can easily see,
18 Commissioner Scott, to my left, he's not
19 functioning at 100 percent. He may be in and
20 out at times during the course of the
21 proceeding, but Commissioner Scott intends to
22 participate fully in this, in this matter.

23 Before we do anything else, let's
24 take appearances. This might take a while.

1 We'll start to my left, in front, work our way
2 back, then over, and then to the front.

3 MR. BUXTON: Good morning, Mr.
4 Chairman. Tony Buxton, of Preti Flaherty, for
5 the Energy Future -- Energy Freedom Coalition
6 of America. With me is Kevin Auerbacher and
7 Patrick Bean and Todd Griset.

8 MR. HINCHMAN: Good morning, Mr.
9 Chairman. Steve Hinchman, with ReVision
10 Energy.

11 MR. EMERSON: Eli Emerson, from
12 Primmer, Piper, Eggleston & Cramer, on behalf
13 of the NH Sustainable Energy Association, and
14 with me is Kate Bashford Epsen.

15 MR. CULLEY: Good morning. Thad
16 Culley, Keyes & Fox, on behalf of The Alliance
17 for Solar Choice.

18 MS. BIRCHARD: Good morning. Melissa
19 Birchard, Conservation Law Foundation.

20 MR. FOSSUM: Good morning. Matthew
21 Fossum, here for Public Service Company of NH
22 doing business as Eversource Energy.

23 MR. RODIER: Jim Rodier, for Freedom
24 Logistics d/b/a Freedom Energy Logistics.

1 REP. OXENHAM: Lee Oxenham,
2 ratepayer.

3 MR. HAYDEN: Bob Hayden, Standard
4 Power.

5 MR. SUNUNU: Michael Sununu,
6 representing the New England Ratepayers
7 Association.

8 CHAIRMAN HONIGBERG: I can't see you,
9 Mr. Sununu. Where are you? Thank you.

10 MR. AALTO: Pentti Aalto, PJA Energy
11 Systems, representing myself.

12 MR. ANDERSON: Chris Anderson, with
13 Borrego Solar Systems.

14 MR. HERNDON: Henry Herndon, with
15 Revolution Energy.

16 MR. SHEEHAN: Mike Sheehan, Liberty
17 Utilities (EnergyNorth -- I'm sorry, (Granite
18 State Electric). Thank you.

19 MR. EPLER: Gary Epler, Unitil. And
20 with me are Tom Meissner and Douglas Debski.
21 Thank you.

22 MS. BOYD: Amy Boyd, Acadia Center.

23 MR. BELOW: Clifton Below, for the
24 City of Lebanon.

1 MR. ASLIN: Chris Aslin, from the
2 Office of the Attorney General, on behalf of
3 the Office of Energy & Planning.

4 MR. KREIS: Good morning. I'm the
5 Consumer Advocate, D. Maurice Kreis, here on
6 behalf of residential utility customers, all of
7 them.

8 MR. WIESNER: Good morning. Dave
9 Wiesner, for Commission Staff. With me at the
10 table are Karen Cramton, Director of the
11 Sustainable Energy Division; Tom Frantz,
12 Director of the Electric Division; Stan
13 Faryniarz, of Daymark Energy Advisors; and
14 David Littell, of the Regulatory Assistance
15 Project.

16 CHAIRMAN HONIGBERG: All right. I've
17 made a map. So, at least for today, you can't
18 move.

19 Is there anyone else here who has
20 been granted intervenor status that didn't
21 identify him or herself?

22 *[No verbal response.]*

23 CHAIRMAN HONIGBERG: All right.
24 That's a good start.

1 How are we proceeding today,
2 Mr. Wiesner?

3 MR. WIESNER: There are a couple of
4 preliminary matters, and I think we can discuss
5 them very briefly. There is still technically
6 outstanding a Motion in *Limine* filed by the OCA
7 with respect to the admission of sworn
8 testimony without the presence of the witness
9 in the room. But I believe that has been
10 resolved.

11 CHAIRMAN HONIGBERG: Mr. Kreis.

12 MR. KREIS: Thank you, Mr. -- excuse
13 me. Thank you, Mr. Chairman. I think it would
14 be helpful if the OCA simply withdrew that
15 motion at this time.

16 CHAIRMAN HONIGBERG: Fair enough.
17 That's easy enough.

18 MR. WIESNER: There's a plan to
19 address that issue.

20 And, as was noted in the Commission's
21 secretarial letter issued Friday afternoon, the
22 City of Lebanon, Mr. Below, raised some issues
23 as to whether or not certain points he wants to
24 cover are within the scope of this matter. And

1 the Commission indicated that it would reserve
2 judgment on those issues until an appropriate
3 time during the hearings.

4 I think it's the consensus of people
5 in the room that we not deal with that right
6 now as a preliminary matter, but address it
7 when questions arise during the course of the
8 hearing.

9 CHAIRMAN HONIGBERG: Does Mr. Wiesner
10 correctly speak for the group? Anyone have any
11 differing view?

12 *[No verbal response.]*

13 CHAIRMAN HONIGBERG: All right.
14 Thank you, Mr. Wiesner.

15 What else do we got?

16 MR. WIESNER: I just want to remind
17 people that it's important to speak into the
18 microphone, for the benefit of the court
19 reporter, but also because we have one of the
20 panel members appearing by video connection. I
21 think he's visible right now, and that is Tom
22 Beach, who is appearing by video from a law
23 office in, I believe, Colorado.

24 CHAIRMAN HONIGBERG: He's looming

1 like a specter over Mr. Sununu's shoulder.

2 MR. BEACH: Good morning, everyone.

3 MR. WIESNER: Yes. We can hear him.
4 That's wonderful. What he can see is what is
5 shown in the small video box in the left-hand
6 corner of the screen. And that is -- that feed
7 is from the camera which appears in the back of
8 the room. And, so, when we get to questioning
9 for him specifically, it may make sense for
10 people not only to speak clearly into the
11 microphone, but perhaps also to try to face the
12 camera. Just noting that.

13 Other than that, the only other thing
14 we have is we have a long list of premarked
15 exhibits. Those are the prefiled testimony,
16 direct, supplemental, and rebuttal testimony
17 that was previously filed in the matter. Some
18 of which has been Bates stamped within the past
19 few days, and there are new paper copies which
20 are Bates stamped.

21 We did not premark any other
22 exhibits. So, as exhibits are presented for
23 identification, we have asked people to bring
24 paper copies to the Bench, and distribute them

1 through the room, and they will be marked at
2 that time.

3 I will note that the Energy Future
4 Coalition has put together a binder of its
5 proposed exhibits. And it may be that not all
6 of those are going to be used during the
7 hearing. But it was very helpful, in terms of
8 distributing paper copies, that those binders
9 be made available ahead of time. So, each of
10 you has one of those binders, and I believe
11 each of the Parties in the room has one as
12 well.

13 CHAIRMAN HONIGBERG: Okay. I would,
14 I guess, ask that, to the extent people are
15 going to use other exhibits, things that
16 haven't been provided already or distributed,
17 there's multiple people in this room. There is
18 no need for the person asking the questions to
19 also take the time to make the tour of the
20 Clerk, the Stenographer, and us, and then all
21 the Parties before dealing with it.

22 So, to the extent that you can, use
23 the people sitting around you, who are your
24 allies, for the most part, to distribute what

1 needs to be distributed, so we can save the two
2 minutes that it takes for every exhibit.

3 Someone else has entered the room.
4 Is this a representative of a party or an
5 intervenor?

6 MR. VOYLES: James Voyles, Consumer
7 Energy Alliance, attorney for the intervenor.

8 CHAIRMAN HONIGBERG: Off the record.

9 *[Brief off-the-record discussion*
10 *ensued.]*

11 CHAIRMAN HONIGBERG: All right.
12 Anything else, Mr. Wiesner?

13 MR. WIESNER: I'm not aware of any
14 other preliminary matters, Mr. Chairman.

15 CHAIRMAN HONIGBERG: All right. The
16 first panel we're hearing is the solar panel,
17 which is fun to say for a variety of reasons.
18 And I know Mr. Beach is already in position.
19 Do we need other witnesses who are going to be
20 taking the witness box here?

21 MR. EMERSON: Yes.

22 CHAIRMAN HONIGBERG: Well, why don't
23 they start moving then.

24 *(Short pause.)*

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 CHAIRMAN HONIGBERG: Mr. Patnaude, do
2 what you need to do with these folks.

3 (Whereupon **Kate B. Epsen,**
4 **Fortunat Mueller, Nathan Phelps,**
5 **Karl R. Rabago, Patrick Bean,**
6 and **R. Thomas Beach** were duly
7 sworn by the Court Reporter.)

8 CHAIRMAN HONIGBERG: Mr. Emerson, you
9 look like you're grabbing the microphone.

10 MR. EMERSON: I am. Good morning,
11 Commissioners.

12 CHAIRMAN HONIGBERG: Off the record.
13 [*Brief off-the-record discussion*
14 *ensued.*]

15 MR. EMERSON: So, what I'm going to
16 do is introduce each of the witnesses' prefilled
17 testimony and then the panel testimony.

18 **KATE B. EPSSEN, SWORN**

19 **FORTUNAT MUELLER, SWORN**

20 **NATHAN PHELPS, SWORN**

21 **KARL R. RABAGO, SWORN**

22 **PATRICK BEAN, SWORN**

23 **R. THOMAS BEACH, SWORN**

24 **DIRECT EXAMINATION**

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 BY MR. EMERSON:

2 Q. And I will start with you, Ms. Epsen. Do you
3 have before you your direct testimony filed in
4 this docket?

5 A. (Epsen) I do.

6 Q. And is that the only testimony that you filed
7 in this docket?

8 A. (Epsen) It is.

9 Q. And do you have any corrections to make to that
10 testimony?

11 A. (Epsen) No corrections.

12 Q. No corrections. And is it the same testimony
13 that you would give if you were testifying live
14 today?

15 A. (Epsen) Yes.

16 Q. And is it true and accurate to the best of your
17 knowledge?

18 A. (Epsen) Yes.

19 MR. EMERSON: I would move the
20 admission of the prefiled testimony of Kate
21 Bashford Epsen?

22 CHAIRMAN HONIGBERG: I have that as
23 "28", is that right?

24 MR. EMERSON: It is, yes, Exhibit 28.

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 Sorry.

2 CHAIRMAN HONIGBERG: All right. I
3 think it would be helpful if you do that so we
4 don't have to then find it.

5 MR. EMERSON: Yes.

6 CHAIRMAN HONIGBERG: Without
7 objection?

8 *[No verbal response.]*

9 CHAIRMAN HONIGBERG: That's admitted.

10 MR. EMERSON: Okay. Next is Mr.
11 Mueller, who does not have prefiled testimony,
12 except the supplemental panel testimony. So,
13 I'll skip over him for now.

14 BY MR. EMERSON:

15 Q. Mr. Phelps, do you have before you what has
16 been marked as "Exhibit" -- well, Exhibits
17 number "33", your direct prefiled testimony;
18 "34", which is "Attachment NP-1"; Exhibit ID
19 number "35", which is "Attachment NP-2"; ID
20 number "36", which is "Attachment NP-3"; ID
21 number "37", which is "Attachment NP-4"; and
22 then also in rebuttal, what is ID number "52",
23 which is the prefiled "Rebuttal Testimony of
24 Nathan Phelps"?

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[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 A. (Phelps) I do.

2 Q. And do you have any corrections to your
3 testimony?

4 A. (Phelps) I do not.

5 Q. And is it the same testimony that you would
6 give live today?

7 A. (Phelps) It is.

8 Q. True and accurate to the best of your
9 knowledge?

10 A. (Phelps) Correct.

11 MR. EMERSON: I would move the
12 prefiled testimony and attachments of Nathan
13 Phelps?

14 CHAIRMAN HONIGBERG: Any objection?

15 *[No verbal response.]*

16 CHAIRMAN HONIGBERG: Seeing none,
17 those are admitted.

18 MR. EMERSON: Okay.

19 BY MR. EMERSON:

20 Q. Mr. Rabago, do you have what is identified as
21 "Exhibit Number 48", which is rebuttal prefiled
22 testimony?

23 A. (Rabago) I do.

24 Q. And do you also have Exhibit ID number "49",

{DE 16-576}[Day 1 - Morning Session ONLY]{03-27-17}

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 which is "Attachment KRR-1"?

2 A. (Rabago) Yes, sir.

3 Q. And "Exhibit 50", which is "Attachment KRR-2"?

4 A. (Rabago) Yes, sir.

5 Q. And "Exhibit 51", which is "KRR-3"?

6 A. (Rabago) Yes, sir.

7 Q. Do you have any corrections to your testimony
8 or exhibits?

9 A. (Rabago) I have no corrections.

10 Q. And is it the same testimony that you would
11 give live today?

12 A. (Rabago) Yes, sir.

13 Q. Is it true and accurate to the best of your
14 knowledge?

15 A. (Rabago) Yes.

16 MR. EMERSON: I would move the
17 prefiled Rebuttal Testimony of Karl Rabago?

18 CHAIRMAN HONIGBERG: Seeing no
19 objection, those are admitted.

20 BY MR. EMERSON:

21 Q. Mr. Bean, do you have before you what has been
22 premarked as Exhibit ID number "21"

23 A. (Bea) I do.

24 Q. And that includes your direct prefiled

{DE 16-576}[Day 1 - Morning Session ONLY]{03-27-17}

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 testimony, and four attachments labeled

2 "Exhibits 1" through "4"?

3 A. (Bean) Yes. That's correct.

4 Q. And do you have any corrections?

5 A. (Bean) I do not.

6 Q. Is it the same testimony you would give live
7 today?

8 A. (Bean) Yes.

9 Q. Is it true and accurate to the best of your
10 knowledge?

11 A. (Bean) Yes.

12 Q. Sorry. And the same is true with Exhibit ID
13 number "46", which is rebuttal testimony?

14 A. (Bean) Yes.

15 Q. And there's an attachment that's been ID'd
16 "Exhibit 47", which is an attachment to the
17 rebuttal testimony?

18 A. (Bean) Yes.

19 Q. And you'd answer "yes" for the same questions,
20 no corrections, --

21 A. (Bean) Correct.

22 Q. -- live today?

23 MR. EMERSON: I would move the
24 prefiled direct and rebuttal testimony and

{DE 16-576}[Day 1 - Morning Session ONLY]{03-27-17}

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 exhibit of Patrick Bean?

2 CHAIRMAN HONIGBERG: Seeing no

3 objection, those are admitted.

4 BY MR. EMERSON:

5 Q. And, finally, Mr. Beach.

6 A. (Beach) Yes.

7 Q. Do you have before you what has been premarked

8 as Exhibit ID number "19", the "Direct

9 Testimony and Attachments of Thomas Beach"?

10 A. (Beach) Yes, I do.

11 Q. And that includes Appendices A through D?

12 A. (Beach) Yes. That's right.

13 Q. And do you also have before you what's been

14 premarked as "Exhibit 20", which is an errata

15 sheet?

16 A. (Beach) Yes. I have that.

17 Q. And, finally, do you have before you exhibit

18 that's been premarked as ID number "45", which

19 is your rebuttal testimony and attachments?

20 A. (Beach) Yes. I have that.

21 Q. And the attachments include Appendices E and F,

22 is that correct?

23 A. (Beach) That's correct.

24 Q. In addition to the errata sheet, do you have

{DE 16-576}[Day 1 - Morning Session ONLY]{03-27-17}

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 any corrections to the testimony that you have
2 before you?

3 A. (Beach) No, I do not.

4 Q. And it's the same testimony that you would give
5 live today?

6 A. (Beach) Yes, it is.

7 Q. And it's true and accurate to the best of your
8 knowledge?

9 A. (Beach) It is.

10 MR. EMERSON: I would move the
11 prefiled testimony, direct and rebuttal, and
12 attachments of Thomas Beach?

13 CHAIRMAN HONIGBERG: Seeing no
14 objection, those are admitted.

15 BY MR. EMERSON:

16 Q. Lastly, the supplemental testimony. Panel, do
17 you have before you what's been premarked as
18 "Exhibit Number 1", the supplemental testimony
19 of the panel?

20 A. (Phelps) We do.

21 A. (Epsen) Yes.

22 Q. And also premarked as number "2", which is
23 Exhibit 1, the "Settlement Terms Outline"?

24 A. (Phelps) Yes.

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1 A. (Epsen) Yes.

2 Q. And premarked "Exhibit Number 3", which is the
3 "Bill Impact Model Results"?

4 A. (Bean) Yes.

5 A. (Epsen) Yes.

6 Q. And are there any corrections to that testimony
7 or exhibits?

8 A. (Mueller) I have only one.

9 Q. Okay.

10 A. (Mueller) My first name is misspelled on the
11 cover page of the supplemental testimony.

12 Q. And there's no "e"?

13 A. (Mueller) There is no "e" at the end of my
14 first name.

15 Q. Okay. Other than that correction, are there
16 any other changes?

17 *[No verbal response.]*

18 BY MR. EMERSON:

19 Q. And is the same testimony that you would give
20 live today?

21 A. (Phelps) It is.

22 *[Court reporter interruption.]*

23 BY THE WITNESSES:

24 A. (Epsen) Yes.

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1 A. (Mueller) Yes.

2 A. (Phelps) Yes.

3 A. (Rabago) Yes.

4 A. (Bean) Yes.

5 A. (Beach) Yes.

6 BY MR. EMERSON:

7 Q. And is it true and accurate to the best of your
8 knowledge?

9 A. (Bean) Yes.

10 A. (Epsen) Yes.

11 A. (Mueller) Yes.

12 A. (Phelps) Yes.

13 A. (Rabago) Yes.

14 MR. EMERSON: I would move the
15 supplemental testimony of the panel and the two
16 exhibits to that testimony?

17 CHAIRMAN HONIGBERG: All right.
18 Seeing no objection, those are admitted.

19 MR. EMERSON: And, finally, that is
20 it. They're available for cross-examination.

21 CHAIRMAN HONIGBERG: All right.

22 MR. EMERSON: Or, actually, sorry
23 they have the statements that they're going to
24 give.

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1 CHAIRMAN HONIGBERG: Mr. Buxton.

2 MR. BUXTON: Thank you, Mr. Chairman.

3 I believe the process that the Staff has
4 organized us to follow is that the panel would
5 take up to 20 minutes to make a statement in
6 support of their Settlement, and then would
7 take up to 20 minutes to offer some
8 constructive criticism of the other Settlement.
9 And we are prepared to do that witness-
10 by-witness.

11 BY MR. BUXTON:

12 Q. You may --

13 CHAIRMAN HONIGBERG: Well, it's not
14 20 minutes per witness, right?

15 MR. BUXTON: No.

16 CHAIRMAN HONIGBERG: All right. You
17 may proceed.

18 MR. BUXTON: Thank you.

19 **BY THE WITNESS:**

20 A. (Epsen) Okay. Good morning, members of the
21 Commission, Staff and Parties. I'm Kate Epsen
22 of the New Hampshire Sustainable Energy
23 Association, taking the lead in explaining the
24 detail and effects of the Settlement of our

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1 Energy Future -- of the settlement our Energy
2 Future Coalition has proposed. After about 20
3 minutes, as Attorney Buxton just said, we'll
4 offer constructive comments on the Utility
5 Coalition proposal as well.

6 We took the name "Energy Future Coalition"
7 in support of policies and mechanisms that will
8 create a forward-looking policy that is
9 consistent with House Bill 1116, the Commission
10 Order of Notice of May 19th, 2016, and the
11 existing New Hampshire statute and rules on net
12 metering. We believe we have succeeded,
13 despite the challenge of lack of essential
14 studies and data, and despite the relatively
15 short time to get this done. From here, we
16 believe New Hampshire can get to a better
17 energy future that includes net metering
18 contributing to lower costs, consumer choice
19 and protection, and more renewable energy.

20 The settlement before you is a fair
21 compromise and good for all New Hampshire
22 stakeholders: Customer-generators, non-net
23 metering consumers, businesses, and utilities.
24 Despite the net benefits to all ratepayers of

[WITNESSES: Epsen~Mueller~Phelps~Rabago~Bean~Beach]

1 the current net metering program, we've agreed
2 to a reduction in the crediting value in return
3 for a comprehensive roadmap for the state going
4 forward. This roadmap seeks to collect more
5 granular data and experience with alternative
6 programs in order to transition to a program of
7 more precise signals to all customers and for
8 distributed energy resources. And I'll just
9 say "DER" going forward for that term.

10 The Limited Electrical Energy Producers
11 Act continues to find small scale renewables in
12 the public interest, and that net metering,
13 specifically, may be one way for
14 customer-generators to have a reasonable
15 opportunity to invest in renewable resources
16 and diversify the state's energy mix. And
17 that's from RSA 362-A:1.

18 House Bill 1116 required this proceeding,
19 including in its purpose statement that "the
20 general court finds it in the public interest
21 to continue to provide reasonable opportunities
22 for electric customers to invest in and
23 interconnect customer-generator facilities and
24 receive fair compensation for such locally

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1 produced power while ensuring costs and
2 benefits are fairly and transparently allocated
3 among customers.

4 In House Bill 1116 importantly, the New
5 Hampshire General Court also affirmed that it
6 "continues to promote a balanced energy policy
7 that supports economic growth and promotes
8 energy diversity, independence, reliability,
9 efficiency, regulatory predictability,
10 environmental benefits, a fair allocation of
11 costs and benefits and a modern flexible
12 electric grid that provides for all
13 ratepayers."

14 In the Commission's Order of Notice, it
15 recited all of these principles saying it will
16 be guided by them, including the requirement of
17 RSA 362-A:9, XVI, requiring the Commission to
18 consider, among other factors, "the costs and
19 benefits of customer-generator facilities; an
20 avoidance of unjust and unreasonable cost
21 shifting; rate effects on all customers;
22 alternative rates" -- "and alternative rate
23 structures, including time-based tariffs."

24 The Commission even specified six relevant

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1 matters to be addressed. First listed was "the
2 performance of marginal cost of service studies
3 by the three regulated electric distribution
4 utilities". That was the Order of Notice at
5 Line 3 [Page 3?]. Unfortunately, only the
6 smaller utilities performed the required
7 marginal cost studies. For example, Eversource
8 did not conduct one, and said that its most
9 recent one was conducted in 1993.

10 The absence of these studies and other
11 important customer-load and locational data
12 that is only accessible through the utility --
13 through the utilities deprived these parties of
14 critical data to performing quality analyses of
15 costs that net metering could save the three
16 distribution utilities. The problem of
17 inadequate data pervaded the proceeding 16-576
18 that we're in as the technical sessions and the
19 proceeding progressed. While data availability
20 varied by utility, in general, the absence of
21 load, customer type, and number and cost data
22 at the circuit and substation level made
23 impossible what we had hoped for, and what you,
24 Commissioner Scott, had asked us to seek: The

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1 development of data showing the cost and
2 benefit of distributed resources targeted to
3 avoid local distribution and transmission
4 investments.

5 In light of the lack of data, we sought
6 other routes. Our cases addressed each
7 legislative/commission priority that they could
8 with what was available, and then the
9 preparation of our settlement proposal.

10 First and foremost, we sought to create a
11 path to the essential data as rapidly as
12 reasonably possible, and we will explain in
13 regard to our pilot projects. Second, in the
14 interim, we sought to lower the cost of net
15 metering materially to all ratepayers, while at
16 the same time ensuring what LEEPA, House Bill
17 1116, and the Commission also prioritized: A
18 reasonable opportunity for small customers to
19 invest in customer generation using net
20 metering, therefore to better ensure customer
21 choice, energy diversity, energy independence,
22 and benefits for all consumers in New
23 Hampshire. Thus, when the essential data now
24 becomes -- later becomes available to use, for

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1 example, time-of-use rates and targeting of
2 distributed resources to avoid distribution
3 increases, there will still be a viable net
4 metering industry in New Hampshire.

5 We propose two phases: Near term changes
6 to lower costs and immediate studies managed by
7 the Commission to gather essential data with
8 all deliberate speed, and then Phase 2, in
9 which the Commission uses that data to create
10 better price signals to inform consumption
11 decisions and maximize the value of DER
12 investments to the grid.

13 The Utility Coalition proposal has several
14 similarities to certain parts of ours,
15 including but not limited to the treatment of
16 projects that are over 100 kilowatts. But the
17 differences are extremely important to
18 fulfilling the statute, House Bill 1116, and
19 the Commissioners' -- Commission's Order of
20 Notice.

21 Fortunat Mueller, Managing Director of
22 ReVision Energy, one of New Hampshire's
23 longstanding solar installers, will summarize
24 several aspects of our proposal now.

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1 A. (Mueller) Thank you, Kate. Good morning and
2 thank you for the opportunity to address you
3 today. ReVision Energy employs about 155
4 people full time, including 65 who live or work
5 here primarily in New Hampshire. As a
6 customer-focused clean energy solutions
7 provider, we look at these kinds of regulatory
8 questions primarily through the eyes of our
9 customers, who are New Hampshire citizens,
10 businesses, and ratepayers, who are eager for
11 the opportunity to make an investment in their
12 own energy future.

13 First, I want to draw your attention to a
14 chart which was part of our supplemental
15 testimony that shows the installed PV capacity
16 in the six New England states, from late 2013
17 to late 2016. I believe that's on Page 20 of
18 our settlement testimony. As you can see from
19 the chart, New Hampshire lags most of the rest
20 of New England in terms of installation of
21 distributed solar energy systems. And, in my
22 professional view, those differences are due
23 not only to the differences in the states, but
24 also primarily to the economic value

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1 proposition that is available to the customer.

2 To be clear, we are not suggesting that
3 New Hampshire should adopt Massachusetts's
4 incentives; but we do suggest that the graph
5 shows that New Hampshire's opportunities for
6 customers to invest in customer generation
7 through net metering are not currently
8 unreasonably generous. And that there is real
9 risk that significant changes for the worse for
10 could foreclose that reasonable opportunity to
11 invest in the future.

12 Because solar systems help lower peak
13 demand, and thus lower New Hampshire's portion
14 of the ISO-New England demand costs, falling
15 behind the other New England states risks
16 increasing New Hampshire's share of those
17 shared costs and hurting ratepayers.

18 Second, based on over a decade of
19 providing clean energy solutions here in New
20 England and tens of thousands of conversations
21 with individual customers, I want to emphasize
22 the risk of arbitrary and shocking actions to
23 that reasonable opportunity to invest. Which
24 is why in our settlement, and throughout the

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1 proceeding, we have emphasized the critical
2 importance of certainty, understandability for
3 the customer, and gradualism in anything that
4 we do.

5 Our proposal is designed as a phased and
6 careful but deliberate transition to an
7 alternative net metering tariff, designed to
8 prevent customer confusion or rate shock, that
9 will maintain customer choice and clean energy
10 jobs here in the state, require data collection
11 and pilots to inform future phases, and keep a
12 fair balance for DG customers and other
13 ratepayers, all per the direction of House Bill
14 1116.

15 Unlike the utility proposal, the Energy
16 Future Coalition's proposal has a clear
17 destination, a DER, a distributed energy
18 resource, tariff. A rate structure that will
19 allow customers to interact with the electric
20 grid in a way that lowers costs for all
21 ratepayers and that enables investments in a
22 variety of new technologies. Not just DG
23 solar, but also efficient appliances, storage,
24 controls that help shift load and regulate time

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1 of use, as well as other forms of beneficial
2 electrification, like replacing propane and oil
3 for home heating with efficient heat pumps or
4 electric vehicles for transportation.

5 Specifically, we have proposed a new
6 tariff start date of September 1st, 2017.
7 Given that we may not see a final ruling in
8 this case until June, that is a very rapid
9 change, and, frankly, perhaps too rapid even.
10 Just as the utilities have an awful lot of work
11 to do to update their metering and billing
12 infrastructure, businesses like ours also need
13 time to update our materials and retrain our
14 team to help customers make the best decisions
15 to meet their particular energy goals. Our
16 typical sales cycle for a residential customer
17 is between four and seven months from first
18 contact until installation, and making
19 significant changes in the customer value
20 proposition for a customer already in process
21 is incredibly burdensome and unfair to those
22 customers.

23 Although the record in this case, and the
24 Staff's own analysis, is pretty conclusive that

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1 DG solar customer-generators in New Hampshire
2 already provide benefits to the Grid in excess
3 of their costs. Our proposal reduces
4 non-participating ratepayer costs even further
5 by reducing the net metering distribution
6 credit by 25 percent in year one and 50 percent
7 in year two, starting on January 1st, 2019.

8 In addition, we have proposed to move from
9 kilowatt-hour volume crediting towards a
10 monetary crediting regime and to eliminate all
11 current non-bypassable charges from net
12 metering entirely. Mr. Phelps' modeling shows
13 this increases the utility costs for a net
14 metering customer by between 9.73 to
15 22.65 percent in year one and 12.34 to 25.35
16 percent in year two, depending on the
17 utilities. These are material, very
18 significant changes in the value proposition
19 for those individual customers, and any greater
20 reductions or increased uncertainty will, in my
21 view, eliminate the reasonable opportunity for
22 those customers to make those investments.
23 Foreclosing those opportunities for customers
24 would obviously also negatively affect the

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1 viability of the continued job growth --

2 [Court reporter interruption.]

3 **CONTINUED BY THE WITNESS:**

4 A. (Mueller) Foreclosing those opportunities for
5 customers would obviously also negatively
6 affect the viability of the continued job
7 growth in the solar industry statewide and
8 force ReVision Energy and other providers to
9 reconsider allocation of resources in New
10 Hampshire.

11 I now turn it over to Tom Beach, who is on
12 the video link, to discuss both the value of
13 solar and whether the new compensation that we
14 propose would be just and reasonable.

15 A. (Beach) Good morning, Commissioners. I thank
16 you very much for allowing me to appear by
17 video.

18 I believe that the Energy Future Coalition
19 proposal reflects costs that are less than the
20 benefits or value of solar to all ratepayers,
21 and, therefore, that the costs are just and
22 reasonable. This case has not focused
23 significantly on the value of solar and other
24 distributed energy resources because of the

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1 absence of the utility marginal cost data and
2 the value information for some of the services
3 that DERs will provide.

4 However, using the available data, our
5 analysis found that, even without the cost
6 decreases that the Energy Future Coalition has
7 proposed, the benefits of net metering in New
8 Hampshire equal or exceed the costs under both
9 the Total Resource Cost and the Societal Tests.
10 I also found that the benefits and costs are
11 reasonably balanced for non-participating
12 ratepayers as shown by the Rate Impact Measure,
13 the RIM test. These tests are used by this
14 Commission and many other state regulators
15 throughout the U.S. to evaluate energy
16 efficiency and similar demand-side programs.
17 They are well recognized, extensively tested
18 measures of what is a just, reasonable, and
19 cost-effective demand-side program. By simple
20 logic, the fact that the Energy Future
21 Coalition proposal further reduces the costs of
22 net metering means that it also will pass all
23 of these cost-effectiveness tests.

24 I note that the New England distribution

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1 utilities have among the highest ratepayer
2 costs in the U.S. Over time, the transmission
3 charges have soared in New England, as have
4 distribution costs. The EFC proposal lays out
5 a way to use targeted distributed energy
6 resources to reduce or mitigate future cost
7 increases in distribution and transmission. In
8 particular, our testimony and our benefit/cost
9 study shows that the distribution benefits of
10 DERs are significant. They are not zero as the
11 utilities have assumed.

12 I now turn this over to Patrick Bean to
13 discuss Phase 2 of the EFC proposal.

14 A. (Bean) Thank you and good morning,
15 Commissioners. Both settlement proposals
16 propose pilot studies and data collection. The
17 critical differences are the number and the
18 depth of the pilot studies. Pilots and Phase 2
19 based on an independent Value of DER study are
20 critical parts of our plan and the reason we
21 have proposed reducing the distribution
22 component in the near-term in exchange for more
23 long-term certainty and predictability.

24 Our proposal places great urgency on

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1 completing pilots and then ensuring the results
2 are used to inform Phase 2 programs. The rate
3 design and non-wires alternative pilots we've
4 proposed will allow for more targeted DER
5 deployments and more precise price signals to
6 create a smarter, lower cost grid. The
7 programs will provide valuable experience and
8 fulfill HB 116 -- 1116, sorry, objectives of
9 promoting resource diversity, independence,
10 reliability, efficiency, regulatory
11 predictability, a fair allocation of the costs
12 and benefits, and a modern and flexible
13 electric grid that provides benefits to all
14 ratepayers.

15 Our proposal is not just about rooftop
16 solar. Customers can choose to invest in a
17 variety of DER, including battery storage,
18 electric vehicles, programmable thermostats and
19 others. Our pilots in Phase 2 are meant to
20 move the state towards a technology agnostic
21 program that sends signals to all customers no
22 matter what technology or combination of
23 technologies they may adopt. The valuable
24 experience pilots and refined analysis will be

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1 crucial for the transition to Phase 2 in 2021.
2 Our approach is similar to that recently
3 adopted by New York.

4 We propose the Commission immediately
5 create working groups to formulate pilot
6 studies, establish data collection
7 requirements, and develop a Value of
8 Distributed Energy Resource study methodology
9 to run in parallel to Phase 1. This will help
10 the utilities do what they did not do in this
11 case, which is establish the full range of
12 costs and benefits of DER. An objective,
13 independent Value of DER study is essential.
14 We propose this study be completed by early
15 2020 so that the Phase 2 program can be
16 implemented by January 1st, 2021. We recommend
17 the Value of DER study be updated every three
18 years so that it utilizes the best available
19 information at the time to refine price
20 signals.

21 We are proposing four pilot studies, and
22 are open to others as proposed by the City of
23 Lebanon. They are a time-of-use pilot, a
24 "Smart Energy Home" pilot, a non-wires

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1 alternative pilot, and a study of the ways that
2 we can provide greater access to DER for low
3 and moderate income customers. This latter
4 proposal for low and moderate income customers
5 builds off the recommendation of the Consumer
6 Advocate.

7 The time-of-use pilot seeks ways to make
8 the existing optional time-of-use rates more
9 actionable. At present, Liberty and Eversource
10 each have optional time-of-use rates, but the
11 13-hour peak window makes it very difficult for
12 customers to shift their demand.

13 The "Smart Energy Home" pilot would test
14 real-time pricing, critical peak prices, demand
15 charges or other structures that enable
16 customers to adopt a variety of technologies
17 and behaviors to manage their electricity
18 consumption.

19 Finally, the non-wires alternative pilot
20 should push hard to assess the means and
21 benefit of deploying DER instead of traditional
22 distribution and transmission investment in new
23 lines or substations. This topic was raised by
24 Commissioner Scott in June and reflects the

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1 convergence of thinking among utilities and DER
2 providers. The objective of the pilot is to
3 find the lowest cost option for the system by
4 targeting DER deployment to save money and
5 increase renewable, local resources whenever
6 whenever possible.

7 In closing, our proposal is not a "take it
8 or leave it" proposal. It is, however, one
9 that our Coalition believes reduces the value
10 of DER exports materially. What we seek in
11 return is a transition to Phase 2 based on the
12 completion of the studies and the collection of
13 data we wish we would have had in this
14 proceeding. We believe this is essential to
15 creating a more advanced program that can make
16 our grid less expensive, cleaner, more
17 reliable, modern, and flexible.

18 Thank you. I will now turn it over to
19 Karl who will offer constructive criticism of
20 the utility proposal.

21 WITNESS RABAGO: Good? Okay. I was
22 going to give your fingers a break.

23 MR. PATNAUDE: No. That's okay.

24 **BY THE WITNESS:**

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1 A. (Rabago) Good morning, Commissioners. My name
2 is Karl Rabago again. And I'm here to offer
3 the Energy Future Coalition's criticisms of the
4 Utility Coalition proposal. These criticisms
5 will be constructive, but I hope they will also
6 be direct and specific.

7 The Utility Coalition proposal includes
8 several components that would undermine the
9 economic benefits of customer investments in
10 self-generation systems. The proposal
11 dramatically reduces compensation for
12 generation produced by net metered customers,
13 those under 100 kilowatts. What the utilities
14 describe as a 14 percent reduction in total
15 bill reduction is, using their numbers, an
16 increase of 125 percent in the bills that a
17 customer-generator would pay. Actual data to
18 assess the impacts was not provided by the
19 utilities.

20 Contrary to sound cost of service
21 ratemaking principles and practice, the
22 proposal is not based on a cost of service
23 analysis. There is no study of what it costs
24 to serve a net metered customer. The proposal

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1 eliminates the "net" in net metering and
2 replaces it for customers on competitive supply
3 with a buy-all-sell-all tariff, in which
4 consumption is charged based on retail cost of
5 service rates, but generation must be sold at
6 wholesale avoided cost rates.

7 The tariff design appears to convert
8 self-generation customers into wholesale
9 generation businesses, with potentially severe
10 tax consequences that would further impair the
11 cost-effectiveness of investing in
12 self-generation.

13 Finally, after these blows to the economic
14 benefits of private customer investment in
15 distributed generation, and without that
16 comprehensive study of all the costs and
17 services -- benefits of that generation, the
18 Utility Coalition proposes pilot programs and
19 studies that do not, in the end, chart a path
20 to an energy future with dynamic rates and
21 other measures to ensure and capture the value
22 of distributed energy resources.

23 Taken as a whole, the Utility Coalition
24 proposal would send a clear signal that New

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1 Hampshire is not a place for the growth of the
2 DER business.

3 Now, this case, and perhaps House Bill
4 1116, was built on a concern over whether net
5 metering creates a cost shift that should be
6 corrected with new rate design. A thorough
7 study of costs, based on data that the
8 utilities alone have the capacity to produce,
9 is therefore an essential prerequisite to any
10 change in rates, just as it always is in cost
11 of service ratemaking. The utilities failed to
12 provide credible and reliable evidence that an
13 unjust and unreasonable cost shift exists in
14 net metering today. And, without this data,
15 there is no way to establish cost-based rates
16 that are just and reasonable.

17 The one utility that purported to do a
18 cost of service study approach did not actually
19 do so. Unitil's consultant merely manipulated
20 a pre-existing cost of service study to show a
21 cost shift without the benefit of empirical
22 cost of service data gathered in New Hampshire.
23 The OCA has noticed -- noted in its comments
24 that no cost shift has been proven in net

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1 metering as it exists today. And the Office of
2 Energy and Planning has made a similar
3 observation in a recent letter.

4 The lack of credible evidence of existence
5 and magnitude of any cost shift resulting from
6 net metering also undercuts the Utility
7 proposal to grant zero value to distributed
8 generators for helping to avoid system
9 distribution costs over the 25 or more years
10 that a net metered system will likely operate.
11 Because distributed generators operate in a
12 mode of interconnection to the distribution
13 grid, zero is the only value of distribution
14 costs or benefits that we know is absolutely
15 wrong. But zero is the value that the Utility
16 Coalition proposes. Mr. Beach's testimony
17 shows at least value equal -- at a value at
18 least equal to 50 percent of distribution
19 charges.

20 Moreover, assigning a value of zero for
21 the distribution credit -- for the distribution
22 credit, excuse me, means that approving the
23 Utility proposal means agreeing that there is
24 no utility distribution expansion that could

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1 not be delayed or avoided by strategically
2 deployed DER. This is not only highly
3 improbable, but out of synch with work that is
4 going on around the nation, and with the kind
5 of analysis of costs and benefits envisioned in
6 HB 1116. It is not credible to propose a rate
7 for net metering with no credit for avoided
8 distribution system costs. But it is, of
9 course, consistent with the lack of load,
10 customer type, and consumption data by circuit
11 and substation, as well as other value of DER
12 data from the utilities in this proceeding.

13 I will leave it to the attorneys to debate
14 the overall assignment of burdens of production
15 and persuasion in this matter, but simply note
16 that the affirmative reduction in net metering
17 credit proposed by the Utility Coalition does
18 not have a basis in evidence.

19 Approval of a new rate for net metering
20 customers based on the extremely weak record
21 supplied by the utilities would send an
22 additional bad signal to investors and
23 customers seeking to do business in New
24 Hampshire.

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1 I don't know of a utility that openly
2 asserts hostility towards customer-sited
3 non-utility generation. But the proposal and
4 the record in this case sends that message
5 quite clearly. The proposed instantaneous
6 netting treatment of distributed generators
7 smaller than 100 kilowatts in the Utility
8 Coalition proposal would be confiscatory if
9 conducted by the government. That is, rather
10 than netting consumption and production on the
11 monthly billing cycle, the Utility proposal for
12 two-channel metering eliminates the very
13 concept of net metering as it was created --
14 that was created to encourage and enable
15 customers who installed generation primarily to
16 offset their use with distributed generation.
17 In effect, it tells these customers that they
18 can only become generators if they assume the
19 burdens and consequences of going into the
20 wholesale generation business. This change
21 frightens and disappoints the DER industry for
22 several good reasons. Fortunat, of ReVision
23 Energy, will explain.

24 A. (Mueller) Thank you, Karl. As Mr. Rabago

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1 notes, the utilities' extreme proposal to take
2 the "net" out of "net metering" was actually
3 only hurriedly explored in the technical
4 session. And, based on that discussion, I
5 believe many of the participants of this docket
6 still don't understand its full implications.
7 Treating self-generation solar customers as if
8 they were a large Qualifying Facility
9 dramatically erodes customer value and creates
10 a huge amount of uncertainty that will all but
11 eliminate the reasonable opportunity for
12 customer-generators to make investments in New
13 Hampshire. When combined with the dramatically
14 lower compensation for exports, eliminating
15 monthly netting for residential solar customers
16 is really a deal-breaker and will be a huge
17 step backwards for New Hampshire.

18 In order to make an informed decision
19 about a project, customers need to have a
20 reasonable expectation about the bill savings
21 that will result from that investment.

22 Companies like ours invest considerable time
23 and resources in developing modeling software
24 and in training our staff to help customers

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1 identify projects that meet their particular
2 goals. We could do that under net metering, in
3 part, because all residential customers have
4 access to historical monthly energy consumption
5 from their utility bill history, which we use
6 to help them understand the economics of a
7 particular solar investment. With our help,
8 customers understand this simple and basically
9 fair paradigm of monthly netting of energy in
10 use, as it has been implemented in New
11 Hampshire, as well as in at least 40 other
12 states, and they can use that information to
13 make sound investment decisions.

14 In contrast, without "netting", it's
15 literally impossible to develop a similarly
16 robust project model for a customer, because
17 residential customers do not have access to
18 their minute-by-minute energy use history.
19 Such data does not exist for most residential
20 customers, and it would take different meters
21 and at least a year's worth of data collection
22 with those meters for us to responsibly advise
23 potential customers about projects.

24 In the absence of data and of reliable

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1 models, DER providers and customers are left to
2 simply guess at the expected project economics.
3 As Dr. Bonbright observed in developing his
4 "understandability" rate design criterion, it's
5 critical that customers understand how their
6 technology can be effectively used to affect
7 their bill, and eliminating netting makes that
8 completely impossible.

9 When you combine this massive new level of
10 customer uncertainty with the already reduced
11 project economics due to a change in the export
12 rate, you simply no longer provide a reasonable
13 opportunity for a customer to make these
14 investments.

15 Just as importantly, the Utility proposal
16 for instantaneous netting is bad policy and it
17 sends exactly the wrong signal to DER
18 customers. It will create an incentive for DER
19 customers to self-consume as much electricity
20 as possible at the time of day when their
21 production is the highest. This is likely to
22 be a time when the grid is in most in need of
23 excess power from the DER. Rather than making
24 such power available to their neighbors when it

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1 is needed most, it would incentivize DER
2 customers to use power generated from the DER
3 for tasks that would normally be reserved for
4 times of lower system load, sending exactly
5 backwards price signals to the market. Kate.

6 A. (Epsen) NHSEA, New Hampshire Sustainable Energy
7 Association, also has serious concerns that
8 were just raised by Fortunat on this issue,
9 regarding the consistency of this proposal with
10 the existing statutes.

11 The first is that instantaneous netting --
12 instantaneous metering, excuse me, doesn't seem
13 to fit with the original intent or language of
14 LEEPA, 362-A:9, in accordance -- which says "In
15 accordance with normal metering practices,"
16 with "a single net meter that shows the
17 customer's net energy usage by measuring both
18 the inflow and outflow of electricity
19 internally." Further, the next sentence in
20 LEEPA -- in LEEPA specifically requires
21 bidirectional metering "either instantaneously
22 or over intervals of an hour or less" for
23 facilities over 100 kW. House Bill 1116 may
24 permit this distinction to be erased, but there

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1 is no hint of the need for that in the
2 legislation or the intent of the legislation in
3 order to protect consumers.

4 Our second concern, echoing Mr. Rabago, is
5 the apparent desire of the Utility Coalition to
6 cause small DER facilities to be treated like
7 wholesale generators. This could result in a
8 very serious change in the way DER as viewed
9 under state and federal law, upending the way
10 New Hampshire has traditionally treated net
11 metering facilities. Surely, the Legislature
12 did not intend such a huge change in our energy
13 policy in a bill that does not mention such a
14 change, and which says the Legislature
15 continues to support the essential purposes of
16 LEEPA.

17 And I'll defer to Mr. Phelps. Thank you.
18 A. (Phelps) Thank you, Kate. And thank you,
19 Commission.

20 As a result of my experience around the
21 country, I think the drastic reductions in the
22 Utility Coalition proposal will be seen
23 nationally as extreme and will discourage the
24 competitive market of DER in New Hampshire,

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1 contrary to the purpose statement of House Bill
2 1116 and what is in the best interest of New
3 Hampshire consumers and its economy.

4 This is similar to the effect on the DER
5 market in Nevada. Nevada reduced
6 customer-generator bill savings by 42 percent,
7 the low end of our estimates for the Utility
8 Coalition proposal. This caused a 99 percent
9 reduction in solar applications in 2016, which
10 cost Nevada over 2,600 jobs. This would be a
11 tragic and unnecessary blow to DER in New
12 Hampshire and its many related benefits.

13 I also want to highlight, as utilities
14 often do, the high cost of regulatory
15 uncertainty. In addition to what you have
16 already heard, the utilities propose adding
17 presently unknown non-bypassable charges to
18 their paradigm. What does this mean? It means
19 increased uncertainty.

20 Overall, this Utility Coalition proposal
21 is a hostile -- is as hostile to net metering
22 and the opportunity to invest in customer
23 generation as any I have seen in the states
24 where net metering is under attack.

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1 A. (Bean) Thank you. As I mentioned previously,
2 we have sought to create pilots and studies to
3 allow the fulfillment of New Hampshire law --
4 net metering law and policy, including those in
5 House Bill 1116. Good studies for these
6 purposes are about what could and should happen
7 in the future. The Utility Coalition study of
8 the Value of Distributed Energy Resources, for
9 example, would not allow the consideration of
10 long-term projections or forecasts. This is
11 imprudent because the utility distribution and
12 transmission investment that might be avoided
13 by DER have useful lives of many decades, and
14 these planning processes also include long-term
15 projections and forecasts.

16 A good Value of DER study should consider
17 the useful lives of both the utility plant and
18 DER resources. Such a limitation raises
19 questions about the intent and sincerity of
20 commitment to lower costs.

21 Finally, there is little or no purpose to
22 ordering studies and not requiring their use in
23 proceedings. There is no Utility Coalition
24 commitment to periodic updates of their pilot

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1 studies, or procedures necessary to require the
2 use of Value of DER studies or various pilots
3 as future alternative tariffs. This would
4 provide more certainty and predictability to
5 the state.

6 We urge that the Commission and its Staff
7 be empowered to get the studies done and take
8 New Hampshire where the data leads.

9 And, with that, that concludes our
10 statements. And we'd like to thank you, the
11 members of the Commission, for your time and
12 attention.

13 CHAIRMAN HONIGBERG: Mr. Buxton.

14 MR. BUXTON: Your Honor, the panel is
15 available for cross-examination.

16 CHAIRMAN HONIGBERG: All right. Who
17 has questions for the panel?

18 *[Show of hands.]*

19 CHAIRMAN HONIGBERG: Mr. Fossum, I
20 see your hand. Mr. Fossum, you're speaking for
21 all the utilities? It seems like it.

22 MR. FOSSUM: My under -- I'll get
23 close enough. My understanding of the protocol
24 that we had all spoken about was that, sort of

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1 on behalf of our Utility Consumer Coalition,
2 there would be a primary questioner, which
3 apparently is me. But that, if there were some
4 potential follow-on questions that are
5 generated in the course of that, then there
6 would be some room for additional questions
7 from our group. But, primarily, I understand
8 I'll be doing the questioning.

9 CHAIRMAN HONIGBERG: Fair enough.
10 Just go off the record for a second.

11 *[Brief off-the-record discussion*
12 *ensued.]*

13 CHAIRMAN HONIGBERG: All right.
14 We'll go back on. Mr. Fossum, you may proceed.

15 MR. FOSSUM: Thank you. And just to,
16 I guess, be up front with everybody, I think
17 all -- at least the vast majority, if not all
18 of my questions, will relate to what has been
19 admitted this morning as Exhibits 1 and 3.

20 WITNESS PHELPS: If it pleases the
21 Commission, before we go back?

22 CHAIRMAN HONIGBERG: Who's talking?
23 Yes.

24 WITNESS PHELPS: I will just note

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1 that Exhibit 3, which was just mentioned, which
2 I believe is my model, I was going to reference
3 via my computer. I hope that is okay.

4 CHAIRMAN HONIGBERG: Really, if
5 there's a problem, I think someone will let us
6 know. But Mr. Fossum is going to ask you
7 questions. And, if you're able to answer them,
8 that's great. If you're not, you're going to
9 have to tell him why. And, if you need to
10 refer to something, we'll get it done.

11 WITNESS PHELPS: Thank you.

12 CHAIRMAN HONIGBERG: All right. Mr.
13 Fossum.

14 MR. FOSSUM: Thank you. And,
15 actually, I don't have just a ton of questions,
16 so hopefully this won't take too, too long.

17 **CROSS-EXAMINATION**

18 BY MR. FOSSUM:

19 Q. I wanted to look at an item that made some --
20 was part of the opening statement this morning
21 regarding instantaneous netting, beginning on
22 Page 6 of the testimony. For what it's worth,
23 since it's group testimony, I don't -- I'll
24 just direct the question. And if it's

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1 appropriate -- more appropriate for one person
2 than another, but I presume, when we get to the
3 model questions, those will be for Mr. Phelps
4 primarily.

5 CHAIRMAN HONIGBERG: Mr. Fossum,
6 they're all here. Whoever feels competent to
7 answer your questions is going to speak up.
8 Just off the record for a second.

9 *[Brief off-the-record discussion*
10 *ensued.]*

11 BY MR. FOSSUM:

12 Q. All right. Now, looking at what's included in
13 the testimony, and particularly at Page 6, and
14 beginning at Line 4, the testimony states that
15 "Instantaneous netting only makes sense when an
16 entity wants to charge a customer for a
17 different price for using electricity from the
18 utility than for exporting electricity to the
19 utility." I guess, to whom it matters, did I
20 read that correctly? That's the correct
21 statement?

22 A. (Phelps) That appears to be correct.

23 Q. And, if I understand your Coalition's proposal,
24 that proposal includes removing non-bypassable

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1 charges from the credit paid by the utility, is
2 that correct?

3 A. (Phelps) That is correct.

4 Q. And, so, would you agree then that, even under
5 your proposal, that there would be a different
6 price charged for electricity deliveries than
7 for electricity sales?

8 A. (Phelps) Yes. We talked about that on Page 5,
9 the previous page.

10 Q. So, would you agree then that, if instantaneous
11 netting only makes sense in that circumstance,
12 that it would arguably make sense in the
13 circumstance that even you propose?

14 A. (Phelps) Yes. We are very concerned about the
15 implication of instantaneous netting.

16 A. (Mueller) I think you misunderstand the meaning
17 of the sentence that you read. You read that
18 "instantaneous netting only makes sense in that
19 case", not that it "necessarily makes sense in
20 that case". Those are two different things.

21 Q. Understood.

22 A. (Mueller) To be clear, there is -- when there
23 is no difference in price paid, the netting
24 interval has no impact whatsoever on the bill.

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1 Q. Looking down a little further in your
2 testimony, beginning at Line 8, and as
3 referenced in some of your opening comments,
4 there's a statement about "instantaneous
5 netting motivating customers to run appliances
6 at the times that their systems are producing".

7 I'm not sure that I understand. Could you
8 explain why it's a problem that a customer is
9 using energy as it's being produced?

10 A. (Mueller) Insofar as solar in New England is
11 still largely peak coincident, and so the value
12 of solar energy generated on the rooftop of a
13 residence has higher-than-average value to
14 other ratepayers, it is a mistake in market
15 signal to encourage generation to shift to that
16 time. Collectively, we are better off if the
17 solar customer has the incentive to export that
18 energy during periods of high grid stress and
19 high cost and use -- and not shift their loads
20 to be coincident with that generation.

21 A. (Rabago) Simply put -- simply put, I'll just --
22 the idea here is that it is better for society
23 as a whole if, to a certain extent, distributed
24 generators become free drivers, where their

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1 excess production is made available to the
2 system at a time of strain, typically, what is
3 accompanying the period of high demand on the
4 rest of the network. So, sending a price
5 signal which encourages them, because the
6 compensation is higher for self-consumption
7 than it is for exports, sending a signal that
8 induces them to say move a discretionary load,
9 like charging an electric vehicle, to a high --
10 a period of high production is
11 counterproductive for society as a whole.

12 A. (Phelps) I'll try to simplify that as much as
13 possible. If customers receive full retail
14 compensation for electricity they use --
15 generate and use on site, but they see some
16 type of reduction in the value for energy that
17 they export, especially if it's a significant
18 reduction, customers will be financially
19 motivated to use as much electricity as
20 possible on site during times that their system
21 is generating electricity.

22 Q. And, to you, that's a problem, that a customer
23 is incented to use energy that, at their site,
24 that they are producing at their site?

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1 A. (Phelps) It's a problem if that doesn't benefit
2 the electric distribution grid. So, for
3 instance, if solar is generating at, say, three
4 o'clock in the afternoon, and a system is
5 peaking at three o'clock in the afternoon, you
6 want to motivate customers to not use
7 electricity at that point in time. The system,
8 as most distributed energy resources, will just
9 end up providing the benefits that they provide
10 throughout the day. But, if you can encourage
11 customers to use less electricity during
12 periods of system peaks, then there's a benefit
13 to all ratepayers.

14 A. (Rabago) I'll just add one more, sort of this
15 was explained to me as a technical issue. If
16 you have -- if you extend this out to the
17 extreme, where all customers have some
18 self-generation and they zero out all their
19 energy consumption during those periods, all
20 that's left to serve the grid is VAR -- is a
21 need for VAR. And, without smart inverters,
22 for example, then what you'll have is a utility
23 facing zero energy with no -- with no VARs and
24 having to provide that separately as a product.

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1 So, we want, for technical and economic
2 reasons, as I stated before, to encourage these
3 self-generators to contribute to the overall
4 system.

5 Q. And, when, for those who install these systems,
6 when talking with customers, is that a -- is
7 that part of the value proposition you make to
8 them?

9 A. (Mueller) Is what part of the value
10 proposition?

11 Q. That they should be encouraged to be supporting
12 the overall system?

13 A. (Mueller) I think customers have different
14 levels of sophistication with respect to how
15 their system -- individual system impacts the
16 greater good. I think most customers who have
17 been paying careful attention understand that
18 DG solar has a net benefit to all customers.
19 And, so, that is something that is interesting
20 to them. I can't imagine it is the primary
21 motivator.

22 Most people are not investing in solar for
23 philanthropic reasons, in order to lower their
24 neighbor's utility costs. But I think many of

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1 our customers understand that that is the
2 consequence of their investment and are proud
3 of that.

4 A. (Rabago) That squares with by experience
5 administrating a utility solar program for some
6 three years as well. Customers are highly
7 motivated to be part of a positive force in
8 their community by making the investment with
9 their own money into a distributed generation
10 system.

11 A. (Phelps) And I'll note that it's not incumbent
12 upon customers to determine what price signals
13 are sent to them. That depends on the rates
14 and then the rate design that customers are
15 given. So, if we empower customers to take
16 action and act in a behavior that benefits
17 themselves, in addition to everyone, I'm very
18 confident that they will.

19 Q. Looking at your proposal, just so that I
20 understand, your proposal, in light of your
21 position on this instantaneous netting issue.
22 Just to be clear, to which portion of the
23 customer's generation would the new
24 compensation rate that you're proposing would

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1 apply?

2 A. (Phelps) I think I need a little bit more
3 detail. I'm a little confused by your
4 question.

5 Q. Fair enough. I'll do it by way of example. If
6 a customer, say, uses 500 kilowatt-hours in a
7 month, and in that same month has a system that
8 produces 600 kilowatt-hours, under your
9 proposal, to which portion of that generation
10 would your new rate apply?

11 A. (Phelps) I will try to answer that question as
12 best as I can, but I will note that more
13 information would be needed to fully explain.
14 So, for instance, as you have previously noted,
15 we are proposing to remove non-bypassable
16 charges from the export credit, from the net
17 metering credit. Also, we are proposing a dual
18 channel meter, a meter that measures all
19 imports and all exports. And the
20 non-bypassable charges would be charged for all
21 imports. All of the other credits would be
22 monthly netting. So, the monthly net, for
23 instance, in your example of usage of 500
24 kilowatt-hours over the month, and then

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1 generation of 600 kilowatt-hours in the month,
2 there would be a monthly net excess of 100
3 kilowatts. And that would be --

4 A. (Bean) Kilowatt-hours.

5 A. (Phelps) I'm sorry, kilowatt-hours. Thank you.
6 And that would be converted into a monetary
7 credit based on the retail rate components, and
8 the distribution portion would be, depending on
9 the date of interconnection, would be reduced.

10 Q. And, so, just to follow that through then, in
11 my example that I've given, would you agree
12 that your proposal would have the effect of
13 lowering the compensation only on the 100
14 kilowatt-hours of excess, but everything else
15 would remain essentially as it is today?

16 A. (Phelps) No, I disagree.

17 Q. Could you explain then how it is that I've
18 misunderstood your proposal?

19 A. (Phelps) You've glossed over the non-bypassable
20 charges that I explained.

21 Q. And, so, if then I understand, so the customer
22 using 500 kilowatt-hours, importing 500
23 kilowatt-hours from the grid, would pay all
24 charges on that, correct?

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1 A. (Phelps) All non-bypassable charges.

2 Q. I guess I'm not -- looking, I guess, at it from
3 a customer bill perspective, which I can maybe
4 try it that way so I hope I can understand as
5 well. In my -- in the scenario that I've
6 given, the 500 and 600, just to stick with the
7 same numbers, would a customer then receive a
8 bill indicating that they had zero use, and
9 they would be charged according to have zero
10 use, and then they would receive a credit for
11 the 100 kilowatt-hours of excess?

12 A. (Phelps) The bill would be a little bit more
13 complicated than that. There would be the
14 non-bypassable charges that would show up on
15 the bill, and then there would be the monetary
16 credit that would show up on the bill, and, of
17 course, the customer charge would show up on
18 the bill.

19 Q. Okay. I think I understand. Thank you. So,
20 there would be then a bill to the customer
21 every month that had a flat customer charge, a
22 charge relating to non-bypassables imported,
23 and a credit on whatever excess they might have
24 produced in that time frame?

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1 A. (Phelps) If they had excess.

2 Q. And you'd consider that something more -- more
3 easy for customers to understand than what has
4 been proposed in the Utility Consumer
5 Settlement document?

6 A. (Phelps) Absolutely.

7 A. (Mueller) And here's the reason. Customers
8 have access to historical monthly energy
9 consumption data. They do not have access to
10 historical instantaneous energy use data in any
11 meaningful way. And, so, you cannot explain to
12 a customer the bill savings under an
13 instantaneous netting regime with any degree of
14 accuracy. And that creates a real problem for
15 customers, in terms of their opportunity to
16 make a reasonable choice about making this
17 investment.

18 Q. Now, you said, Mr. Mueller, that you spend, I
19 guess, in your opening remarks, about "four to
20 seven months working with the customer, between
21 initial contact and the construction of their
22 system." Did I hear that correctly?

23 A. (Mueller) Yes.

24 Q. And, in that four to seven months, do you spend

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1 time educating them on that?

2 A. (Mueller) We spend an awful lot of time
3 educating them, yes.

4 Q. And it's your understanding that customers
5 wouldn't be able to understand the Utilities'
6 proposal, in your experience?

7 A. (Mueller) You know, it is -- customers, in
8 general, are pretty smart. And, given time and
9 access to the right data, they will be able to
10 understand. The problem is that it is not
11 possible to understand. It is not possible for
12 us, with the resources we have to model system
13 production, to make a reasonable estimate for
14 bill savings for a customer under an instant
15 netting regime, because we have no idea whether
16 the customer who uses 500 kilowatt-hours a
17 month is using it during the day, in the
18 evenings. And, if it's during the day, you
19 know, whether it's load that turns on and off,
20 on and off, or is steady through the day.
21 Until and unless we have that data, we can't
22 give the customer the information to understand
23 their bill. And, so, it's not a limitation on
24 the customer's intellect. It's a limitation on

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1 the available data.

2 Q. And, so, in that four to seven months that
3 you're working with them, you don't take the
4 time to understand their load profiles, what
5 devices they use and when, what appliances they
6 use and when?

7 A. (Mueller) We do not have any reason nor -- so,
8 first of all, to be clear, four to seven months
9 is the time period from the initial customer
10 contact until construction. So, you know, our
11 typical sales cycle is somewhere in that chunk,
12 but also installation backlog and permitting
13 and other things are in there.

14 Under the current, what everybody in the
15 world understands to mean "net metering", we
16 don't have any reason to need to understand,
17 nor does the customer need to understand the
18 particular load profile in order to figure out
19 whether their investment makes sense or not.
20 They need to know how much energy did they use
21 over a given year, and, under our proposal, how
22 much energy did they use on a month-to-month
23 basis. But they don't need to know what their
24 instantaneous load profile is.

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1 And, frankly, you know, a month's worth of
2 data is pretty useless. You know, if you look
3 at the month of July, in terms of data of a
4 customer, it is not indicative of the other
5 eleven months of the year. And, so, as I said
6 in my opening remarks, the only way to be able
7 to provide customers with reasonable estimate
8 of savings under an instantaneous netting
9 regime is if we had universal access to data
10 for instantaneous or second-by-second customer
11 load going back at least a year, and, ideally,
12 several years. And we're not in that position
13 today in New Hampshire, nor are we in that
14 position really anywhere in the country that
15 I'm aware of.

16 Q. Moving on from there, and looking over at the
17 testimony on Page 7, there's a -- there's a
18 statement there, up on Lines 2 and 3, that
19 "customers are sheltered from price
20 fluctuations in electricity markets currently".
21 Do you see that portion of the statement?

22 A. (Witness Epsen nodding in the affirmative).

23 Q. What are the electricity markets that are being
24 referred to there?

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1 A. (Phelps) Primarily, the energy and capacity
2 markets in ISO-New England.

3 Q. And, so, those are wholesale markets?

4 A. (Phelps) Correct.

5 Q. And is it your position that customers should
6 be exposed to the regular changes in the
7 wholesale markets?

8 A. (Phelps) Eventually, we would like to see some
9 type of time-differentiated rate, which would
10 start to expose customers to the changing price
11 of electricity throughout the day. And, now,
12 in a very sophisticated customer's case, maybe
13 it would make sense, for instance, as we
14 proposed in pilots, to start to get into
15 real-time pricing or critical peak pricing.
16 But, ultimately, we would like to see some type
17 of time-differentiated rate in order to send
18 the price signals to customers.

19 A. (Mueller) Removing the installation of the
20 customer from the wholesale market signals is
21 not useful unless those signals are actionable
22 for the customer. Otherwise, all you do is
23 increase customer confusion and customer
24 annoyance and generate calls to the Eversource

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1 Call Center month after month.

2 That's why, when we talk about, you know,
3 the Phase 2, the value of DER rates, you need
4 to be fairly thoughtful about crafting those
5 rates in a way that sends appropriate market
6 signals, but is actionable for the kinds of
7 customers these rates are intended for, who are
8 not, you know, giant industrial energy users
9 with five facility managers monitoring a SCADA
10 system. They're residential customers. And,
11 so, the time period and the magnitude and the
12 type of rates that we're proposing in Phase 2
13 need to be appropriate for that customer class.

14 CHAIRMAN HONIGBERG: Mr. Fossum?

15 MR. FOSSUM: Yes.

16 CHAIRMAN HONIGBERG: Commissioner
17 Scott and I suspect Mr. Patnaude are probably
18 going to need a break in a few minutes. Are
19 you near or close to a breaking point?

20 MR. FOSSUM: I'm near a breaking
21 point. I have a few more questions.

22 CHAIRMAN HONIGBERG: Okay.

23 MR. FOSSUM: And, then, I -- well, I
24 have questions about the model, and I could

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1 break before we get to the model itself.

2 CHAIRMAN HONIGBERG: Perfect. Thank
3 you.

4 BY MR. FOSSUM:

5 Q. Looking over at Page 10 of your testimony, and
6 down at -- and, in particular, the answer
7 that's shown at Lines 18 through 20, there's a
8 statement there that, in your Phase 2,
9 customers would "be credited for monthly
10 exports at the Value of DER as determined by...
11 a study." Do you see that portion of the
12 testimony?

13 A. (Phelps) I'm sorry. What page are you on?

14 Q. On Page 10. Page 10 of 21.

15 A. (Phelps) Yes. Apologize, I printed off the
16 version that was filed.

17 A. (Rabago) We've got adequate copies here.

18 Q. Very good. So, do you see the reference now?

19 A. (Witness Rabago nodding in the affirmative).

20 A. (Phelps) Yes.

21 Q. All right. Now, do I understand the purpose of
22 a Value of DER study to be to understand the
23 total value of the distributed resource? Do
24 you agree that that's the purpose, one of the

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1 purposes of such a study?

2 A. (Phelps) As we have proposed, the Value of DER
3 would just be for the distribution component.

4 Q. But the intent, if I understand, is to
5 understand the total value of the resource,
6 both to the consumer and I guess society at
7 large? Or is that not the intent of such a
8 study?

9 A. (Phelps) I'm confused. Are you talking
10 generally or as we have proposed?

11 Q. As you have proposed.

12 A. (Phelps) As we have proposed, we're just
13 looking at the distribution component.

14 Q. Does any of that value come from the customer's
15 ability to offset some of their on-site
16 consumption during a peak period?

17 A. (Rabago) Yes, I think it would. In the idea
18 that, if a customer contributes to a reduction
19 in the system peak by having self-generation,
20 they not only reduce their demand for something
21 that the utility would otherwise have to
22 procure and deliver, or the competitive
23 supplier would generate and then the
24 distribution utility would deliver, but there

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1 are also impacts back to system prices as a
2 whole that could be measured that would flow
3 through. So, yes.

4 Q. And, you've said that it would refer to the
5 distribution piece only. Would your Value of
6 Distributed Resource study look at commodity
7 pricing?

8 A. (Phelps) Not as we have proposed. We're only
9 looking at the distribution component.

10 Q. And I hate to jump back, but I can just make a
11 reference that back on Page 5 of the testimony,
12 and down at Line 30, there's a reference there
13 that the Value of DER study would -- I believe
14 the word is "dictate" the compensation. Does
15 that mean that you're agreeing today that you
16 would be bound by whatever that study would
17 come up with? Is that the Coalition's
18 position?

19 A. (Phelps) That is the entire premise. That
20 eventually we will be changing from the
21 distribution -- our retail rate to the value of
22 distribution number that would go into place in
23 July -- I'm sorry, January 1, 2021.

24 Q. And, so, are you asking the Commission today to

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1 determine that all parties would be bound by
2 the results of that study, whatever they may
3 be?

4 A. (Phelps) We're asking them to conduct the
5 analysis that would determine that value.

6 Q. And I'm just trying to understand what you mean
7 by "dictates" there. That would we, in fact --
8 would that study, the results of that study,
9 bind all parties to this docket when that study
10 is completed, whatever the results of it may
11 be?

12 A. (Phelps) The reason I'm a little reluctant to
13 answer in the affirmative is just that we do
14 propose that this study be updated every three
15 years. So, it's not as if that value would
16 dictate in perpetuity. It would -- it would
17 determine the value for the distribution
18 component for the term until another analysis
19 is complete.

20 A. (Beach) This is Tom Beach. I also think that
21 it would be reasonable for the Commission to
22 take comments on the study that it produced.
23 And I would assume the Commission would have
24 discretion to make changes to the conclusions

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1 of such a study, based on input from parties at
2 that time.

3 A. (Rabago) So, I think the takeaway from the
4 panel is, don't read too much autocracy in the
5 word "dictate". The idea is that it would
6 guide, and then the Commission would make
7 the -- do the dictating when they approved any
8 rate.

9 MR. FOSSUM: Thank you. And I think
10 I'm good to take a break, if that makes sense?

11 CHAIRMAN HONIGBERG: That's perfect.
12 We're going to come back at as close to ten
13 minutes to 11:00 as possible, and off the
14 record.

15 *(Brief off the record discussion*
16 *ensued and then a recess was*
17 *taken at 10:37 a.m. and the*
18 *hearing resumed at 10:54 a.m.)*

19 CHAIRMAN HONIGBERG: Mr. Fossum.

20 MR. FOSSUM: Thank you.

21 BY MR. FOSSUM:

22 Q. And, as I said before the break, I have a
23 series of questions now looking at the model
24 that was provided with -- that has been entered

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1 as "Exhibit 3". And I'll be referring to a
2 couple of page numbers, so on the paper
3 version/printed out copy. And, so, I
4 understand Mr. Phelps has an electronic version
5 up there. But I'm hoping that at least
6 somebody up there has the paper copy that was
7 submitted.

8 A. (Phelps) I'm not sure that we do. I apologize,
9 I was just trying to save a tree.

10 CHAIRMAN HONIGBERG: Let's see how it
11 works.

12 MR. FOSSUM: I brought an extra.

13 *[Rep. Oxenham handing document*
14 *to the Witness Phelps.]*

15 WITNESS PHELPS: Tree dead.

16 BY MR. FOSSUM:

17 Q. Looking at the model, and just to get myself
18 grounded, looking at what is shown on Bates
19 Page 009 of that model. So, what is, and I'm
20 just looking for you to basically correct me if
21 I'm wrong, but, over on the left portion that's
22 hemmed in by the broad lines, where it says
23 "Total Bills". So, is it my -- is it correct
24 to understand that, in that column under I

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1 think "Status Quo", that's showing what a
2 present -- what a customer who is under the
3 present net metering system would have paid in
4 utility bills for the 39-month period
5 referenced at the top of the column there?

6 A. (Phelps) To be specific, from January 1, 2014
7 through March 31st of 2017, that is correct.

8 Q. And, so, then the Phase 1 would be essentially
9 that same 39-month period, if that customer was
10 taking service under your Phase 1 proposal?

11 A. (Phelps) Correct. It's a counterfactual,
12 because, obviously, there were no customers
13 under Phase 1, I think.

14 Q. Right. Okay. Good. And, then, on the right
15 side, that's the average monthly bill, which
16 is, if I understand, basically just taking the
17 information on the left, dividing by 39 months,
18 is that accurate?

19 A. (Phelps) Correct. It's taking the total bills
20 from the previously stated period and dividing
21 it by the total number of months.

22 Q. Okay. Very good. I just wanted to make sure I
23 understood. I wanted to look now at what shows
24 up on Bates Page 100 -- it's Bates Page 160.

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1 A. (Phelps) Okay.

2 Q. And, specifically, under the Eversource
3 "Residential Rate R" section.

4 A. (Phelps) I'm there.

5 Q. And, just to get grounded again, this, reading
6 the header, that says "Phase 1". So, this is a
7 demonstration of what a Eversource residential
8 customer would have paid had they been net
9 metered under your Phase 1 proposal during the
10 first three months of 2017. Is that an
11 accurate description?

12 A. (Phelps) That is correct.

13 Q. Specifically, now, I'd like to look down at the
14 three lines following "System Benefit Charge",
15 "Energy Consumption Tax", and "Default
16 Service". Do you see those three lines?

17 A. (Phelps) I do.

18 Q. Would you agree with me that, for January,
19 February, and March, those three lines are
20 showing identical amounts?

21 A. (Phelps) They are.

22 Q. Are those volumetric charges?

23 A. (Phelps) By "volumetric", I assume you mean
24 "kilowatt-hour charges"?

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1 Q. Correct.

2 A. (Phelps) They are.

3 Q. Would you expect those charges to change month
4 to month?

5 A. (Phelps) I would. And, now that I'm looking at
6 the formula, I see that they're all referring
7 to the same cell, and they should be referring
8 to different cells. So, specifically, they are
9 all referring to a January usage, and they
10 should be referring to a January, February, and
11 March usage.

12 Q. Are there any other similar issues elsewhere in
13 the model that you're aware of?

14 A. (Phelps) Not that I am aware of.

15 Q. Subject to check, would you agree with me that
16 what is shown on Page 222, in the printed out
17 version, has the same issue?

18 A. (Phelps) It appears so.

19 Q. So, would you then agree that the testimony,
20 the charts that you've included in Pages 8 and
21 9 of the testimony perhaps need to be amended?

22 A. (Phelps) They would need to be amended. I will
23 note that, for a residential customer, in the
24 model, as it was constructed, as I constructed

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1 20 percent?

2 A. (Phelps) There is no information in New
3 Hampshire that I am aware of as far as how much
4 is consumed on site. And that is one of our
5 primary issues in this case.

6 Q. Mr. Phelps, have you reviewed Mr. Beach's
7 testimony, which has been entered as "Exhibit
8 19"?

9 A. (Phelps) Are you referring to his direct
10 testimony or his rebuttal testimony?

11 Q. His direct testimony.

12 A. (Phelps) I have.

13 Q. And, subject to check, would you agree with me
14 that he indicates that typically 30 to
15 50 percent of DG production is exported -- I'm
16 sorry, is consumed on site, is imported?

17 A. (Phelps) If I recall correctly, and Mr. Beach
18 is here to speak for himself, but, if I recall
19 correctly, he's referring to his experience in
20 other states, including Arizona, which I will
21 note customers in Arizona have very different
22 production profiles and usage profiles. Which
23 is why it's very difficult to extrapolate data
24 from other states to New Hampshire.

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1 Q. Would you agree with me that, if you
2 substituted your 20 percent for a higher
3 number, that the results of your model, the
4 percentage change in your model goes down?

5 A. (Phelps) The "percentage change", what are you
6 referring to exactly?

7 Q. The percentages that are shown on Page 10 of
8 the paper copy of the model, and reproduced in
9 the testimony, those percentage numbers. If we
10 swapped out 20 percent for a larger number,
11 would you agree that all of those percentages
12 would go down?

13 A. (Phelps) The percentage in our proposal, as far
14 as the percentage that is used on site, only
15 impacts the System Benefits Charges, the
16 Consumption Tax, Stranded Cost, and Storm
17 Recovery for the applicable utilities. So, the
18 increase in the percentage of electricity that
19 is generated and used on site has a relatively
20 small impact on the total bills. So, I
21 believe, if you play from zero percent used on
22 site up to 100 percent, it can be a range of
23 about \$4.00 difference, between 0 percent used
24 on site and 100 percent used on site.

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1 Q. Understood. I was just asking if they go down?

2 A. (Phelps) The percentages ultimately would go
3 down, I believe, a relatively small amount.

4 Q. Now, looking at the customer impacts of the
5 bill model as they're demonstrated, correct me
6 if I'm wrong, but your model compares a
7 presently net metered customer under the
8 existing rules with what a net metered
9 customer -- with what that same net metered
10 customer would pay under your proposal. Is
11 that correct?

12 A. (Phelps) It assumes the same customer
13 characteristics and the same generation
14 characteristics.

15 Q. Would it be more appropriate perhaps to compare
16 a non-net metered customer who goes to net
17 metering today, and what the impact would be to
18 a non-net metered customer who then becomes a
19 net metered customer, if your proposal is
20 adopted, to see the impact?

21 A. (Phelps) That would make sense if we knew what
22 the rates were going to be for the foreseeable
23 future. And, by "foreseeable future", I mean
24 several years. The reason I went back in

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1 history is because all of those rates are
2 known. So, I can demonstrate or we can
3 demonstrate what the impacts would have been
4 with actual known rates.

5 Q. Well, I understand that your bill impact model
6 is an attempt to show what the impact is going
7 to be on future net metered installations, is
8 that correct?

9 A. (Phelps) Yes. It is correct.

10 Q. So, it is forward-looking then?

11 A. (Phelps) The model is an effort to demonstrate
12 what would have happened in the past, in order
13 to give a demonstration of the type of impacts
14 we will likely see in the future.

15 I can't accurately forecast what the rates
16 are going to be in the future. So, at this
17 point in time, it's impossible for me to
18 actually demonstrate what the future impacts
19 will be.

20 Q. Well, with that understanding, perhaps you
21 could bear with me for this, and, since you
22 have the electronic model, you may be able to
23 do it rather quickly. If you take your model
24 and set the solar installation size to zero, as

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1 though it wasn't there at all, it would show,
2 under the "Status Quo" column, a customer bill
3 at about \$113. Is that correct?

4 A. (Phelps) That is correct.

5 Q. So, the difference then between having no
6 system and having the 6-kilowatt system that
7 you model is about -- is about \$94 a month in
8 customer savings. Does that sound about
9 accurate?

10 A. (Phelps) I do not know.

11 Q. Well, if you take the \$113 that would be there,
12 that would be paid by the customer if the solar
13 system was not in place, and you subtract the
14 \$19.33 that the customer pays under the status
15 quo, you agree that that math works out to
16 about \$94?

17 A. (Phelps) Subject to check.

18 Q. And, doing the same exercise with your Phase 1
19 proposal, if the solar system was set to zero,
20 such that it indicates that it might not exist,
21 it would be about \$114 a month in the model?

22 A. (Phelps) Subject to check.

23 Q. And, using the Phase 1 number that you have in
24 your model, the \$23.70, the difference in what

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1 a customer would pay is about \$90 per month,
2 would be the customer savings?

3 A. (Phelps) Subject to check.

4 Q. Would you agree with me that a reduction from
5 approximately \$94 a month in savings, to
6 approximately \$90 a month in savings, is a
7 reduction of about 4 percent?

8 A. (Phelps) I will take that subject to check.

9 Q. And, then again, subject to check, would you
10 agree then that that 4 percent might be even
11 smaller if a number higher than 20 percent for
12 on-site consumption was used?

13 A. (Phelps) I would expect a very nominal
14 difference.

15 Q. And, in your opening, I don't know if it was
16 you or another member of your panel, had
17 testified that what you're offering is a
18 "material change" from the status quo. If,
19 following my hypothetical, or following the
20 math as it appears in your model to me, is a
21 4 percent reduction in the value to a customer
22 a "material change" to you?

23 A. (Phelps) I would consider an increase from the
24 status quo to our proposal in the range of

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1 20 percent increase in customer bills to be
2 material.

3 Q. So, it's a matter of perspective as to how
4 material the change is then. If we're looking
5 at it from that perspective, in your
6 20 percent, but the customer value is really a
7 4 percent difference, does that still seem
8 material to you?

9 A. (Phelps) I would say a customer value from the
10 status quo to the customer value of what we
11 have proposed is a material difference, as I
12 previously stated.

13 A. (Bea) Nathan, and I believe the calculation
14 was \$4.00 a month. So, if we take that to a
15 year, we're talking about \$480 a year, take
16 that over ten years -- I'm sorry, \$48 a year,
17 take that to ten years, you have \$480, take it
18 to 20 years, you're approaching a \$1,000
19 difference. And these are long-term
20 investments the customers are making.

21 Q. I understand. I'm trying to understand the
22 difference between a value to a customer who is
23 not net metered today and becomes one, and the
24 value to a customer who's not net metered a

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1 year from now or two years from now and becomes
2 one?

3 A. (Mueller) I think, if your question is, "does
4 our proposal value consistency and gradualism
5 and customer understandability?" Then, the
6 answer is "yes". That is inherent in the
7 design of our proposal. We're trying to avoid
8 a rate shock.

9 Q. And I'm -- understood. In general, and this
10 isn't necessarily for Mr. Phelps, over the last
11 few years, in general, to the best of your
12 knowledge, what's the trend of the installed
13 cost of solar energy?

14 A. (Mueller) The trend, in general, is that the
15 average solar project is getting less expensive
16 over time.

17 Q. And would you expect that trend to continue?

18 A. (Mueller) We certainly hope so. I think there
19 is -- there are lots of factors that go into
20 the cost of a solar installation. And the
21 element driving much of the cost reduction
22 historically has been a reduction in the cost
23 of modules, which increasingly make up a
24 smaller and smaller fraction of the overall

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1 project cost.

2 So, given that I have an imperfect crystal
3 ball looking into the future, I would say -- my
4 expectation is that the rate of change of solar
5 installation costs going into the future is
6 unlikely to be the same as it has been in the
7 last 24 months. But I'm certain that I will be
8 wrong in one direction or another if I were to
9 guess what the future price of solar will be.

10 Q. Understood. So, with your stated general
11 understanding that the costs would be going
12 down over the next few years, would you
13 consider this, the reduction that you proposed
14 in the compensation, to be consistent with that
15 decrease in cost?

16 A. (Mueller) The goal of our proposal is not to
17 match the compensation to the cost of
18 installing the project. These are -- the goal
19 of our proposal is to set the state up in the
20 direction of a Value of DER tariff that fairly
21 compensates solar customers for their export,
22 so that the market can decide how much is the
23 right amount of solar and where is the location
24 for the right amount of solar and other DERs to

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1 lower costs to all ratepayers. That is
2 independent of what the cost of building that
3 is.

4 Q. On Page 13 of your testimony, it says that, up
5 at Line 3, that "The decision to lease,
6 purchase, or finance a system...is an
7 investment-backed decision with an expectation
8 of an opportunity to recover that investment
9 through a credit for energy". So, do I now
10 understand that that's not the expectation?

11 A. (Mueller) An individual customer obviously
12 makes an individual economic assessment about
13 the value of a project to them. As a matter of
14 policy, we ought to set rates that make those
15 individual decisions aggregate to a whole that
16 is good for everybody. And that is what we're
17 proposing to do, is to create a rate that
18 accurately reflects the value of those solar
19 investments to other ratepayers.

20 So, I think you may be confusing the
21 individual customer value proposition with the
22 collective grid value proposition, which are
23 not the same thing, and then obviously are
24 made -- the two decisions are made separately.

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1 Q. I don't have too much more. I want to look now
2 at what's on Page 11 of Exhibit 1, and
3 specifically what's the information on Lines 1
4 and 2. On Lines 1 and 2 state that "As a
5 comparison, the Eversource and Unitil proposals
6 in this case reduce bill savings to customers
7 by" a number of ranges, up to "63 percent". Do
8 you see that, the testimony?

9 A. (Witness Bean nodding in the affirmative).

10 Q. Would you agree that those numbers are all
11 based on the prior positions of the Parties and
12 don't reflect what's contained in the Utility
13 Consumer Settlement?

14 A. (Mueller) That's correct. The footnote makes
15 that reference, I think, because it comes from
16 Tom Beach's rebuttal testimony. As we said
17 before, it is not possible to model the
18 customer impacts of the Utility Settlement
19 proposal, because there is no access to
20 customer data that is necessary to understand
21 the economics of a project under instantaneous
22 netting. So, it would be foolish to do the
23 same exercise with the Utilities' current
24 proposal.

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1 A. (Bean) And, at the time of this Settlement
2 proposal that we had written, we did not have
3 the Utility proposal to evaluate.

4 Q. Understood. I just wanted to be clear about
5 where the numbers were from. Looking down a
6 couple of lines from there, stated in the
7 testimony and referenced by Mr. Phelps in your
8 opening, there's a statement that "A recent
9 report found that the state of Nevada lost
10 2,687 solar jobs." Do you see that?

11 A. (Phelps) Yes.

12 Q. Now, I have a couple of questions. Looking
13 down at the footnote that's referenced there,
14 the title of that article appears to say
15 "Nevada loses 400 solar jobs, but still ranks
16 4th nationally". Do you see that?

17 A. (Phelps) I see the reference.

18 A. (Bean) Yes.

19 Q. So, is it -- I guess it's unclear to me what --
20 what's the difference between the 2,600 and the
21 400 that's referenced?

22 A. (Bean) This is the title to an article. I
23 think we would have to pull up the article to
24 see what's stated within that document.

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1 Q. Well, I've done that. And, subject to check,
2 would you agree with me that those rooftop
3 solar jobs lost became other solar jobs within
4 the state, such that the net was only 400?

5 A. (Bean) I'm not in a position to make that
6 determination. But I can check, subject to
7 check.

8 Q. I wanted to just ask a couple more questions
9 having to do with the value question and the
10 return on investment. I don't know if any
11 members of the panel do this, but do you
12 understand that some developers sell their
13 systems on the basis of a PPA with a customer?

14 A. (Epsen) Yes.

15 A. (Mueller) Yes.

16 Q. Okay. And, in general, to the best of your
17 understanding, what's the pricing of those PPAs
18 based upon?

19 A. (Mueller) I would imagine every one of those
20 PPAs is negotiated individually with the
21 customer, and the pricing can be based on a
22 variety of different things. So, I don't know
23 that that's a question that can be answered in
24 the general.

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1 Q. So, is it -- well, to the best then of your
2 knowledge, if that's the case, and each one is
3 negotiated individually, do you know how the
4 value proposition, the return on investment
5 proposition would be explained to a customer?

6 A. (Mueller) Can you clarify what kind of customer
7 you might be talking about?

8 Q. A typical residential customer might be looking
9 to install a rooftop system.

10 A. (Mueller) I don't have any experience, personal
11 experience, with selling PPA projects to
12 rooftop solar customers. I'm not sure that
13 anyone is doing that in New Hampshire, to my
14 knowledge.

15 Q. What is -- yes, that's what I'd like to know,
16 too. Mr. Bean, you work for Solar City,
17 correct?

18 A. (Bean) I currently work for Tesla, who acquired
19 Solar City.

20 Q. Okay. Does Solar City sell systems to
21 residential customers on the basis of a PPA
22 system?

23 A. (Bean) I'm not sure. I don't participate in
24 sales in New Hampshire. But I'm not sure if

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1 it's PPAs or leases. This is -- this is also
2 available on our website. What options are
3 available to customers in New Hampshire is
4 available on our website.

5 Q. I understand. And what I'm trying to get at is
6 that, on Page 13 of your testimony, there's a
7 reference to "the decisions to lease, purchase,
8 and finance systems". I'm trying to understand
9 what the decision-making is under a system
10 that's none of those things, and that is on the
11 basis of a PPA system. And you have no
12 knowledge of how that value proposition, the
13 return on investment, the customer savings, or
14 any of that is negotiated and decided?

15 A. (Bea) I don't have experience negotiating with
16 individual customers. I imagine there is some
17 type of value proposition in the materials that
18 are presented to the customers, which, again,
19 are available to anyone on our website.

20 A. (Rabago) I think there might be a little
21 confusion in your question. That a lot of
22 lease structures around various parts of the
23 country, in fact, have a PPA embedded in them,
24 which is the mechanism by which the credit back

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1 to the customer is denominated. But, for
2 larger customers, there would not necessarily
3 be a lease associated with a PPA.

4 So, that that -- I think that your
5 grouping or excluding them into separate
6 categories is causing us some confusion.

7 Q. Well, I'm happy to disaggregate them then by
8 larger or smaller, whichever one. I'm just
9 trying to understand, if one of the issues in
10 this case is "what are customers capable of
11 understanding what's confusing to them", I'm
12 curious about those customers who use a PPA
13 structure, and what it is that they're called
14 upon to understand today. And I don't know if
15 anybody on the panel has any particular
16 knowledge about that?

17 A. (Mueller) I don't think any of us are involved
18 directly in residential PPAs.

19 A. (Bean) And, speaking generally, a power
20 purchase agreement would be for the output, you
21 get a price for the output. Whereas, a lease,
22 it would be a -- I guess, a levelized -- I
23 guess it's similar, in the same sense, a rate,
24 a volumetric rate in which you're charged. But

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1 there's materials on our website that
2 differentiate the two. I'm not in sales, so I
3 can't describe it as well as they could.

4 Q. And, so, for -- and that's the case for smaller
5 residential systems and for business systems,
6 there's nobody on the panel who can explain how
7 any of that actually gets done in practice?

8 A. (Mueller) ReVision Energy does install third
9 party-owned systems using a PPA structure for
10 commercial clients, mostly nonprofit and
11 municipal clients.

12 Q. And is there a general method by which you
13 determine the rates of that PPA?

14 A. (Mueller) The specific method of how we
15 determine the rates of a PPA would be
16 proprietary customer -- company information.
17 Our goal, in working with a nonprofit client,
18 is to figure out how to meet their particular
19 energy goals and cost savings goals. And, so,
20 we make that determination based on the goals
21 articulated by the individual customer.

22 Q. If their goal is cost savings, would the PPA be
23 based then on something like utility pricing
24 that they would otherwise be paying?

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1 A. (Mueller) I am aware that there are PPAs that
2 are, say, indexed, assuming you're talking
3 about a project that is indexed to a utility
4 savings? That's not how we currently structure
5 our payments.

6 MR. FOSSUM: I believe that's all I
7 have.

8 CHAIRMAN HONIGBERG: All right. Who
9 else has questions for the panel? Let me see
10 hands.

11 *[Show of hands.]*

12 CHAIRMAN HONIGBERG: I see Mr.
13 Rodier. I see Mr. Epler, who will not be
14 duplicating questions asked by Mr. Fossum. Who
15 else?

16 *[Show of hands.]*

17 CHAIRMAN HONIGBERG: Mr. Below, and
18 Mr. Kreis, who will not be duplicating
19 questions asked by Mr. Fossum, and Staff.
20 Anybody else?

21 *[Show of hands.]*

22 CHAIRMAN HONIGBERG: Yes. That would
23 be Mr. Voyles. Anybody else?

24 *[No indication given.]*

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1 CHAIRMAN HONIGBERG: All right. Mr.
2 Rodier, I saw you first. Why don't you go.

3 MR. RODIER: Thank you, Mr. Chairman.

4 CHAIRMAN HONIGBERG: We're going to
5 need to get you to a microphone, so Mr. Beach
6 can hear you.

7 MR. RODIER: I've only got a few
8 questions.

9 CHAIRMAN HONIGBERG: That's all
10 right. You still need a microphone, because
11 you've got to talk all the way to the West
12 Coast.

13 MR. RODIER: Got it. All right.
14 Okay. Good morning. Just put that on. Okay.

15 BY MR. RODIER:

16 Q. First thing I want to do is to simply, to try
17 to keep this simple and focused, can we
18 articulate what the issues are between the
19 dueling settlement agreements, okay? As the
20 Chairman said, we have dueling settlement
21 agreements here. I take it that one of the
22 agreements is this instantaneous versus net
23 monthly -- netting on a monthly basis, is that
24 correct? Is that a substantial difference?

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1 A. (Mueller) Yup.

2 Q. Okay.

3 A. (Mueller) We think that's a substantial
4 difference.

5 Q. I'm sorry. Did somebody say something?

6 CHAIRMAN HONIGBERG: Yes. The answer
7 was "Yes. That's a substantial difference."

8 BY MR. RODIER:

9 Q. Okay. So, that's number one. Number two, I
10 heard that a difference is the -- in the EFCA,
11 I call it "EFCA", E-F-C, the Energy Future
12 Coalition Agreement, there would be --
13 distribution charges would form part of the
14 compensation, they would be stepped down, I
15 guess, over a period of a few years. But that,
16 evidently, there would be no compensation in
17 the Utility proposal, is that correct? So that
18 the second major -- I call it "major issue" is
19 how -- whether distribution charges are
20 included or not?

21 A. (Mueller) That's right.

22 Q. Okay. Is there a third?

23 A. (Mueller) I think there is. And maybe,
24 Patrick, you want to speak to that, since he

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1 articulated the difference in terms of how the
2 settlement proposals point towards the
3 long-term future.

4 A. (Bean) Sure.

5 Q. Okay. I want to -- excuse me. I was going to
6 stay away from VDER, because I think that's
7 been adequately explained, for my purposes
8 anyway. Somebody else could ask for that. But
9 I'm just talking about Phase 1, okay? So, --

10 A. (Mueller) I think there's also a difference
11 with respect to the start date, and I spoke
12 about that a little bit in my prepared remarks.
13 We think it's important that the start date
14 give the market and customers adequate
15 opportunity to understand the new regime,
16 especially if it makes significant changes.

17 Q. Okay. You think if -- is the start date really
18 holding up a deal here or is it just the -- do
19 you think instantaneous versus net monthly
20 metering and how distribution costs are
21 handled?

22 A. (Mueller) I don't think any of us are -- can
23 speak for the room as far as what --

24 Q. Okay.

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1 A. -- will prevent us from getting to a deal.

2 Q. Okay. All right. Now, with respect to net
3 monthly metering, this has been defined in the
4 testimony -- in the Coalition Settlement, and
5 there's a statement in here that this is a
6 very -- the difference between instantaneous
7 netting and monthly netting make a very
8 significant difference in the customer savings,
9 is that correct?

10 A. (Mueller) It makes a meaningful difference in
11 the customer savings. It's makes a very
12 significant difference in the predictability of
13 that customer savings.

14 Q. Okay. Now, how would you, in the simplest way
15 possible, describe, let's say for a layman,
16 what the difference is? What does it come down
17 to? We hear "netting on an instantaneous
18 basis" and then "netting on a monthly basis".
19 What does that come down to? I heard somebody
20 earlier say something that sounded like it
21 might be a good description of it. But could
22 you try -- could one of you folks just try to
23 articulate that?

24 A. (Mueller) I think there was -- I think we

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1 articulated that in the answer to one of the
2 discovery questions last week. I don't know if
3 somebody has that to read. But one of you can
4 take another crack at it, if you want.

5 A. (Phelps) Can you repeat the question please?

6 Or --

7 Q. Yes. I'm looking for the simple -- excuse me.

8 A. (Phelps) Apologize.

9 Q. Looking for the simplist -- that's okay. As a
10 matter of fact, you're the man, because I've
11 asked you this question before. What I'm
12 really looking for is a layman's version of the
13 difference between those two?

14 A. (Phelps) Between "monthly netting" and
15 "instantaneous netting"?

16 Q. Yes.

17 A. (Phelps) So, "monthly netting" is simply the
18 difference between total usage in a month and
19 total generation in a month. If it's positive,
20 that means the total usage of the customer has
21 exceeded the total generation in that month.
22 If the number is negative, it means that the
23 total generation in that month has exceeded the
24 total usage.

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1 Q. Okay.

2 A. (Phelps) Now, "instantaneous netting" is much
3 more complicated. Instead of looking at the
4 total picture from the period of one month, it
5 measures what's happening in real time, as far
6 as what is being exported to the grid and
7 what's being imported from the grid.

8 Q. Okay. Now, --

9 A. (Beach) And if I could add something to that?

10 Q. Of course.

11 A. (Beach) Instantaneous netting requires, you
12 know, it requires metering that is capable of
13 measuring both imports and exports on an
14 instantaneous basis. Monthly netting could be
15 done with, you know, with today's meters that
16 are installed in New Hampshire that are, you
17 know, that are relatively -- can be relatively
18 old, on old-style analogue meters. But
19 instantaneous metering requires a new metering
20 infrastructure, which is not available for many
21 customers in New Hampshire.

22 Q. Okay. Thank you. Moving on here, perhaps, Mr.
23 Phelps, I could direct this to you, and the
24 others could chime in, if they got something to

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1 add. But what are the -- you know, we've got,
2 let me just -- I'm not picking on Eversource
3 here, but they have got distribution utilities
4 in Massachusetts and Connecticut, is that
5 correct?

6 A. (Phelps) So, Eversource has distribution
7 utilities in Massachusetts and Connecticut.

8 Q. Right.

9 A. (Phelps) And Unitil has a distribution utility
10 in Massachusetts.

11 Q. Let's stick to Eversource. In Massachusetts,
12 do they use instantaneous or net monthly?

13 A. (Phelps) They do not.

14 Q. They don't use either?

15 A. (Phelps) They use monthly, I'm sorry, I missed
16 it.

17 Q. They use net monthly. How do you know that?

18 A. (Phelps) I was the primary staff person at the
19 Massachusetts Department of Public Utilities,
20 and I wrote the rules in Massachusetts.

21 Q. Okay. Do you have any information or knowledge
22 on how the regulators or the legislators in
23 Connecticut handle this issue?

24 A. (Phelps) It is monthly netting in Connecticut.

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1 Q. It is? And how could we -- is there tariff
2 pages that would verify that or something? Or
3 how is -- where is that at large?

4 A. (Phelps) It will be in the net metering tariffs
5 in each of those jurisdictions. I can't recall
6 the tariff numbers off the top of my head
7 though.

8 Q. Okay.

9 A. (Mueller) That information, along with, you
10 know, where else in the country they do monthly
11 netting, was also contained, I think, in a
12 discovery response last week by the Coalition.

13 Q. Right. Right. Well, I saw a long list of the
14 states, but I didn't -- well, I guess those
15 states may have been listed there, so your --
16 is what your point is?

17 A. (Mueller) Yes.

18 Q. Okay.

19 A. (Mueller) I think, subject to check, that we
20 listed the states where statewide the regulated
21 utilities offer monthly netting. There might
22 be other places where individual utilities do
23 that.

24 Q. Okay.

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1 A. (Mueller) But the 40 or 44 that we listed are
2 the places where there's a statewide policy.

3 Q. Okay. Now, what I'm really driving at here is,
4 for example, from a policy perspective in New
5 Hampshire, if you're a legislator or a
6 commissioner, or whatever that might be, in a
7 position where you might have to weigh in on
8 this dispute, is there any value in looking at
9 what the sister utilities do in these other
10 states, and posing the question as "why New
11 Hampshire should be different?"

12 A. (Phelps) That -- that question is probably best
13 answered by the utilities. I will note that
14 there should be some administrative efficiency
15 from pulling out from the experience of sister
16 utilities. How that is actually implemented,
17 though, would depend on the internal operations
18 of the utility.

19 Q. Okay. I guess I'm just talking more generally
20 about policy across the three states for the
21 three major companies that make up Eversource.
22 Do you think the Commission should try to do
23 something that's really new in New Hampshire,
24 different than what they do in Mass. and

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1 Connecticut, where there are affiliates, not to
2 mention the other 40 or so states that you guys
3 have listed?

4 You're a former commissioner, aren't you,
5 Dr. Rabago?

6 A. (Rabago) Yes. Yes, I am.

7 Q. Okay.

8 A. (Rabago) I think, when you view it from the
9 language in the statutes, there is a lot of
10 emphasis on not only doing fair accounting for
11 costs and benefits, but also, as you've heard
12 us repeat several times, creating, essentially,
13 a positive investment climate for these
14 distributed energy resources, including
15 distributed generation. And with that in mind,
16 and given the way businesses operate at scale
17 more efficiently, than having to have different
18 systems state-by-state, there would be a
19 benefit to consistency among the states.

20 In terms of the customer education
21 process, given the way customers get their
22 information, from the internet and, you know,
23 from going to websites, there's going to be an
24 efficiency that will contribute to investment

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1 climate.

2 There's always room for someone to lead,
3 if the way is clear. But, in this case, our
4 feeling was that the overwhelming weight of
5 evidence on the "instantaneous netting" versus
6 "monthly netting" is that there was not a
7 clear, positive benefit, that it would set the
8 market backwards, and that it would therefore,
9 in the end, not serve the goals of the statute.
10 So, this is not one we wanted to recommend as a
11 "go it alone" or "go out there with a small
12 fraction of states" approach.

13 Q. Okay. Thank you. I'm going to move on now,
14 with you. I want to make sure I'm pronouncing
15 your name correctly. Is it Rab --

16 A. (Rabago) Rabago.

17 Q. "Rabago".

18 A. (Rabago) Yes, sir.

19 Q. I noticed that you were pretty heavily involved
20 in the proceedings before the New York Public
21 Service Commission?

22 A. (Rabago) I am very heavily involved in that.

23 Q. Okay. Now, they came out with a decision on
24 March 9th?

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1 A. (Rabago) That is an interim decision, basically
2 to hold the state of value -- of compensation
3 the Value of DER interim decision, while we
4 take the time to go through and calculate that
5 value more carefully through an extension of
6 the process, with a goal of implementation
7 around, I believe, January 1st, 2019.

8 Q. I thought I noticed in there, took a quick
9 look, that they did come up with sort of an
10 estimate of what VDER might be, is that
11 correct?

12 A. (Rabago) Altogether, but there's a fairly big
13 what one might call a "fudge factor", if you
14 will, in the market transition credit, where
15 more precise work needs to be done to calculate
16 the values with precision.

17 Q. Okay. So, would you -- one last question in
18 this area. Would you suggest the Commission
19 keep its eye on what's going on in New York?

20 A. (Rabago) I would -- I would think so. Also,
21 New York doesn't stand that alone. California
22 has been wrestling with this, and other states
23 as well.

24 Q. Right. My point is, VDER can be a big number,

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1 can't it?

2 A. (Rabago) The study suggests it can be a big
3 number.

4 Q. Okay. Then, lastly, for Ms. Epsen, to begin
5 with anyway. Would you agree that the
6 Commission, under the HB 116 [1116?], is an
7 obligation to preserve a reasonable opportunity
8 for customers, and why don't you just stay at
9 less than 100 kilowatts, okay? Does the
10 Commission have an obligation to continue to
11 provide an opportunity to invest for these
12 customers?

13 A. (Epsen) Yes.

14 Q. And how would we know what a "reasonable
15 opportunity" is when we see it?

16 A. (Epsen) I think you would have to ask each
17 individual customer that.

18 Q. Okay. Is it -- there's no -- okay. And, so,
19 what you're saying is there is no hard-and-fast
20 formula that can be used. It's not going to --
21 it can't be reduced to just return on
22 investment over 20 years, taking into account
23 all the federal tax credits and things like
24 that. It's not that simple?

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1 A. (Epsen) It's not that simple, but we propose a
2 settlement that we believe is a reasonable
3 opportunity to invest, with all of those
4 factors into consideration.

5 Q. Okay. And how does that -- how did you choose
6 that number, very quickly?

7 A. (Epsen) Well, we --

8 Q. How did you identify a "reasonable
9 opportunity"?

10 A. (Epsen) We used Tom Beach's testimony, and then
11 we used the fact that there is very little data
12 to get to a precise number from there to 100.
13 And, so, we also used the factor of gradualism
14 to inform the decision. And we went from
15 there.

16 Q. Okay. I have one last area I want to ask
17 about, and that is --

18 A. (Mueller) Can I just add briefly to what Ms.
19 Epsen said?

20 Q. Of course.

21 A. (Mueller) As I said in my opening remarks, and
22 with reference to the exhibit, there is
23 evidence that the current net metering regime
24 in New Hampshire provides what is probably just

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1 barely a reasonable opportunity for individuals
2 to invest. And, if you look at how solar
3 investments happen in New Hampshire, as
4 compared to the surrounding states, you know,
5 it's pretty clear that New Hampshire is not an
6 overheated solar market. Therefore, it's sort
7 of common sense, it's axiomatic, that a
8 relatively small change from that might
9 continue to preserve that reasonable
10 opportunity to invest. Whereas, a very
11 significant change, both to compensation and to
12 customer risk, probably does not.

13 Q. And, effectively, the penetration on a
14 percentage basis is significantly less in New
15 Hampshire than it is in Massachusetts or
16 Connecticut?

17 A. (Mueller) Or Vermont.

18 Q. Or Vermont. Okay. The last area I have, I'd
19 like to ask whoever wants to tackle this
20 question to turn to Page 8 of the -- I'm not
21 sure of the exhibit, this is your supplemental
22 testimony. Can somebody help me on the exhibit
23 number?

24 Okay. Thank you. It's "Exhibit 1".

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1 Page 8. You see the table in the middle of
2 that page?

3 A. (Phelps) Yes.

4 Q. And, when it talks about "Eversource
5 Residential", this is about "Bill impact
6 summary of the percentage difference from
7 status quo". So, do I read this that the cost
8 Coalition's proposal reduces -- you tell me
9 what -- what's the "22.65 percent" stand for?

10 A. (Phelps) That represents the increase under the
11 Coalition proposal, compared to the current net
12 metering structure.

13 Q. Okay.

14 A. (Phelps) On a monthly -- or, actually, it's --

15 Q. Okay.

16 A. (Phelps) You can think of it as on a monthly
17 basis.

18 Q. All right.

19 A. But, technically, it's calculated over 30 days.

20 Q. So, if the Commission goes with your deal, the
21 residential customers would see 22-23 percent
22 increase in their electric bill, in their total
23 cost?

24 A. (Phelps) In their total bill to the -- in this

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1 case, Eversource total electric bill.

2 Q. Okay.

3 A. (Phelps) I will note that, as Eversource
4 pointed out, that that number would be slightly
5 decreased. While we've been talking over the
6 break, I did calculate those numbers.

7 Q. Okay.

8 A. (Phelps) If the Commission is interested.

9 Q. Then, thank you. I want to move over to the
10 next column, which is "Coalition Proposal Phase
11 1", of course, on "January 1, 2019". You see
12 that, correct? Is that correct?

13 A. (Phelps) Yes.

14 Q. By the way, is this -- these numbers
15 calculated, was that -- did you calculate these
16 with your model?

17 A. (Phelps) I did.

18 Q. Okay. I was just wondering, we've got the
19 divestiture of PSNH generation --

20 *[Court reporter interruption.]*

21 BY MR. RODIER:

22 Q. We've got the divestiture of PSNH generation
23 looming over this whole issue. I hear, you
24 know, that it might be completed in the fourth

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1 quarter this year. Okay? So, let's -- I've
2 seen that quite a bit. So, have you given any
3 thought how the divestiture of the generation
4 might affect your calculations? First of all,
5 you don't reflect any effects of divestiture in
6 your numbers, is that correct?

7 A. (Phelps) Not any future divestiture. The
8 currently in place and historical stranded
9 costs --

10 Q. Right.

11 A. (Phelps) -- are reflected.

12 Q. But not the one that may take place in the
13 fourth quarter of this year?

14 A. (Phelps) I did not model any future rates.

15 Q. Okay. Okay. Now, then, what I'm trying to get
16 at here, the Commission certainly is going to
17 see that coming down the track. And is there
18 any information that might be available as to
19 how that might affect your calculations or
20 Eversource's calculations of savings? Does
21 anybody have an idea about that?

22 A. (Phelps) I did not look at potential future
23 rates at all. I just strictly used the
24 existing rates and historical rates.

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1 A. (Mueller) Directionally, if stranded costs or
2 other non-bypassable charges go up, the
3 difference from our proposal to the status quo
4 is increased. And, if stranded costs and other
5 non-bypassable charges go down, the difference
6 from our proposal are decreased.

7 Q. Okay. So, maybe what you're saying is "Hey,
8 the default service rates are going to go
9 down", maybe from 11 cents to 7 and a half,
10 where Unitil is now, for example. The default
11 service rate, which is bypassable, goes down,
12 but the stranded costs are going to go up, on
13 the --

14 A. (Mueller) That sounds like what you're saying.
15 What I'm saying is, if that happens, then the
16 impact on the customer bill are -- that the
17 more that is non-bypassable, the larger the
18 impact of the change from the status quo.

19 Q. Okay. So, Mr. Phelps, having heard that, would
20 it be fair to say that your percentage numbers
21 would go up, based upon what you just heard?
22 Or, let me stick with Mr. Mueller, I'm sorry.
23 Does that mean that these percentage numbers
24 would go up that we're looking at here?

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1 A. (Mueller) I think it -- and, so, if -- it's Mr.
2 Phelps' model, but my understanding of the
3 model is, if the default service rates go down,
4 and the bypassable costs go up, then more of
5 the cost of the bill is non-bypassable.
6 Therefore, the difference from the status quo
7 would increase. So that the effects on a
8 customer bill reflected in this table would be
9 sort of a, you know, least bad case, if you
10 will.

11 Q. Okay. Mr. Phelps, that sound right to you?

12 A. (Phelps) Yes. I'm a little hesitant to
13 speculate on how future rates would change.
14 But I certainly don't disagree with.

15 Q. This is a hypothetical, we're saying "if".
16 "If", "if", "if".

17 A. (Mueller) Holding everything else constant.

18 Q. Yes. The Commissioners can grapple with this
19 issue, I'm sure.

20 MR. RODIER: Okay. I think we're
21 going to leave it, though, and just call it a
22 day at this point, at least for my questions.
23 Thank you very much.

24 CHAIRMAN HONIGBERG: All right. I

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1 have, just to make sure I didn't miss anybody,
2 Mr. Voyles, Mr. Epler, Mr. Below, Mr. Kreis,
3 and Mr. Wiesner. Right?

4 *[Multiple parties nodding in the*
5 *affirmative.]*

6 CHAIRMAN HONIGBERG: All right.

7 Mr. Voyles.

8 MR. VOYLES: If I might defer? Some
9 of my questions might be redundant, and I'd
10 like to let other parties go first.

11 CHAIRMAN HONIGBERG: Fair enough.

12 Mr. Epler.

13 MR. EPLER: Okay. Thank you. Okay.
14 I'm going to be broadcasting in stereo. So,
15 when you hear me on your left, I'm speaking on
16 my left. If you hear me on the right -- okay.

17 A couple of questions to follow up,
18 and I will try my best not to be redundant.

19 BY MR. EPLER:

20 Q. I think it was Mr. Beach who was talking about
21 the metering that would be required under the
22 Utility Consumer proposal. Isn't the metering
23 under our proposal the same kind of metering
24 that would be required under your proposal,

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1 because you do not want to give credit to the
2 non-bypassable charges?

3 A. (Beach) I think the answer is "yes". If you're
4 doing instantaneous netting, you need a meter
5 that's capable of doing that. So, to the
6 extent that there are at least portions of our
7 proposal with the non-bypassable charges that
8 it would be done on an instantaneous basis,
9 then those meters would be necessary.

10 Q. Okay. So, that appears to eliminate one
11 obstacle. The metering under both proposals is
12 the same. Is that correct?

13 A. (Beach) Yes.

14 A. (Mueller) Can I ask -- go ahead, Tom. I'm
15 sorry.

16 A. (Beach) Yes. The metering would be the same.
17 The difference would be, of course, the thing
18 is the customers don't have any experience of
19 instantaneous, instantaneous netting.

20 Q. Well, I was not talking about the customer
21 experience. We'll get to that. I'm just
22 talking about the metering.

23 A. (Mueller) Yes. And I was just going to add
24 that, under our proposal, yes, the

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1 instantaneous -- the ability to meter
2 instantaneously and bidirectionally is required
3 for new solar customers. It's not required for
4 all other customers, which would be required
5 under the Utility proposal, if you want to be
6 able to give a customer a reasonable
7 expectation about their economics.

8 Q. All customers? I'm not sure what you mean by
9 "all" -- it would be required for "all
10 customers"?

11 A. (Mueller) All customers are potential future
12 solar customers. Thank, God. And, so, to give
13 those customers the data they need to make a
14 good future decision about a solar project,
15 they also need instantaneously readable meters,
16 with intervals, you know, in the seconds or
17 faster.

18 Q. Okay. Let's hold that aside for just a moment.
19 Do you understand -- do you understand whether
20 Unitil, for example, has two-channel meters in
21 place currently or meters that are able to
22 record both import and export currently?

23 A. (Phelps) I believe there's discovery on this
24 issue, but I can't recall exactly for Unitil.

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1 If I recall correctly, Eversource does have
2 this metering deployed for net metering
3 customers currently. But I can't recall for
4 Unitil.

5 Q. Now, there was a point, and I think it was Mr.
6 Rabago, where you talked about the Utility
7 proposal being a "buy-all-sell-all"
8 arrangement. Can you please describe
9 "buy-all-sell-all"?

10 A. (Rabago) Yes. I was speaking about the Utility
11 Coalition proposal regarding less than
12 100-kilowatt systems for customers who are not
13 default supply to the utility, but, in fact,
14 have a competitive supply arrangement. So,
15 those are the preconditions. And what it means
16 with the instantaneous netting is that, for all
17 of those -- for all of the attributes,
18 essentially, the customer is buying at full
19 cost of service based retail, plus, of course,
20 rate of return and all those other factors, and
21 then it -- all of their sales are being paid
22 just at an avoided cost. So, it's the
23 arrangement that, for example, a large scale
24 qualifying facility might have, where they have

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1 separately metered station load, and they're
2 operating as a whole generator selling at a QF,
3 qualifying facility, avoided cost rate. So,
4 basically, two separate business transactions
5 that might, in fact, be recognized as such in
6 the law or for tax purposes.

7 Q. Well, under a buy-all-sell-all, doesn't that
8 mean that all production from the solar
9 facility is essentially sold, and, so, you're
10 separating out completely the production from
11 the import?

12 A. (Rabago) Yes.

13 Q. And do you understand that, under the Joint
14 Utility Consumer proposal, that that's not the
15 case?

16 A. (Rabago) That in what regard?

17 Q. Well, any production that's used on site is
18 not -- is not sold, is not exported?

19 A. (Rabago) Right.

20 Q. So, it's netting?

21 A. (Rabago) It is, yes. It's buy-all-sell-all of
22 the export -- it's sell-all of the export, is
23 that what you're saying? Yes.

24 Q. So, it's not -- well, let's use our terms

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1 precisely here. It's not a sell-all, it's a
2 sell of the export, but it's not a sell-all of
3 the production.

4 A. (Rabago) Oh, I see what you're -- I see your
5 distinction. I understand that to be the case,
6 yes.

7 Q. Okay. Now, in light of that, I'm not sure I
8 understand what the concern is and the need is
9 for instantaneous data. I mean, my
10 understanding would be that, if you had a
11 two-channel meter, your import channel is
12 recording your imports, and you would price
13 your imports at the full retail rate, minus
14 the -- I'm sorry, you would -- let me start
15 again. On the import channel, you would price
16 all your imports at the full retail rate. Do
17 you understand that?

18 A. (Rabago) Yes.

19 Q. Okay. And, on the export channel, you would
20 only be exporting net of what's been consumed
21 on site, of production, minus what's been
22 consumed on site, and you would compensate that
23 at -- for customers who are on default service,
24 the default service rate, plus transmission.

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1 A. (Rabago) Okay. I think --

2 Q. And, so, where is the need for instantaneous
3 data?

4 A. (Mueller) So, when there is a -- when there is
5 a difference, a meaningful difference, between
6 the price paid for imports and the price paid
7 for exports, the customer's value proposition
8 depends strongly on the fraction of the
9 self-generated solar that is consumed in real
10 time behind the meter. While it's possible to
11 make some reasonable predictions about the
12 production shape of a solar project based on
13 models, it is not possible for us to estimate
14 the customer's load shape, instantaneous load
15 shape, without that data. And, so, the same
16 customer -- two customers with identical solar
17 projects in identical houses could have vastly
18 different value propositions depending on their
19 particular load shape. If you work at home and
20 your neighbor, you know, travels for work, or,
21 if you have kids and your neighbor is an empty
22 nester, they have dramatically different value
23 propositions because of the coincidence of
24 their own load with the generation. If we had

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1 instantaneous data, it is theoretically
2 possible, with 31 million data points a year,
3 to make some reasonable estimate of what the
4 savings will be. With the current data we
5 have, which is monthly, it is not possible to
6 make that estimate.

7 Q. Well, I mean, let's try to think about that for
8 a minute. I mean, wouldn't you be able to
9 tell, I mean, if you're installing a system,
10 given the roof size, the orientation of the
11 house, your understanding about solar
12 penetration in New Hampshire, you'd be able to,
13 I mean, I guess you do this on a regular basis,
14 you come up with some estimate of what your
15 expected solar production is going to be on a
16 month-to-month basis. Is that correct?

17 A. (Mueller) That's what we do, yes.

18 Q. Okay. So, wouldn't you be able to look at a
19 customer's bill, the last month, before they
20 installed solar, and see how much energy they
21 used, and then you'd be able to look at what
22 your estimate is of what your solar production
23 is, and you'd be able to tell them "here's the
24 worst case, the least efficient case that we

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1 can offer you." And that would be if you had
2 no consumption during solar production. So,
3 all your production was being exported. And,
4 so, you value that at default service, plus
5 transmission, and then -- and based on last
6 month, and last month, here's what your retail
7 rate was, and you'd have two totals. And you'd
8 say "this is the least efficient result that
9 you would get", and you come up with a dollar
10 amount for that, and then "this is what your
11 bill would look like." And then tell the
12 customer "to the extent you can shift your
13 production to when the solar is producing,
14 you'll see a lower bill than that. So, here's
15 what your savings could be. The minimal
16 savings will be if you have no consumption, and
17 you can increase your savings over time." So,
18 I don't --

19 A. (Mueller) Yes. So, leaving aside how insane it
20 is to create an incentive to have a customer
21 shift their load towards the system peak,
22 that's right. It is possible to evaluate the
23 "worst case" scenario. It's also possible to
24 evaluate the "best case" scenario. And, so,

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1 you generate a significant cone of uncertainty
2 for the customer's value proposition.

3 If we were in a situation where a solar --
4 a solar investment, you know, had a return on
5 investment of, you know, 60 percent annually,
6 then tolerating a 20-25 percent uncertainty in
7 the savings estimate might be something that
8 still leaves a reasonable opportunity to
9 invest. Currently, that is not the case. The
10 solar project in New Hampshire, with the
11 current status quo, is decidedly, you know, a
12 marginal investment for most customers. And
13 they have, at best, a marginal opportunity to
14 make that investment with a reasonable return.

15 So, if you layer on lower compensation,
16 lower return, and greater uncertainty, you get
17 to the point where no reasonable person is
18 going to sign up for a project that has an
19 equal chance of making money or not making
20 money for them over time.

21 A. (Bea) And, Fortunat, if I can, maybe it's
22 worth trying to create a very simple example of
23 a one hour. And we can assume that the
24 customer's demand in that one hour is five

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1 kilowatt-hours, and their production is five
2 kilowatt-hours. If they consume everything,
3 all -- if they can self-consume all the solar
4 generation, their imports would be zero. So,
5 they would have no charge for that hour. But
6 they could also import all five kilowatt-hours
7 and export all five kilowatt-hours in that
8 period. So, in that case, if you've got a
9 reduction of the bill credit of five cents,
10 they would be billed an additional -- they
11 would lose 25 cents of value in that hour. So,
12 your range on a single hour in that case would
13 be zero to 25 cents. Might not sound like a
14 lot on a single hour, but multiply that by the
15 amount of hours in a month, and you've got a
16 very big range that you're now bringing to
17 customers. So, potentially, between zero and
18 \$50 a month of "we don't know what your savings
19 could be, but it's somewhere in here."

20 A. (Mueller) And importantly --

21 A. (Rabago) Let me just add, just so, I think,
22 just to get to the heart of your question. So,
23 yes, it's true, you can calculate the extremes,
24 but nobody lives in those extremes. And, using

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1 Mr. Bean's example, yes, you could imagine the
2 situation where the customer uses all their
3 five kilowatt-hours in the first half hour, and
4 then shuts off all their electricity, and then
5 he ends up with that excess production, then
6 the sun comes out and all the production
7 happens in the second half hour.

8 But what Mr. Mueller is talking about is
9 the situation of trying to do business. Trying
10 to sell somebody a system, and help them figure
11 out what size it should be and how much money
12 they should invest in it. And, knowing that it
13 could either be zero or the 25 cents, using
14 Mr. Bean's example, is absolutely useless
15 information. So, the data -- the core of your
16 question is "why do you need the data?" You
17 need the data so that you can match that solar
18 output, which is pretty easy to model, with the
19 many minute-to-minute, half hour-to-half hour
20 variations in consumption that customers
21 experience. Because, even though you can plot
22 a smooth line for it, it's a lot of jagged,
23 little mini peaks within every hour, and that's
24 what's necessary to make the value calculation.

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1 Does that answer your question about why
2 you need the data?

3 Q. It helps.

4 A. (Mueller) I think, importantly also, given the
5 diversity of load on a typical residential
6 circuit, the two extreme examples that Mr. Bean
7 referenced have -- sort of imposing identical
8 costs onto other ratepayers, identical costs or
9 benefits onto other ratepayers, because
10 somewhere someone else on that circuit, you
11 know, is running a hairdryer in the second half
12 hour. And, so, it's, you know, it's sort of,
13 on the face of it, illogical to treat those two
14 loads -- load profiles as if they were
15 different. And, in general, we ought not to be
16 making rates that create incentives that don't
17 make any sense, and are neither actionable,
18 and, if they were actionable, would be driving
19 people to do sort of, you know, silly things
20 for their own, for the benefits of their own
21 savings, that have no impact at all on other
22 ratepayers. That's a complete waste of energy
23 and economic efficiency.

24 If we're going to use rates to drive

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1 behavior, we ought to use rates to drive
2 behavior that benefit all customers. And
3 that's -- that's what we're moving to, in terms
4 of time-differentiated rates and capturing the
5 value of DER in a granular way.

6 Q. Well, you're also assuming that the peak solar
7 production coincides with the peak demand on
8 the system?

9 A. (Phelps) If I can use an analogy to help --

10 Q. Well, wait a minute. Before you get to that,
11 you're assuming that there's coincidence
12 between the peak solar production and the
13 system peak demand?

14 A. (Mueller) That happens to be true in lots of
15 cases, but that assumption is not built into
16 any of what I just said.

17 Q. Well, if peak demand is post solar production,
18 then it does make sense to move consumption
19 towards the time period when there's solar
20 production.

21 A. (Phelps) I disagree with that. So, for
22 instance, even if the distribution peak occurs,
23 say, eight o'clock at night, or you can choose
24 whatever evening time, that doesn't mean that

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1 there is no demand or even significantly less
2 demand during the day. If you start to move
3 demand that occurs in off-peak hours, and you
4 can define off-peak hours however you wish, to
5 on-peak hours, you're effectively creating an
6 alternative peak during those solar peak hours.

7 I also note that, if you look at it a
8 little bit more holistically, the same can be
9 said for transmission and also for generation.
10 So, if we're moving peak from -- if we're
11 moving demand from, say, ten, eleven o'clock at
12 nine, to one, two, three o'clock in the
13 afternoon, that will have significant impacts
14 on all customers.

15 A. (Bea) And, Nathan, I don't know the number of
16 the exhibit, but Eversource circulated
17 something yesterday or the day before showing
18 an average production profile for July that
19 they had planned to discuss --

20 MR. FOSSUM: I'm sorry to interrupt.
21 I'm going to have to object to that. There's
22 nothing in evidence. He's referencing a
23 document that nobody -- that the Commissioners
24 haven't seen, nobody's presented, and nobody's

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1 testified to. If he wants to reference a
2 document that exists in the record, that's
3 fine.

4 **CONTINUED BY THE WITNESS:**

5 A. (Bean) Sure. In OCA 1-3, I believe the
6 response is, were the peak by hour, by utility.
7 And, if we look at --

8 CHAIRMAN HONIGBERG: Well, hang on.
9 Hang on.

10 MR. FOSSUM: Again, that is a
11 discovery response that is not in the record.

12 CHAIRMAN HONIGBERG: If you're going
13 to discuss what's in a document someplace,
14 we're going to need it, I think, because you're
15 relying on the information in it. If you want
16 to hypothesize something, why don't you do
17 that.

18 WITNESS BEAN: Sure.

19 **BY THE WITNESS:**

20 A. (Bean) So, subject to check, we've seen that
21 there is coincidence between solar production
22 and when the utility customer -- utility
23 systems are peaking, primarily in the summer
24 months.

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1 A. (Phelps) And if I can elaborate on one of your
2 previous questions, Mr. Epler. To use an
3 analogy about using extremes of a value
4 proposition for customers, saying "here's your
5 value proposition if you export everything and
6 here's your value proposition if you use all of
7 your generation on site."

8 Think of, actually, utility assets, and
9 how likely would the utility invest in certain
10 assets, if they were given a range of value
11 propositions from the Commission? Say your
12 return on equity could be anywhere from
13 2 percent, up to, let's say, the high of
14 16 percent, whatever that range would be. That
15 creates a tremendous amount of uncertainty for
16 the actor to make a decision with.

17 BY MR. EPLER:

18 Q. All right. I wanted to turn to Mr. Beach, and
19 excuse my shoulder. If you could turn to your
20 direct testimony, and your Appendix D. That's
21 "Exhibit Number 19".

22 A. (Phelps) I believe there's technical
23 difficulties with Mr. Beach at the moment.

24 Q. Mr. Beach, did you hear the question?

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1 CHAIRMAN HONIGBERG: Let's go off the
2 record for a second.

3 *[Brief off-the-record discussion*
4 *ensued.]*

5 CHAIRMAN HONIGBERG: All right.
6 We'll go back on the record. It's 12:15 right
7 now. We're going to break for lunch and to
8 resolve the technical issue with the audio from
9 Mr. Beach. And we'll return at 1:30.

10 (Lunch recess taken at 12:15
11 p.m. and concludes the **Day 1**
12 **Morning Session**. The hearing
13 continues under separate cover
14 in the transcript noted as **Day 1**
15 **Afternoon Session ONLY**.)
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