

ORIGINAL

RE: DE 22-060

PUC HEARING

August 20, 2024



AVICORE REPORTING

15 Constitution Drive, Suite 1A • Bedford, NH 03110 • (603) 666-4100
info@avicorereporting.com • www.avicorereporting.com

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

August 20, 2024, 9:16 a.m.
21 South Fruit Street
Suite 10
Concord, NH

ORIGINAL

RE: DE 22-060
Consideration to the Current Net
Metering Tariff Structures, Including
Compensation of Customer Generators

PRESENT: Chairman Daniel C. Goldner, Presiding
Commissioner Pradip K. Chattopadhyay
Ben Martin-McDonough, Esq./PUC
Legal Advisor

APPEARANCES:

Reptg. Public Service Company of New
Hampshire d/b/a Eversource:
Jessica A. Chiavara, Esq.

Reptg. Liberty Utilities (Granite State
Electric)Corp.,d/b/a Liberty Utilities:
Michael J. Sheehan, Esq.

Reptg. Unitil Energy Systems, Inc.:
Patrick H. Taylor, Esq.

Reptg. Community Power Coalition of
New Hampshire:
Amy Manzelli, Esq.
Clifton Below

Reptg. Clean Energy New Hampshire:
Sam Evans-Brown

Transcribed Via Webex Recording
By: Nancy J. Theroux, NH LCR No. 100

1 APPEARANCES: (Continued)

2 Reptg. Standard Power of America:
3 Robert Hayden

4 Representing the Conservation Law
5 Foundation:
6 Nicholas Krakoff, Esq.

7 Representing Residential Ratepayers:
8 Donald M. Kreis, Esq. Consumer Advocate
9 Office of the Consumer Advocate

10 Reptg. New Hampshire Dept. of Energy
11 Alexandra K. Ladwig, Esq.
12 Paul B. Dexter, Esq.

13
14
15
16
17
18
19
20
21
22
23
(Regulatory Support Division)

1	I N D E X	
2		PAGE
3	INTRODUCTORY COMMENTS BY CHAIRMAN GOLDNER	5
4	APPEARANCES TAKEN	7
5	OPENING STATEMENTS BY:	
6	Ms. Chiavara	11
	Mr. Dexter	14
7	Ms. Manzelli	15
8	PUBLIC COMMENTS BY:	
9	Mr. Aalto	19
	Ms. Oliver	23
10	Ms. Brown	25
11	WITNESSES: ALEXANDER HILL and	
12	ANIRUDH KSHEMENDRANATH	
	Direct by Mr. Dexter	27
13	Cross by Mr. Krakoff	46
	Redirect by Mr. Dexter	54
14	Cross by Mr. Evans-Brown	55
	Cross by Ms. Manzelli	66
15	Questions by Csmr. Chattopadhyay	76
	Questions by Chairman Goldner	93
16	Redirect by Mr. Dexter	98
17	WITNESSES: EDWARD DAVIS, BRIAN RICE, KAREN ASBURY,	
18	JOHN BONAZOLI, ROBERT GARCIA, ROBERT	
19	HAYDEN, TIM WOOLF, ERIC BORDEN, DAVID	
	LITTELL, THOMAS BEACH, JEFFREY PENTZ,	
	COLLEEN BENNETT and JOSEPH SWIFT	
20	Direct by Ms. Chiavara	107
	Direct by Mr. Taylor	117
21	Direct by Mr. Kreis	123
	Further direct by Ms. Chiavara	127
22	Further direct by Mr. Kreis	143
23		

I N D E X

SETTLEMENT PANEL WITNESSES (Continued) PAGE

Cross by Ms. Ladwig 147

Cross by Ms. Manzelli 180

QUESTIONS BY THE COMMISSION:

By Cmsr. Chattopadhyay 211, 279, 298

By Chairman Goldner 231, 280, 300

1 P R O C E E D I N G

2 CHAIRMAN GOLDNER: Okay. Good
3 morning. I'm Commissioner Goldner, and I'm
4 joined today by Commissioner Chattopadhyay.

5 We are here today for a hearing in
6 DE 22-060. This docket was commenced two years
7 ago pursuant to RSA 362-A:9, Roman XXIII, which
8 directed the Commission to convene a docket to
9 consider the adoption of net metered tariffs that
10 apply to newly constructed customer generators
11 with a total peak generating capacity of greater
12 than one megawatt and to consider whether and
13 when further changes shall be made to net
14 metering -- to the net metered tariff approved in
15 Order No. 26,029.

16 The Commission's jurisdiction on this
17 matter is based on the just and reasonable
18 ratemaking standard of RSA 374:2 and RSA 378:7,
19 as well as the directive to investigate net
20 metering rates in RSA 362-A:9.

21 Before we begin today's proceeding, I
22 would like to note that we are proceeding today
23 without an in-person stenographer. We are making

1 a verbatim sound recording that will be
2 transcribed pursuant to RSA 541-A:31, Roman VII,
3 and Puc 203.31.

4 As I did at last week's hearing, I
5 want to remind all parties that they need to
6 speak clearly, slowly, and into the microphones.
7 This includes making sure to press the microphone
8 button so the red light is on prior to talking.

9 And we must all identify ourselves
10 prior to speaking. If we do not follow these
11 simple steps, our recording will not be
12 accurately transcribed.

13 Also, if there's any member of the
14 public here today who would like to make a
15 comment, please put your names on the sign-up
16 sheet in the back of the hearing room. We note
17 that we have received many written comments from
18 the public in this docket. We will review all of
19 those comments and consider them in our ruling on
20 the issue before us.

21 In the interest of time, we ask that
22 members of the public wishing to speak today that
23 have already submitted comments limit their

1 statements to additions or clarifications to
2 their written comments.

3 Okay. Let's take appearances,
4 beginning with the Department of Energy.

5 MR. DEXTER: Good morning, Mr. --
6 Mr. Chairman. I'm Paul Dexter. I'm sitting in a
7 different location than usual because of the size
8 of the settlement panel. I'm here on behalf of
9 the Department of Energy today with co-counsel,
10 Alexandra Ladwig, and I also will be facilitating
11 the presentation of the Dunsky witnesses who
12 submitted the study on behalf of the stakeholders
13 in this case.

14 CHAIRMAN GOLDNER: Thank you.
15 Eversource.

16 MS. CHIAVARA: Good morning,
17 Commissioners. Jessica Chiavara, here on behalf
18 of Public Service Company of New Hampshire, doing
19 business as Eversource Energy.

20 CHAIRMAN GOLDNER: Thank you. Unitil.

21 MR. TAYLOR: Good morning,
22 Commissioners. Patrick Taylor on behalf of
23 Unitil Energy Systems, Inc.

1 CHAIRMAN GOLDNER: Liberty.

2 MR. SHEEHAN: Good morning. Mike
3 Sheehan for Liberty Utilities, Granite State
4 Electric Corp.

5 CHAIRMAN GOLDNER: The Office of the
6 Consumer Advocate.

7 MR. KREIS: Good morning. I'm Donald
8 Kreis, Consumer Advocate.

9 CHAIRMAN GOLDNER: Walmart.

10 MS. HORNE: Good morning. Melissa
11 Horne on behalf of Walmart, Inc.

12 CHAIRMAN GOLDNER: CLF.

13 MR. KRAKOFF: Good morning. Nick
14 Krakoff on behalf of Conservation Law Foundation.
15 With me today is Adam Aguirre, also with CLF.

16 CHAIRMAN GOLDNER: Thank you. CENH.

17 MR. EVANS-BROWN: Good morning. Sam
18 Evans-Brown with Clean Energy of New Hampshire.
19 Here also with me is Chris Skoglund.

20 CHAIRMAN GOLDNER: Thank you. GSHA.

21 Okay. Standard Power of America.

22 MR. HAYDEN: Good morning,
23 Commissioners. I'm Robert Hayden from Standard

1 Power.

2 CHAIRMAN GOLDNER: Thank you.

3 And CPCNH.

4 MS. MANZELLI: Good morning,
5 Commissioners. Amy Manzelli from BCM Law. Here
6 with me, Clifton Below and Deana Clifton -- I'm
7 sorry -- Deana Dennis. Good morning.

8 CHAIRMAN GOLDNER: Thank you. Good
9 morning.

10 Okay. We would like to provide the
11 parties an opportunity to make opening statements
12 today. We note that the parties have already
13 submitted position statements prior to hearing.
14 These statements explain each party's positions
15 and/or recommendations to the Commission, and we
16 do not need the parties to repeat any information
17 in those statements.

18 Prior to your opening statements, we
19 should like to lay out what we believe the scope
20 of this hearing should be and how the process
21 should go today.

22 We'll then allow the parties to
23 comment on both topics during their opening

1 statements.

2 The parties have submitted proposed
3 exhibits, 1 through 32. We have also received
4 three separate position statements: one from the
5 DOE, one from CPCNH, a third joint statement from
6 the remaining parties, given who we will refer
7 today as the joint parties in this hearing.

8 In order to ensure an efficient
9 process, we believe that the joint parties should
10 present their agreement. The DOE and CPCNH --
11 then DOE and CPCNH shall have the opportunity to
12 cross-examine them. The DOE and CPCNH shall then
13 have the opportunity to present any alternative
14 proposals for action for the Commission to take
15 on this docket.

16 With respect to the testimony from the
17 witnesses, we received a filing from the joint
18 parties regarding a proposed order of witnesses,
19 in which they proposed presenting the witnesses
20 in the following order: first Dunsky, then the
21 joint parties, then the DOE, then CPCNH, and
22 then, finally, a utility rebuttal panel. CPCNH
23 filed a letter objecting to this proposal.

1 We agree, in general, with the joint
2 parties' proposal for the witness schedule,
3 though we prefer the joint parties to go first
4 and Dunsky to go second. However, we do not
5 believe it would be fair to allow a utility
6 rebuttal panel without allowing the other parties
7 a similar opportunity.

8 Therefore, after DOE and CPCNH present
9 their positions, if the joint parties believe
10 additional testimony from their witness is
11 necessary, we will entertain such a request.
12 However, we would also allow the other parties to
13 provide additional testimony in response to any
14 rebuttal testimony.

15 Okay. We're going to take a quick
16 ten-minute break and come back with opening
17 statements. Off the record.

18 (Recess taken.)

19 CHAIRMAN GOLDNER: Okay. We are back
20 on the record. Let's take the parties' opening
21 statements beginning with the joint parties.

22 MS. CHIAVARA: Good morning again.
23 Jessica Chiavara on behalf of the settling

1 parties. The -- I don't have a lengthy statement
2 to make. I have just that the settling parties
3 are excited about the Settlement Agreement that
4 we've reached. It represents a diverse range of
5 interests, and a lot of the parties are coming
6 together. This was a thoroughly negotiated
7 settlement, and we feel that it represents a
8 balanced and reasonable and constructive path
9 forward for net metering. And we have many
10 experts that are here today to speak to that, and
11 so you'll be able to ask them all kinds of
12 questions about that.

13 The other thing that I wanted to touch
14 on is the utility rebuttal panel that we did
15 propose for later this afternoon. I think the
16 way that we're thinking about it is, this case is
17 kind of two cases rolled into one. So, on the
18 one hand, we have the Settlement Agreement, and
19 all the settling parties' opinion on that, and
20 then the non-settling parties' opinion on that
21 settlement.

22 But it's not just those that aren't
23 settling and their opposition to the Settlement

1 Agreement or not. The parties that aren't
2 settling also may have affirmative proposals,
3 different proposals, to put forward. And the
4 utility witnesses did, in fact, submit rebuttal
5 testimony on those proposals. And so it's --
6 that's almost a second case, and so the rebuttal
7 panel is to speak to those separate issues,
8 because the settlement panel will not be speaking
9 to any of those issues, so it's sort of two
10 different tracks.

11 CHAIRMAN GOLDNER: Okay. And I think
12 the proposed process, I think it will work out
13 well. We'll let all the panels testifying go
14 through the normal process, and if the -- if the
15 joint parties still want to have the rebuttal
16 panel, the joint parties can make that request,
17 and then we can see if there are any objections
18 at that time.

19 MS. CHIAVARA: Absolutely. Yes. If
20 things are covered in cross-exam, we won't
21 belabor it. We're not trying to beat anything to
22 death. So, you know, we'll see how it goes and
23 we'll take it from there.

1 CHAIRMAN GOLDNER: Thank you. Okay.
2 The New Hampshire Department of Energy.

3 MR. DEXTER: Thank you, Mr. Chairman.
4 Paul Dexter on behalf of the Department of
5 Energy.

6 Our position in this case is actually
7 quite simple. We are in favor of continuing the
8 status quo of existing net metering tariffs as
9 detailed in the testimony that was put forth in
10 writing.

11 In addition, since our testimony was
12 submitted, the utilities have made substantial
13 progress towards proposing application fees for
14 net metering applicants. Those are laid out in
15 the Settlement Agreement, and our position is
16 that we support the adoption of those application
17 fees as laid out in the Settlement Agreement.
18 Thank you.

19 CHAIRMAN GOLDNER: Thank you, Attorney
20 Dexter. Is -- in your filing, as I recall, there
21 was an open IR docket in the Department looking
22 at applications fees. Is that continuing, or is
23 that -- does that complete the Department's work

1 relative to application fees?

2 MR. DEXTER: So there was an IR docket
3 on interconnection, in general. I'm not sure
4 that it dealt with application fees, but our
5 position with respect to application fees for net
6 metering customers is that we support what's been
7 put forth in the Settlement Agreement.

8 CHAIRMAN GOLDNER: Okay. Okay. Thank
9 you. CPCNH.

10 MS. MANZELLI: Good morning,
11 Commissioners. A little bit of a statement here
12 to get us going this morning. I believe that
13 this docket presents all of us an opportunity
14 right now to make net metering compensations
15 better, smarter, and more accurate in ways that
16 could minimize subsidization and unfair cost
17 shifting. We have the Dunsky VDER study, and it
18 makes a strong case that customer generators
19 generate higher value than current net metering
20 compensation rates, and it's especially so for
21 systems greater than 100 KW.

22 Money settlement processes should be
23 updated so that competitive suppliers have the

1 financial basis to offer innovative net metering
2 programs to customers. Its signals should be
3 improved, with temporal price signals reflecting
4 temporal values to optimize these investments
5 going forward.

6 New Hampshire needs to build the right
7 projects. There's just no need to wait, not an
8 additional three years, five years, or seven
9 years. We have the opportunity right now in this
10 docket to make these changes. Just because we
11 don't have enough information right now to do
12 everything, that doesn't mean that nothing should
13 be done in this docket. As the saying goes,
14 let's not let perfect be the enemy of the good.

15 The information and technology in
16 place today is good enough to at least start
17 making net metering compensations smarter and
18 more accurate with more (indiscernible), and we
19 can do this in a way that aligns with New
20 Hampshire's strong and smart policy of supporting
21 customer choice and market-based competition.
22 Market competition and customer choice benefits
23 all New Hampshire electric ratepayers. Thank

1 you.

2 CHAIRMAN GOLDNER: Thank you,
3 Attorney.

4 Let me just check on one of the action
5 items before we part it. Is there any objection
6 to the third parties going first in testimony,
7 then going to Dunsky second?

8 MR. DEXTER: I wouldn't call it an
9 objection, but I was the one that proposed that
10 Dunsky go first, because their study is sort of
11 foundational. It came out of the last docket.

12 It followed a scope that was --

13 I should have identified myself.
14 Sorry. This is Paul Dexter speaking. It
15 followed a scope that was identified in the last
16 docket. It was done on behalf of all
17 stakeholders; and, therefore, all the parties had
18 access to it and drew from the information, so
19 that's why I had proposed that they go first.

20 Number two. I was also hoping that we
21 could release Dunsky once they were done,
22 therefore, limiting the amount of time that they
23 have to spend at the hearing, because we are at

1 the end of a -- of a pretty tight budget.

2 So that was my recommendation. If
3 there's no strong objection to Dunsky going
4 first, I still think it's a more logical order.

5 CHAIRMAN GOLDNER: Attorney Krakoff.

6 MR. KRAKOFF: Yeah, I have no issue
7 (indiscernible.)

8 CHAIRMAN GOLDNER: Okay. Any other
9 comments on Dunsky going first?

10 MS. CHIAVARA: The settling panel --
11 sorry, Jessica Chiavara. The settling panel is
12 fine with Dunsky going first.

13 CHAIRMAN GOLDNER: Okay. All right.
14 We'll do it in that order then.

15 All right. So I think we have a plan
16 for the day. We'll turn now to public comments.
17 I have a sign-up sheet with three members of the
18 public signed up for comments. I'll ask those to
19 do two things. One is, please keep your comments
20 -- we have a very long day ahead of us -- to a
21 couple of minutes, number one.

22 And, number two, I'll ask you to find
23 a microphone and make sure that the red light is

1 on, and identify yourself before you begin
2 speaking.

3 So first -- the first person is
4 Mr. Aalto.

5 Is there a microphone that Mr. Aalto
6 can use? Thank you.

7 MR. AALTO: Thank you. My name is
8 Pentti Aalto. I'm representing myself. I also
9 bring about 50 years of work trying to integrate
10 distributed generation for the grid from its many
11 different aspects.

12 I guess, and to be really short,
13 without going into a substantial defense of it, I
14 believe the full retail value is the appropriate
15 cost for customers. There's no added cost to
16 anyone by it. There's no subsidy, as such, that
17 isn't already in the system.

18 However, it's incredibly important
19 that we begin to come up with a more efficient
20 system. The counterargument to my argument is,
21 well, it's -- it's a May afternoon, the sun is
22 shining brightly, and the price is negative. How
23 can that be an efficient price, to pay somebody

1 20 cents for power when the market seems to be
2 saying it's negative.

3 And, of course, the answer is, it is
4 not an efficient price, and we should work very
5 diligently to get that, both in terms of the time
6 and system state. In other words, the price of
7 power in the grid itself is a basis for it, plus
8 the distributed -- an expression -- dynamic
9 expression of price for transmission and
10 distribution; the idea of fixed pricing is
11 ultimately unsupportable if we're trying to be
12 efficient.

13 We have no idea -- the customer has no
14 idea what the loading is on the system or
15 anything else. I propose a system that
16 recognizes segments of the -- major segments of
17 the system, each contributing to the cost to an
18 individual customer. Each customer will see a
19 different price. The price will be determined by
20 the revenue requirement for that segment, a cost
21 allocation or a -- I should say a price
22 allocation that is nonlinear that reflects an
23 emulation of a market for investment.

1 When loading on the system is zero,
2 the price to use the system is zero; likewise,
3 the revenue to someone generating at that point
4 is zero. When the wire is melting, the price is
5 infinite, and a hockey stick price curve connects
6 them.

7 Each segment added together then
8 provides a price that reflects the dynamics of
9 the system. How do we do this? The requirement
10 is, of course, measurement of loading on the
11 system at major locations, but that also gives us
12 the ability to provide for the dynamic re-rating
13 of transmission and distribution systems based on
14 temperature and other conditions.

15 Without going further into that, I
16 would point that I would -- did file something
17 in -- in a previous docket, probably five years
18 ago, that described an example of this type of
19 analysis. I will try to find references to it if
20 there's interest.

21 The issue is, do we convert quickly to
22 these prices? Do we require solar to suddenly be
23 efficient when nothing else is? The pricing

1 structure doesn't recognize the -- it doesn't
2 properly account for the efficiency of use of any
3 appliance, whether it's -- or a conservation
4 measure or efficiency measure.

5 Ultimately, we need to come up with
6 more efficient pricing at both load and
7 generation. And, ultimately then, the price that
8 a customer sees is the price they get paid. And
9 if it's done properly, it also reflects the cost
10 of using the system to move exported power to the
11 downstream customers that get it.

12 I'd be glad to answer any questions if
13 there's any interest.

14 CHAIRMAN GOLDNER: Thank you,
15 Mr. Aalto. I would just encourage you --
16 anything you would like to put in the file in
17 this docket, to be considered in this docket, you
18 can file that with the Clerk's office, and that
19 will be reviewed by the Commission.

20 MR. AALTO: Thank you. I will try to
21 do that. I should point out that I'm dyslexic in
22 writing anything, and it's incredibly difficult
23 to come out with something that's legible.

1 CHAIRMAN GOLDNER: Okay. No problem.
2 I was thinking of the -- the item that you filed
3 five years ago, you just mentioned. I think you
4 might want to file that.

5 MR. AALTO: Okay. Thank you.

6 CHAIRMAN GOLDNER: Thank you.

7 Okay. Let's move to Ms. Oliver from
8 the New Hampshire Community Loan Fund.

9 MS. OLIVER: Good morning. Thank you
10 for allowing me to speak this morning.

11 My name is Jeannie Oliver. I'm the
12 vice president of ROC-New Hampshire, which is a
13 program of the New Hampshire Community Loan Fund,
14 and we help residents in manufactured housing
15 parks to purchase a park and then operate them as
16 resident-owned communities.

17 Both at ROC-New Hampshire and in my
18 previous position with the Vermont Law School
19 Energy Clinic, we had worked very closely with
20 these low to moderate income communities to
21 implement community solar projects that benefit
22 those residents. And in that capacity,
23 representing low/moderate income communities, we

1 generally support the continuation of the net
2 metering rate structure in its current form.
3 This will give these residents an opportunity to
4 play catchup to what the general population has
5 been able to do over the last decade or so.

6 We have learnt some lessons, working
7 with the Public Utilities Commission, the
8 Department of Energy, and the stakeholders in
9 this room, that we're now able to scale up in
10 these communities. There are now some funding
11 opportunities coming through the federal
12 government that is also enabling us to scale up
13 these projects in low/moderate income
14 communities.

15 Keeping the net metering tariff as it
16 is, we will be able to apply those lessons
17 learned and apply net metering in a really
18 equitable way for the next five years.

19 So thank you. We will provide written
20 comments (indiscernible).

21 CHAIRMAN GOLDNER: Thank you. And,
22 finally -- I'm not sure I can read the
23 handwriting. It looks like Ms. Brown?

1 MS. BROWN: Hello. For the record, my
2 name is Doria Brown. I am the energy manager for
3 the City of Nashua, New Hampshire. The City of
4 Nashua is a member of the Community Power
5 Coalition of New Hampshire. In fact, we are the
6 largest community member, as well as the
7 community with the most generation. The City of
8 Nashua has two hydroelectric facilities, five
9 rooftop solar arrays, and a landfill gas to
10 energy plant.

11 And today I've been hearing support of
12 the Settlement Agreement for the net metering
13 tariff. We think that it's important to preserve
14 net metering as is, though we do think that, in
15 the future, there is opportunity to expand net
16 metering with some of the ideas that the
17 Community Power Coalition is coming with today.
18 But we think that it's important to preserve net
19 metering as is and allow for that expansion in
20 the future.

21 And thank you for your time today.
22 That's what I had to say.

23 CHAIRMAN GOLDNER: Thank you.

1 That completes the public comment on
2 my sign-up sheet, so we'll move on to the next
3 section.

4 Okay. So let's turn now to the
5 parties' testimony. We'll start with Dunsky
6 Energy, as recommended by the New Hampshire DOE.

7 Ms. Doran. Sorry, Mr. Krakoff.

8 MR. KRAKOFF: Chairman Goldner, I'd
9 just like to bring up something briefly at the
10 outset. Nick Krakoff from the Conservation Law
11 Foundation for transcript purposes.

12 But I'd just like to move under
13 Rule 203.32 for post-hearing briefing. There's
14 an awful lot of law covering this case, not just
15 362-A:9, but also 362-A:1, and there's some
16 relevant legislative history as well as past
17 Commission orders governing this case. So I
18 would just move right now that we, you know,
19 consider that or just take it up at the end of
20 the hearing.

21 CHAIRMAN GOLDNER: Okay. Thank you,
22 Mr. Krakoff. We'll -- we'll address that before
23 the day is out.

1 Okay. Anything else before we move to
2 the Dunsky testimony?

3 Okay. So one at a time, I'll ask the
4 witnesses to state their name for the record.

5 MR. HILL: Good morning. My name is
6 Alexander James Hill.

7 CHAIRMAN GOLDNER: Thank you.

8 MR. KSEMENDRANATH: Good morning. My
9 name is Anirudh Kshemendranath.

10 CHAIRMAN GOLDNER: Thank you. Okay.

11 Can you please both raise your right
12 hands.

13 (Whereupon, ALEXANDER HILL and
14 ANIRUDH KSEMENDRANATH were duly
15 sworn by Chairman Goldner.)

16 CHAIRMAN GOLDNER: Thank you. Well
17 done. The witnesses are ready for direct.

18 MR. DEXTER: Thank you, Mr. Chairman.
19 Paul Dexter doing the direct of the Dunsky
20 associate witnesses today.

21 DIRECT EXAMINATION

22 BY MR. DEXTER:

23 Q. Since we've already had their names stated, I'll

1 ask each of the witnesses from Dunsky to state
2 their position with -- with their employer.

3 A. (Hill) Yes. My title is partner at Dunsky
4 Energy and Climate Advisors.

5 A. (Kshemendranath) Hi. This an Anirudh. My
6 current title is senior consultant.

7 Q. Thank you. And would one of you please describe
8 generally the role that Dunsky played in
9 connection with this net metering proceeding?

10 A. (Hill) Yes, I can do that.

11 So Dunsky's role was to conduct the
12 study, which is presented as Exhibit 8, to
13 establish the value of distributed energy
14 resources for New Hampshire, and it includes
15 assessment of rate and bill impacts for electric
16 utility customers resulting from projected net
17 energy metering tariffs and behind-the-meter
18 solar PV uptake in the state.

19 We were selected to conduct the VDER
20 analysis -- that's the short form of Value of
21 Distributed Energy Resources -- after we
22 responded to a request for proposals titled, "The
23 Value of Distributed Energy Resources Study

1 Consultant RFP No. 2020-01," issued by the State
2 of New Hampshire Public Utilities Commission on
3 March 27th 2020.

4 The RFP detailed the scope and
5 approach for conducting the VDER analysis, which
6 was predetermined based on Commission Order
7 No. 26,213. The order established the scope and
8 timeline for the VDER study and directed the
9 staff to engage a consultant.

10 According to the order, the Commission
11 staff previously held a series of stakeholder
12 working group sessions and filed its Value of
13 Distributed Energy Resources Study scope and
14 timeline report on May 9th, 2018. And the
15 Commission held a public comment hearing on June
16 29th, 2018, and approved the VDER study scope on
17 December 18th, 2019.

18 MR. DEXTER: Mr. Chairman, if
19 Mr. Patnaude was here, I have a feeling he'd ask
20 Mr. Hill to slow down. If you think the speed is
21 okay with the tape system, or --

22 CHAIRMAN GOLDNER: I hope so, but I
23 would encourage everyone to speak slowly today.

1 We'll be sending the audio and video off to a
2 off-site stenographer to do the translations.

3 BY MR. DEXTER:

4 Q. Okay. So then, Mr. Hill and Mr. Kshemendranath,
5 if you could remember to speak a little slowly
6 and directly into your microphone.

7 You had mentioned Exhibit 8. I
8 should have said at the outset that I will be
9 questioning you about documents that have been
10 marked as Exhibit 8 through 12 in the proceeding.

11 Continuing with Exhibit 8, which
12 you've identified as the final study report of
13 the VDER. Could you give a very brief summary of
14 the -- of this study?

15 A. (Hill) Certainly. So Exhibit 8 contains the
16 final report for the VDER analysis, which was
17 filed by the New Hampshire Department of Energy
18 on October 31st, 2022, as part of this docket.

19 It contains two components. The first
20 is the final study report that provides an
21 overview of the results and finding of the
22 analysis, including the value generated by
23 distributed energy resources. It also contains

1 the levelized customer-installed costs for DERs,
2 and as well, a rate and bill impact assessment,
3 which typically we refer to as the RBI
4 assessment.

5 The second component is the appendix
6 to the report that provides an overview of the
7 approach and methodology used for the VDER study
8 and the RBI analysis.

9 Q. Can you describe briefly the purpose of both of
10 those components of the final study report?

11 A. (Hill) Yes. The VDER study aimed to quantify
12 the New Hampshire-specific avoided costs and
13 incurred costs expected for utilities and
14 ratepayers from future incremental additions of
15 net metered distributed energy resources in the
16 state.

17 It considered 19 value streams for
18 DERs assessed on an hourly basis covering the
19 period from 2021 to 2035. This allows for
20 technology neutral assessment of DER benefits
21 over the study period.

22 Q. And the same question with respect to the rate
23 and bill impact analysis. Could you give a brief

1 description of the purpose, please?

2 A. (Hill) Yes. The rate and bill impact analysis
3 provides insight into the impact of customer
4 generator deployment on New Hampshire ratepayers,
5 considering both the benefits and costs that the
6 utilities would incur.

7 The assessment is intended to serve as
8 a future-looking estimate of the direction and
9 magnitude of the impacts that further net metered
10 solar PV will have on all ratepayers and any
11 potential cost shifting between customer
12 generators and non-customer generators.

13 It is not intended to represent an
14 exact projection of future electricity rates or
15 cost recovery within the state.

16 The RBI analysis considers the impacts
17 of customer generator compensation under the
18 existing alternative net energy metering tariff
19 effective September 2017.

20 Q. And could you give us a brief summary of the
21 results of these two analyses that were
22 performed?

23 A. (Kshemendranath) Yes. This is Anirudh. The

1 final study report consists of two essential
2 studies. One is the VDER study, and the second
3 is the RBI analysis.

4 The VDER study quantifies the value of
5 distributed energy resources owned by customer
6 generators and eligible to participate in the
7 current net metering energy program in New
8 Hampshire.

9 And as for this Exhibit 8, DERs are
10 expected to provide a total system-wide net
11 avoided cost of anywhere between 11 cents and 18
12 cents for electricity produced in 2021. And, by
13 2025, DERs are forecasted to provide anywhere
14 between 10 cents and 23 cents per kilowatt hour
15 produced.

16 These value vary by DER system type
17 and across utilities, and they exclude the values
18 associated with environmental externalities. All
19 the numbers that I mentioned are all expressed in
20 real 2021 dollars.

21 Also, as a part of the exhibit, the
22 RBI analysis projects that adopting additional
23 net metered solar PV may result in a slight rate

1 increase for all rate classes and utilities under
2 the current alternative net metering design.

3 As a result, the monthly bills are
4 projected to increase by a small percentage for
5 non-customer generators, but decrease by a more
6 significant percentage for customer generators.

7 However, when we average the impact
8 and the bill impacts across all customers, we
9 find that the projected additional net metered
10 solar PV would reduce the monthly energy bills.

11 Q. Thank you. Now, turning to Exhibit 9, which is
12 titled, "An Addendum to the VDER Study," could
13 you describe what Exhibit 9 is and what prompted
14 you to prepare Exhibit 9?

15 A. (Hill) Certainly. Yeah, Exhibit 9 is an
16 addendum prepared to update the results in the
17 initial study as presented in Exhibit 8,
18 specifically to account for two factors.

19 The first was that natural gas prices
20 were significantly higher during 2021 and 2022
21 than had been projected when the initial analysis
22 was conducted. This led to a reassessment of the
23 avoided energy costs, the ancillary services and

1 load obligation charges, transmission and
2 distribution line losses, wholesale market
3 suppression benefits, also referred to as DRIPE,
4 and wholesale risk premiums.

5 At the same time as updating those
6 avoided cost components, we also updated --
7 converted the values in this -- for all avoided
8 cost elements to real 2024 values.

9 The Department of Energy requested
10 Dunsky to prepare Exhibit 9 because of the higher
11 natural gas prices initially presented in Exhibit
12 8, and which warranted an update to the price
13 projections over the 2021 to 2025 -- sorry --
14 2035 period.

15 Q. And when Exhibit 9 put together?

16 A. (Hill) Sorry. Pardon me? I didn't hear that
17 question.

18 Q. When was Exhibit No. 9 put together?

19 A. (Hill) Exhibit 9 was issued on June 8th, 2023.

20 Q. And what did Exhibit 9 show in relation to the
21 original study that you described for Exhibit 8?
22 Did it change the conclusions at all?

23 A. (Kshemendranath) So I can answer this.

1 The purpose of this exhibit was to
2 articulate the impact of real energy prices as
3 reflected in the historical locational margin
4 price in 2021 and 2022, which differs
5 significantly from the predicted values in the
6 original VDER study.

7 The addendum also quantified the
8 impact of forward-looking natural gas price
9 projections on the projected energy price, and
10 consequently, the 19 VDER benefit streams. So
11 the addendum updates all the values in the
12 analysis into real 2024 dollars to facilitate the
13 future application of the results.

14 Now, when we compared the results in
15 Exhibit 9 to Exhibit 8, we find that the total
16 tech-neutral value stack, on average, is about 17
17 percent higher in 2025 and about 5 percent higher
18 in 2035.

19 The VDER components that were
20 influenced by the change in natural gas prices
21 include avoided energy cost, ancillary services,
22 transmission and distribution line losses, DRIPE,
23 and wholesale risk premium.

1 Q. Would you say that the -- that the -- the fact
2 that you did or -- or -- or that you analyzed the
3 addendum -- sorry.

4 Is the fact that you proposed -- that
5 you performed the analysis that's set forth in
6 Exhibit 9 -- in your view, does that undermine
7 the validity of the report that was submitted in
8 Exhibit 8? And please explain why or why not.

9 A. (Hill) Yeah. No, it doesn't undermine the
10 validity of Exhibit 8. In our opinion, all
11 forecasts -- you know, these are forward-looking
12 reports, and all forecasts represent the best
13 projection of future values at a given period of
14 time and, by nature, carry some degree of
15 uncertainty.

16 Despite a significant change in the
17 avoided energy cost forecast between those used
18 in Exhibit 8 and those applied and updated in
19 Exhibit 9, the overall impact on the VDER value
20 stack is relatively muted as this -- as my
21 colleague noted. You know, 17 percent in -- on
22 the short term in 2025 and 5 percent over the
23 longer term. Moreover, energy prices have since

1 returned to values that align more closely with
2 the original values used in the analysis in
3 Exhibit 8.

4 For the RBI analysis component, the
5 impact of fluctuating energy prices on the
6 assessment is even less. The RBI assessment
7 assumes that, of the VDER avoided costs that were
8 impacted by updated natural gas price
9 projections, the avoided energy costs, the
10 ancillary services, transmission distribution
11 line losses, and wholesale risk premiums are
12 considered passthrough costs that don't directly
13 impact utility costs and, as such, do not produce
14 rate impacts related to the NEM program. So in
15 those cases, there is no change in -- in our
16 analysis.

17 The exception would be the DRIPE
18 benefits, which are assumed to contribute to the
19 NEM program rate impacts; however, energy DRIPE
20 is a relatively small component in the value
21 stack; and, therefore, the resulting
22 energy-price-driven changes to DRIPE values would
23 have a marginal impact on the generation rate

1 impacts resulting from the NEM program.

2 Q. Okay. Thank you. I want to turn briefly to
3 Exhibit 10, which is your testimony.

4 CHAIRMAN GOLDNER: Mr. Dexter?

5 MR. DEXTER: Yes.

6 CHAIRMAN GOLDNER: If you could just,
7 please, make sure your witnesses are identifying
8 themselves each time.

9 MR. DEXTER: And I should be
10 identifying myself as well, Mr. Chairman. I will
11 try to remember that. And, yes, I will ask the
12 witnesses to do that as well.

13 BY MR. DEXTER:

14 Q. So, again, Paul Dexter. Moving to Exhibit 10 on
15 direct exam, which is your pre-file testimony.
16 Was this prepared by you or under your
17 supervision?

18 A. (Hill) Alex Hill responding.

19 Yes, the testimony in Exhibit 10 was
20 prepared in collaboration between myself and my
21 colleague, Mr. Kshemendranath.

22 Q. And do you have any corrections or updates that
23 you would make to Exhibit 10 at this time or that

1 you would like to describe at this time?

2 A. (Kshemendranath) Yes. Anirudh responding.

3 Yes, as noted in Exhibit 11 and
4 Exhibit 12, in the preparation of our rebuttal
5 testimony, we encountered an error in the RBI
6 assessment calculation from the initial study,
7 and this error led us to prepare a second
8 addendum to the RBI assessment report, which is
9 included here as Exhibit 12.

10 Now, correcting this calculation error
11 reduced the RBI impacts, and we compared them to
12 the values presented in Exhibit 8 and 10. Thus,
13 the testimony, as presented in Exhibit 10, should
14 be corrected to state that, under the current net
15 metering scenario, based on the forecasted DG
16 adoption over the 2021 to 2035 period, what we
17 see is that, on average, across all customers
18 within the residential customer class, they will
19 experience a decrease in their monthly energy
20 bills. Moreover, on average, small and large
21 general service customers are projected to
22 experience a reduction in their monthly bills as
23 well.

1 While DG customer generators will
2 experience a notable reduction in monthly bills
3 resulting from the NEM tariff, non-generator
4 customers are expected to see a slight increase
5 in their monthly bills. And these bills are
6 driven by increases in rates, which will result
7 in increase in rates for both -- for residential,
8 the small general service and the large general
9 service customers across all utility service
10 territories.

11 So this RBI assessment aims to
12 indicate the magnitude and the direction of the
13 impact of the potential rate changes, and this
14 correction does not change the overall study's
15 conclusion.

16 Q. So except for the corrections that you just
17 talked about that are explained in more detail in
18 Exhibit 12, if I were to ask you the questions
19 that are contained in your testimony as Exhibit
20 10, would your answers be the same as those
21 contained therein?

22 A. (Hill) Alex Hill responding.

23 And, yes, they would be the same.

1 Q. And Paul Dexter questioning.

2 Do you adopt this as your sworn
3 testimony in this proceeding?

4 A. (Hill) Alex Hill responding again.

5 And the answer is, yes, we do.

6 Q. Thank you. So I want to turn quickly now to
7 Exhibit 11, which is your rebuttal testimony in
8 this case. Was this prepared by you or under
9 your supervision?

10 A. (Hill) Alex Hill responding.

11 The rebuttal testimony in Exhibit 1
12 was prepared in collaboration between myself and
13 my colleague, Mr. Kshemendranath.

14 Q. Paul Dexter asking.

15 Do you have any corrections to make at
16 this time to the rebuttal testimony which has
17 been marked as Exhibit 11?

18 A. (Hill) Alex Hill responding.

19 We have no corrections to make
20 regarding the rebuttal testimony at this time.

21 Q. And do you adopt this rebuttal testimony as your
22 sworn testimony in this proceeding?

23 A. (Hill) Yes, we do.

1 Q. What was -- briefly describe the purpose of the
2 rebuttal testimony that was -- that you filed.

3 A. (Hill) Alex Hill responding.

4 The purpose of the testimony was to
5 respond to questions raised by other intervenors
6 in this filing.

7 Q. And, finally, turning towards Exhibit 12, which
8 you've actually described a little bit already,
9 could you just give a brief description of the
10 purpose of Exhibit 12, which is entitled,
11 "Addendum to the RBI assessment"?

12 A. (Hill) Alex Hill responding.

13 The addendum to the RBI assessment and
14 the VDER study in Exhibit 12 provides corrected
15 values resulting from the computational error
16 that was corrected in how the demand was such --
17 reduced induction -- demand reduction induced
18 price effects and avoided capacity costs were
19 applied in assessing the generation rate impacts
20 in the RBI model.

21 We discovered this error when
22 preparing our rebuttal testimony as presented in
23 Exhibit 11.

1 Q. And, again, if I understood the earlier
2 testimony, it's your conclusion that correction
3 of this error did not change the overall
4 conclusion from the RBI assessment; do I
5 understand that correctly?

6 A. (Hill) Alex Hill responding.

7 It did not change our overall
8 conclusion.

9 Q. Thank you. I just want to clarify, is it -- is
10 Dunsky providing an opinion or position on the
11 net metering tariffs that are being considered in
12 this case?

13 A. (Hill) Alex Hill responding.

14 No. Our role was not to provide an
15 opinion; and, as a result, Dunsky does not take a
16 position in New Hampshire's net meter -- net
17 metering tariff.

18 MR. DEXTER: Thank you for those
19 answers. Those are the only questions I have at
20 this time.

21 And I meant to say at the outset,
22 Commissioner, that the primary purpose of us
23 bringing in Dunsky and presenting these materials

1 in writing and putting them into the record was
2 to allow the Commission an opportunity to ask
3 Dunsky questions, because you haven't had that
4 opportunity. Most of the other parties in the
5 case have had that opportunity through technical
6 sessions. And they may have some questions
7 today, too, as well, but I wanted to state that
8 that was the primary purpose of this exercise
9 today.

10 CHAIRMAN GOLDNER: Okay. Thank you,
11 Attorney Dexter. I appreciate that.

12 Okay. Let's move to the joint parties
13 for any cross-examination.

14 MS. CHIAVARA: The utilities don't
15 have any questions for Dunsky, but I believe
16 there are other members of the settling parties
17 that may.

18 CHAIRMAN GOLDNER: Okay. Okay. So
19 the questions today are not necessarily funneled
20 through the representative for the joint parties?

21 MS. CHIAVARA: Yes. I believe
22 Conservation Law Foundation has some questions
23 for Dunsky.

1 CHAIRMAN GOLDNER: Okay. Okay.

2 Mr. Krakoff.

3 CROSS-EXAMINATION

4 BY MR. KRAKOFF:

5 Q. Nick Krakoff with the Conservation Law
6 Foundation.

7 You said that the scope of the study
8 that was established -- I think you said Order
9 26,213. Wasn't the real order 26,316? Could you
10 clarify that.

11 A. (Hill) I'm just referring to my notes.

12 Our understanding was that the scope
13 and approach for conducting the VDER analysis was
14 predetermined based on Commission Order 26,213.

15 Q. Okay. Was that the order from December 18th,
16 2019?

17 A. (Hill) I don't -- I don't have a note as to the
18 specific date of that order.

19 Q. Okay. Regardless of what the date of the actual
20 order number, you know, you mentioned that the
21 study assessed the value of environmental
22 externalities. And I'll probably be the only one
23 asking about it today, but those were a

1 requirement from the Commission to study those
2 environmental externalities, correct?

3 A. (Hill) Apologies. I'm having trouble hearing.
4 It's a bit muted. What exactly was the question
5 regarding the environmental externalities?

6 Q. Sorry. I'll try to speak more directly into the
7 microphone for you. Is that better?

8 A. (Hill) A little bit, yeah.

9 Q. Okay. You said that the order that set the scope
10 for the study, they asked you to look at -- or
11 asked that you consult with a contractor to look
12 at environmental externalities, correct?

13 A. (Kshemendranath) Anirudh.

14 The answer, yes. That is correct. We
15 looked at environmental externalities as a
16 sensitivity to the study.

17 Q. And that was a requirement from that order from
18 the Commission, right?

19 A. (Kshemendranath) That's a part of the RFP, yes.

20 CHAIRMAN GOLDNER: I'm sorry,
21 Mr. Krakoff. If I can just remind the witnesses
22 and the questioner to identify themselves each
23 time for the transcription. Thank you.

1 BY MR. KRAKOFF:

2 Q. Okay. Again, Nick Krakoff from CLF.

3 And, you know, with the requirement of
4 the study to -- to consider environmental
5 externalities, were those related to the public
6 purpose for the net metering statute -- or one of
7 the public purposes for the net metering statute?

8 A. (Kshemendranath) I didn't hear. I'm sorry. I
9 didn't catch the question.

10 Q. Sorry. Was there a requirement to consider
11 environmental externalities related to one of the
12 purposes of the net metering statute?

13 A. (Hill) Yeah, apologies. The audio is cutting
14 out a little bit, so we're missing the occasional
15 word in your question. This is Alex Hill
16 responding.

17 It was part of our scope to provide an
18 assessment of the environmental externalities and
19 apply them as a sensitivity within the VDER
20 analysis.

21 Q. And so --

22 CHAIRMAN GOLDNER: I'm sorry,
23 Mr. Krakoff. It might be useful to switch

1 microphones with somebody over there. You might
2 just have a bad mic. And then -- and then,
3 again, please don't forget to identify yourself
4 each time.

5 Are there any more microphones?

6 MR. KRAKOFF: No, there's only --

7 CHAIRMAN GOLDNER: Okay. All right.

8 So maybe just speak as slow as you can and most
9 words will get through. Thank you.

10 MR. KRAKOFF: All right. I'll try my
11 best.

12 BY MR. KRAKOFF:

13 Q. Okay. Again, Nick Krakoff for the Conservation
14 Law Foundation.

15 Now, for the VDER study, this
16 environmental externality sensitivity, that
17 looked at the avoided cost value of pollutant air
18 types, correct?

19 A. (Kshemendranath) Anirudh Kshemendranath.

20 Yes, that looks at the societal cost
21 of carbon.

22 Q. Okay.

23 A. The marginal emissions reduction.

1 Q. And so this gives them a benefit received for
2 avoiding those types of air pollutants from net
3 metering?

4 A. (Kshemendranath) So the study -- Anirudh
5 Kshemendranath.

6 The study quantified the environmental
7 benefits from the reduction of -- potential
8 reduction of marginal emissions from the system.

9 Q. And even (indiscernible) potential double
10 counting of environmental externalities where
11 people are already getting wholesale energy
12 prices, correct?

13 A. (Kshemendranath) Anirudh Kshemendranath.

14 So my understanding is that -- are
15 you -- is your question related to, are we double
16 counting the benefits? Is that your question?

17 And I would say, no, we -- we take out
18 the RGI benefits associated from that -- from the
19 externality benefits.

20 Q. Okay. Nick Krakoff with CLF.

21 So you made sure to avoid double
22 counting?

23 A. (Kshemendranath) Anirudh Kshemendranath. That's

1 right.

2 Q. Okay. And then, when Mr. Dexter was asking you
3 some questions, you said -- you kind of detailed
4 the value set -- the value stack over -- for net
5 metering for 2021 and for 2035.

6 Now, doesn't the study show that
7 environmental externalities, that sensitivity
8 added an additional 5 cents per KWH to the
9 benefits to the average annual value stack for
10 net metering systems in 2021?

11 A. (Kshemendranath) Anirudh Kshemendranath.

12 On average, it directionally points to
13 those two values, but I will have to check for
14 specific DR systems.

15 Q. And then, in 2035, I think the study found --
16 sorry. Nick Krakoff, CLF again.

17 In 2035, the study found that the
18 environmental externality sensitivity added an
19 additional 3 to 4 cents to the value stack? And
20 that's for an average system, of course.

21 A. (Kshemendranath) Anirudh Kshemendranath.

22 It is -- in the Exhibit 8, it shows
23 that, on average, it's somewhere between 4 and 5

1 cents.

2 Q. Okay. And so I think -- Nick Krakoff, CLF.

3 The conclusion on Page 58 of your
4 study, Exhibit, I guess, 8, was that, in general,
5 environmental externalities that avoided cost,
6 that that added approximately 20 percent to 45
7 percent, varying by year, in DG systems to the
8 value stack; was that -- was that your
9 conclusion?

10 A. (Kshemendranath) Anirudh Kshemendranath.

11 I'm sorry. I didn't quite catch your
12 question.

13 Q. Sure. Just on page 58, I think your conclusion
14 was that environmental externalities, that
15 sensitivity analysis added approximately 20 to 45
16 percent of the value -- to the average value of
17 the value stack?

18 A. (Kshemendranath) Anirudh Kshemendranath.

19 Yes, that is in one of the key
20 findings on page 48 -- 58 of Exhibit 8.

21 Q. And then just -- again, Nick Krakoff, CLF.

22 Just one or two more questions. You
23 talked about Exhibit 12, which is the updated RBI

1 assessment, the rates and benefit impact analysis
2 or assessment.

3 You know, prior -- prior -- in
4 answering Mr. Dexter's question, you said that
5 you're now going to show a slight cost shift to
6 non-net-metering customers in your initial
7 analysis. Isn't it true that the addendum to the
8 RBI assessment, that that showed even a smaller
9 cost shift?

10 A. (Kshemendranath) Anirudh Kshemendranath.

11 That is right. In the addendum, which
12 is in Exhibit 12, we show that the updated values
13 have a lower impact, rate impact and bill impact,
14 compared to the report that is published in
15 Exhibit 8.

16 Q. Your conclusion was that they were even lower
17 than your initial finding?

18 A. (Kshemendranath) Anirudh Kshemendranath.

19 That is right.

20 MR. KRAKOFF: Okay. No further
21 questions. Thank you very much.

22 CHAIRMAN GOLDNER: Okay. Are there
23 any other questions for cross from any of the

1 joint parties?

2 MR. EVANS-BROWN: Clean Energy New
3 Hampshire does have a few questions. If --

4 MR. DEXTER: Mr. Chairman, this is
5 Paul Dexter. I wanted to ask Mr. Kshemendranath
6 a question on redirect concerning Mr. Krakoff's
7 question, because there's a -- a discrepancy
8 between Bates page numbers and report page
9 numbers.

10 I wonder if I could do that before
11 Clean Energy.

12 CHAIRMAN GOLDNER: Please do.

13 MR. DEXTER: Thank you.

14 REDIRECT EXAMINATION

15 BY MR. DEXTER:

16 Q. Mr. Kshemendranath, when you were referring to
17 page 58 of the VDER analysis, which is Exhibit 8,
18 including environmental externality
19 sensitivities, is it correct that that's page 58
20 of the original report as filed with Bates
21 page 71, as it's been marked as Exhibit 8; is
22 that your understanding?

23 A. (Kshemendranath) Anirudh Kshemendranath.

1 That is right. I was looking at page
2 58 of the original study report, which is marked
3 as Bates 71 in Exhibit 8.

4 MR. DEXTER: Thank you. That's all I
5 had. Thank you, Mr. Chairman.

6 CHAIRMAN GOLDNER: Thank you, Attorney
7 Dexter.

8 CROSS-EXAMINATION

9 BY MR. EVANS-BROWN:

10 Q. This is Sam Evans-Brown from Clean Energy, New
11 Hampshire. And I can direct these questions to
12 either of you. You can take them as you see fit.

13 I'd like to ask you a few questions
14 about the rates and bill -- rate and bill impact
15 analysis in Sections 2.6 and 3.4 of the final
16 report listed as Exhibit 8, as well as the
17 corrections that you've already spoken to, which
18 are part of Exhibit 11.

19 Would you agree that the rates and
20 bill impact analysis in the initial report shows
21 small bill increases for participating
22 residential ratepayers under the current net
23 metering program?

1 A. (Kshemendranath) Anirudh Kshemendranath.

2 It -- the study in Exhibit -- as shown
3 in Exhibit 8 shows small rate increases for
4 non-DG customers in residential customer classes.

5 Q. I'd like to refer you to Tom Beach's testimony,
6 because Tom -- this is Sam Evans-Brown again.

7 Tom Beach's testimony, which is listed
8 as Exhibit 5, and I believe begins on page 413.
9 Mr. Beach's testimony proposed several
10 adjustments to your RBI analysis that changed
11 those results. And, in Mr. Beach's testimony,
12 those -- those increases became slight bill
13 decreases for non-participants, generally in the
14 same order of magnitude, generally less than 1
15 percent.

16 Are you aware of the adjustments that
17 Mr. Beach proposed in his testimony?

18 A. (Kshemendranath) Anirudh Kshemendranath.

19 Yes, we have seen Mr. Beach's proposed
20 recommendations to the changes in the RBI
21 assessment, and we have clarified our position
22 and our reasoning in our rebuttal testimony,
23 which is Exhibit 11.

1 Q. This is Sam Evans-Brown again.

2 And I appreciate you having gone
3 through those changes already, and I won't make
4 you do that again. But is it fair to say that
5 you did not agree, at least in part, with some of
6 the adjustments that Mr. Beach recommended?

7 A. (Kshemendranath) Anirudh Kshemendranath.

8 That is -- that is right. We did
9 provide a rationale for where some of the
10 adjustments could be made and give an overview of
11 the potential impact on rates. There were a few
12 changes that we adopted that were recommended by
13 Mr. Thomas Beach within our analysis.

14 Q. Sam Evans-Brown again.

15 Is it correct to state that all of the
16 adjustments and corrections you made, in fact,
17 revised the bill impact downward for all
18 non-participating customers?

19 A. (Kshemendranath) Anirudh Kshemendranath.

20 The changes that we made were with
21 respect to the correction in the model where we
22 changed the -- where we -- where we noted that
23 the DRIPE and the capacity impacts would have a

1 downward pressure on generation rates, resulting
2 in lower generation rates. And that was a
3 correction that we made when we were preparing
4 our rebuttal testimony.

5 Q. Sam Evans-Brown again.

6 The initial number was in the order of
7 1 percent. The new revised number is also lower
8 than that 1 percent average number. Would you
9 agree that the new number is, in fact, close to
10 the number zero?

11 A. (Kshemendranath) Anirudh Kshemendranath.

12 It is definitely lower. Is your
13 question with respect to relatively close to
14 zero? That depends upon the results and the --
15 it depends on the customer class and the utility
16 service territory.

17 So, as seen in our addendum on --
18 that's Exhibit 12, page 6, we find that the
19 numbers range anywhere between 0.2 to 0.6 in the
20 volumetric rate impacts, so it is -- it's a big
21 range within a single territory itself across
22 customer classes.

23 Q. There's one other issue that I'd like to raise

1 with your rebuttal testimony. Again, this is
2 on -- this is Exhibit 11.

3 The issue is the 9.54 factor that you
4 applied to avoid the transmission costs in your
5 RBI analysis. These are discussed on pages 13
6 through 15 of Exhibit 11.

7 Am I correct in understanding that
8 this factor is applied because New Hampshire
9 utilities bear 9.54 percent of the regional ISO
10 New England transmission costs?

11 A. (Kshemendranath) Anirudh Kshemendranath.

12 That is -- that is right. We had
13 adopted this approach to be consistent with the
14 New Hampshire rate and bill impact and
15 participant impact assessment that is prepared
16 for the New Hampshire Evaluation Measurement and
17 Verification Working Group. And the rationale
18 for that is based on the load share of New
19 Hampshire with respect to the entire ISO New
20 England system.

21 Q. Sam Evans-Brown again.

22 So if a DER in New Hampshire resulted
23 in one dollar avoided regional transmission cost,

1 this factor reflects that, in the short run, only
2 9.5 cents of those savings would be assigned to
3 New Hampshire utilities, and the rest flows out
4 to other New England states, correct?

5 A. (Kshemendranath) Anirudh Kshemendranath.

6 The way ISO New England sets its
7 transmission rates is system-wide, and all the
8 DCs contribute to that based on a particular
9 rate. Therefore, if a DER resource results in a
10 1 percent -- or a one dollar reduction, 9.54
11 percent of that would be attributed to benefits
12 to the New Hampshire load zone.

13 Q. Sam Evans-Brown again.

14 Would it, however, not also be true
15 that, under this methodology, that other New
16 England states also have similar DER programs
17 that are reducing peak loads and avoiding
18 transmission costs, and so a share of benefits
19 from other states' programs should -- would flow
20 to New Hampshire utilities under your methodology
21 as well?

22 A. (Kshemendranath) Anirudh Kshemendranath.

23 That is correct. That is our --

1 that's a concept that -- that is our rationale
2 for it.

3 So if benefits -- if programs or DR
4 reduction in other states would -- would
5 subsequently result in benefits to New Hampshire
6 as well, based on the overall share of the New
7 Hampshire load zone with respect to the ISO New
8 England system.

9 Q. Sam Evans-Brown.

10 And was the adoption rate of DERs in
11 other states taken into account as you evaluated
12 the transmission benefits to New Hampshire -- the
13 New Hampshire net metering program?

14 A. (Kshemendranath) Anirudh Kshemendranath.

15 The scope of our assessment was to
16 look at the impact of the DER adoption within New
17 Hampshire. So when we looked at the rate and
18 bill impact assessment, our objective was to give
19 the directionality and the magnitude of the
20 impact between customers and non-DG customers
21 within the New Hampshire state, so we did not
22 look at forecasted DG adoption in other states as
23 a part of this assessment.

1 Q. Isn't it correct that -- Sam Evans-Brown again.

2 Isn't it correct that your avoided
3 cost model does not include this 9.5 percent --
4 9.54 percent factor in its calculation of avoided
5 transmission costs, and that this reflects that
6 in the long run, the full one dollar in regional
7 transmission costs will be saved because a DER
8 should produce that long-term reduction in New
9 Hampshire peak load?

10 A. (Kshemendranath) Anirudh Kshemendranath.

11 The avoided cost looks at the overall
12 impact or the value provided by DER resources,
13 and we did not apply the 9.54 percent to the
14 avoided transmission charges.

15 The RBI assessment takes a different
16 approach. It looks at what can be monetized
17 within the New Hampshire system, and -- which is
18 why the 9.54 percent was applied for the RBI
19 assessment and not for the VDER study.

20 Q. Okay. I'm going to leave this line of questions,
21 but will ask one other.

22 In your -- Sam Evans-Brown again.

23 In your previous statements responding

1 to the DOE's questions, you said that the -- that
2 it's more appropriate to use the initial VDER
3 study as opposed to the addendum, because energy
4 market prices have dropped again, and so the
5 original study is now more reflective of the
6 current market environment.

7 Is it not true that, were we to find
8 ourselves in a high price gas environment again,
9 that the New Hampshire net metering program would
10 result in more benefits to New Hampshire
11 consumers?

12 Q. (Hill) Alex Hill responding.

13 I don't believe I stated that the
14 initial study is more relevant than the addendum.
15 I simply stated that the addendum doesn't
16 undermine the validity of the initial study as
17 presented in Exhibit 8, and that energy prices
18 are more -- have returned to be more aligned with
19 the initial values presented in Exhibit 8.

20 Q. I apologize -- Sam Evans-Brown. I apologize for
21 mischaracterizing your response, but could you
22 respond to the question?

23 Would it not be the case that, were

1 energy prices to rise again, that the New
2 Hampshire net metering program would result in
3 more benefits to New Hampshire ratepayers?

4 A. (Kshemendranath) Anirudh Kshemendranath.

5 Based on our assessment in the
6 addendum as presented in Exhibit 9, the increase
7 in natural gas prices could result in an increase
8 in energy prices. These energy prices would
9 result in increasing energy values, and customers
10 who adopt solar would see increased benefits.

11 When it comes to evaluating the
12 benefits to all ratepayers within New Hampshire,
13 most of the components that result in increased
14 energy prices are a passthrough, and it is only
15 the Demand Reduction Induced Price Effect, which
16 is the DRIPE energy benefits, that actually
17 reduce the generation rates. But that is a very
18 marginal component within the stack that we
19 assessed. Therefore, yes, technically, all
20 ratepayers would see value and benefits as
21 natural gas prices and energy prices were to
22 rise; however, that benefit would be marginal at
23 most.

1 MR. EVANS-BROWN: No further
2 questions.

3 CHAIRMAN GOLDNER: Are there any other
4 joint parties that wish to cross-examine the
5 witnesses?

6 Okay. Seeing none, we'll move to
7 CPCNH.

8 MS. MANZELLI: Thank you. Good
9 morning. My name is Amy Manzelli, for the
10 Coalition.

11 I just want to check (indiscernible).
12 I'm using the same mic as Attorney Krakoff was
13 using.

14 MR. KRAKOFF: Yes.

15 MS. MANZELLI: Okay. This doesn't look
16 like it's (indiscernible).

17 CHAIRMAN GOLDNER: Well, again, be
18 advised -- this is Commissioner Goldner. Okay.
19 Maybe you could join in front, and perhaps that
20 would help with both the video and perhaps the
21 microphone.

22 MR. MANZELLI: And do you want to do
23 an audio check one more time? Can the witnesses

1 hear me?

2 All right. Terrific. That's much
3 better.

4 CROSS-EXAMINATION

5 BY MS. MANZELLI:

6 Q. Good morning. My name is Amy Manzelli,
7 representing the Coalition here this morning.
8 Good morning, Mr. Hill and Mr. Kshemendranath.
9 Just a couple questions this morning.

10 For your reference, if you need to
11 be following along, I'm going to have a couple of
12 questions about a couple sentences on -- it is
13 report page 59, but Bates stamp page 72 of your
14 original VDER report marked as Exhibit 8.

15 So I'll read the statement. Follow
16 along just to make sure I'm reading it
17 correctly.

18 CHAIRMAN GOLDNER: I'm sorry. Could
19 you repeat the Bates page again, please?

20 MS. MANZELLI: Absolutely. It's Bates
21 stamp page 72.

22 CHAIRMAN GOLDNER: Thank you.

23 MS. MANZELLI: You're welcome.

1 BY MS. MANZELLI:

2 Q. So the statement reads, "From a utility system
3 perspective, under current ISO New England market
4 rules, all systems provide greater value by
5 passively reducing load than by participating as
6 aggregated resources in the markets, with the
7 single exception of micro hydro facilities.
8 Micro hydro plants are able to consistently
9 generate energy during the summer and winter peak
10 reliability periods, thereby increasing their
11 value in the capacity market."

12 So I just want to check that I read
13 that correctly.

14 A. (Hill) Alex Hill responding. Yes, that appears
15 to be consistent with what's presented in Exhibit
16 8 on Bates page 72.

17 CHAIRMAN GOLDNER: And I'm sorry, this
18 is Commissioner Goldner again. We're having some
19 microphone hearing problems. If you could
20 actually back off the microphone a little bit.
21 It's like the three little bears in here, so --

22 MS. MANZELLI: Thank you.

23 Overcompensating.

1 BY MS. MANZELLI:

2 Q. Amy Manzelli. Thank you for confirming that.

3 And for this statement, did it take into account
4 the loss of avoided transmission costs that would
5 result from participation in the ISO New England
6 markets?

7 A. (Kshemendranath) Anirudh Kshemendranath
8 answering.

9 So when we looked at the MRVS stack,
10 we only looked at three components: That is
11 energy, capacity, and potential ancillary
12 services.

13 Q. Thank you. Amy Manzelli here.

14 And so is the answer to the question
15 of, did this statement take into account the loss
16 of avoided transmission costs that would result
17 in participation in the ISO New England markets,
18 is the answer no?

19 A. (Kshemendranath) That is right. We did not look
20 into the loss of avoided transmission cost.

21 Q. Thank you. This is Amy Manzelli.

22 I'm turning now to Bates stamp page
23 71, still in Exhibit 8, and I'm just going to

1 read the second full paragraph there, and my
2 question is just going to be, if you could
3 confirm that this statement is still true.

4 "The total avoided cost value to stack
5 value" -- excuse me -- yes, that's right.

6 "The total avoided cost value to stack
7 value decreases over the study period for
8 solar-only systems primarily as a result of
9 decreasing energy avoided costs. West-facing PV
10 systems provide 5 to 10 percent greater avoided
11 cost value overall. Although currently in New
12 Hampshire, south-facing systems are most commonly
13 installed because of production incentives
14 embedded in the current NEM tariff structure."

15 So please just confirm I read it
16 correctly, and then let me know if that is still
17 true.

18 A. (Kshemendranath) Anirudh Kshemendranath.

19 Yes. That statement is correct. As
20 per Exhibit 8, Bates 71, Paragraph 2, that
21 statement regarding that west-facing systems
22 provide 5 to 10 percent more value is true, given
23 the fact that it's got more alignment with system

1 peak than south-facing systems; however,
2 south-facing systems have more volumetric energy
3 production compared to west-facing systems, which
4 is why the stronger incentive to install more
5 south-facing systems compared to west-facing
6 systems, is our understanding.

7 Q. Thank you. And same thing for the next sentence
8 here on Page 71. I'm just gonna -- and the first
9 phrase in the next sentence, I just want to read
10 that into the record and have you confirm that as
11 well.

12 "Net-metered DER value increases over
13 time for solar paired with storage and for micro
14 hydro, as a result of the ability of those
15 systems to generate greater T&D avoided costs."

16 Did I read that correctly, and is that
17 still true today?

18 A. (Kshemendranath) Anirudh Kshemendranath.

19 That is right. As you install more
20 storage, you can start aligning the production to
21 meet system peak. That is the assumption that we
22 have taken when developing the analysis for the
23 solar plus storage case, which is why we think

1 that it'll continue to drive more and greater T&D
2 value.

3 Q. Thank you. And now turning -- changing
4 documents. Now turning to Exhibit 11, which is
5 your rebuttal testimony filed January 30th, 2024,
6 and, in particular, we've got an alignment of
7 numbers here. It is native document page 15 and
8 also Bates stamped page 15.

9 And drawing your attention to the
10 graph, the chart that's at the top of the page
11 labeled, "New Hampshire Peak Contribution
12 Percentage of System Load." I just want to make
13 sure you have a chance to get there with me.

14 Okay. Is it fair to say that this
15 graph here at the top of Exhibit 11, Bates stamp
16 page 15, that it shows a trend of the New
17 Hampshire share of regional peak increasing over
18 time?

19 A. (Kshemendranath) Anirudh Kshemendranath.

20 It is -- so my read of the graph is
21 that it is relatively stable. There might be
22 slight increases and changes, but it is hard to
23 discern whether that is significant enough to

1 determine that it's actually showing increase.

2 Q. You wouldn't agree that it shows at least a
3 slight increase over these years?

4 A. (Kshemendranath) So when we look at the chart
5 from 2016 to 2017, there is a reduction. And
6 then over 2017 to 2019, there is a slight
7 increase. But 2019 to 2021, it remains flat.
8 And 2021 to 2022, it shows a slight increase. So
9 I would say it's a marginally slight increase,
10 yeah.

11 Q. So -- sorry, we're falling out of habit here.
12 This is Amy Manzelli.

13 Let's go with a marginally slight
14 increase. What would you project would be --
15 well, would you agree that the marginally slight
16 increase would continue for the next three years
17 if no changes are made to the net metering status
18 quo?

19 A. (Hill) Alex Hill responding. I'm sorry. Could
20 you repeat the question?

21 Q. Sure. Given that this graph shows a marginally
22 slight increase from 2016 to 2022 -- 2022, would
23 it be fair to say that that marginally slight

1 increase would continue for years into the
2 future, given no change in the net metering
3 status quo?

4 A. (Hill) Alex Hill responding.

5 We did not conduct a regression
6 analysis of New Hampshire's contribution to the
7 ISO peak load, annual peak load. And we did --
8 we did not project into the future, you know, how
9 this trend may evolve with time in relation to
10 the net metering.

11 This graph was presented to show that
12 it has been relatively stable historically, but
13 not to -- not to provide a projection or
14 regression of past values.

15 Q. Given what you know -- sorry, Amy Manzelli.

16 Given what you know, would you have
17 any reason to doubt that the trends shown in this
18 graph would change projecting into the future if
19 net metering did not change?

20 A. (Kshemendranath) Anirudh Kshemendranath.

21 It is difficult to make a statement of
22 how the graph would change, because there are
23 multiple factors that can change. Another -- a

1 utility's contribution to -- or a sys -- or a
2 load zone's contribution to the overall system,
3 the increase in electrification, EVs, the
4 penetration of solar, adoption of storage, there
5 are multiple factors that can affect how the net
6 -- how the load zone share could change over all
7 systems.

8 A. (Hill) Alex Hill, adding further response.

9 In our analysis, we assumed,
10 projecting forward for the rate -- for the
11 purpose of the rate and bill impact assessment,
12 that the value of 9.54 percent would remain
13 consistent within the period which we're applying
14 the RBI results.

15 Q. So I'm asking you for the purposes of -- this is
16 Amy Manzelli.

17 And I'm asking you, for purposes of
18 this question, to make an assumption that the
19 status quo would be maintained.

20 So making that assumption, do you have
21 any reason to doubt that this trend line would
22 continue as you've depicted it here in your
23 report?

1 A. (Hill) Alex Hill responding.

2 I think, you know, adding to -- to my
3 colleague's response. You know, as we mentioned,
4 there are many factors that impact the
5 directionality of that curve and moving into the
6 future, and we did not conduct an assessment of
7 how all of those various, you know, contributing
8 factors in other states would change or alter
9 that curve.

10 This was presented for the purposes of
11 showing that we haven't seen a great deal of
12 variation over the -- historically, over the past
13 years around the value -- the assumed value of
14 9.54 percent, but I don't believe we're in a
15 position to determine a specific trend
16 directionality of that, other than to say that
17 our -- our opinion -- in our -- or our assumption
18 in our study was that it would stay relatively
19 close to the 9.54 percent, such that we could use
20 that as a consistent assumption within the rate
21 and bill impact analysis.

22 So to make a conjecture as to what
23 might happen directionally to that curve beyond

1 that, minor changes above or below, I'm not sure
2 that we're in a position to be able to make that
3 comment.

4 MS. MANZELLI: Okay. Thank you. Amy
5 Manzelli. I appreciate your patience with the
6 audio difficulty here. Thank you, gentlemen.

7 CHAIRMAN GOLDNER: Thank you. We'll
8 turn now to Commissioner questions, beginning
9 with Commissioner Chattopadhyay.

10 BY CMSR. CHATTOPADHYAY:

11 Q. Commissioner Chattopadhyay. Good morning.

12 So my questions are going to be sort
13 of conceptual, but it's really trying to
14 understand some of the results that the VDER
15 study provided. So what I'm going to do -- I'm
16 going to go to Exhibit 9, and I'm using it only
17 as a reference. If you go to Bates page 24. Let
18 me know when you're there.

19 So it is -- what this Table 3 --
20 sorry, Table 11 is doing is listing all the --
21 the rows that capture the avoided costs
22 associated with each of those pieces, correct?

23 A. (Kshemendranath) Anirudh Kshemendranath.

1 Yes, that is correct.

2 Q. So one of them is totaling all of that?

3 A. (Kshemendranath) Anirudh Kshemendranath.

4 Yes. We are expressing the total
5 across all the years which include external --
6 environmental externalities and one which
7 excludes environmental externalities.

8 Q. Yes. So let me understand, for example, when
9 you're talking about the first renewable energy,
10 that avoided cost is about the NEM KWH
11 production, right?

12 A. (Kshemendranath) Anirudh Kshemendranath.

13 Yes. The first line, that's energy,
14 that looks at the avoided cost for energy or the
15 annual avoided cost for energy for a residential
16 south-facing PV system paired with storage, in
17 page No. 24, yeah.

18 Q. Commissioner Chattopadhyay.

19 So that benefits only the DER
20 ratepayer, meaning the NEM ratepayer, right?

21 A. (Kshemendranath) Anirudh Kshemendranath.

22 That is the avoided cost or the value
23 generated by a residential south-facing system

1 combined with storage. The benefit to the
2 ratepayer or the customer will be based on the
3 applicable net metering -- or based on the net
4 metering tariff and the applicable energy rates
5 at that time.

6 Q. Let's talk about your avoided cost, while just
7 asking, that avoided cost is associated with the
8 NEM production of one kilowatt hour, and that --
9 within the cost, that avoided cost is going
10 directly to the -- to the net metering customer?

11 A. (Kshemendranath) Anirudh Kshemendranath.

12 Yes, that is correct. That is the
13 avoided energy cost that's attributed to one
14 kilowatt hour produced by the NEM customer.

15 Q. Okay. Likewise, for the next row of transmission
16 charges, based on what I have read in Exhibit 1
17 and your rebuttal testimony, I'm assuming that is
18 also associated -- that is -- sorry, that is
19 about avoided cost that results from the net
20 metering customer in producing one kilowatt hour?

21 A. (Kshemendranath) Anirudh Kshemendranath.

22 That's right. The second line on
23 transmission charges shows the avoided cost value

1 that can be attributed to a NEM customer who
2 installs solar and storage -- residential
3 customer that installs solar and storage.

4 Q. Can you -- can you tell me how you arrived at
5 those numbers, or what's the source? Just dive
6 into a little bit -- talking about, for example,
7 2024 transmission charge avoided cost.

8 A. (Kshemendranath) Certainly -- Anirudh
9 Kshemendranath.

10 Certainly. When it -- when we tried
11 to double up the transmission charge value, what
12 we did is that, we looked at the RNS and the LNS
13 charges that are applicable to the New Hampshire
14 zone, and then we applied those RNS charges on a
15 dollar per megawatt basis to the highest monthly
16 load peak in -- across for each month.

17 Once we identified those hours, where
18 the RNS and LNS charges would apply, we would
19 superimpose archetypical production profile for a
20 solar and a solar blistoid (phonetic) system and
21 estimated the overall transmission charge
22 benefit.

23 Essentially, what our study did is

1 that we developed -- for every 19 components, we
2 developed hourly avoided stack, which is tech
3 neutral, and that -- and where we would compare
4 the -- each DER production profile and resource
5 shape to estimate the avoided cost for each of
6 these components.

7 Q. So this calculation includes an analysis of how a
8 particular DER might be coincident to the NEM by
9 one PV system peak, roughly speaking?

10 A. (Kshemendranath) We made a broad assumption with
11 respect -- with respect to the dispatch strategy
12 for the storage system, so we assumed that the
13 storage system would dispatch based on the
14 highest value to the system -- to the system. So
15 it roughly coincides with the times when
16 transmission charges would be the highest.

17 Q. Okay. Just confirm that for me. RBI -- I know
18 there is a difference in opinion between, I
19 believe, CPCNH and your analysis, and that's been
20 provided in Exhibit 1, I think Bates pages 20-21.

21 I -- I just want to get a confirmation
22 from you, though, that if there is a non-NEM
23 customer, a ratepayer, that ratepayer would not

1 benefit from this avoided cost. They would still
2 be paying what they pay otherwise, correct?

3 A. (Kshemendranath) Anirudh Kshemendranath.

4 So when we looked at the RBI
5 assessment, what we -- we used the solar
6 production -- the DG forecast to estimate the
7 overall impact on transmission charges and
8 transmission avoided costs for the whole system.
9 There would be a reduction in transmission
10 charges. But the thing is, the way it is set up
11 is that, that might result in a slight increase,
12 so it's -- it somehow looks at the transmission
13 benefit versus the lost revenue base for all
14 customers within the customer class.

15 Q. As you may have captured, my question was just
16 about the customer that is non-NEM or -- so when
17 you are listing these rows, as I went through for
18 the first two, those are really benefiting the
19 DER customer rate there, and so I want to -- it
20 would be nice if you had also looked at each of
21 these rows and provided your -- in an additional
22 column, some opinion about who benefits. So I
23 want to split it up between the NEM and the

1 non-NEM customer.

2 As I understand, your RBI analysis is
3 looking at everything together, so that is --
4 that is not what I'm asking. I'm asking that,
5 for each of these rows, is it possible for you to
6 say which ones are the ones who cause that to go
7 directly to the NEM customer and which ones go to
8 own customers?

9 A. (Hill) Alex Hill responding.

10 First, I would just point out that --
11 and correct me if I'm wrong, my colleague,
12 Mr. Kshemendranath. When we did the RBI
13 analysis, we only looked at solar PV production.
14 We didn't look at solar paired with storage.
15 There are many permutations of systems that, you
16 know, could be considered, which, you know, were
17 not -- were beyond the scope of the analysis that
18 we conducted.

19 Within these avoided costs, as we
20 pointed out, many of them are passthroughs from
21 the energy system to the customer, which do not
22 affect generation rates for other customers.

23 From this table, my understanding

1 would be that the DRIPE -- I'm just looking --
2 yeah, the DRIPE avoided costs would be a benefit
3 to all customers, even non-participants, because
4 they are suppressing future energy -- energy
5 avoided costs for those customers. It's a
6 capturing of that impact, as well, I believe, as
7 the capacity charges, and that was accounted for
8 in the RBI assessment.

9 The differences between our analysis
10 and -- I believe it's Mr. Beach's analysis that
11 we're -- we're talking about. We did not assess
12 the degree to which changing our analysis to
13 align with the -- the instances where we did
14 agree that his analysis may provide further
15 precision would change our values. I think
16 there -- there are two areas. One was
17 additional precision around the transmission and
18 distribution avoided costs, and the other was
19 related to the impact of demand charge -- demand
20 charges on -- on non-residential customers, where
21 we had noted that their approach could provide
22 further precision.

23 I hope that answers your question.

1 You know, the point being that, yes, there are
2 some of these avoided cost streams that do
3 benefit all of the customers. And when taken
4 into account in the RBI analysis, you also have
5 to consider the -- the full scope of costs
6 incurred by the utilities and the volume of
7 kilowatt hours by all customers that those can be
8 spread across.

9 Q. And that is understood. And to be clear, I'm
10 simply using this table just as a reference. I'm
11 not too -- too married to asking you questions
12 about what's going on with solar PV paired with
13 storage or not. It's just, as a reference point,
14 I'm trying to go through the rows.

15 And so, you have identified or at
16 least indicated there are some that the avoided
17 costs would accrue to both the NEM customer and
18 the non-NEM customers. But there are others that
19 go only to the NEM customers.

20 And so, it just naturally occurs to me
21 that, because the RBI impact, which you are
22 looking at overall, the rates are going to be
23 higher, that rate is what is being faced by the

1 non-NEM customers or ratepayers. For them, the
2 real question is, how much -- what are the
3 avoided costs that they benefit from? And so,
4 there may be a way to slice the analysis to
5 indicate the benefit-to-cost ratios with -- for
6 the non-NEM customers as well as for the NEM
7 customers.

8 Now, for the NEM customers, thinking
9 like an economist, clearly if they decided to
10 spend the money and go ahead with NEM, they must
11 be -- we should assume that they are benefitting
12 from it, so that's less of a -- of relevant
13 information for me. It's more important to know
14 what's going on with the other customers, as well
15 as in total.

16 So this is just a suggestion or a way
17 that I think about it. So, in some ways, the
18 analysis isn't really complete to me.

19 The other thing is, have you looked at
20 specifically the utilities' numbers in terms of
21 the production of the net metering customers
22 during the New England system peak monthly, or
23 those transmission numbers are based on some

1 average look?

2 A. (Kshemendranath) Anirudh Kshemendranath

3 responding.

4 When we looked at the utility load
5 system profile, those are from -- we looked at
6 the utility system load codes, and we used the
7 data from the ESC as well to determine when those
8 peaks will occur. This is based on the data that
9 is presented in the 2021 ESC reports.

10 Q. Is that report -- does -- rather, does that
11 report -- this is Commissioner Chattopadhyay --
12 allow you to specifically go in depth into net
13 metering production locationally to have a lot of
14 confidence in the numbers that you have for the
15 transmission charges?

16 A. (Kshemendranath) Anirudh Kshemendranath

17 responding.

18 That report gave us a sense -- and
19 gave us the exact hours -- or gave us a
20 representation of what we would assume the
21 monthly peak load code for each system utility
22 territory.

23 When it comes to the net metering

1 production profile, we used an established
2 resource, the STP reports from NREL, and we used
3 ISO New England's typical solar production
4 profile codes to estimate exactly what is the
5 likelihood of those resources meeting the system
6 peaks for the New Hampshire load zone.

7 So it's the combination of these two
8 well-established reports and resources that we
9 used to develop the transmission charges and the
10 benefits for the same.

11 Q. Okay. The VDER study that was done -- that was
12 provided in October was updated to reflect the
13 changes in the NEM prices that happened later,
14 and, in June, you filed an addendum.

15 Do you have a sense of where the
16 numbers might be, given how the energy prices
17 have gone significantly lower, even lower than
18 what they were probably during October 2022? Or
19 am I incorrect?

20 A. (Kshemendranath) Anirudh Kshemendranath
21 responding.

22 We -- we briefly looked at the LMP
23 prices that were published from 2023 onwards to

1 the latest, 2024. We believe that it could -- it
2 is reflecting to be slightly -- actually, lower
3 on the energy LMP front. But we haven't looked
4 at every other component as well and seen exactly
5 how that could impact the avoided cost for the
6 other 18 streams.

7 Q. But (indiscernible) will that lead to lower
8 avoided cost estimates relative to the first VDER
9 study?

10 A. (Kshemendranath) So -- Anirudh Kshemendranath
11 responding.

12 The natural gas prices have a
13 significant influence on the avoided energy cost,
14 and, therefore, the other components in the
15 study.

16 Seeing that there are much -- there's
17 significantly lower -- or lower LMP prices as
18 seen in the ISO New England New Hampshire zone,
19 it could lead to a lower avoided energy cost.

20 However, the values that we saw were
21 on an annual basis. To accurately estimate
22 whether that will lead to a lower energy --
23 avoided energy cost, what we would need to do is

1 to conduct a study where we looked at the
2 hourly production -- hourly energy prices,
3 compare that to the solar production codes, and
4 see if there is a likelihood of coincidence.

5 So that is another level of
6 granularity and study that needs to be done to
7 see how the avoided energy costs for solar could
8 change with respect to the changes in the avoided
9 energy cost.

10 To give a bit more context, we only
11 looked at the annual price. But in the study, we
12 actually looked at a temp -- an hourly temporal
13 basis what the energy -- avoided energy costs
14 look like. Therefore, the solar production
15 profile or the DR's production profile matters
16 significantly in that case to determine what the
17 avoided energy costs could be.

18 Q. Okay. The rate impact analysis, you had two
19 different scenarios. One was based on the
20 alternative net metering rates, and the other one
21 was based on the value proposition; is that
22 correct?

23 A. (Kshemendranath) Anirudh Kshemendranath

1 responding.

2 That's right. We looked at two
3 scenarios. One is looking at the current
4 alternative net metering tariff, and another one
5 was a hypothetical ECB tariff that looked at the
6 compensation based on the avoided cost framework.

7 Q. Commissioner Chattopadhyay.

8 It's probably helpful -- after your
9 speaking, maybe my accent is closer to you, so I
10 need to do that.

11 I think the question that I have is
12 with respect to the risk premium, that row. When
13 you talk about the value-based assessment of the
14 rate impacts, is that included in it?

15 A. (Kshemendranath) Anirudh Kshemendranath
16 responding.

17 The value of risk premium was
18 considered as a passthrough, because our
19 assessment and our understanding is that risk
20 premium is baked into energy prices; therefore,
21 in the RBI assessment, that would not result in a
22 change in generation rates.

23 Q. Commissioner Chattopadhyay.

1 Do you have any opinions -- and this
2 is for both of you. Whoever feels comfortable
3 can respond -- any opinion on the legacy period
4 settlement terms?

5 A. (Kshemendranath) Anirudh Kshemendranath
6 responding.

7 We do not have an opinion on that,
8 because we haven't looked into any legacy period
9 settlement terms.

10 Q. Okay. Am I correct in assuming that the study
11 does not perf -- perf -- sorry, I'm having a hard
12 time saying that word -- to calculate the
13 benefit-to-cost ratios overall, nor does it try
14 to do it separately for non-NEM and NEM
15 customers?

16 A. (Kshemendranath) Anirudh Kshemendranath
17 responding.

18 The study only looked at the avoided
19 energy -- avoided costs from DERs, and we
20 presented the levelized customer cost for rate
21 classes across DERs, but we did not consider --
22 we did not conduct any benefit/cost assessment
23 for that.

1 Q. Do the witnesses have -- again, Commissioner
2 Chattopadhyay.

3 Do the witnesses have anything to
4 share about grandfathering that you might know
5 about, in terms of your experience with this
6 area, regardless of where it might have happened,
7 other states or otherwise?

8 A. (Kshemendranath) Anirudh Kshemendranath
9 responding.

10 We haven't looked into the issue or
11 the considerations of grandfathering, so we
12 cannot provide an opinion on the same.

13 Q. I understand. I'm just saying, do you have your
14 knowledge -- do you have any knowledge of how
15 that's done in other states? Or you do not?
16 That's what you're saying?

17 A. (Kshemendranath) Anirudh Kshemendranath.

18 Yes, we haven't looked into
19 grandfathering mechanisms in other states very
20 closely.

21 CMSR. CHATTOPADHYAY: Thank you.
22 That's all I have.

23 CHAIRMAN GOLDNER: Okay. This is

1 Commissioner Goldner. I have just a few
2 questions. Then we'll go to redirect and then
3 take a brief break.

4 BY CHAIRMAN GOLDNER:

5 Q. So I'm Bates page 61 of Exhibit 8. And that --
6 in that table, which is 3.4.1.2, it's entitled,
7 "Bill Impacts," and it looks like there's about a
8 90 percent reduction -- a little bit over 90
9 percent for the residential and small general
10 service customers, and a little over 40 percent
11 for the large general service customers; am I
12 reading that right?

13 A. (Kshemendranath) Anirudh

14 Kshemendranath responding.

15 That is right. In the graph, Figure
16 28 of Exhibit 8, page 61, that is the case.

17 Q. Okay. And so when -- let's just use
18 solar as the example. So when the solar arrays
19 are put in place, the -- -- there's not fewer
20 poles and wires. There's not less
21 infrastructure. It's the same infrastructure.
22 So in that moment when solar is installed on the
23 house, who -- who pays for the 90 -- the 40 to 90

1 percent reduction? Where does that -- where does
2 that money go? How does it get collected?

3 A. (Kshemendranath) Anirudh Kshemendranath
4 responding.

5 So in this graph, what we tried to
6 estimate are what would be the reduction in bills
7 for customers, DG customers, across the three
8 rate classes for the Eversource territory.

9 This represents the reduction in that
10 customer bill without accounting for the costs
11 that the customer would need to incur when they
12 deploy or install these systems on their -- on
13 their roofs or on their site.

14 But, to your question as to how those
15 benefits would pass on to other ratepayers and
16 other customers, to answer that question, the
17 rate and bill impact assessment looks at, if
18 these customers are being compensated at the
19 current rate by the current net metering tariff
20 and considering the net benefit and cost to the
21 utility, how does that overall benefit or net
22 benefit impact rates to all participants.

23 And when we -- when we try to answer

1 the question as to what is the net impact, or
2 like who pays for it, what we find, on a very
3 general basis, is that there's a slight increase
4 in rates for all customers, and that is marginal
5 at best, given the rate and bill impact
6 assessment that we conducted.

7 A. (Hill) Alex Hill responding.

8 I would point out that the -- the
9 graph that you're referring to on page 61 of
10 Exhibit 8 is -- does not account for the
11 corrections we made to our computation as
12 presented in Exhibit 12, which lowered, to some
13 degree, the non-DG customer bill impacts, and it
14 also does not account for any adjustments that
15 would align that analysis with the areas where we
16 did see merits in Thomas Beach's additional
17 precisions that could be added to that analysis.

18 Q. Okay. Thank you. And I know I have more
19 questions for the joint parties during that part
20 of the testimony, but, you know, basically, my
21 question is around, the infrastructure is not
22 less when -- when DERs go into place. I know
23 that the argument is, is that it frees up

1 capacity over time, but, in the moment, when
2 it's -- when it's in place, then that has to be
3 paid for by somebody, and the question that I'll
4 have, when we get to the joint parties is, I
5 think this was the problem that they had in
6 California. I think CENH was going to be able to
7 address that, so just as -- as a heads up, I'll
8 have more questions on that -- on that later.

9 If we go on to Exhibit 8, to Bates
10 page 55. Okay. Again, this is Commissioner
11 Goldner.

12 So it's sort of a related question.
13 Can you point me to a part of the report that
14 accounts for the additional capital that the
15 utility needs to put in place to accommodate the
16 DERs, and I think Bates -- Bates 55 at least
17 partially addresses that. It talks about
18 incurred costs, incurred costs being cumulative,
19 but then not quantified.

20 And when Eversource comes up -- we
21 have a rate case before us for Eversource, so we
22 can talk about what, if any, additional capital
23 that Eversource has submitted in the rate case to

1 accommodate DERs, because it looks to me like
2 there's costs here that are not quantified in
3 this -- in this docket, at least not at this
4 point, and I'd like to -- I'd like to talk more
5 about that when the joint utilities are up, and I
6 have a series of questions around that.

7 But I wanted to give Dunsky an
8 opportunity to comment on that issue before the
9 joint utilities testify.

10 A. (Kshemendranath) Anirudh Kshemendranath
11 responding.

12 So we did -- we did hold many sessions
13 with the utilities to get a sense of what those
14 cost impacts would be and how they would change
15 over time. It was our estimate that it is very
16 hard to estimate what can be attributable to
17 those -- those line items, which is why we have
18 qualitatively described them in the study. It
19 was difficult for us to estimate what that value
20 would look like.

21 But we do try to capture that in some
22 form in the utility admin cost, where we look at
23 some equipment cost and some metering cost, but

1 not the system upgrade requirements that are
2 attributable to NEM.

3 The reason is that it is very location
4 specific. It is very project specific. And
5 sometimes it depends upon some resources may not
6 incur those costs, some resources may trigger
7 that cost, so it's highly project dependant.

8 CHAIRMAN GOLDNER: Okay. Commissioner
9 Goldner. Thank you.

10 Just check with Commission
11 Chattopadhyay to see if there are any further
12 questions for these witnesses.

13 CMSR. CHATTOPADHYAY: No, I don't.
14 This is Commissioner Chattopadhyay.

15 CHAIRMAN GOLDNER: Okay. Back to
16 Commissioner Goldner. And we're over to Attorney
17 Dexter for any DOE redirect.

18 FURTHER REDIRECT EXAMINATION

19 BY MR. DEXTER:

20 Q. Okay. Thank you. This is Paul Dexter.

21 I'm going to try one question on
22 redirect, and that -- it has to do with
23 Commissioner Chattopadhyay's very first question.

1 So I'd ask the witnesses to go back
2 through Exhibit 9, Bates page 24, and look at the
3 chart we were talking about. And, in particular,
4 for the year 2024, Commissioner Chattopadhyay
5 asked you about energy charges of 6.7 cents per
6 KWH, and transmission charges of 7.5 cents per
7 KWH. I want to make sure I understand what your
8 answer was.

9 I believe you testified -- so I will
10 ask you, is it correct that you testified that
11 those two figures that I've just read are the
12 avoided costs that result from -- from a
13 residential south-facing solar installation with
14 storage?

15 A. (Kshemendranath) Anirudh Kshemendranath
16 responding.

17 That is correct. We have the values
18 presented in those two components, the net energy
19 impact charges specifically. They are related to
20 the annual avoided cost that can be attributed to
21 DER resources, so DERs like solar paired with
22 storage for residential customer classes.

23 Q. Okay. Thanks. And it was not your testimony

1 that the -- that the installer of that facility
2 would receive those figures; is that correct?

3 A. (Kshemendranath) Anirudh Kshemendranath.

4 That is correct. That is the value
5 generated by this resource. It does not imply
6 that that's the value that is received by those
7 customer generators.

8 MR. DEXTER: Okay. I just wanted to
9 make that clear. That's all I had, Commissioner.

10 CHAIRMAN GOLDNER: Okay. Thank you.

11 So I'll move to Attorney Chiavara for
12 the next question. Well, first let me -- let me
13 excuse the witnesses. Thank you to Dunsky for
14 testifying today.

15 MR. DEXTER: Thank you, Mr. Chairman.
16 Would it be okay if the Dunsky witnesses were
17 dismissed for the day?

18 CHAIRMAN GOLDNER: Let me check with
19 the other parties. Any concerns with dismissing
20 the Dunsky witnesses?

21 Okay. Seeing none, Attorney Dexter,
22 they are dismissed for the day.

23 MR. DEXTER: Thank you very much.

1 CHAIRMAN GOLDNER: Okay. So now a
2 question for Attorney Chiavara. It's the awkward
3 time of 11:30, so would you prefer to take a
4 lunch now and return with the swearing in of the
5 witnesses and the witness testimony? Would you
6 prefer to take a ten-minute break and then come
7 back with the witnesses?

8 MS. CHIAVARA: I feel like I have the
9 fate of everyone's lunch on my nerves.

10 I want to poll the room. I think
11 maybe I'm getting signals to keep going? Okay.

12 The direct exam that we have for the
13 settlement panel is relatively brief. I think we
14 could at least get through direct.

15 CHAIRMAN GOLDNER: Okay. We can do
16 that now, Commissioner Chattopadhyay, or do we
17 need a break?

18 CMSR. CHATTOPADHYAY: How long will it
19 take? Commissioner Chattopadhyay.

20 MS. CHIAVARA: Oh, Jessica Chiavara.
21 I think it would -- direct exam would take
22 between five, ten minutes, about.

23 CMSR. CHATTOPADHYAY: Let's continue.

1 CHAIRMAN GOLDNER: It will be much
2 longer to swear in the witnesses if we're
3 about to --

4 MS. CHIAVARA: Actually, yes, when we
5 take into account that we have to call about 12
6 witnesses, it's going to take a bit longer.

7 CHAIRMAN GOLDNER: Okay. Let's power
8 through it. We can at least get through that
9 part, and then we can make a decision at that
10 point.

11 Okay. So I'm going to ask each
12 individual testifying in the joint panel to
13 identify himself or herself for the record.
14 After identification, I'll swear the witnesses
15 in.

16 Before accepting the oath, I'll need
17 each witness to again identify himself or herself
18 for the record.

19 So let's -- let's do it this way. Let
20 me just -- let me try to simplify here. So --
21 just a moment. We've never had this before at
22 the Commission, so bear with me while we try to
23 swear in this many witnesses without the court

1 reporter and doing it one by one.

2 Okay. So let's have the witnesses
3 identify themselves, beginning with Mr. Davis,
4 and we'll run through the list of witnesses just
5 to identify everyone first. So Mr. Davis.

6 MR. DAVIS: Good morning, Chairman.
7 I'm Ed Davis. I am the Director of Rates for
8 Eversource Energy.

9 CHAIRMAN GOLDNER: Thank you. And,
10 again, I guess, so you can go in any order.

11 MR. RICE: Brian Rice, Director of
12 Customer Solar Programs for Eversource Energy.

13 MR. HAYDEN: Robert Hayden, Senior
14 Manager, Standard Power.

15 MR. LITTELL: David Littell, Bernstein
16 Shur, for Clean Energy New Hampshire.

17 MR. WOOLF: Tim Woolf from Synapse
18 Energy Economics here on behalf of the Office of
19 Consumer Advocate.

20 MS. ASBURY: Karen Asbury, Unitil.

21 MR. BONAZOLI: John Bonazoli, Unitil.

22 MS. CHIAVARA: Mr. Beach and
23 Mr. Borden?

1 MR. BEACH: Yes. My name is Tom
2 Beach. I'm a principal at Crossborder Energy
3 representing Clean Energy New Hampshire.

4 MR. BORDEN: Eric Borden, Principle
5 Associate with Synapse Energy Economics on behalf
6 of OCA.

7 CHAIRMAN GOLDNER: Then we have
8 Liberty left, I think.

9 MR. SHEEHAN: Yes, the Liberty witness
10 assessor who was unable to come this morning, she
11 will not play an active role, but we will make
12 sure she downloads her testimony before this
13 proceeding is over.

14 CHAIRMAN GOLDNER: Okay. And
15 Mr. Garcia.

16 MR. GARCIA: Good morning, Chairman.

17 MR. SHEEHAN: Again, Mike Sheehan from
18 Liberty.

19 Mr. Garcia did not participate in the
20 direct testimony. He did participate in the
21 rebuttal, so our -- we're happy to swear him in
22 now, but that was his role in this docket.

23 CHAIRMAN GOLDNER: Okay. Thank you.

1 Mr. Garcia, go ahead and identify
2 yourself, and we'll swear everyone in at the same
3 time.

4 MR. GARCIA: Good morning. Robert
5 Garcia for Liberty. I'm Manager of Rates and
6 Regulatory Affairs.

7 CHAIRMAN GOLDNER: Okay. Thank you.

8 MR. TAYLOR: Commissioner, this is Pat
9 Taylor --

10 CHAIRMAN GOLDNER: Yes.

11 MR. TAYLOR: -- from Unitil. We also
12 have a witness who is here for the rebuttal panel
13 only. So if you're going to try to swear
14 everybody in at once, we should probably have him
15 included in that.

16 His name is Jeffrey Pentz, and he's
17 sitting in the back, right?

18 CHAIRMAN GOLDNER: Thank you.

19 Mr. Pentz, if you could identify
20 yourself.

21 MR. PENTZ: Jeff Pentz, Supervisor of
22 Energy Supply at Unitil.

23 MS. CHIAVARA: I'm sorry. Jessica

1 Chiavara.

2 I'm going to pile on as well. We have
3 two rebuttal witnesses for Eversource that are
4 sitting in the back. Colleen Bennett and Joseph
5 Swift.

6 CHAIRMAN GOLDNER: Okay. As I write
7 down their names, please -- please go to a
8 microphone to identify yourself. Thank you.

9 MS. BENNETT: Good morning. Colleen
10 Bennett, Manager of Load Settlement and Analysis,
11 Eversource Energy.

12 CHAIRMAN GOLDNER: Thank you.

13 MR. SWIFT: Good morning. Joe Swift,
14 Supervisor of Load Settlement for Eversource
15 Energy.

16 CHAIRMAN GOLDNER: Thank you.

17 Okay. So here's what we're going to
18 do. I'm going to ask you to all raise your right
19 hand, all the witnesses.

20 (Whereupon, EDWARD DAVIS, BRIAN RICE,
21 KAREN ASBURY, JOHN BONAZOLI,
22 ROBERT GARCIA, ROBERT HAYDEN, TIM
23 WOOLF, ERIC BORDEN, DAVID LITTELL,

1 THOMAS BEACH, JEFFREY PENTZ,
2 COLLEEN BENNETT and JOSEPH SWIFT
3 were duly sworn by Chairman Goldner.)

4 DIRECT EXAMINATION

5 BY MS. CHIAVARA:

6 Q. Thank you. I'm Jessica Chiavara for Eversource
7 on behalf of the settlement panel. I'm going to
8 start with qualifying the Eversource witnesses,
9 beginning with Edward Davis.

10 Mr. Davis, please state your name
11 again and the title of your role at Eversource.

12 A. (Davis) Edward R. Davis, Director of Rates for
13 Eversource Energy.

14 Q. And can you explain the responsibilities of your
15 role at Eversource?

16 A. (Davis) I am responsible for rates, tariffs,
17 costs of service, and other related matters for
18 all of the operating companies, ES Electric.

19 Q. And have you ever testified before this
20 commission?

21 A. (Davis) Yes, I have.

22 Q. So I'm going to ask you about August 11th, 2023,
23 direct testimony and January 30th rebuttal

1 testimony.

2 Did you file testimony and supporting
3 attachments on both of those dates, August 11,
4 2023, marked as Exhibit 2, and the filing on
5 January 30th, 2024, marked as Exhibit 3?

6 A. (Davis) Yes.

7 Q. Were the testimony and supporting attachments
8 prepared by you or at your direction?

9 A. (Davis) Yes.

10 Q. Do you have any changes or updates to make at
11 this time?

12 A. (Davis) I do not.

13 Q. Do you adopt your testimony today as it was
14 written and filed?

15 A. (Davis) Yes, I do.

16 Q. And then, also, with the Settlement Agreement,
17 did you participate in settlement discussions
18 that resulted in the Settlement Agreement that's
19 marked as Exhibit 1?

20 A. (Davis) Yes.

21 Q. And do you, on behalf of Eversource, assert that
22 the approval of the Settlement Agreement is in
23 the public interest and will result in just and

1 reasonable rates?

2 A. (Davis) Yes, I do.

3 Q. Thank you very much.

4 Turning to Mr. Rice. State your name
5 again and the title of your role at Eversource.

6 A. (Rice) My name is Brian Rice. I'm Director of
7 Customer Solar Programs at Eversource.

8 Q. And the responsibilities in your role at
9 Eversource?

10 A. (Rice) I'm responsible for administering --
11 administering certain distributed generation
12 programs and tariffs for Eversource Energy
13 Operating Companies.

14 Q. And have you ever testified in front of this
15 Commission?

16 A. (Rice) Yes.

17 Q. And, again, did you file testimony and supporting
18 attachments as both the filings on August 11th,
19 2023, which is marked as Exhibit 2, and the
20 filing on January 30th, 2024, marked as Exhibit
21 3?

22 A. (Rice) Yes.

23 Q. And were that -- were the testimony and the

1 attachments prepared by you or at your direction?

2 A. (Rice) Yes.

3 Q. And do you have any changes or updates to make?

4 A. (Rice) I do not.

5 Q. And you adopt that testimony as it was written
6 and filed?

7 A. (Rice) I do.

8 Q. Thank you very much. With this Settlement
9 Agreement, were you a part of the settlement
10 discussions that resulted in a settlement marked
11 as Exhibit 1?

12 A. (Rice) I was.

13 Q. Do you, on behalf of Eversource, assert that
14 approval of the settlement is in the public
15 interest and will result in just and reasonable
16 rates?

17 A. (Rice) I do.

18 Q. Thank you very much. I am also going to qualify
19 the witnesses for Clean Energy New Hampshire and
20 Mr. Hayden from Standard Power.

21 Beginning with David Littell.

22 Mr. Littell, will you please repeat
23 your name and your title.

1 A. (Littell) David Littell. I am a shareholder at
2 Bernstein Shur, and I'm appearing here as a
3 technical policy expert.

4 Q. And what is the role that you are serving in this
5 docket?

6 A. (Littell) I'm appearing on behalf of Clean
7 Energy New Hampshire, again, as a technical
8 policy docket, and I'm testifying on behalf of --
9 in favor of the settlement which -- of which we
10 are a party.

11 Q. And have you ever testified in front of this
12 Commission?

13 A. (Littell) I have not testified in front of this
14 Commission, but I've testified in front of many
15 commissions, and I have spent a lot of time with
16 this Commission. I was a former regulator in the
17 utility commission and have been in regulatory
18 circles 32 years, so -- no, I've not testified
19 here, but just general testimony.

20 Q. Thank you very much. Regarding testimony filed
21 on December 6th, 2023, and January 30th, 2024,
22 did you file such testimony and supporting
23 attachments? The filing on December 6th, 2023,

1 is marked as Exhibit 5, and the filing on January
2 30th, 2024, is marked as Exhibit 6?

3 A. (Littell) Yes, so that's my direct and rebuttal.

4 Q. Were those testimonies and supporting materials
5 prepared by you or at your direction?

6 A. (Littell) Yes, they were prepared by me.

7 Q. And do you have changes or updates to make?

8 A. (Littell) I don't have changes, but I know that
9 there was an update in the -- it was included in
10 the Record Response 001, because these net
11 metering tariffs changed in multiple states.
12 And because the testimony was filed last year, we
13 took the opportunity, when we filed Record
14 Response 001 to the Commission, to update the
15 reply. So that's in Record Response 001, so it
16 does function as (indiscernible).

17 Q. Okay. With that update, do you adopt your
18 testimony?

19 A. (Littell) Yes, I adopt both the testimonies and
20 the portion of Record Response 001 from Clean
21 Energy New Hampshire.

22 Q. Okay. And regarding the Settlement Agreement,
23 did you participate in settlement discussions

1 that resulted in the settlement marked as Exhibit
2 1?

3 A. (Littell) Yes. Yes, I did.

4 Q. And do you, on behalf of Clean Energy New
5 Hampshire, assert that the approval of the
6 Settlement Agreement is in the public interest
7 and will result in just and reasonable rates?

8 A. (Littell) Yes, I do.

9 Q. Thank you very much.

10 Next is Mr. Thomas Beach.

11 Mr. Beach, will you please state your
12 name and your title.

13 A. (Beach) Yes. My name is Thomas Beach. I'm
14 Principal Consultant of the consulting firm of
15 Crossborder Energy, which is based in Berkeley,
16 California.

17 Q. And can you describe the role you're serving in
18 this docket?

19 A. (Beach) Yes. I am appearing on behalf of Clean
20 Energy New Hampshire, which is one of the parties
21 to this proceeding and one of the parties to the
22 Settlement Agreement, as an energy policy and
23 rate design expert.

1 Q. And have you ever testified in front of this
2 Commission?

3 A. (Beach) Yes, I have. I participated in the last
4 net metering docket, Docket No. DE 16-576.

5 Q. Thank you. Did you file testimony and supporting
6 attachments filed on December 6th, 2023, marked
7 as Exhibit 5, and filed on January 30th, 2024,
8 marked as Exhibit 6?

9 A. (Beach) Yes, I did.

10 Q. And were those testimony and materials prepared
11 by you or at your direction?

12 A. (Beach) Yes, they were.

13 Q. Do you have any updates or changes to make at
14 this time?

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

16 Q. So do you adopt your testimony today as it was
17 written and filed?

18 A. (Beach) I do.

19 Q. Thank you. Did you participate in the settlement
20 discussions that resulted in the Settlement
21 Agreement marked as Exhibit 1?

22 A. (Beach) Yes, I did.

23 Q. And do you, on behalf of Clean Energy New

1 Hampshire, assert that the approval of the
2 Settlement Agreement is in the public interest
3 and will result in just and reasonable rates?

4 A. (Beach) I do.

5 Q. Thank you very much.

6 Finally, I'm turning to Robert Hayden.

7 Mr. Hayden, will you please repeat
8 your name and your title.

9 A. (Hayden) Robert Hayden, Senior Manager at
10 Standard Power.

11 Q. And can you describe the role you're serving in
12 this docket?

13 A. (Hayden) Yes. I have experience as an energy
14 provider for schools, towns, and businesses for
15 the last 12 years. I served 25 community power
16 programs. The total customers is 150, many of
17 which I consult on for solar projects. We
18 administer net metering programs for 27
19 hydroelectric plants across the state, and have
20 been active in net metering from its onset with
21 early adopters in the hydroelectric area, one of
22 the first entities who participated as a
23 municipal post, and even now we're looking at the

1 virtual net metering program for a couple of
2 other facilities.

3 Q. Thank you. Have you ever testified in front of
4 this Commission?

5 A. (Hayden) I have not.

6 Q. And you did not submit trial testimony in this
7 docket, so can you briefly discuss the role on --
8 that you're serving on the settlement panel?

9 A. (Hayden) Yes, I did not pre-file, but I do have
10 extensive knowledge from developers in the solar
11 industry who have active projects in hopes of
12 interconnecting and delivering these programs to
13 schools, towns, and, in a few cases, industrial
14 customers.

15 They do not want to be quoted
16 directly, but, in general, with their expectation
17 of the net metering program being available to
18 them to facilitate the completion of these
19 projects.

20 Q. And you also have firsthand experience and
21 knowledge regarding these subject matters?

22 A. (Hayden) I do. In fact, I have a lot of
23 knowledge on this matter.

1 Q. Okay. Thank you. Did you participate in the
2 settlement discussions that resulted in the
3 Settlement Agreement that's marked as Exhibit 1?

4 A. (Hayden) I did.

5 Q. And do you, on behalf of Standard Power of
6 America, assert that the approval of the
7 Settlement Agreement will -- is in the public
8 interest and will result in just and reasonable
9 rates?

10 A. (Hayden) I absolutely do.

11 MS. CHIAVARA: Thank you very much. I
12 am going to turn it over to Unitil.

13 DIRECT EXAMINATION

14 BY MR. TAYLOR:

15 Q. Thank you. Patrick Taylor on behalf of Unitil.

16 I'm going to start with Karen Asbury.

17 Ms. Asbury, can you please state your
18 name, employer, position that you hold with the
19 company, and your responsibilities in that
20 position.

21 A. (Asbury) Yes. My name is Karen Asbury. I'm
22 Director of Regulatory Services for Unitil
23 Service Corp. My primary responsibilities are in

1 the areas of rights and tariff administration.

2 Q. Thank you. And have you ever testified before
3 this Commission?

4 A. (Asbury) Yes, I have.

5 Q. Did you file testimony and supporting attachments
6 as part of the filing on August 11th, 2023,
7 marked as Exhibit 2, and the filing made on
8 January 30th, 2024, marked as Exhibit 3?

9 A. (Asbury) Yes.

10 Q. And were the testimony and supporting materials
11 prepared by you or at your direction?

12 A. (Asbury) Yes.

13 Q. Do you have any changes or updates that you want
14 to make to your testimony today?

15 A. (Asbury) No, I do not.

16 Q. And do you adopt your testimony today as it was
17 written and filed?

18 A. (Asbury) Yes.

19 Q. With respect to the Settlement Agreement, did you
20 participate in the settlement discussions that
21 resulted in the Settlement Agreement marked as
22 Exhibit 1?

23 A. (Asbury) Yes.

1 Q. And do you, on behalf of Unitil, assert that
2 approval of the Settlement Agreement is in the
3 public interest and will result in just and
4 reasonable rates?

5 A. (Asbury) Yes, I do.

6 Q. Thank you. Moving to Mr. Bonazoli.

7 Can you please state your name,
8 employer, the position that you hold with the
9 company and your responsibilities in that
10 position?

11 A. (Bonazoli) My name is John Bonazoli. I'm the
12 Manager -- Manager of Distribution Engineering.
13 In that position, I'm responsible for the
14 planning of the distribution engineer --
15 distribution system and the interconnection of
16 all distributed energy resources.

17 Q. Thank you. Have you ever testified before this
18 Commission?

19 A. (Bonazoli) Yes, I have.

20 Q. All right. Did you file testimony and supporting
21 attachments as part of the filing on August 11th,
22 2023, marked as Exhibit 2, and the filing of
23 January 30th, 2024, marked as Exhibit 3?

1 A. Yes, I did.

2 Q. And were the testimony and supporting materials
3 prepared by you or at your direction?

4 A. (Bonazoli) Yes, they were.

5 Q. Do you have any changes, clarifications, or
6 updates that you'd like to offer on the record
7 today?

8 A. (Bonazoli) Yes, I do have a clarification and an
9 update to the testimony of August 11th, 2023,
10 marked as Exhibit 2.

11 In the question about describing the
12 level of customer participation in current net
13 metering tariffs --

14 Q. Sorry to interrupt you, Mr. Bonazoli. Could you
15 please direct the Commissioners to the page that
16 you're referring to?

17 A. (Bonazoli) Yes. That's on page 9 of 24.

18 In that question is a statement,
19 "Unitil saw a notable increase for new project
20 applications of 53 percent from 9-0 -- 905
21 applications in 2021 to 1,387 applications in
22 2022."

23 The clarifications is that those

1 numbers are for Unitil total, which includes
2 Massachusetts and New Hampshire.

3 For Unitil energy systems in New
4 Hampshire alone, the notable increase for new
5 project applications was over three times, from
6 193 applications in 2021 to 628 applications in
7 2022.

8 And as an update, in 2023, we received
9 910 applications, an increase of almost five
10 times of those in 2021.

11 Q. Thank you. With that clarification, do you adopt
12 your testimony today as it was written and filed?

13 A. (Hayden) Yes, I do.

14 Q. Thanks. And with respect to the Settlement
15 Agreement, did you participate in the settlement
16 discussions that resulted in the Settlement
17 Agreement marked as Exhibit 1?

18 A. (Hayden) Yes, I did.

19 Q. And do you, on behalf of Unitil, assert that the
20 approval of the Settlement Agreement is in the
21 public interest and will result in just and
22 reasonable rates?

23 A. (Hayden) Yes, I do.

1 Q. Thank you.

2 MR. TAYLOR: As mentioned earlier,
3 Ms. Sasso, who is on the direct -- the first
4 testimony, Exhibit 2, is not present today. The
5 other Liberty witness who participated in that
6 testimony, Mr. Kommineni, actually left the
7 company a couple of weeks ago to, oddly enough,
8 join the Commission of the District of Columbia.
9 So we gave an appropriate brief going to the
10 other side, but he was the technical lead. And
11 Ms. Sasso was the customer account lead, and,
12 again, we'll have her -- I don't want to say
13 later. I'm not sure if there's a -- so that's
14 why we have no live person here on the direct
15 testimony.

16 CHAIRMAN GOLDNER: Would you like to
17 take care of the -- the rest of the Liberty
18 witnesses for preparation for redirect?

19 MR. TAYLOR: I suppose. You mean the
20 rebuttal?

21 CHAIRMAN GOLDNER: Yeah.

22 MR. TAYLOR: Well, we did not do that
23 for our witnesses at the beginning, because, as

1 Attorney Chiavara had said earlier -- I think we
2 were going to address the question of requesting
3 the opportunity to put the rebuttal panel on if
4 necessary.

5 CHAIRMAN GOLDNER: Okay.

6 MR. TAYLOR: So I think the assumption
7 would be that we would do it then when the panel
8 comes on.

9 CHAIRMAN GOLDNER: Okay. That makes
10 sense.

11 Did I not check off Mr. Woolf and
12 Mr. Borden, or that's a preview of coming
13 attractions?

14 MR. KREIS: Consumer Advocate Kreis
15 here. I think the next order of business is for
16 me to introduce my witnesses.

17 CHAIRMAN GOLDNER: Very good.

18 MR. KREIS: Which I'd be happy to do
19 that, starting with Mr. Woolf.

20 DIRECT EXAMINATION

21 BY MR. KREIS:

22 Q. Mr. Woolf, would you be kind enough to introduce
23 yourself by name, title, and reason for being

1 here?

2 A. (Woolf) Yeah. My name is Tim Woolf. I'm a
3 Senior Vice President at Synapse Energy
4 Economics. I'm here on behalf of the OAC to
5 respond to any questions about our testimony and
6 about the settlement.

7 Q. And have you ever testified at the New Hampshire
8 PUC before?

9 A. (Woolf) Yes, I have, several times.

10 Q. And let me move over to Mr. Borden next.

11 Mr. Borden, would you do the same from
12 your remote location far away from here?
13 Identify yourself by name, title, and reason for
14 being virtually here.

15 A. (Borden) Sure. So Eric Borden, Principal
16 Associate with Synapse Energy Economics here on
17 behalf of OAC to discuss our testimony on net
18 energy metering in New Hampshire.

19 Q. Okay. And I have questions for Mr. Woolf and
20 Mr. Borden in succession for each of you.

21 Turn your attention to what has been
22 marked for identification as Exhibit 4, which is
23 written testimony by the OAC on December 6th of

1 last year. Are you the authors of that document?

2 A. (Woolf) Yes, I am one of the authors, along
3 with -- I worked closely with my colleague, Mr.
4 Borden.

5 Q. Mr. Borden?

6 A. (Borden) Yes.

7 Q. Do you have any corrections or updates to make to
8 that testimony since it was filed late last year?

9 A. (Woolf) No, I do not.

10 Q. Mr. Borden?

11 A. (Borden) No.

12 Q. And if I were to ask you all of those questions
13 in that document there for today, live on the
14 stand, would your answers to those questions be
15 the same?

16 A. (Woolf) Yes, they would.

17 Q. Mr. Borden?

18 A. (Borden) Yes.

19 Q. And, so, therefore, is it fair and correct to say
20 that you adopt that testimony as your sworn
21 testimony here in today's proceeding?

22 A. (Woolf) Yes, it is.

23 Q. Mr. Borden?

1 A. (Borden) Yes, it is.

2 Q. You both heard Ms. Chiavara ask most of the other
3 witnesses, if not all of them, if they
4 participated in the discussions that led to the
5 filing of the Settlement Agreement that's been
6 marked as Exhibit 1, so let me ask you,
7 gentlemen. Is it fair to say that you did not
8 directly participate in those discussions?

9 A. (Woolf) That's correct. I did not directly
10 participate. I monitored the discussions through
11 the draft settlements that were sent around.

12 Q. Mr. Borden?

13 A. (Borden) Correct. We did not directly
14 participate but coordinated with counsel.

15 Q. So, and as you both have just suggested, you did
16 have an opportunity to review the terms of the
17 Settlement Agreement, both during their
18 consideration and then thereafter, once they were
19 filed?

20 A. (Woolf) Yes, we did.

21 Q. Mr. Borden?

22 A. Yes.

23 Q. And is it your considered judgment, as expert

1 witnesses working for the OAC, that it is in the
2 public interest for the Commission to approve the
3 terms of that Settlement Agreement in its
4 entirety?

5 A. (Woolf) Yes, it is.

6 Q. Mr. Borden?

7 A. (Borden) Yes, it is.

8 MR. KREIS: Okay. I would like to ask
9 one other question of these witnesses during the
10 direct examination, but I think that's all I need
11 to do right now to introduce them.

12 CHAIRMAN GOLDNER: Thank you. I guess
13 I would suggest that we complete direct. It
14 sounds like it will be fairly efficient, and
15 then, at that point, take a break for lunch.

16 So Attorney Chiavara.

17 FURTHER DIRECT EXAMINATION

18 BY MS. CHIAVARA:

19 Q. Thank you. Jessica Chiavara on behalf of
20 Eversource, and right now, on behalf of the
21 settling parties' account.

22 The first question is for Mr. Rice.
23 Could you provide, on behalf of all the settling

1 parties, a brief explanation as to why the
2 settlement essentially recommends preserving the
3 status quo?

4 A. (Rice) Brian Rice, Eversource Energy responding.

5 Yes. The settlement recommends
6 maintaining the status quo at this time, because
7 the current structure for net metering in New
8 Hampshire is successfully creating distributed
9 energy options for customers without unreasonably
10 burdening other utility customers with added
11 costs.

12 The net metering compensation
13 structure in New Hampshire has been by far the
14 most balanced in New England. New Hampshire has
15 consistently set a more moderate level of net
16 metering credit than neighboring states and has
17 also remained technology neutral, refraining from
18 carving out added incentives for specific
19 technologies, such as solar.

20 The distributed generation market has
21 been growing more rapidly in New Hampshire as a
22 result, but New Hampshire customers have also not
23 been burdened with the costs of funding more

1 significant net metering credit or additional
2 incentive programs. That disciplined policy has
3 resulted in a more balanced and market-driven
4 distributed generation development.

5 Growth of distributed generation in
6 New Hampshire accelerated only more recently when
7 higher energy supply rates in 2022 and '23
8 prompted more customers to recognize that
9 distributed generation was an economic option to
10 meet their energy needs. This growth occurred
11 because of market conditions and without the
12 additional incentives that have supported
13 distributed generation elsewhere.

14 Maintaining the current -- terms of
15 the current --

16 CHAIRMAN GOLDNER: Mr. Rice.

17 THE WITNESS: Yes.

18 CHAIRMAN GOLDNER: Sorry for
19 interrupting. If you could slow down a little
20 bit.

21 MR. RICE: Absolutely.

22 CHAIRMAN GOLDNER: It's hard to
23 understand you behind the microphone, so I

1 think --

2 MR. RICE: I'll be happy to slow down.

3 Thank you for the prompt.

4 CHAIRMAN GOLDNER: Thank you.

5 THE WITNESS: (Rice) Maintaining the
6 terms of the current tariff while sustaining
7 distributed generation development in New
8 Hampshire have provided customers with access to
9 more energy options without unreasonable or
10 unjust cost shifting.

11 The utilities and Clean Energy New
12 Hampshire have testified in this docket that
13 distributed generation provides unique benefits
14 that bear consideration even when they're
15 difficult to quantify or validate.

16 Two separate analyses submitted in
17 this proceeding considering these benefits have
18 supported the conclusion that net metering is not
19 significantly burdening other customers with
20 added costs.

21 The Department of Energy's VDER study
22 estimated the total bill impact of net metering
23 to other customers to be about 1 percent based on

1 its assumptions.

2 Clean Energy New Hampshire's expert in
3 this docket, Mr. Tom Beach, produced analysis
4 demonstrating how net metering may actually
5 result in a modest bill decrease.

6 Both assessments show that the current
7 tariff falls short of unjust or unreasonable cost
8 shifting in the context of New Hampshire's net
9 metering laws and the ten-year energy strategy.

10 Certain measures that will change net
11 metering have been contemplated in legislation
12 and have been recommended by other parties to the
13 proceeding. Some of the settling parties would
14 even agree that some changes to increase net
15 metering credit could be justified based on
16 commensurate benefits to the generating
17 customers. However, all settling parties
18 recognize that implementation of tariff changes
19 would likely create new administrative costs and
20 risk customer confusion. It's not necessary to
21 introduce those costs and risks when the current
22 net metering structure has been successful.

23 The DOE also recommends the status

1 quo, because the settling parties have agreed to
2 collaborate with stakeholders on a data
3 collection effort that will expand the data that
4 utilities collect for net metering projects. An
5 expansion of data collection from net metering
6 customers can provide greater confidence that
7 future net metering changes will be equitably
8 designed and beneficial to all customers. These
9 future changes may include thoughtfully designed
10 time-of-use rates, which the utilities have
11 committed to submitting for consideration two
12 years following approval of the settlement.

13 Lastly, I do want to note, the
14 settling parties, in an effort to offset
15 administrative costs of distributed generation,
16 are recommending that modest application fees be
17 instituted for all interconnection applications,
18 ranging from \$200 for the smallest project of
19 25 KW or less, to \$1,000 for any project with a
20 capacity over 100 KW.

21 Overall, the settling parties strongly
22 believe that we have reached, after considerable
23 negotiation, a fair and balanced settlement that

1 takes diverse interests into account and presents
2 an effective and efficient net metering program
3 that will result in just and reasonable rates for
4 all customers.

5 BY MS. CHIAVARA:

6 Q. Thank you, Mr. Rice. Jessica Chiavara of
7 Eversource on behalf of the settling parties.

8 There has been a recommendation made
9 that RPS compliance should be removed from the
10 supply portion of the net metering credit. This
11 would arguably reduce overall net metering costs.

12 Why doesn't the settlement recommend
13 doing this.

14 A. (Rice) Brian Rice, Eversource Energy.

15 The settlement doesn't recommend the
16 removal of RPS compliance value from the net
17 metering credit, because the parties agree it's a
18 negligible change that wouldn't be particularly
19 constructive.

20 An adjustment for RPS compliance would
21 require the utilities to credit customers for
22 excess generation at a default service rate that
23 would be different from the rate that was charged

1 for net usage. Updates to utility billing
2 systems would be required to make the change, and
3 the structure of net metering would become more
4 complicated for customers. Many customers
5 already report that it's more difficult for them
6 to understand their bill after enrolling in net
7 metering, and the proposed change would likely
8 increase those numbers.

9 The balance of interests between net
10 metering customers and other customers is also
11 ultimately driven by the total value of credit
12 provided for excess generation, not one small
13 individual component. And, as we said
14 previously, it's not apparent that the total
15 value of net metering credit is currently
16 contributing to unreasonable cost shifting, so
17 changes that would result in additional
18 implementation tasks and customer confusion
19 aren't necessary or recommended.

20 Q. Thank you, Mr. Rice. Jessica Chiavara,
21 Eversource, on behalf of the settling parties.

22 This next question is for Mr. Littell,
23 Mr. Beach, and Mr. Hayden.

1 The one substantive change to the
2 existing tariff terms is the creation of a legacy
3 period that would allow for the products that
4 initiate net metering under the settlement --
5 settlement-recommended tariff, to receive
6 compensation -- that compensation structure for
7 20 years from the year that they begin net
8 metering. What purpose does this legacy period
9 serve, and why it is critical to the settlement?

10 And I will start with Mr. Littell.

11 A. (Littell) Yeah, the legacy period is essential
12 to stabilize the net energy metering market and
13 the distributed energy resource market.

14 I'll clarify that we don't see this as
15 a substantial change. I think we posture it as
16 sort of a more conservative version of what was
17 adopted by the submission in 2017, where they put
18 in place, at that time, an extension all the way
19 until 2040, so 23 years.

20 What this settlement does is just
21 restore that balance to allow a 20-year period.
22 We've called it a legacy period here. It was
23 previously called a grandfathering period. We

1 just thought "legacy" was a little bit more
2 explanatory.

3 The reason it's essential is because
4 these projects need to be financed. Whether
5 they're going in as community power -- you heard
6 some testimony on that before -- whether they are
7 going in for municipality, they need third-party
8 financing, and you can't get third-party
9 financing when you're -- you're looking at 15 --
10 certainly, you can't get it at 10 years. So it's
11 essential. You'll hear, I think, more on that
12 from Mr. Hayden. So this is simply allowing for
13 the financeability of the projects at a quite low
14 after-tax rate of return, far lower than utility
15 returns. So it's essential for that reason.

16 I want to emphasize two things here.
17 One is New Hampshire has always been more frugal
18 on net energy metering than the rest of New
19 England. My testimony lays that out, and we
20 are -- this settlement is in support of that
21 frugality. We're just asking to extend that time
22 period to 20 years. And it's no guarantee of any
23 particular rate of compensation.

1 The default energy portion of
2 compensation fluctuates with the market, as the
3 Commissioners are well aware of. So we're not
4 asking for what Mr. Aalto asked for at the
5 beginning, which is full retail net metering.
6 Some other states offer that. That's not what
7 this settlement sets out, to be clear.

8 We simply want to make them be able to
9 pencil out so that third-party financiers will
10 finance the projects and the bottom doesn't fall
11 out of the market, to be frank, because right
12 now, our -- the membership of Clean Energy New
13 Hampshire has been quite clear that they are --
14 they're having great difficulty financing these
15 currently, with only -- the time period going out
16 to 2040, which is 16 years left.

17 On that, we'd also note that we think
18 it's consistent with the statute, RSA 260-A:9,
19 that specifies the Commission should consider
20 allowing customers to adopt renewable energy
21 projects, innovative projects, and projects that
22 will allow ordinary customers to buy locally
23 produced energy, which are the terms of the

1 statute.

2 We think that it's -- it's certainly
3 consistent with that policy. And the studies --
4 you have already heard from Dunsky, and you will
5 hear from Mr. Beach. These are two -- I have
6 reviewed dozens of studies in one of my former
7 roles, which was working with commissions to
8 evaluate value of solar studies, and I can tell
9 you that the Dunsky and Tom Beach's analysis is
10 some of the best I've seen presented to any
11 commission anywhere. It doesn't mean it can't be
12 improved. It doesn't mean it can't be
13 criticized. But these are two good, very solid
14 studies, showing that there is -- there's either
15 a very slight cost or a very slight benefit to
16 other ratepayers, aside from the obvious benefit
17 to net energy metering ratepayers.

18 So right now, at the particular point
19 that New Hampshire is at in their solar adoption,
20 which is behind most other states in New England
21 and states on the West Coast certainly, there's a
22 benefit. And that -- that also is laid out in my
23 testimony, particularly pages 13, 14, 21 to 27,

1 and Mr. Beach's pages I was going to refer you to
2 were 30 to 433 in Exhibit -- these are all in
3 Exhibit 5, but the same pages for Mr. Beach's
4 were already referred to by one of the
5 Commissioners in your questioning.

6 So, again, the 20-year period is
7 essential. It's conservative. And it has -- for
8 references, these were very tough, multi-month
9 negotiations. You have a varied group of
10 parties. You have utilities and Clean Energy New
11 Hampshire and OAC, that represent your consumers
12 as well, and Walmart. Very different parties all
13 in this settlement who essentially adopt a
14 bare-bones settlement to keep net energy metering
15 alive at this very sort of frugal level of
16 support.

17 And one last point. The utilities,
18 for administrative efficiency purposes, would
19 administer the 20-year period by an annual
20 evaluation, looking at what agreements are over
21 20 years and sweeping those and putting those on
22 whatever the current net energy metering rate is
23 20 years in the future, whatever that might be.

1 So, again, simplicity,
2 administrative -- the administrative piece, and
3 I'd recommend the settlement for the Commission's
4 consideration.

5 Q. And Mr. Littell -- sorry. Jessica Chiavara.

6 I just want to make one small record
7 correction. You said that the settlement was
8 consistent with the policy purpose of RSA 260-A,
9 and did you mean 362-A:9?

10 A. (Littell) Thank you.

11 Q. Thank you.

12 A. (Littell) Yeah, I should look at my notes
13 more --

14 Q. No, no.

15 A. (Littell) -- and jog my memory.

16 Q. That's fine.

17 A. (Littell) So I accept that correction.

18 Q. I want to turn to Mr. Hayden. Do you have some
19 thoughts on the legacy period as well from your
20 position?

21 A. (Hayden) Largely similar to David's testimony,
22 in that the 20-year period is essential for
23 developers to finance projects here in New

1 Hampshire. The frugal nature of our program
2 makes it a tight budget to start with, and the
3 slow nature of interconnection means that we
4 might not even have 15 years or even 14 years to
5 do projects that we would enjoy in the next few
6 years. With that in mind, 20 years gives the
7 consistency of financing necessary for most
8 projects.

9 Now, I'm also privy to projects that
10 do not depend on net metering because they're
11 largely behind the meter. They work great no
12 matter what, but that's a very rare case. Most
13 projects enjoy some portion, as a host, or a very
14 large portion in some cases, as a host, and most
15 of that money that I represent or see in
16 transactions goes back into schools and towns and
17 our manufacturing base.

18 So although there is, you know, some
19 financial movement of net metering revenue, it
20 helps all of the core business in our state, our
21 schools, and our towns.

22 Some of the numbers we have in Exhibit
23 1, page 29, show a range of return at 15 years of

1 already being negative. Well, that's at the
2 current -- you know, current inflating rate of
3 our default service. So even that number, I
4 think, is a little questionable, in that we see
5 our default service rate vary, but in the last
6 few years, we have seen rates of 6 cents and 8
7 cents, 20 cents in '22. So the variation is
8 huge.

9 But we really don't know what that
10 time frame of 15 years will yield. But the
11 expectation is that it will net out -- net up 50
12 percent. If it's less than that, more of these
13 projects at 15 years would fail, and even at 20
14 years, some would be in question for financial
15 success.

16 So, in general, we need 20 years to
17 continue the conservative growth of moderate to
18 large solar development in our state.

19 MS. CHIAVARA: Thank you very much.
20 That's all we have for direct exam.

21 CHAIRMAN GOLDNER: Okay. Well, are
22 there others that have direct? Attorney Kreis,
23 or anyone else?

1 MR. KREIS: Mr. Chairman, Attorney
2 Kreis. I wanted to ask my witnesses one question
3 on direct exam.

4 CHAIRMAN GOLDNER: Please do.

5 MR. KREIS: Thank you.

6 FURTHER DIRECT EXAMINATION

7 BY MR. KREIS:

8 Q. I'll direct this question to Mr. Woolf because
9 he's in the hearing room, but I certainly invite
10 Mr. Borden to chime in, and it really has to do
11 with the reason for the OAC signing onto the
12 Settlement Agreement.

13 I guess -- so I guess what I'd like to
14 ask is: Would it be fair to say that the
15 principal reason that the OAC signed the
16 Settlement Agreement has to do with our having
17 caused the Settlement Agreement to include what
18 appears in Paragraphs 12, 13, and 14 of the
19 settlement, concerning the data collection --
20 what is identified there as the data collection
21 effort and stakeholder process?

22 A. (Woolf) Yes. That is a very important addition
23 to the settlement.

1 Q. And so, Mr. Woolf, could you briefly explain why
2 we, the OAC, regard that provision as
3 particularly important?

4 A. (Woolf) Tim Woolf responding.

5 Yes. So when we began this hearing,
6 we didn't see any estimates of rate impacts, bill
7 impacts, and those are central to understanding
8 some of the issues at play here. And so we took
9 our time and effort to create those. And the
10 idea -- and -- and the key theme of our testimony
11 is that these issues that we're talking about now
12 need to be revisited periodically, every two or
13 three years.

14 And when you do revisit them, it's
15 really important that we're all starting with
16 good data. And that's really what this whole
17 data process thing is about. It's -- it's good
18 data, so that we can have these discussions, and
19 everybody has sort of vetted the data, and we're
20 all sort of on the same page as to what the
21 avoided costs are, what the benefits are, and
22 then we can get to the real challenging part of
23 balancing the interests of the DG developers,

1 customers, and the other customers.

2 So the key element we would like to
3 see as a part of the data collection is the
4 information that we presented in our testimony.
5 First, you want to see information on
6 participation rates. You know, what's the
7 penetration rates of DG in New Hampshire? And
8 that -- it requires looking historically at
9 what's happened in most recent years, and it
10 requires doing an estimate of payback periods,
11 because the payback periods give you some
12 indication of the likelihood of customers
13 participating in the program going forward.

14 And then the other piece of all this
15 is -- we've heard already today is information to
16 do a good, solid rate and bill impact analysis,
17 so that all the questions that have been asked
18 today by the Commissioners, and will probably be
19 asked later today, have been more or less
20 resolved among the parties, and we can start with
21 a really solid set of numbers, and, then again,
22 approach the Commission with proposals that
23 adequately balance the interests here.

1 And then the last thing I'll say about
2 that is, we're hoping that the data can be used
3 to create these analyses, participation and rate
4 impacts, for several different scenarios of NEM
5 compensation mechanisms. One would obviously be
6 the current one. Another would be time-of-use
7 rates, but then there'll probably be others that
8 you can use to analyze to see which one works
9 best for customers and which one, again, strikes
10 the right balance.

11 There might be other parts, other
12 features of the NEM rate, that needs to be
13 investigated beyond time-of-use rates, in which
14 case they should be investigated as well.

15 MR. KREIS: Attorney Kreis here.
16 Thank you, Mr. Woolf. Apologies to the
17 Commission for having asked two questions when I
18 said I only had one.

19 I just want to turn it over to
20 Mr. Borden and make sure he -- or find out
21 whether he has anything he would like to add to
22 those.

23 THE WITNESS: (Borden) Nothing to

1 add. Thanks.

2 MR. KREIS: Thank you.

3 Mr. Chairman, that's all I have.

4 CHAIRMAN GOLDNER: Okay. Anything
5 else on direct?

6 All right. I'll just do a quick
7 check-in, before we take a break for lunch, with
8 the DOE and CPCNH to get an idea for the amount
9 of cross that you're expecting.

10 MS. LADWIG: Alexandra Ladwig from
11 DOE. We'd expect about 20 minute of cross from
12 the Department.

13 CHAIRMAN GOLDNER: And CPCNH.

14 MS. MANZELLI: It might be a half an
15 hour to an hour for the cross.

16 CHAIRMAN GOLDNER: Okay. All right.
17 So thank you for that.let's take a break. We'll
18 return from lunch at 1:00 sharp, and we'll go off
19 the record. Thank you.

20 (Luncheon recess taken.)

21 CROSS-EXAMINATION

22 BY MS. LADWIG:

23 Q. Thank you. This is Alexandra Ladwig questioning.

1 These questions are going to be
2 directed at the settlement panel, in general, so
3 whoever wants to answer, I guess, has been
4 designated.

5 I want to start off by talking about
6 the application fee proposal in the settlement.
7 Exhibit 1, which is the settlement, Bates 31 has
8 the details of that proposal. And then Footnote
9 1 on that page -- well, let me backtrack.

10 The settlement proposal for application
11 fees says that the utilities will credit
12 applicable costs to the state for -- sorry --
13 Eversource will credit applicable cost to its
14 standard cost recovery charge, but in Footnote 1,
15 it doesn't look like there's a reconciling
16 mechanism listed for Unitil or Liberty.

17 Do Liberty have a plan for which
18 mechanism you propose to use?

19 A. (Asbury) Yes. Karen Asbury, Unitil.

20 Unitil would use its external delivery
21 charge as its mechanism.

22 A. (Garcia) Robert Garcia for Liberty. We had also
23 planned on using the standard cost charge, but it

1 could easily be fed at the other mechanism,
2 especially if the ERAM is approved in the pending
3 rate case.

4 Q. Thank you. Alexandra Ladwig questioning.

5 Exhibit 1, the Settlement Agreement.

6 I'm going to bounce back up to Bates 4.

7 Paragraph 10 says, "The electric utilities may
8 petition the Commission to propose changes to the
9 fee levels and structure to better address costs
10 as necessary."

11 Do the utilities anticipate that this
12 would be a joint petition among the utilities, or
13 each individual utility would petition if that
14 becomes necessary?

15 A. (Rice) Brian Rice for Eversource Energy.

16 Speaking for Eversource, I don't think
17 if we -- that we necessarily anticipated one way
18 or the other. The -- Paragraph N is really
19 intended just to reserve opportunity to make
20 adjustments in the future. We think the initial
21 fees are going to be appropriate. We have no
22 intention of changing them anytime soon after
23 approval. But if one company -- and -- you know,

1 discovered that their administrative costs
2 merited a higher application fee and wanted to
3 propose that, I don't think it would be, you
4 know, unreasonable to say that they can at least
5 make that proposal.

6 Q. Alexandra Ladwig.

7 And do Unitil or Liberty have a
8 response?

9 A. (Asbury) Karen Asbury, Unitil.

10 I would support what my colleague,
11 Brian Rice, indicated; that, you know, Unitil
12 would be, you know, okay if the utility wanted to
13 propose a different fee, but we could certainly
14 collaborate on maintaining the consistent fees as
15 well.

16 A. (Garcia) Robert Garcia from Liberty.

17 Yeah, I don't have any differing view
18 to offer on that.

19 Q. Alexandra Ladwig questioning.

20 Thank you. And then perhaps 11, on
21 that same page, lists the three different fees
22 broken down based on project size. How did the
23 settling parties come up with those fee amounts

1 and the -- the breakdown by project size?

2 A. (Rice) Brian Rice, Eversource Energy.

3 The fee levels were arrived at through
4 a combination of methods. First, the companies
5 assessed the cost that they're incurring to
6 administer applications to distributed generation
7 customers as well as, in some cases, costs that
8 they expect to be incurring to streamline both
9 processes through Eversource, given the volume
10 has significantly expanded.

11 The other thing we looked at was
12 similar fees that were assessed to metered
13 customers in other jurisdictions are commensurate
14 with these levels, so we thought that the fee
15 levels both were consistent with administrative
16 costs and consistent with fees that were applied
17 elsewhere.

18 A. (Bonazoli) John Bonazoli, Unitil.

19 Just to add that, we also looked at
20 the division at 100 KW. There is a separate --
21 or a -- a separate application process for
22 systems that are 100 KW and larger, so we wanted
23 to make that -- that split at that time, at that

1 place, to make it consistent with application
2 processes.

3 Q. All right. And then, heading back down to
4 Exhibit 1, Bates 31 through 32, the settlement --
5 and, again, that's the -- the part with more
6 detail on the application fee proposal.

7 Those pages describe a performance
8 reporting process through which the joint
9 utilities will provide quarterly reports with
10 application processing metrics and narrative
11 descriptions of how each utility is managing
12 interconnection processes to streamline and
13 expedite the experience of customer generators.

14 Would you mind providing a little bit
15 more detail on how that would work, where the
16 utilities would submit those quarterly reports?

17 A. (Rice) It was expected, and it's noted in the
18 Settlement Agreement, that metrics may be
19 adjusted or expanded based on stakeholder input.

20 The same would apply to the preferred
21 method of reporting. So I mean, the distribution
22 companies -- and we've identified at least an
23 initial set of metrics that we intend to track

1 and report. The settlement doesn't contemplate a
2 specific venue on where they should be reported,
3 but there are options, and I don't expect the
4 options will be all that objectionable, just to
5 get the information out there.

6 Q. Alexandra Ladwig questioning.

7 And so, would you anticipate that the
8 process for figuring out where those reports
9 would -- would be filed would also be something
10 that the stakeholders decide on or the utilities
11 decide on together after this proceeding?

12 A. (Rice) I think it's something the stakeholders
13 would decide together with the utilities.

14 Q. Thank you. Alexandra Ladwig questioning.

15 Bates 32 specifically mentions what
16 appears to be the outgoing opportunities for
17 stakeholder input, like you'd said, regarding
18 application fees and application processing.
19 What forum would the stakeholder input occur in?
20 Is that kind of similar; the stakeholders would
21 figure that out after the proceeding?

22 A. (Rice) Certainly, the forum would be based on
23 stakeholder input. Successful models that

1 Eversource is familiar with under other
2 jurisdictions include working groups, just
3 providing a somewhat informal forum for
4 distributed generator installers to explain what
5 information and what processes are valuable to
6 their business, utilities to provide their own
7 perspective on documentational requirements and
8 what it takes to support timelines.

9 Yeah, my recommendations would be
10 creating a working group structure so that
11 discussions can be had on a collaborative,
12 somewhat informal basis, as opposed to trying to
13 sort all this out through, you know, a more
14 adjudicative process.

15 Q. Alexandra Ladwig questioning.

16 So under that scenario, if we do
17 working groups, there's something else -- who
18 would -- I guess, who would you envision being
19 the stakeholders who would be involved in those
20 processes?

21 A. (Rice) At a minimum, the parties in this joint
22 Settlement Agreement, and, again, the other
23 entities that -- that the Commission directed

1 participate, or that the solar parties agreed
2 would be (indiscernible).

3 Q. Alexandra Ladwig questioning.

4 Last question on application fees.
5 That list on page 32 of the processing metrics,
6 No. 6, there's the percent of applications
7 requiring customer correction, and then it has
8 Eversource and Liberty in parentheses.

9 Just out of curiosity, why is Unitil
10 not listed there?

11 A. (Bonazoli) John Bonazoli, Unitil.

12 At this time, we do not have -- we do
13 not record that information. We do not have
14 anything that we can provide that information.

15 Q. Thank you.

16 I want to switch to asking about the
17 legacy period proposed in the Settlement
18 Agreement. So going up to Bates page 29, that
19 contains the spreadsheet analyses that you talked
20 about briefly on direct with several scenarios
21 under different legacy periods.

22 I just wanted to follow up and ask
23 if -- are those numbers based on specific data,

1 or are they meant to be illustrative?

2 A. (Littell) These numbers were provided by a
3 specific NH member who does a lot of work in New
4 Hampshire, so these are -- as explained in
5 Attachment B, these are scenarios based on -- I
6 can't recall if it's median or average -- median
7 assumptions for financing projects. So they are
8 specific pro formas based on median -- median
9 numbers for each of these categories.

10 Q. Alexandra Ladwig questioning.

11 So these all are specific numbers for
12 different projects from one developer?

13 A. (Littell) In that -- that developer's
14 experience. These are median -- as I said,
15 median -- median numbers for each of the three --
16 three types. I should say each of the three
17 types of projects over three scenarios. As --
18 and I'm happy to walk through those if that would
19 be helpful.

20 Q. Alexandra Ladwig questioning --

21 A. I'm sorry. That was David Littell. I'm sorry
22 to interrupt.

23 Q. I can't remember if I said my name or not half

1 the time, so --

2 Yeah, it might be a little helpful to
3 walk through, I guess. I just had a couple
4 specific questions. And maybe, as we get into
5 it, if you think it would just be easier to
6 provide an overall summary, I will leave that up
7 to you.

8 But first, just looking at the
9 Scenario 1A and 1B, it looks like those don't
10 have a start date until 2031. Could you explain
11 why that is?

12 A. (Littell) David Littell answering, and then I'll
13 ask if -- if a specific developer experience
14 wants to add to that.

15 Scenarios 1 and 2 are meant to
16 illustrate what would happen for a project that's
17 built in 2030. It starts at 2031, if the current
18 net metering rate proposal is not adopted, so
19 the -- the period would only go to the end of
20 2040. And those both show negative returns,
21 either for a smaller project, a 1 megawatt
22 project, or for a larger 4.9, which we haven't
23 got a smallest project.

1 So simply -- it simply illustrates
2 that between now and then, not only would
3 different returns be unfinanceable, but they
4 would actually be negative in a certain time
5 period between now and 2030.

6 Q. Alexandra Ladwig questioning.

7 And so the settlement propo -- or
8 agreement also proposes another proceeding in two
9 years, with the opportunity to readdress the
10 legacy period issue at that time. If, at that
11 point, the legacy period does change, so any
12 project being built or going on to net metering
13 in 2031 would be after that new legacy period is
14 implemented, does that change the applicability
15 of that scenario here?

16 A. (Littell) Oh, of course. I mean, if -- it's
17 David Littell answering.

18 If the Commission, in two or three
19 years, does something different between now and
20 2031 and modifies the net metering that's in
21 place, yes, of course it will.

22 Q. Alexandra Ladwig questioning.

23 And so those -- those two scenarios,

1 1A and 1B, and 2A and 2B, don't appear to include
2 any data beyond 2040. Does that mean those
3 scenarios assume an end to net metering
4 completely after 2040?

5 A. (Littell) That -- I guess that's what the
6 assumption is, I believe. Yes. I -- that's the
7 ten-foot answer. Okay. Nothing else. David
8 Littell answering. Sorry.

9 Q. Alexandra Ladwig questioning.

10 And so, if net metering were to end
11 completely after 2040, would those -- do you
12 anticipate those existing facilities would keep
13 producing power?

14 A. (Littell) David Littell answering.

15 I would anticipate we actually stop --
16 an attorney as well and represent, when solar
17 asks folks in the markets, the typical -- if you
18 entirely end with a tariff structure, you would
19 be forced to either find a bilateral contract, or
20 if you couldn't find a bilateral contract, you
21 would just sell it to the -- the wholesale
22 markets. Those are the two defaults, either of
23 which will finance a project from this. It won't

1 come close in the current markets.

2 Q. Alexandra Ladwig questioning.

3 So just to summarize, the facilities,
4 you're anticipating they would continue to
5 produce power that would just be -- they'd be
6 receiving revenues from different sources other
7 than that net metering compensation?

8 A. (Littell) That's what my assumption would be.

9 David Littell answering.

10 They said for the remaining useful
11 life, which is typically between 20 and 25 years
12 for a facility, assuming it's still operational,
13 yes, there would be some additional revenue
14 beyond that time period.

15 Based on my experience related to the
16 tariff in place here would be -- would be
17 substantially less, probably 75 to 80 percent
18 less, which is why I assume the folks who did
19 this didn't include it, because my answers aren't
20 interested in seeing that (indiscernible).

21 Q. Alexandra Ladwig questioning.

22 This might be a question Mr. Hayden
23 would be positioned to answer.

1 Are there any existing power-producing
2 facilities that are not currently net metered
3 that you would anticipate might apply to begin
4 net metering?

5 A. (Hayden) I would say -- Bob Hayden speaking --
6 thanks. Bob Hayden speaking.

7 I would think that would only be the
8 case if they're currently net metering, falling
9 off of net metering in, you know, some future
10 time. But there are plenty of generators over
11 5 megawatts that participate in the wholesale
12 market, and then, as David said, bilateral
13 agreements.

14 Q. Alexandra Ladwig questioning.

15 So just to follow up, are there any
16 facilities under 5 megawatts not currently net
17 metered that you anticipate might apply to start
18 net metering?

19 A. (Hayden) I think the answer is yes. I'm
20 actually working on a couple soon that would fit
21 that characteristic.

22 Q. Alexandra Ladwig questioning.

23 And what is the incentive for them to

1 move to net metering if they are not currently?

2 A. (Hayden) Revenue opportunities. So the revenue
3 of net metering is better than wholesale, and the
4 opportunity is a technical opportunity, so they
5 are working on the technical aspects of becoming
6 eligible.

7 Q. Alexandra Ladwig questioning.

8 And those existing facilities, if they
9 applied and began net metering under a NEM 2.0
10 tariff, as proposed in here, would they still be
11 eligible for the 20-year legacy period?

12 A. (Hayden) The legacy period isn't written yet,
13 but I would hope the answer is yes, after the --
14 that element of the law is written.

15 Q. Alexandra Ladwig questioning.

16 I'm sorry, I'm not -- I'm not
17 completely sure what you mean by the legacy
18 period not being written.

19 A. (Hayden) So we hope to have the legacy period.
20 I don't think we have it in existence yet. For
21 those facilities, they are more than happy to
22 participate in the net metering program,
23 regardless of what program they are registered

1 under at this time. That is their position.

2 Surely having a legacy period that
3 starts on the date they enroll would be in their
4 best interest. But if it ended up that the
5 current end date is the current end date, they'd
6 still be very interested.

7 Q. Alexandra Ladwig questioning.

8 Thanks. That was -- that was helpful
9 clarification. I appreciate it.

10 Going back up to Phase 3 of the
11 Settlement Agreement, Exhibit 1. It says in
12 paragraph 4, "Any net metering project that first
13 commences receiving NEM compensation under the
14 NEM 2.1 tariff will be eligible to continue to
15 receive the NEM 2.1 tariff for 20 years from the
16 year in which it first begins net metering, a/k/a
17 the legacy period."

18 So, to clarify, the legacy period
19 would only apply to projects that have never
20 previously net metered under any tariff?

21 A. (Littell) David Littell answering.

22 Yes, that's the way it's written.

23 Q. Alexandra Ladwig questioning.

1 So a project that's currently
2 receiving compensation under NEM 1.0 or 2.0 or
3 may have net metered in the past but isn't
4 anymore, those wouldn't be eligible for the
5 legacy period if they -- I guess they couldn't
6 switch to NEM 2.1 into this legacy period?

7 A. (Littell) David Littell answering.

8 Yes, that would -- that's the way it
9 was written, and that was intentional.

10 Q. Alexandra Ladwig questioning. Thank you.

11 And I guess on that same page,
12 Paragraph 6, it says, "To administer the legacy
13 period, the electric utilities shall do an annual
14 review at the start of each calendar year to move
15 any projects for which the legacy period has
16 expired from NEM 2.1 to the net metering tariff
17 in effect at that time."

18 So if the Settlement Agreement were to
19 be approved, the first of those annual reviews
20 would be in 2045; is that right?

21 A. (Littell) I'm thinking, because I -- that's not
22 an answer that we have said that. That sounds --
23 I want to ask the utilities, since this will be

1 their obligation to think about that question,
2 too, but that -- that sounds correct to me for
3 just this specific -- what we're calling 2.1.

4 A. (Rice) I don't know if I'm just confusing
5 things, and maybe I'll just share my thoughts,
6 and then some of the parties can correct me here.

7 But the language says that, "Any NEM
8 project that first commences receiving NEM
9 compensation under the NEM 2.1 tariff will be
10 eligible to continue to receive the NEM 2.1
11 tariff for 20 years from the year in which it
12 first begins net metering."

13 So the -- the question I'll ask the
14 panel is, it's -- it's -- how does this -- how
15 does this language apply maybe to a project
16 that's been net metering since 2015?

17 A. (Littell) And that's why --

18 A. (Rice) I'm sorry. That was Brian Rice,
19 Eversource Energy, speaking.

20 A. (Littell) Yeah, and David Littell here.

21 So you can get different permutations
22 by adjusting the time frame. But in that case,
23 it would mean they would have to start earlier

1 than 2045, because the project started net
2 metering in 2015, and under this, it would only
3 have a 20-year period from that.

4 So if a project elected to come in,
5 they would probably decide whether that would
6 make economic sense for the project to come in or
7 not. Obviously, each project makes their own
8 decision there, working with the utility.

9 But then I think that -- that suggests
10 they would have to start doing the reviews
11 sooner, so the utilities may elect, if they're in
12 that situation, to decide to start -- if they --
13 if they have opt-ins to 2.1, to start doing a
14 sweep -- I would call it an annual sweep,
15 potentially even next year.

16 I mean, I could see a hypothetical
17 situation where someone started 19 years ago,
18 they opt in, and they would come up in another
19 year. I'm not sure that would really happen, but
20 one could, if you're working on old-school
21 hypotheticals.

22 So I'll stop. I'll stop answering
23 hypotheticals you're not asking.

1 Q. Alexandra Ladwig questioning.

2 Thank you for that observation. My
3 understanding of the settlement proposal was that
4 any currently net metered project would be under
5 NEM 1.0 or 2.0, and they would still be able to
6 net meter until 2040 because of the current
7 tariff, right?

8 A. (Hayden) That is my understanding. We're all
9 (indiscernible) -- same.

10 A. (Littell) Yes.

11 CHAIRMAN GOLDNER: Make sure to
12 identify yourself when answering the question.

13 MR. HAYDEN: Sorry.

14 CHAIRMAN GOLDNER: No, that's okay.
15 Go ahead and do it now. Yeah.

16 MR. HAYDEN: Robert Hayden.

17 CHAIRMAN GOLDNER: Thank you.

18 A. (Littell) Yeah, and David Littell. My
19 understanding, it's the same. So, again, I
20 haven't thought it through and looked at what the
21 assumptions would be for whether they'd have an
22 incentive to opt into this for any time period
23 that they could stay on, this so-called standard

1 tariff, which is closed at this point, or the 2.0
2 that you're talking about.

3 A. (Rice) Brian Rice for Eversource Energy.

4 So I think what this means is there's
5 a previous statement that no customers would be
6 rolled off net metering until 2045. I don't
7 think that's correct, because I think we've -- I
8 can find a scenario in which customers would be
9 rolled off net metering in 2040.

10 BY MS. LADWIG:

11 Q. Alexandra Ladwig questioning.

12 Right, I -- my question there was --
13 my understanding of the settlement was, this
14 yearly review was to specifically address
15 NEM 2.1 customers, and so variably individually
16 address when each 20-year period is up for them.
17 So NEM 1.0 and NEM 2.0 would be grandfathered
18 under the legacy period, for lack of a better
19 word, until 2040 already. So they're not getting
20 booted off net metering.

21 If the Settlement Agreement is
22 approved, anyone starting net metering would be
23 under NEM 2.1 and be able to get a 20-year legacy

1 period from the day they started net metering.
2 So my assumption that I was making was, if it's
3 an annual review, NEM 2.1 is approved, the first
4 opportunity for projects to begin net metering
5 and then have it reviewed 20 years from now, that
6 first annual review would be 2045. That was --
7 that is what I was trying to get at.

8 Does that sound right?

9 A. (Littell) This does feel a little bit like being
10 back at law school. I think your -- your prior
11 line of questioning, I thought it was
12 illustrative that what -- the language is
13 intending here to offer an option for someone to
14 opt into 2.1, if they believe that it's more
15 advantageous for them. But the thinking was
16 that's probably not likely going to be the case
17 for (indiscernible). So we didn't think through
18 the permutations, I'll just say that.

19 But the sense was that we're getting
20 increasingly restrictive here with each
21 permutation of net metering. So (indiscernible)
22 if what your question said, well, suppose you
23 start in 2015 -- and so you started net metering

1 then, but you opted, as this language says, from
2 when they started net metering. It doesn't say
3 started net -- started net metering 2.1. It says
4 start net metering.

5 So I can envision a situation where
6 the utilities may want to -- if they do have a
7 switchover, which may or may not happen, but if
8 they do, they would want to start the sweeps
9 earlier than 2045.

10 Q. Alexandra Ladwig questioning.

11 So I might have been confused earlier.
12 My understanding was that anyone currently on net
13 metering, NEM 1.0 or 2.1, wouldn't be able to
14 switch to the 2.1; is that wrong?

15 A. (Rice) I will let Mr. Littell say -- address the
16 eligibility for net metering 2.1, regardless of
17 whether it's expressly allowed, not allowed. I
18 don't think it's likely for kind of some of the
19 reasons we've suggested.

20 So I think the most likely glide path
21 that would result from approval of the settlement
22 is you'll start having the first wave of
23 existing -- projects that exist today and are net

1 metering today will roll off net metering in
2 2040.

3 And then, projects that are installed
4 following approval of the Settlement Agreement
5 would then begin rolling off in 2045, consistent
6 with them having a 20-year term to participate in
7 the net metering tariff.

8 Sorry. It's Brian Rice for Eversource
9 speaking today. I can't remember if I said that
10 to begin with or not.

11 A. (Littell) And David Littell answering.

12 So just -- so my attorney instinct
13 came out. I read the language eight times. And
14 it does provide -- and the answer I gave before,
15 that a party -- looking at Paragraph 4 on Bates
16 3: The parties agree that any net metering
17 project that first commences receiving NEM
18 compensation under 2.0 will be eligible for the
19 20 years.

20 So you don't get the 20 years unless
21 you first commence receiving NEM benefits under
22 2.1.

23 Q. Alexandra Ladwig questioning.

1 Thanks. That was -- that was helpful
2 to clear up. So just to absolutely make clear.
3 So if a project starting in 2022, currently
4 receiving NEM 2.0 compensation, they would not be
5 able to switch to NEM 2.1 and get that 20-year
6 period and be able to go until 2042?

7 A. (Littell) David Littell. That was -- David
8 Littell answering. There are two questions
9 there, and I'll pull them apart.

10 The second question, I'm sure the
11 answer is, would not be able to receive the
12 20-year period. Yes, they would not be able to
13 receive the 20-year period.

14 The first part of your question, I'm
15 not 100 percent sure on, but -- I've just
16 answered the second part, so tell me if you want
17 me to go back to the first part and think more
18 about it.

19 Q. Alexandra Ladwig questioning. Okay. Thank you.

20 Other than the 20-year legacy period,
21 is there anything structurally different about
22 NEM 2.1 that would make NEM 2.0 or 1.0 customers
23 switch?

1 A. (Littell) David Littell answering.

2 No, that's why we assume that -- that
3 no one would. And we're obviously not going to
4 talk about settlement discussions here, but it
5 was something in our back-and-forth that was
6 discussed. And we tried to draft, and I think we
7 did draft it successfully, to avoid any perverse
8 incentive to opt out of a current program and
9 just get more years for the benefit on it.

10 That's why I said it was purposely
11 drafted to avoid that -- that type of thing.

12 Q. Alexandra Ladwig questioning.

13 Thank you. That was -- that was
14 helpful, and I know we've spent a lot of time
15 clarifying what was basically a lead-up to the
16 question that, from a practical perspective,
17 whenever these reviews start, whether it's 20
18 years from now or some other moment in time, how
19 are the utilities going to make sure that those
20 reviews start happening, or I guess that this --
21 this settlement is remembered in 20 years?

22 A. (Rice) If the settlement is approved, I expect
23 there would be some steps to memorialize

1 participation in terms of tariff language. So
2 that would be, first off, quoted on there.

3 And then the utilities have already
4 gathered information on project interconnection,
5 including this interconnection date.

6 So we have existing databases, and we
7 make sure that those database include a
8 memorialized start date. I think that could be
9 relied on in 20 years, if I'm still around, to
10 appropriately (indiscernible) whole projects from
11 tariff.

12 Q. Alexandra Ladwig questioning.

13 Thank you. And just briefly a
14 question about the data collection that the
15 Settlement Agreement recommends. Bates 5 of
16 Exhibit 1, it says -- it describes this 18-month
17 data collection effort that would be undertaken
18 if the Settlement Agreement is approved.

19 Paragraph 12 says, "The settling
20 parties shall, following approval of the
21 Settlement Agreement by the Commission, confer
22 and agree upon the data elements to be
23 collected."

1 Does that mean that the agreement
2 anticipates only the settling parties would be
3 developing the scope for the data collection
4 effort, or would there be a broader opportunity
5 for other stakeholders to have an input on that
6 scope as well?

7 A. (Rice) Brian Rice, Eversource Energy.

8 So the settlement contemplates that
9 that would be the settlement parties primarily
10 participating in that process. And a big part of
11 that reason is that the type of information that
12 we expect to collect, it's really information
13 that's actually illustrated in attachments to the
14 exhibit, two examples of kind of disclosure forms
15 that include a number of data points that we
16 would expect would kind of be the initial
17 starting point for those discussions.

18 And that's all the information that
19 ultimately would be collected by a distributed
20 generation installer in the up-front contracting
21 process with the customer, and then provided to
22 the utilities to be compiled so that a more
23 thorough picture of the distributed generation

1 market in New Hampshire can be developed in time.

2 So because -- you know, that's a
3 process that primarily involves distributed
4 generation installers as primarily represented by
5 Clean Energy New Hampshire and the utilities that
6 would be in a position of having to collect that
7 data.

8 So I'm a little selfishly excited. I
9 think our respective perspectives are pretty
10 important on making sure we build a data
11 collection process that both stakeholder groups
12 can execute.

13 For all that said, I think the same
14 thing with -- as I previously said; that we
15 wouldn't object to the inclusion of additional
16 stakeholders, as directed by the Commission, or
17 as agreed to along the -- the initial group of
18 stakeholders.

19 A. (Littell) And David Littell.

20 I'll just add a more basic answer.
21 Some parties will say you didn't include us in
22 this or that. I mean, this is an agreement of
23 the settling parties, and the parties can't

1 obligate other people or add them to it, so I
2 would say we stop if the parties didn't invite
3 Department of Energy into those discussions, and
4 I'll leave my answer at that.

5 A. (Davis) Ed Davis. I just wanted to point out
6 also, in Bates 2, top of the page, did intend to
7 include the DOE.

8 Q. Alexandra Ladwig questioning.

9 And, yeah, sorry, that wasn't --
10 wasn't meant to be a gotcha; that another party
11 say that DOE is included. I was just broadly
12 wondering if others would be included in the
13 stakeholder process, and, yes, if that included
14 the DOE, as the settlement says earlier, so I
15 think Mr. Davis answered -- answered that part of
16 it.

17 And then my last question just is,
18 would that 18-month -- the 18-month period for
19 the data collection effort, does that 18 months
20 include the amount of time needed to develop the
21 scope?

22 A. (Rice) No. Brian Rice, Eversource Energy.

23 No. My understanding of that was

1 other settlement parties disagree that 18 months
2 was envisioned to add, really, a minimum amount
3 of time necessary to comply -- to compile a
4 meaningful data set.

5 So 18 months refers to the period of
6 time in which we would be collecting information,
7 not inclusive of the time lead onto that, in
8 which they would have that process used in this
9 scope of data collection to be developed.

10 Q. Alexandra Ladwig questioning. So I guess that
11 does lead me to one final question.

12 The settlement also -- agreement also
13 anticipates another proceeding in two years after
14 the agreement is approved. So if -- if that
15 scope development process and 18-month data
16 collection effort, does that all have to be
17 wrapped up within two years, or would that
18 conceivably go past the two years?

19 A. (Rice) Brian Rice, Eversource Energy.

20 Once we have a data collection process
21 set up and upgrading, I don't think we'd expect
22 to discontinue it just once the 18 months is up.
23 We'd expect to continue collecting that data so

1 we would continue to have an updated picture of
2 the distributed generation market in New
3 Hampshire, to continue to inform net metering
4 structures and related policies.

5 A. (Woolf) Tim Woolf responding, if I may.

6 My understanding and vision of the
7 data collection is to inform the next filing, so
8 I do hope that if it is sufficiently complete, to
9 provide that support for the next filing. It
10 might continue, but we hope that we have enough
11 information to really -- here's what we need to
12 have a robust filing.

13 MS. LADWIG: Alexandra Ladwig
14 questioning.

15 Thank you. That's kind of the general
16 clarification I was looking for.

17 So that is all the questions the
18 Department has on cross. Thank you very much.

19 CHAIRMAN GOLDNER: Thank you.

20 We'll now move to cross with CPCNH.
21 And if you could move to the front, I think that
22 would allow us to see you in the video and hear
23 you better, so -- I'll give you a chance to move

1 to the front.

2 CROSS-EXAMINATION

3 BY MS. MANZELLI:

4 Q. All right. Thank you. Amy Manzelli. I'm here
5 for the Community Power Coalition of New
6 Hampshire. You guys may have picked up my
7 (indiscernible) for the alphabet soup.

8 MS. LADWIG: Or vegetable.

9 MS. MANZELLI: That's how I feel about
10 my cross-examination as well, so all right.

11 BY MS. MANZELLI:

12 Q. I called it the Coalition, just to avoid that
13 alphabet soup, so I'm just going to go with that
14 today.

15 Let me get up to the -- I have my
16 questions organized by sort of utility and party,
17 so I'll let you know where we started.

18 My first set of questions is for
19 Eversource, but I don't know which of the
20 witnesses is going to be best suited.

21 I want to thank Alexandra because we
22 had that same question about the legacy period,
23 so I want to skip right over that now, and I'll

1 (indiscernible).

2 So turning your attention to Exhibit
3 1, the Settlement Agreement. I have a question
4 about the term that says that "The electrical
5 utilities shall, two years from approval of the
6 Settlement Agreement, file an NEM time-of-use TOU
7 rate with the Commission."

8 So the question is, does that in any
9 way require utilities to propose anything other
10 than a two-part, time-of-use rate?

11 CHAIRMAN GOLDNER: And just a moment.
12 Attorney Manzelli, if you could back up from the
13 microphone a little bit. They're having a hard
14 time picking it up.

15 MS. MANZELLI: I'm sorry.

16 CHAIRMAN GOLDNER: It's okay. Thank
17 you.

18 Okay. Please proceed with the answer.

19 THE WITNESS: (Davis) Ed Davis.

20 The specifics of that rate proposal
21 will be informed by the data collection, so not
22 necessarily two-year period, not to exclude it as
23 an option.

1 BY MS. MANZELLI:

2 Q. Thank you. Amy Manzelli.

3 And does that provision that a TOU
4 rate be final, quote -- referring again to
5 Exhibit 1 -- along with a petition to open a new
6 docket for consideration of the same, end quote,
7 does that suggest that the Commission's next
8 consideration of net metering in a new docket
9 would be limited to the utilities' time-of-use
10 rate proposal, and then matters, you know,
11 associated with time-of-use referenced in the
12 Settlement Agreement, or would it be time-of-use
13 and other rate proposals?

14 A. (Davis) It's silent on that. It's not
15 determined at this point. Ed Davis.

16 Q. It's a very awkward way of speaking when you need
17 to say your name at the beginning of every
18 statement. This is Amy Manzelli.

19 Okay. So just changing topics a
20 little bit here. Part of Eversource's rationale
21 throughout its testimony and then the settlement
22 exhibit, and specifically I'm referring to
23 Exhibits 3 and Exhibit 1, is concerns like

1 implementation costs, ongoing maintenance,
2 administration costs, administrative efficiency,
3 alignment with technical capabilities and
4 processes, facility of administration.

5 Our question is: Wouldn't it make
6 more sense if billing systems and processes were
7 adaptable to market developments that benefit
8 consumers, rather than consumer choice and
9 consumer benefits being limited to the existing
10 billing system capabilities and processes?

11 A. (Rice) Yeah, it would be great if, you know, we
12 could offer anything and everything and have very
13 adaptable and customizable rate solutions.

14 Eversource Energy also has 500,000
15 customers in New Hampshire that we're obligated
16 to bill on a timely and accurate basis, and that
17 necessarily -- that necessarily requires
18 automated systems. And you simply can't change
19 an automated system, you know, quickly or at, you
20 know, no cost.

21 So, because we have to operate at the
22 scale that we do with the volume of customers
23 that we have, we are limited in implementing

1 customizable -- customizable solutions that, you
2 know, may serve, you know, a narrow segment of
3 that customer group, at least in terms of, if we
4 can do it, we can do anything. It's just a
5 matter of time and cost.

6 Q. (Indiscernible.) Excuse me. Thank you. Thank
7 you.

8 This is probably a question for
9 Mr. Davis, as I understand you provide rate and
10 tariff-related services. But for either one of
11 you, isn't it true that in Massachusetts,
12 Eversource's extra-large Class T5 customers in
13 western Mass., specifically, that they have
14 coincident peak transmission billing?

15 A. (Davis) There is a special provision for large
16 C&I customers under that tariff -- pardon me --
17 that you referred to -- Ed Davis, by the way --
18 to provide the capability for coincident peak
19 billing, along with and in conjunction with
20 regular billing of transmission service.

21 Q. And that capability has been in place since
22 around 1997, right? Amy Manzelli.

23 A. (Davis) Ed Davis.

1 No, that's about the time -- in fact,
2 it was more on the order of 1999-2000, when the
3 concept was introduced, and after an extensive
4 period of litigation and experimentation in
5 several litigated cases, that mechanism was put
6 in place and has since been expanded to cover all
7 of the Eversource Energy and Star Electric
8 service area for that class of customers.

9 Q. Thank you. In the extension you just mentioned,
10 that's on opt-in basis, and is that the eastern
11 territory?

12 A. (Davis) The extension -- at this point, it's an
13 extension. However, we treat our rate mechanisms
14 more uniformly across both western Mass. and
15 eastern Mass. I did want to highlight, not only
16 does it have an opt-in characteristic, but it is
17 very manually intensive.

18 CHAIRMAN GOLDNER: I know it's strange
19 when you're sitting next to each other to keep
20 identifying yourself, but please continue to do
21 that.

22 MS. MANZELLI: Thank you,
23 Commissioner.

1 BY MS. MANZELLI:

2 Q. This is Amy Manzelli.

3 Acknowledging that it's manually
4 intensive, is it fair to say that somehow or
5 another, Eversource has arrived at a solution
6 regarding concerns about implementation,
7 administration costs, administrative efficiency,
8 so on and so forth, with respect to this tariff
9 in Massachusetts that we are discussing?

10 A. (Davis) A solution -- Ed Davis.

11 A solution for the purpose at hand. I
12 would say, however, that it's probably a process
13 while it's being implemented now, but we need to
14 learn more about those costs with -- and then the
15 processes involved. I would not consider it an
16 efficient solution scaleable at any large volume
17 at this point.

18 Q. Can you -- Amy Manzelli.

19 And you want to just summarize, again,
20 what volume of customers this rate is available
21 to in Massachusetts?

22 A. (Davis) Ed Davis.

23 I don't know the number offhand.

1 Availability, if I recall -- it's subject to
2 check -- to our largest C&I customers and
3 actual -- actual participation is obviously a
4 subset of that, so, you know, application of that
5 and the amount of administrative process, and I
6 guess impacts and benefit of that, all would have
7 to be looked at a little more closely. But I
8 would say it's probably a very small number of
9 customers who actually take -- take advantage of
10 that.

11 Q. Changing gears again, just a little bit further.
12 The distribution component of the NEM 2.0 rate,
13 wouldn't you agree that each of the joint
14 utilities implement a different credit rate for
15 exports to the grid than the charge rate?

16 That was Amy Manzelli.

17 A. (Rice) So the -- the Settlement Agreement
18 recommends continuation of the status quo, which,
19 for customers less than 100 KW, includes being --
20 a credit for net success generation, a credit
21 equal to 25 percent of the distribution rate,
22 then transmission, KWH rate. And for those
23 customers, I guess, in the bulk service, they get

1 a bulk service rate.

2 CHAIRMAN GOLDNER: That was Mr. Rice.

3 THE WITNESS: (Rice) Sorry. I

4 didn't --

5 CHAIRMAN GOLDNER: That's all right.

6 THE WITNESS: (Rice) So the settling
7 parties, again, as part of the negotiated
8 settlement, are recommending the continuation of
9 the status quo.

10 BY MS. MANZELLI:

11 Q. So I think your answer was, specifically, the
12 credit rate was 25 percent; yes?

13 This is Amy Manzelli.

14 A. (Rice) Brian Rice, Eversource Energy. Yes.

15 Q. Okay. And so for NEM 2.0, was that
16 extraordinarily difficult, time consuming, or
17 expensive to implement?

18 Amy Manzelli.

19 A. (Rice) Off the top of my head, I don't know what
20 the implementation costs were. I know there were
21 implementation costs. I'd be happy to produce
22 those as a record request.

23 The other thing that -- I think that

1 Eversource is most concerned with, as have other
2 utilities as well, a little confusion. I think
3 we've answered -- provided information on record
4 requests saying that a large volume of customers
5 are confused about their bills after they start
6 net metering. In the order of 25 percent have a
7 hard time understanding their bills after they
8 install generation.

9 And there's a real cost to customer
10 confusion. They are calling the call center.
11 They're spending time with a CSR trying to get
12 answers on -- on their bill. They're having
13 frustrating experiences with just understanding
14 their bill. And we -- as a result, we're -- we
15 don't recommend further changes that would create
16 more permutations that would confuse customers
17 and have to be explained to them.

18 Q. This is Amy Manzelli. Thank you for that answer.

19 And there's several routine -- let me
20 rephrase this.

21 Would you agree that, with respect to
22 implementing NEM 2.0, each of the utilities,
23 including Eversource, just absorb that into their

1 cost of doing business?

2 A. (Rice) I can't recall what the specific cost
3 recovery method over those costs were. I'd be
4 happy to investigate that and answer it as a
5 record request.

6 Q. Would you agree that -- this is Amy Manzelli.

7 Would you agree that it's likely that
8 if implementation of NEM 2.0 was extraordinarily
9 difficult, time consuming, or expensive, you
10 might recall those details as we were sitting
11 here?

12 A. (Rice) No.

13 Q. Okay. Thank you, too. I appreciate that.

14 I have a couple of questions for
15 Unitil. Ms. Asbury and Mr. Bonazoli, again,
16 whichever of you feels the most, you know, eager
17 to answer, just jump in. This is Amy Manzelli.

18 Are you familiar with the Unitil
19 Kingston solar project in Docket 22-073?

20 A. (Asbury) Karen Asbury, Unitil.

21 I was not involved in that proceeding,
22 so I'm only very -- only very generally familiar.

23 Q. Okay. Are you in a position to -- are you in a

1 position to agree that Unitil testified in that
2 docket, by Mr. Kevin Sprague, that its Kingston
3 solar project would operate as a load reducer?

4 MR. TAYLOR: Objection to the question.
5 Ms. Asbury has already indicated that she's
6 passingly familiar with it. To my knowledge,
7 nothing from the docket was offered as an exhibit
8 in this case. Nothing has been put before Ms.
9 Asbury to validate. She's being asked basically
10 to validate a statement that she's already
11 indicated she doesn't have any close knowledge
12 of, so I object to the question.

13 CHAIRMAN GOLDNER: Rephrase.

14 MR. MANZELLI: Well, the question was
15 not objectionable. I asked if she was in a
16 position to testify, and it seems like from the
17 objection, the answer is probably no. But the
18 question in and of itself is not objectionable,
19 and I think the witness should be instructed to
20 answer.

21 CHAIRMAN GOLDNER: Thank you.

22 MR. TAYLOR: But with that
23 clarification, I suppose the witness can answer.

1 CHAIRMAN GOLDNER: Please answer,
2 Witness.

3 THE WITNESS: (Asbury) Karen Asbury,
4 Unitil.

5 I am not in a position to answer that
6 question.

7 BY MS. MANZELLI:

8 Q. Let me ask, do either of you have a copy of that
9 document?

10 UNKNOWN SPEAKER: Yes, I do.

11 MS. MANZELLI: And I'll identify this
12 document. So I have here the Unitil Energy
13 Systems, Incorporated, direct testimony of
14 Kevin E. Sprague. This is Exhibit KES-1, New
15 Hampshire Public Utilities Commission. The
16 document is labeled, Docket No. DE 22-blank,
17 which, as you know, as they come in before the --
18 before the docket number has been assigned, but I
19 will represent for the record that it is
20 Docket No. 22-073. Along with the -- well,
21 that's the only document we need right now.

22 So I'd like the Commission's
23 permission to provide this document to Ms. Asbury

1 so she can review it.

2 MR. TAYLOR: I object. It's not
3 Ms. Asbury's testimony. It's somebody else's
4 testimony. There really is no point in providing
5 it to her. It says what it says.

6 MS. MANZELLI: This is the testimony
7 of Unitil Energy System by Mr. Sprague. It is
8 Unitil Energy System's testimony.

9 CHAIRMAN GOLDNER: Was it filed in
10 this docket?

11 MS. MANZELLI: No, it was not filed in
12 this docket. But Unitil is a party to this
13 docket, and it is an admission of Unitil Energy
14 that challenges the assertions that Unitil is
15 putting forward in this docket.

16 CHAIRMAN GOLDNER: And can you
17 summarize what -- what your intent is from using
18 this document in the question or where you were
19 planning on ending up?

20 MS. MANZELLI: Sure. And this applies
21 to several lines of questioning that I had
22 planned for today, so this is probably helpful to
23 go through in some detail.

1 So the settling parties have asserted
2 that maintaining the status quo -- let me back up
3 for one second. This is Amy Manzelli.

4 One aspect of the settlement -- and
5 we'll cover this formally in Mr. Below's
6 testimony -- is the application fee, and the
7 Coalition has no issue with the application fee,
8 so just sort of set that aside for a second.

9 It is the rest of the Settlement
10 Agreement that we're really after here today.
11 And the rest of the Settlement Agreement, in
12 plain terms, seeks to maintain the status quo, no
13 changes to the current net metering, and the
14 rationale for that is that it provides the most
15 balanced approach to compensation for net
16 metering without burdening the non-net-metered
17 customers. And then the conclusion to that is
18 that it's just and reasonable for all customers.

19 So we wish to set forward evidence
20 that is an admission that that is not the case
21 from these utilities. So, for example, in the
22 Kingston solar project, Unitil itself has put
23 forward evidence that that project acts as a load

1 reducer, that it reduces overall supply and
2 transmission costs, that the increase in -- that
3 the better approach -- excuse me -- that one of
4 the aspects of that better approach is that it is
5 an increase in benefits that exceeds the added
6 cost, that it produces local and regional
7 transmission benefits by reducing load; and that
8 this project, as well as a couple other projects
9 that I wish to present cross-examination about,
10 exist today.

11 And the crux to the Coalition's
12 position is that the direction in this docket is
13 that enhancement to net metering be made today.

14 CHAIRMAN GOLDNER: But this wasn't in
15 your testimony?

16 MS. MANZELLI: This -- yes, the
17 changes to net metering today is definitely in
18 our testimony.

19 CHAIRMAN GOLDNER: That part of it,
20 but the evidence that you're suggesting we accept
21 now is not in the testimony, or it is in the
22 testimony?

23 MS. MANZELLI: No, it's not in the

1 testimony because it's cross-examination.

2 CHAIRMAN GOLDNER: Okay.

3 MR. TAYLOR: If I may, there have
4 been -- since Attorney Manzelli was allowed to
5 partially testify, I suppose I should do the
6 same.

7 First of all, that was a whole other
8 different panel of witnesses that was involved in
9 that project. They are not here today. And so
10 those people are not here today to answer those
11 questions.

12 I also -- the notion that the analysis
13 that was provided in that case, which was a net
14 benefits analysis specific to a single utility
15 owned and operated generation unit, is -- is not
16 analogous to what CPCNH is proposing, which, as I
17 understand it, is basically to say, "All you
18 gotta do is just take that," which was not
19 designed as a compensation mechanism for small --
20 for smaller projects or projects across the
21 system. All you gotta do is take that and
22 extrapolate it across every net generating unit
23 across the state. That's simply not what it was

1 designed for.

2 So the two would -- there's no
3 disconnect between what was in that case, which
4 is we stamp aside 100 percent, which is accurate,
5 and what the companies have said in this case.

6 If there's any confusion about that,
7 we'll set it right. And if we have to, we can
8 take a record request and get the right people to
9 provide an answer. But there's no disconnect
10 between the two cases.

11 And I do have an objection to, all of
12 a sudden on cross-examination, evidence coming in
13 to witnesses who don't know anything about the
14 evidence. It's not -- it's not appropriate.

15 CHAIRMAN GOLDNER: Attorney Manzelli,
16 I'll give you a chance to respond. I did preside
17 at that docket and do remember the details of
18 that docket. And Attorney Taylor's point, the
19 locational effect of that particular array was
20 highly beneficial and integral to the
21 calculations that said that it was -- had a
22 positive NPV, so it was sort of a unique set of
23 circumstances that the -- that the company

1 presented and that the Commission ultimately
2 approved.

3 So I want to give you a chance to
4 respond, and then if we have a legal question,
5 we'll just take a quick break, resolve it, and
6 return. So I want to give you a chance to reply
7 before we take the break.

8 MS. MANZELLI: Sure. Thank you. I
9 appreciate that, Commissioner.

10 My understanding of cross-examination
11 and the rules through which this Commission
12 operates is that there is no requirement to list
13 out all of the questions through which we
14 would -- we would attempt to impeach the
15 testimony of any witness. And we have evidence
16 that we believe undermines a factual and legal
17 point in this docket, that we're entitled to put
18 it forward.

19 Now, of course, if a party, in this
20 case Unitil, has not seen a document before, we
21 will provide it. We will give them time to
22 review it. And we are prepared to do that.

23 And, of course, if the Commission is

1 not persuaded by our point, you can give it the
2 weight that it's due, which might not be very
3 much.

4 But we see no legal impediment to
5 making this cross-examination. Unitil is Unitil,
6 no matter which witness it puts forward evidence
7 from.

8 CHAIRMAN GOLDNER: Either a final
9 reply, and then we're going to take a five-minute
10 break to resolve this legal conundrum.

11 MR. TAYLOR: To the extent -- my
12 understanding of Attorney Manzelli is that she is
13 treating the witness as a corporation itself.
14 The point is, is that they appear to be attending
15 -- attempting to introduce evidence through a
16 person, a witness, in this case, who does not
17 have direct knowledge of the testimony that was
18 given. It's someone else's testimony. And so I
19 don't see what the factual benefit of that is to
20 the Commission.

21 The Commission has the ability, if it
22 wants, to take it -- possibly administrative
23 notice -- I guess I would have to think about

1 that as to whether they could or could not. But
2 in this case -- and I would also challenge the
3 idea that you don't need to provide your exhibits
4 in advance of -- in advance of the case. So it's
5 typically the process that we do provide the
6 exhibits in advance, and so that was not done in
7 this case. It's a bit of a gotcha moment, and,
8 unfortunately, it's resulted in a situation where
9 the person who could have provided a response to
10 it isn't available.

11 MS. MANZELLI: If I may, I need to
12 clarify. This is -- we are not using this as an
13 exhibit. We are not using this as evidence. We
14 are -- we are using it to refresh a witness's
15 memory, and that's different in place of an
16 evidence exhibit, and I just wanted to clarify.

17 MR. TAYLOR: This -- this isn't the
18 rules of evidence. This doesn't apply here, and
19 so that -- it's not appropriate in this context.

20 CHAIRMAN GOLDNER: Okay. Thank you,
21 everybody. We'll -- we'll take a 10-minute break
22 to return, and we're off the record.

23 (Recess taken.)

1 CHAIRMAN GOLDNER: After considering
2 the arguments of CPCNH and Unitil, we partially
3 grant Unitil's objection.

4 As an initial matter, we note that
5 pursuant to Rule Puc 203.23(c), the rules of
6 evidence do not apply to hearings before the
7 Commission.

8 It appears that the line of
9 questioning is intended to impeach Unitil on the
10 grounds that its witness's testimony today is
11 inconsistent with the testimony of Unitil and
12 Unitil's prior witnesses in earlier dockets.

13 However, because the witness whose
14 testimony at issue is not present today, we do
15 not see the relevance of asking Unitil's
16 witnesses about that testimony on the stand
17 today.

18 That said, we will allow CPCNH to file
19 a post-hearing briefing, requesting that the
20 Commission take administrative notice of the
21 testimony in a prior hearing to the extent that
22 it is relevant, and we'll obviously give an
23 opportunity for a reply brief as well. So ten

1 days for each is a ruling from the bench.

2 So with that, let's proceed with CPCNH
3 questions.

4 MS. MANZELLI: Thank you,
5 Commissioner. Just a quick clarification. My
6 understanding is that this will be an issue that
7 will be briefed in a post-hearing brief, not in a
8 special issue-specific brief; is that correct?

9 CHAIRMAN GOLDNER: Commissioner
10 Goldner. That is correct.

11 MS. MANZELLI: Thank you.

12 Okay. With that -- and in one further
13 clarification, I did mention I had a similar
14 impeachment line of questioning indicating a
15 completely different docket. I just want
16 clarification that the Coalition should treat
17 that issue in the same manner?

18 CHAIRMAN GOLDNER: That is correct,
19 unless the witness is here today.

20 MS. MANZELLI: No, the witness is not,
21 so we will do that. Thank you.

22 CHAIRMAN GOLDNER: Thank you.

23 MS. MANZELLI: All right.

1 BY MS. MANZELLI:

2 Q. So I have a question for Mr. Woolf or Mr. Borden.
3 It might be easier, with Mr. Woolf in the room,
4 but either one of you, please.

5 Based on your testimony, which I
6 understand is contained in Exhibit 4 -- I'll just
7 confirm my reference here. Yeah. If the
8 Commission were to adopt in this docket -- so I'm
9 asking you to make that assumption --
10 compensation that moved more closely to utility
11 system avoided costs, such as, for actual avoided
12 transmission costs, would that not be consistent
13 with the direction that you recommended net
14 metering compensation move towards?

15 A. (Woolf) Yes, that would be consistent.

16 CHAIRMAN GOLDNER: And since we're out
17 of practice, we'll agree to --

18 THE WITNESS: (Woolf) Sorry. Tim
19 Woolf.

20 CHAIRMAN GOLDNER: Commissioner
21 Goldner.

22 BY MS. MANZELLI:

23 Q. Thank you, Mr. Woolf.

1 And, again, question for either
2 Mr. Woolf or Mr. Borden. Do you believe that all
3 kilowatt hours produced by net metering customer
4 generators are equal in value regardless of when
5 they're produced?

6 A. (Woolf) No.

7 Q. Thank you. And moving on to some questions for
8 Mr. -- Attorney Littell or Mr. Beach, again,
9 either one of you that would prefer to answer.

10 In making reference, generally, to
11 Exhibit 5, which I believe is your joint
12 testimony. In your testimony, you argued and
13 provided evidence that net metering 2.0
14 under-compensates solar compared to value; is
15 that correct?

16 A. (Littell) David Littell answering.

17 That is correct.

18 Q. Thank you. And this is Amy Manzelli.

19 And did your analysis find that New
20 Hampshire's current net metering, quote,
21 structure is foregoing some value even for
22 non-net-metering participants by
23 under-compensating large customer generators in

1 particular, end quote?

2 A. (Littell) David Littell answering.

3 Yes, that is -- that is correct.

4 That's my testimony. Not to be confused with
5 supporting the settlement.

6 Q. Amy Manzelli questioning.

7 And did your analysis not support
8 providing compensation to customer generators
9 greater than 100 kilowatt for avoided
10 transmission costs, arguing that, quote,
11 transmission adder is needed -- sorry -- the
12 transmission adder is needed so that large
13 customers who install solar and who pay
14 transmission costs and demand charges receive
15 some benefit for avoiding transmission costs, as
16 recognized by the Dunsky New Hampshire VDER
17 study, end quote.

18 A. (Littell) I'll say generally, without checking
19 the quotation, yes, that sounds like that is from
20 my testimony, and it's certainly consistent with
21 my testimony.

22 I'm just pausing to see if Beach has
23 anything else to add here.

1 A. (Beach) Yeah, that's -- that sounds consistent
2 with our testimony. You know, we found that
3 there were small net benefits to the current net
4 metering structure in New Hampshire, and you
5 could make -- there was room to make those -- to
6 provide that additional compensation to, for
7 example, larger net metering customers to reflect
8 avoided transmission while still providing net
9 benefits.

10 Q. Thank you for that. This is Amy Manzelli.

11 And same question to the Clean Energy
12 New Hampshire witnesses, Attorney Littell and
13 Mr. Beach.

14 Do you believe that all kilowatt hours
15 produced by net meter customer generators are
16 equal in value regardless of when they are
17 produced?

18 A. (Littell) David Littell answering.

19 I'll take that first, and then
20 Mr. Beach may want to add to it.

21 I mean, the question -- the question
22 is a little overly simplified. I don't like to
23 be a -- too much of a policy wonk. I like to

1 sort of state what matters, but this isn't the
2 level of what matters.

3 You say "equally valuable," and there
4 -- there are a number of value stacks, and in --
5 in both the Dunsky analysis and in Tom Beach's
6 analysis, so "valuable" for what purpose, right?

7 So, no, clearly, the default energy --
8 but that's probably default rates, anyway, if
9 they're not time-of-use rates, right, is that you
10 average over every hour.

11 So even our supply rates, no, they're
12 not equally valuable. But since you're
13 compensated at the rate of supply rates, I would
14 say the problem isn't the lack of differentiation
15 within net metering. The problem is a lack of
16 differentiating within the way we do standard
17 cost for service.

18 So that's just an example. You go
19 through capacity, transmission, each of the value
20 streams, RECs -- right, each of them adds value,
21 and most, not all of them, have different values
22 at different times of the day. Right? RECs,
23 maybe not, because RECs are a very geared thing

1 anyway, the way they're disassociated with that,
2 I mean.

3 So I would just distinguish that, no,
4 clearly, many of the value streams we analyze
5 have different values at different times of the
6 day. Putting them all together in a way that
7 works is the fundamental issue why time-of-use
8 rates themselves are so problematic.

9 So I agree that many of those --
10 different aspects of value do vary throughout the
11 day, not necessarily all.

12 I don't know if Mr. Beach wants to add
13 to that.

14 A. (Beach) No. That's -- this is Tom Beach.

15 I have nothing further to add to that.
16 It's certainly true that avoided cost values
17 differ substantially by hour of the day.

18 Q. Okay. Thank you to both of you.

19 And for any witness on the settlement
20 panel, the -- we've touched on this, but just to
21 refresh and to contextualize the question, the
22 Settlement Agreement -- this is Amy Manzelli.

23 The Settlement Agreement calls for the

1 electric utilities to undertake a data collection
2 effort to support development of the proposed net
3 time-of-use rate proposal prior to the electric
4 utilities filing that rate proposal, which is to
5 be filed within two years after the settlement is
6 approved, if approved. And it says -- the
7 Settlement Agreement, Exhibit 1, says the data
8 collection would be subject to a stakeholder
9 process.

10 Thank you to Attorney Littell for your
11 prior explanation that -- you know, that the
12 Settlement Agreement doesn't name any
13 organization or entities to be part of the
14 stakeholder process that are not part of the
15 Settlement Agreement, because, you know, you
16 can't bind third parties to an agreement that
17 aren't part of the agreement. I appreciate that
18 explanation quite a lot.

19 And I appreciate the explanation
20 earlier from Eversource that Eversource wouldn't
21 object if the PUC ordered other parties to be
22 part of that stakeholder process.

23 So I just want to clarify, on the

1 record, that the parties to the Settlement
2 Agreement wouldn't object if the Coalition was
3 included as part of the stakeholder group.

4 A. (Littell) David Littell answering.

5 The parties for the settlement haven't
6 discussed that issue, so I don't feel that --
7 that, at least, I'm in a position to answer that
8 question, simply because I can't answer for other
9 parties.

10 I -- what I would say is since, as you
11 heard from Mr. Rice's answer, there's
12 anticipation of dealing with some confidential
13 business information, we would want whoever was
14 in the room accessing that information to agree
15 to some form of an NDA. It might not be proper
16 with sharing some of it. Usually, you work that
17 type of stuff out.

18 So I think parties participating
19 would have to agree on how to honor that
20 confidentiality, and if there were a concern that
21 some parties might take it and give it
22 inappropriately, that obviously would have to be
23 dealt with, but I -- we could caucus and get an

1 answer to people.

2 I understand why it would be important
3 to your client to know whether they're being
4 permitted -- there's certainly no intent to
5 purposely exclude your client. That I can say.

6 Does anyone else want to add to that?

7 MS. MANZELLI: Okay. I am
8 geographically far from my clients. Just give me
9 one moment to confer before I conclude.

10 (Brief pause.)

11 MS. MANZELLI: Yeah, thank you for
12 the patience. The Coalition has no further
13 cross-examination questions for the settlement
14 panel. Thank you all.

15 CHAIRMAN GOLDNER: Thank you. We'll
16 turn now to Commissioner questions, beginning
17 with Commissioner Chattopadhyay.

18 BY CMSR. CHATTOPADHYAY:

19 Q. This is Commissioner Chattopadhyay. I have to go
20 back to the discussion about the legacy period.
21 I will say that I was a little bit confused as to
22 what the (indiscernible), so I'm going to go back
23 to that. But in my example here, let's say there

1 is a NEM ratepayer, as part of the 2.0, and ended
2 up -- ended up being so, let's say, beginning or
3 end of 2023, okay?

4 Does that ratepayer have the ability
5 to switch to 2.1?

6 A. (Littell) Yeah, and I apologize to the extent I
7 was implying confusion. I was getting the very
8 first question, so I'll try to be very precise.

9 The settlement actually doesn't speak
10 to that exact question, because the assumption
11 was that there would be no -- no reason for them
12 to switch, because the settlement does speak to
13 the question whether they can get an extra 20
14 years, and the settlement is, no, they can't.
15 You don't become a 2.1 participant with an
16 additional 20 years by opting into 2.1.

17 And other than that, 2.0 and 2.1 are
18 exactly the same, so we -- we did not infer, and
19 the settlement doesn't answer the question
20 whether you can opt in, because they're the same.

21 Does anyone disagree with that on the
22 settlement panel?

23 As far as the customer, NEM

1 obligations, you know, there's obviously on here
2 some stuff.

3 Q. The part that's confusing me is this, in my
4 example, somebody who becomes -- who is a NEM 2.0
5 customer, starting in 2023, you're essentially
6 saying that that customer, if it becomes 2.1, the
7 clock would still start in 2023, will go up to
8 2043?

9 A. (Littell) This is David Littell answering.

10 No, that's not -- that's not what
11 we're saying. We're saying quite the opposite,
12 because we did think about that and worked that
13 out in settlement. We did not want to create the
14 ability of someone who's a 2.0 person and already
15 came in at '23 to say, hey, I end at 2040, so I
16 want an extra 20 years, so I'm going to opt in at
17 2.1.

18 The settlement paragraph where it
19 speaks to that directly, it says, no, because the
20 wording is, any NEM project that first commences
21 NEM compensation under 2.1 would get the
22 additional 20 years.

23 So if you don't start under 2.1, you

1 don't get 20 years.

2 Because we did want to -- at least the
3 sentiment among the settling parties, at least
4 speaking for Clean Energy New Hampshire, we're
5 obviously gonna have some members that wanted to
6 take advantage of that. But we thought it was a
7 fair request to not just give parties additional
8 time if they had already built the facility
9 and -- and just wanted to extend beyond 2040.

10 So, no, you can't -- you can't get an
11 extra 20 years if you're a 2.0 or -- under
12 Paragraph 4. Was that clear enough?

13 Q. But it's -- I think you would have felt that
14 there was some clause there saying anybody who
15 was with 2.0, or 1.0, cannot be part of 2.1.
16 That's the confusion I'm having.

17 A. (Littell) David Littell answering.

18 I think with the answer I have given
19 you, one option -- obviously, this is just a
20 suggestion. The Commission could make it
21 absolutely clear what your understanding is in
22 any order that you, the Commission, understands
23 based on the hearing evidence, that NEM 1.0 and

1 2.0 customers cannot opt in -- go and get the
2 additional 20 years.

3 Q. Thank you. I will share that, after the previous
4 break somehow, my big monitor isn't working, so
5 I'm working with some limitations here now.

6 So again, I have a conceptual
7 question. If net metering becomes pretty
8 significant, meaning there are a lot of
9 ratepayers that participate as NEM customers in
10 the future, and you have a certain grandfathering
11 or legacy approach, is it possible that you're
12 sort of creating a lot of standard costs, because
13 ultimately you're -- if you're thinking about
14 competitive markets, the price signals, customers
15 being on legacy rates can actually create cost
16 shifting as well as pricing, you know, signal
17 issues that may be detrimental to competitive
18 markets. And in that thinking, it's -- it's also
19 something that I wonder about. Why should the
20 non-NEM customers bear the risk -- the risk of --
21 you know, the financial risk that you're talking
22 about for NEM customers and be responsible for
23 it? So -- and this is more about when the net

1 metering -- right now, there's not a whole lot of
2 net metering. It may be reasonable. But I'm
3 more worried about what will happen in the
4 future. If there are lots of customers there,
5 then the paradigm might be completely different.
6 So can you please --

7 A. (Littell) Yeah, David Littell answering.

8 I -- the answer, actually, is in your
9 last -- please bring me back. You asked three or
10 four different questions, if I don't answer all
11 of them.

12 But I think the answer to your third
13 question, which is the most substantial, is in
14 your fourth question, is that, if things change
15 and the costs -- you end up with more net
16 metering participation than is anticipated, and
17 that changes the balance. Because the balance
18 right now shows negligible NEM costs.

19 And I think Tom Beach had the idea,
20 because his analysis is excellent, so I think I'd
21 rely on his analysis. You know, we're actually
22 benefiting other ratepayers, right? So that's
23 the reason to go forward now.

1 But if that situation changes in the
2 future, this Commission can open up a new docket
3 at any time and do a new net metering -- I mean,
4 this Commission has that authority, right? And
5 we built in a two-year review. Two-year reviews
6 sometimes with commissions end up being longer.
7 They end up being three-year reviews.

8 But you've already -- this settlement
9 already builds in a time period to collect the
10 data that OCA insisted on, that -- the data
11 (indiscernible), to have better data to evaluate
12 those value streams.

13 So I think we've built a reevaluation
14 and reconsideration in, long before that
15 situation would change substantially. I think
16 that's sort of the intent of the overall
17 settlement.

18 And so have I answered -- I answered
19 the last two questions. I'm not sure about the
20 initial ones.

21 Q. I think you touched upon the points enough that I
22 understand what you're saying.

23 A. (Rice) Commissioner, if I may also answer the

1 latest question?

2 Q. Absolutely.

3 CHAIRMAN GOLDNER: Only if you
4 identify yourself.

5 THE WITNESS: (Rice) Brian Rice,
6 Eversource Energy.

7 I think it's also important to note
8 that the settling parties support continuing the
9 current structure, because we view it to already
10 be -- be very much a market-based compensation
11 structure.

12 The largest component of the net
13 metering credit by far is the default service
14 rate for default service customers, and, of
15 course, that fluctuates with energy prices. It
16 goes up when they go up. It goes down when they
17 go down.

18 So, in that respect, because we're
19 not -- this isn't a fixed-price, long-term
20 contract that a customer is going to have for 20
21 years. They're really going to have a
22 market-based compensation structure that
23 significantly reduces the risk of stranding costs

1 by continuing the status quo.

2 A. (Beach) And this is Tom Beach. Can I jump in
3 here as well?

4 BY CMSR. CHATTOPADHYAY:

5 Q. Yes, because you said your name.

6 A. (Beach) Thank you. Commissioner, you -- your
7 question -- I think I caught it that it was
8 suggesting that the rate structure would stay in
9 place for 20 years, and that's -- it's actually
10 the net metering structure that's staying in
11 place for 20 years. The rates are -- are not
12 staying in place for 20 years.

13 And this actually builds upon the
14 gentleman from Eversource's answer that, you
15 know, he just suggested, which is -- is that
16 rates are gonna change over time, in part due to
17 the impact of the market and also due to the
18 changes in rate design over time.

19 I mean, it's -- it's my expectation
20 that, as we electrify the economy, you're gonna
21 wanna move eventually to time-of-use rates for
22 everybody, because that's the way you get people
23 to charge their cars in off-peak periods and use

1 their heat pumps when -- when there's capacity on
2 the system.

3 So we're not -- you need to remember
4 that rates are not gonna be static for 20 years.
5 It's just the net metering structure that's gonna
6 be in place.

7 Q. I actually understood that, you know, even before
8 you explained it, so I understand that point.

9 But the real -- so what I'm talking
10 about is the rate structure. So you may have a
11 rate structure in place for 20 years, for
12 example, and you might find later, well into the
13 future, that rate structure is causing standard
14 costs or impacting the competitive -- the markets
15 adversely, to the point that that is not good.

16 So that's how I was viewing it. But I
17 understand the point about the rates changing,
18 and there will be an attempt to make sure that
19 the rates are such that they -- they lead to the
20 reasonable -- they lead to reasonable outcomes.

21 A. (Beach) And Commissioner, this is Tom Beach, and
22 if I could respond to that.

23 And this is perhaps -- you know, a

1 certain amount of stranded costs is not
2 necessarily a bad thing. I think if you look at
3 the history of -- so I have been working on net-
4 metering-related issues for at least the last 15
5 years, and -- and there -- and issues concerning
6 cost shifts and standard costs have come up
7 continually for over that 15-year period.

8 And the root cause of that is the fact
9 that the cost of solar has been declining over
10 that time. And what it took to fairly compensate
11 a solar customer 15 years ago, it was -- is a lot
12 higher than what it costs to fairly compensate a
13 solar customer today.

14 And so a lot of the stranded cost
15 issues arise simply because this technology has
16 been declining in cost. But that's a good thing.
17 We're much better off as a society in making a
18 transition here with declining solar costs than
19 if solar costs were -- had increased over that
20 period.

21 Q. Commissioner Chattopadhyay. I have to get used
22 to it as well, so -- anyone can respond to this
23 question.

1 Are there states out there that no
2 longer have grandfathering for NEM rates?

3 A. (Littell) I'm not -- David Littell answering.

4 I'm not aware of any for -- for net
5 metering. And I know, last I saw a summary,
6 there were 40-some states that net meter. I
7 think that may have changed by a few. But I'm
8 not aware of any that don't have any, like, terms
9 if you call it that.

10 Now, that said, I -- I mean, there's
11 always sort of the nuclear option. It's just
12 that commissions, I think, have many states -- I
13 haven't done a legal review of all 40 of those
14 states, but I think commissions have plenary
15 authority to change rates subject to restrictions
16 on retroactive rate designs. So if there were a
17 terribly unjust and unreasonable situation that
18 occurred, I think there is some plenary authority
19 for commissions to go ahead and adjust it.

20 Again, the numbers we're talking
21 about, if the markets shift that substantially,
22 you have five states around you that are gonna be
23 in a much worse situation than New Hampshire. So

1 I think you have -- you have some cushion built
2 in, and sort of your frugality in setting up the
3 rates and your thriftiness, I call it in my
4 testimony, in procuring more value for less money
5 than the other states already.

6 So my sense is that, if there's a huge
7 shift in the markets, that freight train is gonna
8 hit others around you, and you'll see them having
9 to struggle with it before -- before it hits New
10 Hampshire, based on the way you structure and
11 based on what we've recommended in the
12 settlement.

13 Q. Anyone else?

14 A. (Rice) Brian Rice, Eversource Energy.

15 Yeah, and with the tariffs that I'm
16 most familiar with, providing some minimum
17 certainty of tariff treatment is common. I mean,
18 in fact, it's not necessarily easy for the
19 utilities to administer at all.

20 Say, Massachusetts net metering tariff
21 had gotten very complicated, because, as the
22 utility, we're required to track, you know, many
23 vintages of net metering information and the

1 credit they're eligible for. It's not easy, but
2 it's done to, you know, balance the competing
3 interests of providing those customers that made
4 significant investments in distributed generation
5 and that glide path that is consistent with their
6 expectations, while also pursuing opportunities
7 to continue to lower the cost of supporting
8 distributed generation programs when possible.

9 Q. Just quickly, we talked about the -- just
10 quickly, to the issue of application fees.
11 Again, this is something that I'm wondering
12 about. Are there jurisdictions where, instead of
13 application fees, there are maybe monthly fees
14 that take care of some of the costs, you know.
15 Anyone?

16 A. (Rice) Brian Rice, Eversource Energy.

17 Application fees are the most common
18 mechanism that I'm familiar with to fund the
19 costs that we're targeting with the fee
20 structure.

21 But, specifically, we're -- we're
22 really trying to offset the costs that a utility
23 incurs up front to review an interconnection

1 application, to communicate back and forth with
2 the installer, working on that, as well as the,
3 you know, customer, and kind of get the -- get
4 their service ready and their meter swapped out.

5 So the application is really funding
6 that one-time, up-front cost, so it's a one-time,
7 up-front fee.

8 A. (Littell) David Littell has comments.

9 Adding to that, I -- for larger
10 renewable projects -- and any type of
11 interconnection, not just renewable. ISO New
12 England, of course, for an LGIA, a large
13 generator interconnection agreement, has a
14 standard payment for -- it's required -- well, I
15 should say the utilities do administering the ISO
16 tariff for -- for O&M costs, which is monthly.
17 So that's sort of Point No. 1. Not very
18 responsive.

19 I have seen instances now, with the
20 amount of solar activity we have going on in
21 Maine, smaller projects, which would be large by
22 New Hampshire standards, but projects up to 4.99
23 megawatts, where they go into a cluster study,

1 and the cluster study has some transmission
2 upgrades where that -- that payment may get
3 transitioned down to what are considered smaller
4 distributed projects.

5 That's the only instance where I'm
6 aware of where, for smaller distributed projects,
7 there are monthly payments. But it is an
8 example. It's responsive.

9 Q. Anyone else? No. Okay.

10 A. (Woolf) Yeah.

11 Q. Please go ahead.

12 A. (Woolf) Tim Woolf.

13 Is it okay to go back a question or
14 two?

15 Q. Absolutely.

16 A. (Woolf) Thank you. Your question about
17 surrendered costs, David Littell explained as
18 how, over time, as new iterations of NEM will
19 probably be -- prevent future undue cost to
20 future customers. So then what we're left with
21 is the question, okay, what about the current
22 customers and each iteration?

23 And we've learned from this study,

1 just like has been done in this docket, that the
2 cost shifting is -- first of all, the rate impact
3 is very small. They could be slightly negative
4 or positive, but they are very small.

5 And you -- I think your concern, which
6 I understand, is due to the fact that, well, what
7 if costs change over time, and suddenly things
8 are different?

9 And that's -- it's possible that costs
10 change; and, therefore, there's more cost
11 shifting than we can anticipate. But you have to
12 realize that costs can go the other way as well.

13 For example, in Massachusetts, for
14 utilities, National Grid, Eversource, and Unitil
15 recently filed re-modernization plans, which
16 cover all kinds of investments in the
17 distribution system, whether it's substation,
18 poles and wires, feeders, but also in grid line
19 technologies and in DERs, distributed energy
20 resources. And they're forecasting billions and
21 billions of dollars in increased distribution
22 costs to respond to EV growth, just natural EV
23 growth, to respond to new heat pumps, and other

1 things that are going to change the electricity
2 system in Massachusetts.

3 If those forecasts turn out to be
4 real, then there's a lot that can be avoided.
5 And so, the -- one of the answers -- there's many
6 answers to that challenge -- is distributed
7 energy resources, whether it's energy efficiency
8 or distributed solar. And if those kind of
9 avoided distribution costs could be captured in
10 one of the analyses, you'd see a very different
11 kind of cost-shifting picture.

12 And maybe, you know, as we go and we
13 work together, as you get future analyses to look
14 at future new iterations, we think a little bit
15 more about how the distribution system is or
16 might change over time, to have a more robust
17 understanding of the -- of the risks that you're
18 concerned about.

19 Q. Yes. Commissioner Chattopadhyay.

20 To be clear, I mean, I'm -- I wasn't
21 necessarily assuming that the other possibility
22 cannot happen, so -- but, ultimately, it's about
23 setting the rates right, meaning the

1 beneficiaries pay, and there's always some room
2 for cross-subsidies. We have been living in it
3 for centuries now. But, at some point, some
4 things can become bad enough that it's no longer
5 reasonable. And that can play out either way,
6 whether it's -- if there isn't a whole lot of
7 electrification happening in the future, there's
8 not a whole lot of EV, then maybe the answer is
9 very different than what it would be in the other
10 alternative. So I understand that point, but
11 it's really about getting the study done
12 properly.

13 And so, if you recall my question in
14 the morning today, really, I was trying to drive
15 it to (indiscernible) or requiring the parties to
16 think in terms of doing the studies in -- more
17 seriously in terms of thinking about the NEM
18 customers and the non-NEM customers.

19 And that isn't -- is something that
20 should be done, because it's not like we aren't
21 making assumptions here about the other stuff.
22 We can certainly try to conduct analysis that
23 would have some assumptions about even the

1 break-up, and that should be pursued, so
2 that's -- that's where I'm going.

3 Okay. This is sort of tangential, but
4 I was -- I'm curious about it. Are the utilities
5 doing anything about Order 2222, that somehow
6 also impacts things here?

7 A. (Rice) Brian Rice, Eversource Energy.

8 Yes, but I'm not the person to speak
9 to them.

10 Q. Anyone else?

11 A. (Davis) Ed Davis, as well, from Eversource
12 Energy.

13 Yeah, I'm aware there are clearly many
14 discussions around that order and others, so it's
15 definitely on our mind, part of our thinking and
16 planning.

17 Also, I'm definitely not the person to
18 answer any further, but, just, in general, I'm
19 quite aware that that's on our mind and will be
20 discussed.

21 A. (Rice) Brian Rice, Eversource Energy.

22 I'll just come back and offer it. If
23 the Commissioner has specific questions about

1 FERC Order 2222 implementation, we'd, of course,
2 be happy to endeavor to answer them as a records
3 request.

4 Q. Nothing comes to mind right away, but I might.
5 But it doesn't have to be this topic.

6 A. (Bonazoli) John Bonazoli, Unitil.

7 As Eversource said, yes, we're aware
8 of it. We are following ISO New England's lead
9 and working with them, but there's -- there's a
10 lot to it.

11 Q. There's nothing -- but right now, there's nothing
12 that you can share, right?

13 A. (Bonazoli) Correct.

14 A. (Rice) Okay.

15 CMSR. CHATTOPADHYAY: I think that's
16 all I have for now. Thanks.

17 BY CHAIRMAN GOLDNER:

18 Q. Okay. This is Commissioner Goldner.

19 I'll start with the Exhibit 2, page
20 17. So flip to that. So that's -- that's for
21 Rice, et al. I was gonna flip to 17.

22 And in -- on that page, the witnesses
23 lay out the dangers of it -- in establishing a

1 net metered tariff greater than 1 megawatt in
2 other New England states, in particular, circuit
3 saturation.

4 Can you expand on how circuit
5 saturation is handled and who pays the cost in
6 those other states?

7 A. (Rice) Brian Rice, Eversource Energy.

8 Yes, so I already testified in the
9 beginning, and I think, as a lot of people
10 understand, so Massachusetts, in particular, was
11 totally instituting many programs to support
12 distributed generation, including a series of
13 renewable portfolio standards that were specific
14 to distributed solar resources, to aspect
15 programs, followed by a much lower cost
16 distributed generation tariff program called the
17 SMART program in Massachusetts.

18 So, at this point, Massachusetts has
19 provided direct incentives, both for net metering
20 and through additional programs, to support, I'd
21 say, over 200 megawatts of distributed solar
22 around the state.

23 What eventually occurred is the

1 ability of circuits -- I'm saying this as a
2 non-engineer -- the ability of circuits to absorb
3 the output from additional PV systems exceeded
4 the capacity of existing substations, such that,
5 to accommodate an additional, you know, megawatt
6 of distributed generation on a circuit, very
7 costly substation upgrade was required.

8 The historic cost allocation policy in
9 Massachusetts, which remains the current cost
10 allocation policy in New Hampshire, is that the
11 interconnecting customer would be responsible for
12 the full costs of reported upgrades.

13 Of course, it wasn't feasible for a
14 developer of a 1 megawatt solar project to
15 independently fund the cost of expanding an
16 entire upgrade. So as soon as they were
17 presented with the responsibility for those
18 costs, that project was quickly abandoned.

19 So that became a significant barrier,
20 that you couldn't have more solar until a
21 substation upgrade was completed, and no
22 individual solar project was of the capacity to
23 finance that substation upgrade.

1 That resulted in a pretty lengthy set
2 of deliberations and stakeholder processes,
3 supervised by Mass DPU, and the end result was
4 approval of a very new cost allocation
5 methodology, in which the EBCs were directed to
6 share the cost of those substation upgrades, both
7 between -- I know it consisted -- the non-DG
8 customers and DG customers had the recognition
9 that if you do undertake an upgrade as
10 significant as rebuilding a new substation,
11 that's gonna have additional benefits to the
12 distribution system beyond just allowing more
13 solar to interconnect. So there was a cost
14 sharing between DG customers and non-DG
15 customers.

16 In addition to that, there was cost
17 sharing among both current and future DG
18 customers. So, you know, once these upgrades are
19 completed, it'll enable the interconnection of
20 some portion of active projects. They will each
21 pay their kind of pro rata share of the upgrade
22 costs. That won't fund it all. And the
23 expectation is that, as more projects come online

1 and interconnect into that circuit, they will
2 reimburse the utility for costs that have already
3 been incurred to fund that substation upgrade.

4 So I think that's a long answer, but
5 it underscores the -- kind of the magnitude of
6 impacts that can happen when you have higher
7 rates of DG that necessitate new models.

8 But I'll stress that, New Hampshire is
9 not there yet. The cost allocation policy, which
10 maintains complete funding of upgrades required
11 for interconnecting products to be funded by the
12 interconnecting customer, with newer cost
13 responsibility flowing to other EC customers for
14 those elements.

15 Q. Okay. Thank you. Commissioner Goldner.

16 What's your -- what's your
17 understanding of the 1 to 5 megawatt tariff in
18 New Hampshire? Is there -- is there no tariff
19 today? Are the parties looking for the
20 Commission to establish a tariff? Is there a
21 difference between the tariff for a regular
22 customer, if I can call it that, versus a
23 municipal host? What's the tariff structure look

1 like today between 1 to 5 megawatts in New
2 Hampshire?

3 A. (Rice) Brian Rice, Eversource Energy.

4 Can I just take a moment to confer
5 with --

6 Q. Please do, yes. Thank you.

7 (Brief pause.)

8 A. (Littell) (Indiscernible.) Mr. Rice is probably
9 best to answer it. David Littell here.

10 Yeah, my understanding right now is
11 that's statutorily mandated. You're -- to go
12 above one, you need to be a municipal host, is
13 the general terminology, but that includes
14 certain subdivisions of the state, is my
15 understanding as well.

16 Other than that, you have to be in
17 that category, and our proposed settlement is not
18 proposing any -- any changes to that arrangement
19 at all. In other words, it is what it is, as
20 specified by the legislature.

21 That's of great interest to -- I think
22 you'll hear from other parties who are a party to
23 this settlement, but we're not proposing any

1 changes to that, simply because it's not what we
2 negotiated. It's not part of our bare-bones
3 settlement.

4 Q. Okay. I just want to repeat that back for
5 clarity.

6 So RSA 362-A:9, XXIII, talks about
7 when the Department of Energy's distributed
8 energy resource valuation study is completed, the
9 Commission should consider the tariff between
10 1 and 5 megawatts.

11 And I think the settlement is
12 suggesting that it was considered, and that --
13 and that the recommendation is to -- the status
14 quo in that category.

15 Did I summarize that correctly?

16 A. (Littell) Yes, Mr. Chairman. David Littell
17 answering.

18 You summarized that correctly. And,
19 again, you have a very strong Consumer Advocate,
20 and they were -- they were sensitive to any --
21 anything, so -- that might add cost, so we kept
22 it pretty bare bones in what we're recommending.

23 Q. Okay. Thank you. I just want to make sure the

1 Commission is doing its duty, per the statute,
2 and it sounds like there's a consensus that that
3 was evaluated, and a recommendation has been put
4 forward, so I just wanted to clarify that. Thank
5 you. Okay.

6 I just want to go back, Mr. Rice, to
7 make sure to clarify what you said. I think I
8 understood perfectly, but I want to repeat it
9 back, because your answer was lengthy, and the
10 afternoon is long, so here we go.

11 If a customer in New Hampshire builds
12 a solar array, for an example, between 1 and 5
13 megawatts, any -- any cost to the system,
14 distribution or transmission, would be paid for
15 by that entity that's putting forward that
16 project?

17 A. (Rice) Yes, that is the current cost allocation.
18 Our policy, it's referred to as the Cost Causer
19 Pays methodology. And it's been the traditional
20 policy across most of the U.S., from my
21 understanding, and what I have experienced in
22 Massachusetts. It was something that was unique,
23 approved by Mass DPU and everybody else, if I

1 recall, the Massachusetts team.

2 Q. So just from a process perspective, the
3 Eversource engineers look at the project, they
4 look at the location, they do the math on the
5 lines that are there and not there, and -- and
6 they figure all that out, and then they present
7 that package to the -- to the entity that's
8 proposing the project so that they understand the
9 total cost, and then they can decide whether they
10 want to go forward with the project, given that
11 Eversource has provided the cost of the solution?

12 A. (Rice) That's a good description of the
13 substance.

14 Q. Okay. Thank you.

15 Okay. I have some broader questions
16 here, a little more fun for the panel. You know,
17 let's get out of the weeds and go to a higher
18 level. This will be exciting.

19 So, you know, I -- I -- I've heard
20 in -- it might not have been this docket, but I
21 think it was, about solar energy being the
22 cheapest form of power. You read about it from
23 time to time, but kind of -- I kind of don't

1 understand why a subsidy is needed if you have --
2 if you already have the cheapest form of power.
3 So I wanted to throw that to the panels and maybe
4 educate the Commission a little bit on why that
5 would be.

6 A. (Littell) David Littell. My first answer to
7 that anyway.

8 One, I have some wind clients who
9 would take a different position as to wind. And
10 I have access to some confidential data
11 information, so I think it's wind or solar, but
12 it's obviously intermittent.

13 And you need to finance the projects.
14 And the reason why -- in our region, why it's
15 particularly important, you see it -- actually,
16 the Dunsky study illustrated this well -- is that
17 our wholesale market structure were restructured,
18 so we -- obviously, there's a whole set of values
19 that we sort of left in '97 through 2001, while
20 we restructured in New England, in the Northeast.

21 We left -- we sort of set the
22 competitive generator. Probably doing your math,
23 will ask, is it going to take care of that?

1 There you go.

2 And then come -- we sort of added a
3 substantial change since then. Wind costs have
4 come down. Solar costs have come down. These
5 markets were set up, really, to focus on the
6 creation of (indiscernible).

7 So I think it's safe to say, in a
8 number of ways -- and this is sort of a very
9 high-level question -- those markets don't work
10 for other models very well.

11 In the Dunsky analysis, one of their
12 sensitivities, it looked at market value,
13 illustrated that well, because the value to
14 customers as a load reducer is actually much
15 higher, if you kind of add all of the values
16 together, than just participating in the
17 wholesale market, because the -- and the
18 utilities operating in the tariff that they
19 provide to individual customers for larger
20 projects is -- which a lot of other states than
21 New Hampshire have done a lot more of them -- oh,
22 a lot that New Hampshire has done. Which doesn't
23 mean it hasn't happened, obviously. I'm unaware

1 of it.

2 So that, in some -- in some ways, it's
3 a reaction to our particular restructured markets
4 that aren't a very good fit for distributor
5 resources, and that sort of summed that up.

6 One example of use is that, the one
7 state in the region that hasn't restructured is
8 Vermont. But, of course, Vermont doesn't have a
9 lot of generation, right? They've got a large
10 biomass, (indiscernible), and I think some gas,
11 but they don't have a lot of -- so one would say,
12 well, it doesn't matter that much, but they have
13 found it much easier in Vermont to implement
14 things like Green Mountain Power's battery
15 program. It saved customers a lot of money, just
16 hedging in the markets, but that our -- our
17 restructured utilities aren't authorized to do as
18 a general matter.

19 I know Liberty has their battery pilot
20 going on here, and they measure that just in the
21 capacity market savings, but they don't generally
22 hedge in the markets. I think most commissions
23 in the region don't like -- and, in fact, I think

1 most utilities don't want to be put in charge of
2 making it in the markets, because they simply
3 don't do that anymore. We don't have people who
4 do that anymore.

5 So in a restructured market
6 environment, people were capturing that overall
7 value that the Dunsky report has described as
8 load reducing. And Tom Beach's analysis, he'll
9 speak for what it is.

10 So that's -- that's how we do it,
11 given it sort of -- we don't want to walk away
12 from restructured markets, because we still like
13 the price discipline that we get in the wholesale
14 markets. I think everyone agrees that's a good
15 thing. But we mitigate for the fact that those
16 markets don't work really well for distributed
17 resources by creating other structures, where the
18 value that we can identify for ratepayers is
19 superior, as a general matter.

20 I think as a commissioner, that's the
21 way I always thought of that work, when the
22 legislature orders you to do something. But
23 we're not in that situation here.

1 A. (WOOLF) May I add to that? I would also agree
2 that I don't think it's really safe to say that
3 rooftop PV is the lowest-cost energy resource out
4 there. In addition to utility scale wind -- and
5 utility scale solar has energy efficiency. So,
6 aside from that -- you have asked a good
7 question.

8 I don't -- I think -- first of all,
9 I've never been in any state or docket where
10 anyone has suggested that customers should not
11 have the opportunity to reduce their demand
12 through PV. I don't know if they have a right,
13 but they -- no one's ever argued that they
14 shouldn't be able to do it.

15 So the question is, how much do you
16 compensate them for, through avoided rates or
17 whatever. And it's not so much, you know, why
18 give them a subsidy. It's a matter of like, how
19 do you achieve the goals you're looking for.

20 And in New Hampshire, you have a
21 statute that says that you should be promoting
22 enough PV to avoid cost shifting, but also make
23 sure that it happens. Because the legislature

1 recognized, as most states do, that there are
2 benefits to all customers from PV, rooftop PV.

3 We've heard about avoided transmission
4 distribution costs and DRIPE costs, and we've
5 seen some studies suggesting that rates may not
6 go up at all, maybe even go down.

7 So really, the issues is not so much
8 in why provide a subsidy. It's more about what's
9 the right compensation mechanism so that you get
10 a reasonable level of development of these
11 benefits without burdening non-DG customers.
12 That's really the question. That's what we've
13 been talking about often today.

14 Q. And so let me follow up. This is Commissioner
15 Goldner.

16 There's a different subsidy for large
17 and small customers, so maybe -- maybe walk the
18 Commission through -- there's a -- there is a
19 subsidy for both, but they're different, and
20 maybe walk us through why.

21 A. (Rice) Brian Rice, Eversource Energy.

22 I'll take the first pass at that. So,
23 in my mind, a lot of the differentiation comes

1 through in what I was talking about previously
2 with circuit saturation.

3 Again, coming back to Massachusetts --
4 and I'm a Massachusetts native, and I'm a proud
5 one. I like their policies. But they're not New
6 Hampshire's policies.

7 Very early on, Massachusetts was
8 providing full retail net metering credits
9 one-for-one for all service, distribution,
10 transmission, to facilities as large as 5
11 megawatts, as well as an SREC on top of that
12 that, in the 2010 time frame, was valued as much
13 as 60 cents a kilowatt hour.

14 New Hampshire has never been remotely
15 close to providing that level of compensation.
16 But that made a lot of 5 megawatt solar projects
17 economic to build early on. And circuits got to
18 the point where, yeah, they can accommodate these
19 projects, because all these projects do is put
20 power back onto the grid. They're not serving
21 any load, so they're really just pushing power
22 back onto the grid and hoping that there's enough
23 other load on that circuit to absorb the

1 generation that's going on in the circuit.

2 When that ceases to become the case,
3 when the output onto the circuit goes above the
4 load, then, you know, you're looking at having to
5 build upgrades that allow for the extra output to
6 go up to the transmission system and be moved out
7 from there.

8 So that happens faster when you -- you
9 have large projects that aren't serving load,
10 such as, facilities greater than 100 KW. It
11 happens -- and this is my non-engineer's
12 description, again, as a qualifier. It tends to
13 happen less frequently and more slowly when
14 you're encouraging projects to be sited, such
15 that they're directly serving an onsite load;
16 that they're behind the meter, that there's
17 enough -- the customer already is using enough
18 electricity to absorb what the PV system -- or it
19 should be generation system -- produces, so
20 they're not pushing power back onto the grid.

21 So because of that -- because --
22 because those types of resources have a higher
23 probability of, you know, kind of working in

1 tandem with the grid as it exists and the load
2 that's there, I think when you provide extra
3 credit for those facilities or distribution for
4 transmission, you're more likely to realize a
5 commensurate benefit.

6 So I think that's why New Hampshire
7 is -- one of the reasons why New Hampshire's
8 tariffs, for a long time, have differentiated
9 between those types of facilities, and recognize
10 that a facility that's more likely to be
11 operating on its own, not creating any power
12 back -- not using any -- displacing any off their
13 load, but just putting everything back to the
14 grid, might be less beneficial than something
15 that the customer is using to meet their own
16 loads.

17 A. (Littell) David Littell.

18 I'll -- I agree entirely with the
19 explanation. I just want to try a
20 simple (indiscernible).

21 I mean, I think one way I've heard
22 some people describe that is when you build solar
23 in a dense area, which is more likely these

1 smaller projects on a rooftop or someone's
2 backyard. Even if you're not using energy, you
3 put it out in the grid, and your neighbors absorb
4 it quickly. So from a physical energy point of
5 view, it's less likely to hit the substation,
6 until you get to a very advanced stage, where
7 everyone might be doing it in the neighborhood.

8 So from that perspective, the benefits
9 are greater and the burden on the distribution
10 circuits are less, especially, say, if you're in
11 a, you know, big peak -- we're still summer
12 peaking in this region. And when you hit peak in
13 the summer, you know, everyone's got their
14 cooling going. So when solar is pumping out,
15 that's when -- that's when you're going to have
16 your greatest.

17 Different situation in -- in the
18 spring and fall, but -- so you just -- that's the
19 justification for giving higher, closer to retail
20 value.

21 And the other way -- again, I've heard
22 some people simplify it, that I think is
23 oversimplified, but that it's close to retail,

1 right? You're at the retail customer. That
2 energy never gets anywhere near the pricing nodes
3 that traditional generating -- generation prices
4 do. So it's closer to retail-type transactions.
5 So it's a rough approximation.

6 But that's -- that's -- that's the
7 justification that I -- it's a simplified
8 version. I don't know if Mr. Rice is comfortable
9 with it, but that's how I've heard that be
10 simplified to simple -- for audiences for -- for
11 simple ones.

12 A. (Davis) Ed Davis, Eversource Energy.

13 I entirely agree with that
14 description.

15 Q. So let me just use some actual numbers just to
16 make sure that the Commission understands what's
17 being described.

18 So if you're a large customer today,
19 that payment for putting energy on the grid is
20 default service. And so, I think there were --
21 yeah, default service rate for residential
22 customers, and I think -- I don't think the
23 commercial one is so different. It's maybe,

1 let's call it, 100 to \$110 a megawatt hour, so
2 that's the default service rate that these large
3 solar arrays are getting as a payment for putting
4 energy on the grid.

5 And I may not be taking into account
6 the REK piece correctly, so when I finish my
7 description, please -- please, correct me.

8 If I look at the residential piece,
9 it's that 100 to \$110 for the default service
10 piece, it's around 30 for transmission, and then
11 a quarter of the distribution piece is about
12 20 -- 15 to 20. Figured roughly at \$150 a
13 megawatt hour is what the -- is what the solar
14 owner is putting back on the grid. That's the
15 price that they're putting back on the grid.
16 Plus, in this case, I think the REK payment is
17 about 30 bucks.

18 So really, you've got about 180 -- at
19 these prices, you have about \$180 a megawatt hour
20 that the small residential customer is putting
21 back out on the grid. And the large customer is
22 putting it back on at about \$100.

23 Is that -- am I -- are we -- am I

1 understanding that that's what's happening?

2 A. (Davis) Ed Davis.

3 So it's on that order of magnitude.

4 Of course, those prices will change. August 1st,
5 you have different default service prices.

6 Prices for residential are different than the
7 large C&I, for example.

8 In a -- just looking at the history
9 and where we are with small and large, the bulk
10 of our small are going to be more sized to a
11 retail load, and many of them are rooftop solar.
12 And, of course, those retail rates are those
13 prices you just mentioned.

14 And if you go back to the true root
15 origin of net metering, with a meter that
16 actually spins forward and backward, that
17 actually really happened when those meters did
18 that, and so they were sizing early, small
19 numbers of net metering facilities, let's say on
20 a residential load, and it was spinning forward
21 and backward, maybe coming back to the same
22 starting point by the end of the month, kind of
23 like Ferris Bueller's Day Off with the car, and

1 -- so, you know, fast-forward to where we are
2 today with different kinds of metering, and the
3 concept is still the same.

4 The 100 kilowatt threshold tends to
5 align with residential upticks our threshold
6 level of our small C&I customers.

7 So most of those facilities are
8 compensated -- they're smaller, they are attached
9 to load, and they're compensated at rates that
10 align with what would happen if they actually
11 could apply all of that usage size to those
12 facilities at that local location.

13 So there's sort of that generic
14 history. Obviously, this thing has morphed over
15 time.

16 The larger ones tend to be standalone.
17 They tend to be just grid-connected resources.
18 Some of them are -- you know, as we talked about
19 earlier, if they're municipal, there's a sharing
20 of the -- of the credits. But all of the energy
21 is put out to the grid. There's no load,
22 typically, attached to it locally.

23 So there's kind of a system-level

1 class of facilities and more load -- load, you
2 know, located facilities.

3 I -- this is almost like a portion of
4 everything you heard earlier, because there's a
5 lot to this. But price-wise and compensation-
6 wise, the pricing tends to -- tends to come from
7 the rate class they're served on. And I think
8 that's -- that's especially at the residential
9 level.

10 Rate R, for example, for Eversource is
11 our -- by far, the rate most residential
12 customers pay. Those prices you just mentioned
13 are exactly from those tariffs.

14 So, you know, if that's the current
15 and longstanding form of compensation, the
16 otherwise applicable retail rate and which of
17 those apply, now we're taking that next sort of
18 generation dive into -- we've already unbundled
19 rates. We've had that for a while. And now
20 we're taking a further look at -- when we had
21 just monthly metering and kilowatt hours and rate
22 structures and compensation built around that,
23 now we're looking at options; what else can we

1 do? Can we have time-of-use and time to
2 differentiate that? And it keeps getting more
3 granular. It gets more complex as you go.

4 Now, the compensation levels still
5 tend to tie to the published pair of rates, and
6 those are the cost-based rates based on the
7 services provided.

8 So there's a lot of linkages in there
9 that all tie together?

10 Q. And so if I'm -- if I'm running something at 900
11 kilowatts, and I'm a net metering customer, I'm
12 getting -- if I put energy on the grid, I get
13 paid default service, whatever that is that
14 month.

15 If I'm not a net metering customer, I
16 put energy on the grid at -- at the ISO New
17 England rate, and I think history would say
18 there's -- I'm just going to use round numbers.
19 It's roughly half the ISO New England rate over
20 the last ten years versus the default service
21 rate.

22 So that's -- that's what's happening.
23 That's the motivation to be a net metering

1 customer, is you get -- as a large customer, is
2 you get default service versus the ISO New
3 England rate. So, so far, so good? Am I
4 describing it correctly?

5 A. (Davis) Yeah, I think you're -- you know, let's
6 just use, for discussion, you know, half the
7 value.

8 Now, there's the energy and the
9 capacity, and if you're registering and bidding
10 these in, there's different types of revenues.
11 But I think there's elements of default service
12 that you won't find at just pure market pricing,
13 which is definitely going to show a difference in
14 most prices.

15 Q. Oh, that's true, and let me just clarify. So I
16 think, going back four or five years -- this is
17 Eversource's own data, I think -- that the
18 average ISO New England rate is about \$45 a
19 megawatt hour. The ancillary charges capacity,
20 these other things, it's roughly \$10 over that
21 time period. So you're talking about roughly
22 \$55 a megawatt hour for the ISO New England rate,
23 plus all the ancillary charges.

1 And then the rate that we charge the
2 ratepayers in New Hampshire collectively, the
3 Commission-approved rate, is -- you know, as, I
4 think, someone highlighted earlier, between \$80 a
5 megawatt hour and \$22 a megawatt hour here in the
6 last -- last few years.

7 So that's the -- the difference is
8 substantial between the ISO New England rate and
9 the -- or I should say the wholesale rate and
10 the -- and the rate that we would give -- give to
11 a net metered customer.

12 A. (Davis) Correct. Ed Davis speaking.

13 Yeah, I mean, when you're looking at
14 all the elements across the services needed to
15 provide the required service, it layers in a lot
16 more cost. It isn't just a pure market price.
17 Yeah, so absolutely, for sure.

18 Q. Yeah. And I'm just trying to understand the --
19 the motivation to a net metering customer. I
20 think we -- which I think is clear, right? Your
21 choice is between the ISO New England rate, the
22 wholesale rate, and the default service rate, in
23 the case of a large customer.

1 And in the case of a residential
2 customer, it's also transmission, plus a quarter
3 of distribution, plus the REK.

4 So -- so you have a lot of additional
5 benefits to being a residential customer on the
6 system, and -- and to the point Mr. Rice made
7 earlier that -- sounds like for a good reason,
8 because that -- that small amount of power being
9 put on the grid locally is more beneficial than
10 the large array that's in the middle of a field
11 somewhere, so -- so was that good, Mr. Rice? Am
12 I getting that correct?

13 A. (Rice) Brian Rice, Eversource Energy.

14 Yeah, I think you have that correct.
15 I think one thing that I just want to introduce
16 that's important -- also important to recall is,
17 again -- Mr. Davis alluded to the fact that a
18 small customer generator is -- can be more likely
19 to be using their distributed generation to serve
20 their onsite load.

21 And if you think about it, if a
22 customer's distributed generation system is sized
23 such that they never push anything back to the

1 grid or ever having that excess, then they're
2 going to realize the avoidance of 100 percent of
3 charges.

4 So really, one of the -- and, frankly,
5 even, like, for a residential customer, if you
6 compare their net access to what the system was
7 producing over the course of the prior year, a
8 lot of those residential customers were going to
9 be receiving net metering credit for a very small
10 portion of what their community system is
11 producing.

12 But it makes for an easy-to-understand
13 model for the customer. I mean, this is a
14 homeowner, right? This isn't somebody who's
15 involved in energy markets. So it's important
16 for them to understand that this is gonna be the
17 value realized from producing reliable energy,
18 regardless of whether they're using it.

19 Q. This is actually the problem -- sorry, this is
20 Commissioner Goldner.

21 This is actually the problem I was
22 highlighting to Dunsky. At least as I understand
23 it is, that that other customer -- residential

1 customer that puts solar on his house, or her
2 house, now consumes a lot less energy. The poles
3 and wires didn't go anywhere. They're still
4 there. You're, I know, effectively relieving the
5 burden on that for future generations, but at --
6 when that solar is put on the roof, it doesn't
7 change the infrastructure that's in place. Now
8 somebody else has to pay for that infrastructure.

9 And I know the case that the parties
10 have made, I think, is that that's relatively
11 small today, but I just want to make sure that I
12 understand the point.

13 A. (Rice) Brian Rice, Eversource Energy.

14 I'll just quickly kind of characterize
15 what you're describing from the utility
16 perspective, and then I expect other settlement
17 party witnesses will have their own perspective.

18 So I think what you described earlier,
19 if I remember the question that you asked about
20 90 percent bill reduction. When you think about
21 it, that represents a reduction in revenue
22 collected by the utility.

23 We're not billing that customer as

1 much. They're incurring additional costs,
2 presumably, for their distribution generation.

3 And -- but there certainly are, you
4 know, commensurate reductions and utility costs.
5 So we have a revenue reduction, but we also have
6 a cost reduction. Some of that is easy to
7 quantify and happens immediately.

8 Q. I apologize for interrupting, but can you just
9 help me with the cost reduction. Where does that
10 happen? I don't understand where that happens.

11 A. (Rice) I would be happy to.

12 So the immediate cost reduction is,
13 you know, a reduction in the amount of supply
14 that has to be procured for that to supply that
15 customer.

16 Q. Supply; agreed.

17 A. (Rice) Yeah. And then, you know, beyond that --
18 and this is really what value the DER study got
19 into, is there are -- there are additional
20 benefits. Or at least, there's a reasonable
21 opportunity that additional benefits will be
22 realized in terms of not having to make the same
23 future investments in a distribution and

1 transmission infrastructure that you might
2 otherwise have to.

3 And you're right that those benefits
4 don't happen -- they don't accrue the second that
5 that PV system starts operating. But I mean, I
6 think pretty much any business, or even any
7 individual, routinely incurs expenditures in
8 anticipation of future benefits. So I don't
9 think it's reasonable to say those benefit --
10 those future benefits don't count here, because
11 no -- that's not really a logical decision-making
12 process as long as --

13 Q. As they were phased in, one could understand it
14 would just be -- I'm really checking to see if
15 that calculus has happened. Is that something
16 that is -- sort of overly complicates what -- the
17 way that Eversource has looked at it, or is
18 that -- is that the way you look at it? You're
19 like, well, okay, over the next ten years, we're
20 gonna not have to upgrade these lines, and that's
21 gonna save us this amount of money.

22 A. (Rice) Yeah. I mean, the expectation is that
23 benefits accumulate. The challenge -- and we

1 recognize this -- is that it's still difficult to
2 pin down what those benefits are. I mean,
3 anecdotally, look at regional system peaks for
4 New England.

5 When I started my energy career, my
6 recollection is that the system-wide peak for New
7 England typically occurred around 4:00 o'clock in
8 the afternoon on a hot July afternoon, all right?
9 That doesn't happen anymore. Now, the regional
10 system peak, because of the penetration of DG
11 across the region, it's more like the 8:00 p.m.
12 range.

13 Now, I, fortunately, still can't
14 quantify, okay, what would have happened? What
15 costs would we have incurred had that change in,
16 you know, leaving a load not materialized? But I
17 don't think it's reasonable to conclude that
18 there was no benefit associated with that change
19 in how the electric power system is.

20 Q. Is it beneficial for it to shift from 4:00 to
21 8:00? What's the benefit of that shift?

22 A. (Beach) This is -- this is Tom Beach.

23 So, you know, before you had solar,

1 the -- the system peaked at 4:00 p.m. And when
2 you add solar, that will produce in the afternoon
3 and then decline into the evening, and your peak
4 will shift later in the day to, you know, maybe
5 as late as 8:00 p.m. around sunset.

6 But that -- what's called the net load
7 peak at 8:00 p.m. in the evening is going to be
8 lower than the peak that you would have had at
9 4:00 p.m. in the afternoon, because those higher
10 loads in the mid and late afternoon are now being
11 served by the solar.

12 So there's a definite benefit, because
13 the peak that's shifted into the evening is lower
14 than the peak that -- the prior peak that
15 happened at 4:00 p.m.

16 Q. Thank you. And I'll just repeat back, as I think
17 what you were saying that I misunderstood was
18 that, it's sort of proof of the shift, like your
19 proof -- your sense the peak went from 4:00 to
20 8:00, it shows that solar is having an impact on
21 the system, and is that what you were saying?

22 A. (Rice) That's correct. Yes.

23 Q. Okay. Thank you.

1 A. (Littell) I just want to add, consistent with
2 the answers, Mr. Beach said what I was going to
3 say, is that the evening peak is almost always
4 lower, until a lot of people start buying EVs,
5 right?

6 And why am I mentioning that? Because
7 I -- the assumption that we're just losing
8 revenue from the utilities with net metering, I'm
9 not sure is correct, and that's one of the things
10 that this sort of data collection suggested be
11 looked at, is that there is -- there are some
12 studies out of -- just like, California, they
13 have a lot more EVs, that there's a strong
14 correlation between people that do net metering
15 on their roofs that buy EVs and that put in
16 things like heat pumps.

17 And, again, anecdotally, if someone
18 does all three of those things, it's very likely
19 that their load is going up multiple times. So
20 even if they're net metering, they -- you know,
21 they're going to be reducing that load, but
22 they're probably -- their purchases from utility
23 are probably substantially higher, so they may

1 actually -- if you take that -- those customers,
2 if they're a subset of net metering customers,
3 may be actually subsidizing the other customers.

4 And we don't really have the data on
5 that, so that's something that would be, I think,
6 interesting to know, other than some -- some
7 studies that suggest that may be the case.

8 Anecdotally, I see it quite a bit,
9 because Maine has such high heat pump
10 penetrations, is that they're almost always --
11 when you have someone who's net metering, they've
12 converted to heating their house and the -- to
13 heating their house in the winter with their heat
14 pumps, and those heat pumps cannot -- can't get
15 enough from your rooftop to fund those heat
16 pumps. So they're going to be buying more from
17 the utility not less, so --

18 A. (WOOLF) If I may add a little bit. I think
19 terminology is important here regarding the
20 limited peak. The peak isn't shifted. The
21 battery is shifting. Distributed solar lifts it.
22 If you have 100 megawatts of distributed solar,
23 you've taken it off. You haven't moved it to

1 elsewhere. Just to be clear, I think it's
2 important to understand that it's not shifted.
3 It's --

4 Q. That's a good point. Thank you.

5 Okay. So -- so really, you know,
6 these questions are really around, you know,
7 trying to determine if these rates are just and
8 reasonable, and -- and there's clearly cost
9 shifting going on, right? It's just a question
10 of how much, and is that just and reasonable, and
11 that's -- that's one of the challenges, is to
12 figure out what that -- you know, where that line
13 is.

14 Let me go to -- let's have a couple
15 more lines of questioning. Let me go to
16 Eversource and the SCRC. You know, we -- there
17 was a filing -- we appreciate the Eversource
18 filing list in 23-091. There was clarification
19 that Eversource has 16,000 net metering
20 customers, and the 12-month cost is \$36 million,
21 so it just kind of framed it for the Commission
22 so we know what's -- you know, how big the bread
23 box is.

1 So my question for Eversource is:
2 That \$36 million, is that -- what is that? How
3 is that calculated? And is that really the net
4 metering cost? Is that the cost that's being
5 shifted between folks that have distributed
6 generation and folks that don't?

7 A. (Davis) Ed Davis here.

8 And I may have to double-check some
9 facts here. But reviewing that response and the
10 data behind it, that's actually the power
11 purchase expense; in other words, how much are we
12 paying out to the different types of net metering
13 facilities on our system.

14 So you quoted a number, so 35, almost
15 \$36 million during that -- during the current
16 period. So, yeah, that's the magnitude of the --

17 Q. That's the bill, right?

18 A. (Davis) -- credits, yeah.

19 Q. Right. Okay. That's the bill credit.

20 And so -- can you just walk the
21 Commission through the difference between the
22 bill credit and the -- sort of the -- the cost of
23 net metering from the point of view of a

1 non-distributed customer? How much of that \$36
2 million benefits the distributed generation
3 customer, and how much is -- is not in that
4 category?

5 A. (Beach) I'll do my best. I don't know if I can
6 cover everything on the benefits side. I would
7 say those are credits that accrue to participants
8 or customers who have those net metering
9 facilities. Some of those are certainly --
10 certainly, the credits are either allocated to
11 those -- received by those customers or applied
12 against their bill, but, also, could be shared
13 and allocated out to other customers.

14 At the end of the day, by having those
15 systems deployed, we're bringing on, of course,
16 renewable resources, and the cost of those are
17 spread over all customers.

18 So the SCRC, as a mechanism, elects a
19 number of different costs. This \$36 million
20 portion is allocated out, so it's brought in
21 monthly and, ultimately, allocated out over the
22 course of a year among our rate classes.

23 So all customers pay. Even if you're

1 a net metering customer, you will probably still
2 have a bill and be charged an SCRC rate for that
3 service. So that -- that, effectively, is sort
4 of on the class side. I think for a 600 kilowatt
5 customer, that's about \$2.80 a month on their
6 bill, the SCRC portion. I'm just taking 39
7 percent of the total cost, which is just these
8 \$36 million of credit. And it goes for everybody
9 supporting them, one way or another, through our
10 SCRC rate.

11 Q. But not by -- but not by -- yeah. So
12 Commissioner Goldner.

13 So I just want to make sure I
14 understand the question, or at least the -- what
15 the Commission is trying to answer. So we're
16 trying to understand if the cost shifting is just
17 and reasonable. We all know that there's cost
18 shifting. We have to just figure out if it's
19 just and reasonable.

20 And I just am trying to understand,
21 from an Eversource point of view -- we haven't
22 talked to any of the other utilities, but is the
23 cost shifting we're talking about \$36 million

1 from Eversource's point of view, or is it some
2 different number?

3 A. (Davis) Let me try this. Ed Davis.

4 If I take \$36 million and I divide it
5 by sales, about half a penny, on average.

6 Q. Yeah. That's right. Yeah.

7 A. (Davis) And I think that's a number similar to
8 what we've seen in some of the testimony. That's
9 just sort of an average cost or just the power of
10 purchase portion.

11 I don't think that's the full
12 equation, though. And maybe that's what I'm
13 struggling with in trying to answer, how do you
14 translate that to total cost/total benefit?

15 Q. That's what we're trying to understand in the
16 SCRC docket -- sorry. But in the SCRC docket,
17 the witnesses who were available that day
18 didn't -- didn't understand the -- you know, how
19 that SCRC was calculated.

20 And all the Commission is trying to
21 understand is, what is the amount of cost
22 shifting that's going on, because we have to
23 judge whether that's just and reasonable. So

1 that's -- that's really what I'm trying to get
2 to, is how much cost is being shifted, and if
3 that's a different analysis or -- we can -- I
4 just -- we just need to understand what that
5 would be.

6 A. (Rice) Brian Rice, Eversource Energy.

7 So I think your last statement there
8 is important, because what I would suggest is we
9 have -- obviously, review of the information in
10 the SCRC is important. I don't think you can
11 rely just on the information that the company
12 filed in the SCRC to make a determination on
13 whether, you know, any -- any cost shifting is
14 occurring and whether that cost shifting is just
15 and reasonable.

16 You know, we talked about 36 million,
17 so that is the value of net metering credits that
18 are provided to net metering customers on their
19 bills. They get that credit. They can use it to
20 offset charges that they would otherwise have to
21 pay. So that's really the top-line item.

22 But what the -- what the value of the
23 DER study goes into, what Tom Beach's analysis

1 for CENH goes into, is the offset -- the benefits
2 that accrue to customers that offset that 36
3 million.

4 And it's tough, because you can't put
5 all those benefits in a schedule in the SCRC.
6 You can put some of it in. The SCRC includes a
7 credit for market revenues that the company
8 collects for those to access their registered
9 device. You can itemize that.

10 There's another benefit in reducing
11 the load obligation that all wholesale suppliers
12 are responsible for, that presumably they'd have
13 to pass on to their customers, whether that be
14 Eversource providing default service or a
15 competitive supplier, so that there's an impact
16 in the wholesale load obligations. But, again,
17 you're already at a point where it's tough to
18 itemize that.

19 And then we talked about the
20 expectation on how, you know, distributed
21 generation can have beneficial impacts, and we'd
22 do that, avoid costs that would otherwise be
23 incurred for transmission and distribution

1 systems.

2 I think the analyses on the docket can
3 provide a basis for having confidence that those
4 benefits exist, even though they're hard to
5 materialize. But, again, you can't -- I don't
6 think, unfortunately -- you can't rely on a nice
7 clean schedule in the SCRC to make a
8 determination that's required in this proceeding.

9 A. (Woolf) May I elaborate? Or maybe you should go
10 first. You are younger.

11 Q. Well, thank you. I guess what I'd like to say
12 before you respond, Mr. Woolf, is that it's
13 important for the Commission to know what it is
14 they're approving. Understanding that there's no
15 perfection in the world, and quantifying line
16 losses and clipping out the peak, and so forth,
17 are not straightforward.

18 But you're asking us to approve,
19 somewhat, cost shifting, and then your
20 Commissioners area couple of quants, so we like
21 to quantify things and understand what it is
22 we're being asked to approve.

23 And so I grabbed the 36 million

1 because I didn't have anything else, and now --
2 you know, there's thousands of pages in this
3 docket. I can't find the quantification, so I'm
4 reaching out for help to understand, what is it
5 are you asking us to approve in terms of dollars,
6 at least to the best of your ability,
7 understanding that some things are hard to
8 quantify.

9 Mr. Woolf.

10 A. (Woolf) Thank you. You've actually teed up my
11 response. This is Tim Woolf responding.

12 I know it's very tempting to try to
13 quantify the cost shifting in terms of million of
14 dollars, but I caution you against it, because
15 it's -- it's out of context. What does it mean
16 if it's 50, if it's five?

17 And -- and we have provided you with
18 the evidence you're looking for, the metric
19 you're looking for. It's rate impacts. Rate
20 impacts will provide context for how much \$50
21 million means. Does it mean a
22 2 percent increase in rates or a .2 percent
23 increase in rates?

1 So that's what -- and that's why we've
2 said throughout our testimony -- and I say this
3 in every state I've work in, that it's the rate
4 impacts that identifies what kind of cost
5 shifting you might see.

6 Q. Just, my challenge is that it reminds me of how I
7 didn't eat my peas when I was a kid. I stuffed
8 them under my mashed potatoes, and I didn't eat
9 the peas.

10 If you spread out the numbers --
11 significant numbers, \$50 million, \$30 million,
12 over a large enough base, you're going to get a
13 small number. And while I appreciate the need to
14 sort of -- that's a rational thing to do, to look
15 at the bill impact, but it's also -- I don't --
16 you're spreading it out over Eversource, which is
17 the largest utility in the state, and, you know,
18 I just don't -- I don't know that that's -- to
19 me, the dollar impact is meaningful, and it has
20 to be put in context.

21 I agree with looking at the bill
22 impact, but it does remind me of hiding my peas
23 at the moment, so --

1 A. (Woolf) Just quickly. Tim Woolf responding.

2 That is how the cost shift affects
3 customers. It affects them because their rates
4 change.

5 So I -- maybe the best way to think of
6 it is looking at it both ways, in dollars and
7 rate impacts, because that's what customers see.
8 So that's why I see it as the most meaningful
9 metric.

10 Q. Yes. Thank you for the clarification. I think
11 we're in violent agreement. I think the bill
12 impact has to be a part of the equation, and I
13 think the dollars have to be a part of the
14 equation, and I think both are helpful.

15 And so, I'm just going to circle back.
16 I understand the bill impact, because that's in
17 the filing -- at least, I understand it's in the
18 filing.

19 Can -- can somebody undo that bill
20 impact into a dollar impact, just so the
21 Commission can have both numbers?

22 A. (Littell) David Littell here.

23 What I -- I mean, one way to deal with

1 it, I'll suggest to my client, is that if we
2 have -- if you accept CLF's suggestion for
3 briefs, we could pull out of the appendices and
4 all the studies the actual dollar calculations
5 for avoided costs. That helps take the 36 and
6 puts it in context of what the calculation is for
7 avoided capacity costs in the avoided capacity
8 market and avoided transmission, and the DRIPE,
9 which I think the -- the demand response, that's
10 basically price suppression.

11 That could help put it in context for
12 you, if you see those in the briefs. That's my
13 response for -- on this record, where we could
14 help put that into context for you.

15 Q. Thank you. I'll just add that -- I'm looking at
16 Attorney Chiavara, that I think, in the SCRC
17 docket, in this docket, we're just -- the
18 Commission is just pounded with pages and
19 numbers, and we do our very best to make sense of
20 all of it, but to the extent that you can help us
21 consolidate it so we can have a single view, it
22 would be very helpful. Because in the SCRC
23 docket, it would have been -- you know, it would

1 be good to know, you know, what the total impact
2 is of the net metering.

3 So thank you for the suggestion,
4 Attorney Littell. I think we'll take you up on
5 that. And we can look at both the bill impact
6 and dollar impact numbers so the Commission can
7 understanding what it is it's approving.

8 Commissioner Chattopadhyay, yeah.

9 COMMISSIONER CHATTOPADHYAY: Is this
10 working?

11 CHAIRMAN GOLDNER: Yeah.

12 BY CMSR: CHATTOPADHYAY:

13 Q. Commissioner Chattopadhyay.

14 I think I would want to also make sure
15 that it's understood what I was stressing, which
16 is, having numbers separately for the customers
17 who are not DG and the others who are DG. That
18 itself is going to be extremely helpful.

19 A. (Littell) Dave Littell.

20 Yeah, there's a good chance you'll see
21 that in the briefs as well.

22 A. (Woolf) If I may respond. Tim Woolf.

23 The rate impacts are the -- the

1 impacts on the non-DG customers.

2 Q. And I -- Commissioner Chattopadhyay.

3 And I understand that, but -- like, I
4 went through the avoided cost discussion. That's
5 where we need to do some analysis to improve the
6 visibility as to what's going on with a
7 representative customer who is not on DG.

8 CHAIRMAN GOLDNER: Okay. Just a
9 couple more -- couple more questions, and we'll
10 move to redirect here shortly.

11 BY CHAIRMAN GOLDNER:

12 Q. I promised to ask this question earlier, and I
13 wanted to keep my commitment.

14 Do you have any capital spending for
15 -- this a question directed to Eversource. Is
16 there -- is there an estimate of the capital
17 spending needed in your rate case to support
18 distributed energy resources? Have you broken it
19 out? Does the company have an understanding of
20 how much of its capital plan in the rate case is
21 for distributed energy?

22 A. (Rice) Brian Rice, Eversource Energy.

23 I didn't prepare any capital spending

1 schedules included in the rate case. However, as
2 I explained previously, New Hampshire has a
3 policy that, if system upgrades, which are
4 typically capital expenses, are required to
5 enable the interconnection of a distributed
6 generation customer, the distributed generation
7 customer is responsible for funding those costs.
8 So I wouldn't expect any capital costs for this
9 rates case associated with enabling the
10 interconnection of DG.

11 Q. So Attorney Chiavara escaped while we were
12 talking, but I wanted to make sure that the
13 company understands that we would expect, in the
14 rate case, to see no capital expenditures
15 associated with distributed generation in the
16 rate case. So I just want to make sure that
17 that's clear to the company, and that's what we
18 expect to see, based on the testimony here today.
19 Thank you.

20 A. (Rice) I will pass that along.

21 Q. Thank you.

22 A. (Woolf) Got it.

23 Q. Thank you. Okay. I think I just have a couple

1 left. So, I believe I understand the explanation
2 for this, but I just want to go through this
3 briefly.

4 So, the variability -- I think ISO New
5 England reports in five-minute increments, if I'm
6 not wrong, and I think the collective goal here
7 on the panel -- I don't want to put words in your
8 mouth, but I think the goal is, if we have a hot
9 afternoon like we did earlier, I think in June,
10 maybe in early August as well, where the prices
11 go to \$2,000 a megawatt hour, that's the perfect
12 time for a solar operator to be running. And
13 that is your position, and it makes sense to me,
14 that the solar operator really should be entitled
15 to every penny of that \$2,000, because that's the
16 perfect time to be putting energy on the grid.

17 The only reason we're not doing that
18 today is that DOE rates and instant reporting and
19 this kind of thing is something that's sort of
20 not practical from a utility point of view. It
21 would be too expensive, and we don't have the
22 meters and the computer backbone and that kind of
23 thing. Is that -- is that kind of where the

1 joint parties landed?

2 A. (Littell) This is David Littell.

3 That's right. I think the position
4 that those parties would be entitled to \$2,000 is
5 sort of way out beyond, certainly, the
6 settlement, and at least, it's beyond our
7 testimony. I don't recall anyone saying any of
8 that, so I just want to be clear on that.

9 In fact, I think, given what we've
10 proposed, what I -- to bring it back to the
11 settlement, is we would say they're not entitled
12 to that \$2,000. They're entitled to what they
13 get under net metering. And for those hours,
14 that's a clear benefit that's going to
15 ratepayers, right? That's part of the
16 load-reducer benefit, is for the hours where the
17 grid's above that -- that that cost of supply
18 flows directly to the other ratepayers, as well
19 as the reduced capacity costs and reduced
20 transmission costs. Because if you didn't have
21 all this behind-the-meter solar and other solar
22 on the system, we'd be building a lot more
23 transmission and a lot more capacity to serve it.

1 So, I mean, just to flip it around,
2 our position is that, actually, ratepayers are
3 entitled to that -- that \$2,000 -- the difference
4 between net metering. That is part of the
5 benefit that ratepayers get. That's a load
6 reducer.

7 Q. So let me ask you this question as Clean Energy
8 New Hampshire, not as a settling party. Is it
9 Clean Energy's position that over time, not --
10 not right now, but over time, that you would want
11 to go to instantaneous rates or time-of-use
12 rates, or does Clean Energy not have a position
13 on that?

14 A. (Littell) I know I had -- that's not part of my
15 testimony and not part of what we were asked to
16 talk about in this.

17 What I can say is that, when we get
18 into the far future -- I've done a lot of work
19 with what rates should look like, in both the
20 wholesale markets, the RTOs, and then how that
21 transitions to retail rates. And it gets quite
22 complex, because you're gonna end up with a lot
23 of zero marginal cost resources on the system,

1 right?

2 So I -- we all are gonna have to do a
3 lot more thinking about how those interact with
4 RTOs in our market design, because the
5 solution -- you know, with all due respect to my
6 friends in Connecticut, who've done a lot -- the
7 solution can't be to procure 90 percent of our
8 standard offer load, and I don't think we're in
9 disagreement, right? That doesn't really work
10 with the restructured markets.

11 So I think, you know, the long-term
12 answer, it's going to have to -- is likely going
13 to be lower compensation for lower-cost
14 resources, like solar and wind, in the long term.
15 I'm talking decades in the future.

16 And my own personal view is that much
17 higher compensation for dispatchable, flexible
18 energy, whether that's from -- clean energy
19 people like to say a battery. My natural gas
20 clients like to say natural gas. Hydro folks
21 like to say it's from hydro with storage. It'll
22 be from all three, right?

23 Those -- those are the real value in

1 that type of advanced system, but we're decades
2 from that. So I just -- I fast-forwarded to the
3 answer, and until we get there, I think, you
4 know, we're stuck with trying to make our
5 wholesale markets work in -- with these
6 resources. And -- and, you know, we're doing --
7 we're doing an okay job, but we're -- I think
8 it -- I think it could be better.

9 And, again, just focus here -- you
10 know, the value here is greater than -- than the
11 costs, so we sort of move on. I think if we do
12 that, move on, we'll figure out how to deal with
13 the next structure.

14 But we just got through dealing with
15 the Mystic costs, right? The Mystic costs was a
16 huge problem, because it was threatening the
17 habit in our -- in our wholesale markets, because
18 it was the uplift costs. You got a bill from ISO
19 New England, like six months after it was
20 incurred, and then all the suppliers didn't know
21 how to deal with it.

22 But part of the solution to that,
23 actually, ironically, ISO New England -- I put

1 this in my testimony. They said, "Hey, we didn't
2 expect all this solar generation in the middle of
3 the winter. This is enough that we can actually
4 cycle off and not have to pay domestic."

5 So we -- when I say "we," I mean at
6 least Maine and New Hampshire -- got off of
7 paying for that. And then Massachusetts, your
8 DPU volunteered to pay for it through your email.

9 So, I mean, my suspicion was that's
10 okay with this solution, so --

11 Q. Thank you. Mr. Woolf.

12 A. (Littell) So, I mean, I digress a little bit,
13 but just to point out the interconnections
14 between these. I mean, the Mystic might be no
15 problem with -- it was a big problem, but we've
16 gotten beyond it now. And -- again, with thanks
17 to Massachusetts for ponying up afterwards to pay
18 for that.

19 Q. Let me just run through this grandfathering
20 business. I just wanted to come back around to
21 that briefly. Is -- is the purpose of the
22 grandfathering to -- just -- just a moment,
23 please.

1 When they first came across the
2 grandfathering scheme, I thought it was to
3 develop sort of immature technology. You'd sort
4 of have this -- you have this technology you're
5 developing. This is common in high tech. You --
6 you know, some subsidies. You try to figure out
7 how to launch the thing. And then once it's
8 launched, you move your subsidies to the next
9 thing, and you move on with your development
10 process.

11 Is that -- is that not what's
12 happening here with grandfathering? Because it
13 seems like you're looking for -- it has to do
14 with financing and this kind of thing.

15 A. (Littell) Yeah. No, that's -- what you just
16 said is correct. That's not what's happening
17 with it. It strictly provides a time period
18 where the third-party -- third-party financiers,
19 banks and others, will say, "Hey, your pro forma
20 looks good enough that I'm going to provide
21 financing, because you're going to make enough
22 money that you can pay off my loan." It's that
23 simple.

1 Q. And so, this is very helpful for the Commission,
2 so -- so just walk us through how that -- how
3 that works. This is -- you know, you're going to
4 TD Bank on the corner, and you've got \$50,000 on
5 your roof, and you're trying to get it financed,
6 and, like, how does this -- like, can you just
7 walk us through, from a homeowner perspective,
8 what does it look like? How does this
9 transaction work?

10 A. (Littell) Before I can answer that question.

11 A. (Woolf) Yeah. If I may -- Tim Woolf responding.

12 I think there's a different calculus
13 for the homeowners than it is for the larger, you
14 know, customers. The homeowners, they are
15 approached either by a utility or by a vendor,
16 and they say, we can put this, quote/unquote, big
17 system on your roof, and here's how it will
18 benefit you with reduced bills. And often,
19 they'll say, we can give you a payback period of
20 seven, ten, whatever years.

21 And if they were to come along and
22 say, oh, we can't tell you what's going to happen
23 in year five, because we're not grandfathered,

1 and everything up to year five could be totally
2 different. You'd lose a lot of customers.

3 That's, for me, the reason for
4 grandfathering, is to give certainty to
5 residential customers as to what they can get
6 when they put their money down.

7 And it's the similar concept for
8 larger customers, but in that case, they're
9 looking for financing in addition.

10 Q. I see.

11 A. (Littell) Now, that was well said. I think you
12 have to differentiate.

13 In the retail market, the way that
14 solar companies market is a payback period; this
15 is how long you'll pay that. It's -- you know,
16 most -- not all residential people even
17 understand the value of money, what a discount
18 rate is, so -- sometimes it's a very simple
19 calculation, right, without even a discount rate
20 of, this is how many years.

21 And, of course, you know, you've got a
22 finance or business background, you know, it's
23 going to be longer because (indiscernible). But

1 that's how that goes for a residential customer
2 program.

3 For your businesses that are putting
4 in the systems, especially, you know, larger
5 businesses like -- one large businesses is a
6 member of the settlement. They -- you know, they
7 look at the dollars and cents. Does this make
8 sense for our business to offset our load?

9 And then, again, you have community
10 solar, which -- you know, a lot of municipalities
11 that have the best intentions and want to have --
12 a mixture of motivations. Sometimes they just
13 want to save money. Sometimes they want to do
14 clean power. Sometimes they want to do both.

15 But, for all of those larger projects,
16 almost all of them, you're going to have a
17 third-party financier arrangement come in,
18 because no one can -- it's going to be able to
19 put up the roughly -- I'll throw out \$10 million.
20 That's a very rough figure. But for a 499
21 megawatt project, it can be more, it can be less.
22 But, you know, none of those parties is willing
23 to do that on our balance sheet, so to speak.

1 So I think the differentiation Mr.
2 Woolf makes is exactly right. You differentiate
3 the market, but for both of them -- one, the
4 residential need certainly of a payback period,
5 because they don't -- I mean, and I'm -- one
6 point on that.

7 In Maine, for a short time period, we
8 had the Commission adopt a form of net metering
9 that just really didn't work. And even the
10 residential market, everything just fell off.
11 All of the solar companies in Maine were coming
12 over to New Hampshire during that time period to
13 try to stay afloat.

14 So you do see it make a difference,
15 even for the residential market, where people are
16 not motivated, in my estimation, primarily to
17 save money, but they still don't want to pay 15
18 to \$20,000 for something on the rooftop that, you
19 know, they -- they are not sure they're -- what
20 economics are after five years.

21 So, you know, even then, it makes a
22 difference, even if the primary motivation is
23 something different.

1 Q. Well, what's the -- what's the payback today for
2 residential customers in New Hampshire? I think
3 it's in the filing somewhere. I don't remember.
4 Was it nine years or something?

5 A. (Woolf) Actually, you know what --

6 A. (Beach) You can check our testimony on that.
7 We've made some estimates, but, you know, these
8 are all estimates. And they range, I think, from
9 9 to 14, depending upon the scenario. Again,
10 subject to checking in the testimony.

11 Q. That's what I -- I think I remember that.

12 So -- so what you're asking about with
13 the grandfathering legacy in the settlement is,
14 today, if the Commission did nothing, the --
15 the -- let's call it the formula, would apply
16 through 2040, which is 16 years, which is outside
17 the payback period. So I'm just trying to
18 understand why extend beyond 2040, given that the
19 payback period is inside of that -- the current
20 values, and that the request in this settlement,
21 I think, is to return in two or three years to
22 look at it again, where it would still be inside
23 the window. So why wouldn't we just leave it

1 alone, I guess?

2 A. (Hayden) I think this was more the legacy
3 period -- oh, sorry. Bob Hayden.

4 Q. Thank you, Bob.

5 A. (Hayden) It's more directed at larger projects
6 that have a traditional finance period of 20
7 years. So that's a -- a normal range of time
8 that investors consider for solar projects.

9 At some unknown lesser amount, based
10 on the fact that we might have 16 years or we
11 might have interconnection problems and have 15
12 years, these projects won't work. And there
13 are -- you know, I have examples of projects that
14 won't complete if there's only 15 or 16 years of
15 net metering benefits.

16 Q. And the reason I'm confused by that is, let's
17 take a large customer, for example, who's getting
18 the default service rate plus REKs, sort of not
19 seeing much of a difference between the --
20 between the payment that they're getting today
21 and the alternative.

22 So they're going to get the ISO New
23 England rate anyway, and the other difference

1 is -- is that we're giving them default service
2 today, so they're getting that sort of risk
3 premium and a few other things baked in there.
4 So there's not much of a difference. So I guess
5 I don't understand why -- why this 20 years is
6 important.

7 A. (Hayden) Robert Hayden again.

8 The 20 years is enough for the profit
9 margin of the investors in some cases.
10 Otherwise, it comes out as a negative
11 calculation, like I think David showed earlier.

12 Q. Yeah, I'm building, really, on the Department's
13 line of questioning.

14 The chart showed that everything
15 terminated in 2040, went to zero. But it
16 wouldn't. You would still get the ISO New
17 England rate. You would still get the RECs in
18 that time period. And, in fact, by my simple
19 calculation, the delta is what, \$40 a megawatt
20 hour, not zero. It's -- it is a difference, but
21 it's -- but the assumption on the spreadsheet
22 looked erroneous.

23 A. (Littell) Okay. Three's two questions. David

1 Littell here.

2 One is, yes, I acknowledge in response
3 that there -- I mean, anyone who is operating
4 will likely salvage whatever revenue they can get
5 out of it, up to the point where their effort
6 isn't paid for just to them. So, yes, I agree to
7 that.

8 Finally, I mean, to be absolutely
9 clear, we're not -- I mean, you can't finance a
10 project -- we're hearing this from our members.
11 I know it from my solar client folks. They say
12 you can't finance it when you start to get it to
13 the point that we're at now, which is 15 or 20
14 years. It's simply banks won't provide that type
15 of financing.

16 So, as a practical matter, that's --
17 that's why that sort of -- Clean Energy New
18 Hampshire and companies that do this, the bottom
19 line is that they just want a program that works.
20 And it doesn't work, except for the residential
21 customers.

22 As to residential -- I think you have
23 a point. You -- I don't have a breaking point

1 for residential yet. But residential go to the
2 smaller projects on people's roofs.

3 And, as you pointed out earlier, they
4 get -- they get compensated for (indiscernible),
5 particularly for commercial projects, but which
6 include the municipal -- those projects within
7 that category, small business. They use them to
8 offset their projects. They use them to --
9 sorry, offset their energy bill. So these are
10 real energy bill reductions for real companies.

11 And I'd also point out, we cited the
12 Maryland value solar study in the testimony, but
13 based on also, like, the various studies they
14 did, and for the Kingston project study, that's
15 not in evidence, from earlier, but they talked
16 about jobs benefits and the economic -- multiple
17 economic factors. Those are very real to the
18 economy, so those -- didn't want to lose sight of
19 those benefits as well.

20 Q. So let me just put forward -- and then go to
21 Commissioner Chattopadhyay as a follow-up -- that
22 you do have 20 years. Nobody is going to pay
23 zero for the energy after 2040. It's just a

1 different number, maybe less, maybe the same,
2 maybe more. That's all I'm taking for now.

3 So I'm a little bit skeptical of the
4 20-year argument, just because there is -- there
5 is a payment out there, and it's still
6 significant, although, admittedly, much less in
7 relative terms for the residential ratepayer
8 versus the commercial.

9 Commissioner Chattopadhyay, did you
10 have a follow-up?

11 BY CMSR: CHATTOPADHYAY:

12 Q. Yeah. This is Commissioner Chattopadhyay.

13 Just to make sure, when you're talking
14 about large customers, you're talking about
15 100 KW to 1 megawatt, or is it all above 1
16 megawatt?

17 A. (Littell) The terminology that's used in New
18 Hampshire is that large customers are 100 KW and
19 above, so I'm using -- I'm using that
20 terminology. It does vary from state to state.

21 And, again, we're not -- I mean, it's
22 a matter of financeability. So I understand sort
23 of the skepticism. But I just want to be clear,

1 it's a matter of the ability to finance. It's
2 not that there might be additional revenue out
3 there beyond what's here. The folks that are
4 providing the financing won't say that's
5 sufficient and put the money forward.

6 Q. So the financeability is -- you're still talking
7 about facilities that are -- when you say
8 "large" --

9 A. (Littell) Again, really, one-to-one and above
10 one for the municipal host facilities.

11 Q. But -- okay. I understand. Thank you.

12 A. (Rice) Brian Rice, Eversource Energy.

13 I'd also like to come back to the
14 residential customer issue, because I think we've
15 focused on financing terms. I think there are
16 other considerations that are important to keep
17 in mind for residential customers. Third-party
18 ownership, as we've seen, is a common model for
19 residential customers to acquire distributed
20 generation. My understanding is probably these
21 terms are 15, 20 years.

22 And I think it's also important to
23 understand that -- we talked about the scenario

1 in which, like, a residential customer won't, you
2 know, proceed if they're told that -- a change in
3 five years. Guess what, there's some salespeople
4 out there that are just trying to set up
5 customers. They might not tell them that the
6 rules are going to change in five years.

7 So there's a real risk of kind of
8 leaving less-sophisticated residential customers
9 and -- with underwater distributed generation
10 investments.

11 So I think extending that
12 grandfathering term to them provides an element
13 of kind of consumer protection for them.

14 CHAIRMAN GOLDNER: Okay. Thank you.
15 And not to beat a dead horse, but it's already
16 guaranteed through 2040, assuming nothing
17 changes, so -- at 16 years, and then after that,
18 as we had discussed, it's a net zero number, but
19 I do appreciate that.

20 Okay. I think we can maybe wrap up
21 with this one. This is a question for Attorney
22 Chiavara, because I think it's a legal question,
23 so I won't address it to the panel.

1 Does the Commission have the legal
2 authority to issue a rate guarantee proposed by
3 the joint parties? Would this interfere with a
4 future Commission's authority to set rates, as
5 well as its obligation to ensure that all
6 existing rates are just and reasonable? Equally
7 significantly, would it constitute rulemaking by
8 order?

9 And if you'd like just to take a break
10 and come back for that, we can do that, or you
11 can fire away.

12 MS. CHIAVARA: Jessica Chiavara.

13 I think I have a couple of clarifying
14 questions first. There was a lot in there.

15 First, you said, does the Commission
16 have the authority to make -- to have a rate
17 guarantee? And I wondered if you could clarify
18 what you mean by a "rate guarantee."

19 CHAIRMAN GOLDNER: So the way we think
20 of what we're being asked to do, which seemed
21 consistent with prior Commission order, but --
22 I'm just checking -- that you're asking us to
23 approve the current NEM 1 and NEM 2, which is

1 basically a formula that says, you know, your
2 default service, plus your transmission, plus a
3 quarter of your distribution, and so forth.

4 So you're asking us to basically
5 provide what -- what I would call a rate
6 guarantee -- through the default service can vary
7 over time, but that formula is guaranteed for the
8 next -- the request is 20 years.

9 MS. CHIAVARA: Right. The
10 compensation, its structure then.

11 CHAIRMAN GOLDNER: That's right.

12 MS. CHIAVARA: Okay. And sorry, then
13 after that, there were a couple other things
14 right after that.

15 CHAIRMAN GOLDNER: Would this
16 interfere with a future Commission's authority to
17 set rates, as well as its obligation to ensure
18 that all existing rates are just and reasonable?
19 And then, finally, would it constitute rulemaking
20 by order?

21 MS. CHIAVARA: Okay. I would be ready
22 to answer that after a short break.

23 CHAIRMAN GOLDNER: Okay. Thank you.

1 So we'll -- I think the Commissioner -- we'll
2 check. There might be one follow-up. We'll come
3 back for redirect and Attorney Chiavara's answer,
4 and then the -- and what we'll do at that point,
5 I think, is end the day, and then pick it up
6 with -- let's see who is next. Was it the DOE?
7 Was the DOE next? I'm sorry. Hold on. There's
8 many pages here. The DOE, I think, is next. So
9 we'll come back and start with the DOE on
10 Thursday morning.

11 So any questions before we take a
12 break? Okay. Thank you. Let's return at 4:00.
13 Off the record.

14 (Recess taken.)

15 CHAIRMAN GOLDNER: Okay. We'll wrap
16 up the day and start with redirect.

17 MS. CHIAVARA: We actually have no
18 redirect. It's an afternoon gift.

19 CHAIRMAN GOLDNER: Thank you. Then we
20 can return to the legal question.

21 MS. CHIAVARA: Sure. So taking this
22 in its component parts, the first question was,
23 does the Commission have the authority to set

1 what you characterized as a rate guarantee? And
2 I would say, yes, but I wouldn't necessarily
3 characterize it as a rate guarantee.

4 I think what you are approving is a
5 compensation structure. It's made up of
6 component parts. Each of those component parts
7 is an individual rate, which is -- has to be
8 found just and reasonable in and of itself.

9 So each of those -- so that goes to
10 your second question, which is, does this
11 complicate your ability to find rates just and
12 reasonable? And I would say, no, it does not,
13 because you still have to find each of those
14 rates, default, supply, transmission, and
15 distribution, all just and reasonable in and of
16 themselves.

17 As far as the compensation structure
18 that you'd be approving and as far as that would
19 be some sort of guarantee because the projects
20 that enter -- should you approve the Settlement
21 Agreement, any projects that enter under 2.1
22 would get the 20-year-legacy period that would
23 adhere to them, so they would be locked into that

1 compensation structure.

2 However, the Commission does -- and I
3 believe one of the witnesses mentioned this
4 earlier. The Commission has the authority to
5 open a new docket to examine changes to the
6 compensation structure.

7 So while any of the projects that
8 qualify under the legacy period would have that
9 20-year term, the Commission could always change
10 the compensation structure if they felt that that
11 compensation structure was no longer in line
12 with -- if they felt that there was unjust and
13 unreasonable cost shifts occurring.

14 CHAIRMAN GOLDNER: Okay. Thank you.
15 Any of the other legal folks in the room like to
16 weigh in to Attorney Chiavara?

17 MS. CHIAVARA: Well, there was --
18 sorry. The last thing with -- Jessica Chiavara.

19 There was rulemaking by order as well?

20 CHAIRMAN GOLDNER: Yes.

21 MS. CHIAVARA: This is -- this would
22 apply to utility tariffs, and I think it's
23 squarely within the ratemaking purview of the

1 Commission and doesn't encroach on rulemaking.

2 CHAIRMAN GOLDNER: Thank you. Okay.

3 Anybody else like to weight in on the issue?

4 Okay. Seeing none --

5 MS. CHIAVARA: Commission Goldner?

6 CHAIRMAN GOLDNER: Yes.

7 MS. CHIAVARA: I just want to reserve
8 the right -- it would be appropriate for the
9 parties to brief this issue in post-hearing
10 briefs, correct?

11 CHAIRMAN GOLDNER: Sure.

12 MS. CHIAVARA: Okay. Thank you.

13 CHAIRMAN GOLDNER: Thank you. Okay.

14 Very good.

15 So the witnesses are excused. Thank
16 you, everyone, for the excellent testimony today.
17 Thank you very much.

18 And let's see, so is there anything
19 else we need to cover today? And I'll just, as a
20 quick reminder, say I think DOE is first on
21 Thursday. We'll start at 9:00 a.m. And I'll
22 just check to see if there's anything else we
23 need to cover today.

1 Okay. Thank you. Seeing none, we'll
2 continue this hearing at 9:00 a.m. on Thursday.
3 The hearing is adjourned.

4 (Whereupon, the hearing
5 was adjourned at 4:40 p.m.)

6 * * *

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

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

C E R T I F I C A T E

I, Nancy J. Theroux, do hereby certify that the foregoing transcript is a true and accurate transcription of the within proceedings, to the best of my knowledge, skill, ability and belief.

THE FOREGOING CERTIFICATION OF THIS TRANSCRIPT DOES NOT APPLY TO ANY REPRODUCTION OF THE SAME BY ANY MEANS UNLESS UNDER THE DIRECT CONTROL AND/OR DIRECTION OF THE CERTIFYING REPORTER.

Nancy J. Theroux



NANCY J. THEROUX
Licensed Court Reporter
NH LCR No. 100

\$					
\$1,000 132:19	11:30 101:3	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2042 172:6	149:6 163:12 171:15 203:6 214:12	
\$10 256:20 291:19	11th 107:22 109:18 118:6 119:21 120:9	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2043 213:8	4.9 157:22	
\$100 251:22	12 30:10 40:4,9 41:18 43:7,10,14 52:23 53:12 58:18 95:12 102:5 115:15 143:18 174:19	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2045 164:20 166:1 168:6 169:6 170:9 171:5	4.99 225:22	
\$110 251:1,9	12-month 267:20	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	21 138:23	40 93:10,23 222:13	
\$150 251:12	13 59:5 138:23 143:18	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	22 142:7	40-some 222:6	
\$180 251:19	14 138:23 141:4 143:18 293:9	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	22-060 5:6	413 56:8	
\$2,000 282:11,15 283:4,12 284:3	15 59:6 71:7,8,16 136:9 141:4,23 142:10,13 221:4,11 251:12 292:17 294:11,14 296:13 299:21	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	22-073 190:19 192:20	45 52:6,15	
\$2.80 270:5	15-year 221:7	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	22-blank 192:16	48 52:20	
\$20,000 292:18	150 115:16	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2222 230:5 231:1	499 291:20	
\$200 132:18	16 137:16 293:16 294:10,14 300:17	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	23 33:14 129:7 135:19 213:15	4:00 263:7,20 264:1, 9,15,19 303:12	
\$22 257:5	16,000 267:19	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	23-091 267:18		5
\$30 276:11	17 36:16 37:21 231:20,21	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	24 76:17 77:17 99:2 120:17	5 36:17 37:22 51:8,23 56:8 69:10,22 112:1 114:7 139:3 161:11, 16 174:15 204:11 235:17 236:1 237:10 238:12 246:10,16	
\$36 267:20 268:2,15 269:1,19 270:8,23 271:4	18 33:11 88:6 177:19 178:1,5,22	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	25 115:15 132:19 160:11 187:21 188:12 189:6	50 19:9 142:11 275:16	
\$40 295:19	18-month 174:16 177:18 178:15	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	26,029 5:15	500,000 183:14	
\$45 256:18	180 251:18	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	26,213 29:7 46:9,14	53 120:20	
\$50 275:20 276:11	18th 29:17 46:15	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	26,316 46:9	541-A:31 6:2	
\$50,000 289:4	19 31:17 36:10 80:1 166:17	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	260-A 140:8	55 96:10,16	
\$55 256:22	193 121:6	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	260-A:9 137:18	58 52:3,13,20 54:17, 19 55:2	
\$80 257:4	1997 184:22	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	27 115:18 138:23	59 66:13	
0	1999-2000 185:2	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	27th 29:3		6
0.2 58:19	1:00 147:18	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	28 93:16	6 58:18 112:2 114:8 142:6 155:6 164:12	
0.6 58:19	1A 157:9 159:1	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	29 141:23 155:18	6.7 99:5	
001 112:10,14,15,20	1B 157:9 159:1	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	29th 29:16	60 246:13	
1	1st 252:4	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2A 159:1	600 270:4	
1 10:3 42:11 56:14 58:7,8 60:10 78:16 80:20 108:19 110:11 113:2 114:21 117:3 118:22 121:17 126:6 130:23 141:23 148:7,9,14 149:5 152:4 157:15,21 163:11 174:16 181:3 182:5,23 209:7 225:17 232:1 233:14 235:17 236:1 237:10 238:12 298:15 301:23	2 69:20 108:4 109:19 118:7 119:22 120:10 122:4 157:15 177:6 231:19 275:22 301:23	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	2B 159:1	61 93:5,16 95:9	
1,387 120:21	2.0 162:9 164:2 167:5 168:1,17 171:18 172:4,22 187:12 188:15 189:22 190:8 204:13 212:1,17 213:4,14 214:11,15 215:1	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	3	628 121:6	
1.0 164:2 167:5 168:17 170:13 172:22 214:15,23	2.1 163:14,15 164:6, 16 165:3,9,10 166:13 168:15,23 169:3,14 170:3,13, 14,16 171:22 172:5, 22 212:5,15,16,17 213:6,17,21,23 214:15	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	3.4 55:15	6th 111:21,23 114:6 124:23	
10 33:14 39:3,14,19, 23 40:12,13 41:20 69:10,22 136:10 149:7	2.6 55:15	20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	3.4.1.2 93:6	7	
10-minute 200:21		20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	30 139:2 251:10,17	7.5 99:6	
100 15:21 132:20 151:20,22 172:15 187:19 197:4 205:9 247:10 251:1,9 253:4 259:2 266:22 298:15,18		20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,11 215:2 218:20 219:9, 11,12 220:4,11 251:12 294:6 295:5, 8 296:13 297:22 299:21 302:8	30th 71:5 107:23 108:5 109:20 111:21 112:2 114:7 118:8 119:23	71 54:21 55:3 68:23 69:20 70:8	
11 33:11 40:3 42:7,17 43:23 55:18 56:23 59:2,6 71:4,15 76:20 108:3 150:20		20 20:1 52:6,15 135:7 136:22 139:21,23 141:6 142:7,13,16 147:11 160:11 163:15 165:11 169:5 171:19,20 173:17,21 174:9 212:13,16 213:16,22 214:1,1			

- 80** 160:17
8:00 263:11,21 264:5,7,20
8th 35:19
-
- 9**
-
- 9** 34:11,13,14,15
 35:10,15,18,19,20
 36:15 37:6,19 64:6
 76:16 99:2 120:17
 293:9
9-0 120:20
9.5 60:2 62:3
9.54 59:3,9 60:10
 62:4,13,18 74:12
 75:14,19
90 93:8,23 260:20
 285:7
900 255:10
905 120:20
910 121:9
97 240:19
9th 29:14
-
- A**
-
- a/k/a** 163:16
Aalto 19:4,5,7,8
 22:15,20 23:5 137:4
abandoned 233:18
ability 21:12 70:14
 199:21 212:4 213:14
 233:1,2 275:6 299:1
absolutely 13:19
 66:20 117:10 129:21
 172:2 214:21 218:2
 226:15 257:17 296:8
absorb 189:23 233:2
 246:23 247:18 249:3
accelerated 129:6
accent 90:9
accept 140:17
 195:20 278:2
accepting 102:16
access 17:18 130:8
 240:10 259:6 273:8
accessing 210:14
accommodate 96:15
 97:1 233:5 246:18
account 22:2 34:18
 61:11 68:3,15 84:4
 95:10,14 102:5
 122:11 127:21 133:1
 251:5
accounted 83:7
accounting 94:10
accounts 96:14
accrue 84:17 262:4
 269:7 273:2
accumulate 262:23
accurate 15:15 16:18
 183:16 197:4
accurately 6:12
 88:21
- achieve** 244:19
acknowledge 296:2
Acknowledging
 186:3
acquire 299:19
action 10:14 17:4
active 104:11 115:20
 116:11 234:20
activity 225:20
acts 194:23
actual 46:19 187:3
 203:11 250:15 278:4
Adam 8:15
adaptable 183:7,13
add 146:21 147:1
 151:19 157:14
 176:20 177:1 178:2
 205:23 206:20
 208:12,15 211:6
 237:21 241:15 244:1
 264:2 265:1 266:18
 278:15
added 19:15 21:7
 51:8,18 52:6,15
 95:17 128:10,18
 130:20 195:5 241:2
addendum 34:12,16
 36:7,11 37:3 40:8
 43:11,13 53:7,11
 58:17 63:3,14,15
 64:6 87:14
adder 205:11,12
adding 74:8 75:2
 225:9
addition 14:11
 143:22 234:16 244:4
 290:9
additional 11:10,13
 16:8 33:22 34:9
 51:8,19 81:21 83:17
 95:16 96:14,22
 129:1,12 134:17
 160:13 176:15 206:6
 212:16 213:22 214:7
 215:2 232:20 233:3,
 5 234:11 258:4
 261:1,19,21 299:2
additions 7:1 31:14
address 26:22 96:7
 123:2 149:9 168:14,
 16 170:15 300:23
addresses 96:17
adds 207:20
adequately 145:23
adjudicative 154:14
adjust 222:19
adjusted 152:19
adjusting 165:22
adjustment 133:20
adjustments 56:10,
 16 57:6,10,16 95:14
 149:20
admin 97:22
administer 115:18
 139:19 151:6 164:12
 223:19
- administering**
 109:10,11 225:15
administration 118:1
 183:2,4 186:7
administrative
 131:19 132:15
 139:18 140:2 150:1
 151:15 183:2 186:7
 187:5 199:22 201:20
admission 193:13
 194:20
admittedly 298:6
adopt 42:2,21 64:10
 108:13 110:5
 112:17,19 114:16
 118:16 121:11
 125:20 137:20
 139:13 203:8 292:8
adopted 57:12 59:13
 135:17 157:18
adopters 115:21
adopting 33:22
adoption 5:9 14:16
 40:16 61:10,16,22
 74:4 138:19
advance 200:4,6
advanced 249:6
 286:1
advantage 187:9
 214:6
advantageous
 169:15
adversely 220:15
advised 65:18
Advisors 28:4
Advocate 8:6,8
 103:19 123:14
 237:19
Affairs 105:6
affect 74:5 82:22
affects 277:2,3
affirmative 13:2
afloat 292:13
after-tax 136:14
afternoon 12:15
 19:21 238:10 263:8
 264:2,9,10 282:9
 303:18
aggregated 67:6
agree 11:1 55:19
 57:5 58:9 72:2,15
 83:14 131:14 133:17
 171:16 174:22
 187:13 189:21
 190:6,7 191:1
 203:17 208:9
 210:14,19 244:1
 248:18 250:13
 276:21 296:6
agreed 132:1 155:1
 176:17 261:16
agreement 10:10
 12:3,18 13:1 14:15,
 17 15:7 25:12
 108:16,18,22 110:9
 112:22 113:6,22
 114:21 115:2 117:3,
 7 118:19,21 119:2
- 121:15,17,20 126:5,
 17 127:3 143:12,16,
 17 149:5 152:18
 154:22 155:18 158:8
 163:11 164:18
 168:21 171:4
 174:15,18,21 175:1
 176:22 178:12,14
 181:3,6 182:12
 187:17 194:10,11
 208:22,23 209:7,12,
 15,16,17 210:2
 225:13 277:11
agreements 139:20
 161:13
agrees 243:14
Aguirre 8:15
ahead 18:20 85:10
 105:1 167:15 222:19
 226:11
aimed 31:11
aims 41:11
air 49:17 50:2
Alex 39:18 41:22
 42:4,10,18 43:3,12
 44:6,13 48:15 63:12
 67:14 72:19 73:4
 74:8 75:1 82:9 95:7
Alexander 27:6,13
Alexandra 7:10
 147:10,23 149:4
 150:6,19 153:6,14
 154:15 155:3
 156:10,20 158:6,22
 159:9 160:2,21
 161:14,22 162:7,15
 163:7,23 164:10
 167:1 168:11 170:10
 171:23 172:19
 173:12 174:12 177:8
 178:10 179:13
 180:21
align 38:1 83:13
 95:15 253:5,10
aligned 63:18
aligning 70:20
alignment 69:23 71:6
 183:3
aligns 16:19
alive 139:15
allocated 269:10,13,
 20,21
allocation 20:21,22
 233:8,10 234:4
 235:9 238:17
allowed 170:17 196:4
allowing 11:6 23:10
 136:12 137:20
 234:12
alluded 258:17
alphabet 180:7,13
alter 75:8
alternative 10:13
 32:18 34:2 89:20
 90:4 229:10 294:21
America 8:21 117:6
amount 17:22 147:8
 177:20 178:2 187:5
- 221:1 225:20 258:8
 261:13 262:21
 271:21 294:9
amounts 150:23
Amy 9:5 65:9 66:6
 68:2,13,21 72:12
 73:15 74:16 76:4
 180:4 182:2,18
 184:22 186:2,18
 187:16 188:13,18
 189:18 190:6,17
 194:3 204:18 205:6
 206:10 208:22
analogous 196:16
analyses 32:21
 130:16 146:3 155:19
 228:10,13 274:2
analysis 21:19 28:20
 29:5 30:16,22 31:8,
 23 32:2,16 33:3,22
 34:21 36:12 37:5
 38:2,4,16 46:13
 48:20 52:15 53:1,7
 54:17 55:15,20
 56:10 57:13 59:5
 70:22 73:6 74:9
 75:21 80:7,19 82:2,
 13,17 83:9,10,12,14
 84:4 85:4,18 89:18
 95:15,17 106:10
 131:3 138:9 145:16
 196:12,14 204:19
 205:7 207:5,6
 216:20,21 229:22
 241:11 243:8 272:3,
 23 280:5
analyze 146:8 208:4
analyzed 37:2
ancillary 34:23 36:21
 38:10 68:11 256:19,
 23
and/or 9:15
anecdotally 263:3
 265:17 266:8
Anirudh 27:9,14 28:5
 32:23 40:2 47:13
 49:19 50:4,13,23
 51:11,21 52:10,18
 53:10,18 54:23 56:1,
 18 57:7,19 58:11
 59:11 60:5,22 61:14
 62:10 64:4 68:7
 69:18 70:18 71:19
 73:20 76:23 77:3,12,
 21 78:11,21 79:8
 81:3 86:2,16 87:20
 88:10 89:23 90:15
 91:5,16 92:8,17
 93:13 94:3 97:10
 99:15 100:3
annual 51:9 73:7
 77:15 88:21 89:11
 99:20 139:19
 164:13,19 166:14
 169:3,6
answering 53:4 68:8
 157:12 158:17
 159:8,14 160:9
 163:21 164:7 166:22
 167:12 171:11 172:8
 173:1 204:16 205:2
 206:18 210:4 213:9
 214:17 216:7 222:3
 237:17

- answers** 41:20 44:19
83:23 125:14 160:19
189:12 228:5,6
265:2
- anticipate** 149:11
153:7 159:12,15
161:3,17 227:11
- anticipated** 149:17
216:16
- anticipates** 175:2
178:13
- anticipating** 160:4
- anticipation** 210:12
262:8
- anymore** 164:4
243:3,4 263:9
- anytime** 149:22
- apologies** 47:3 48:13
146:16
- apologize** 63:20
212:6 261:8
- apparent** 134:14
- appearances** 7:3
- appearing** 111:2,6
113:19
- appears** 67:14
143:18 153:16 201:8
- appendices** 278:3
- appendix** 31:5
- appliance** 22:3
- applicability** 158:14
- applicable** 78:3,4
79:13 148:12,13
254:16
- applicants** 14:14
- application** 14:13,16
15:1,4,5 36:13
132:16 148:6,10
150:2 151:21 152:1,
6,10 153:18 155:4
187:4 194:6,7
224:10,13,17 225:1,
5
- applications** 14:22
120:20,21 121:5,6,9
132:17 151:6 155:6
- applied** 37:18 43:19
59:4,8 62:18 79:14
151:16 162:9 269:11
- applies** 193:20
- apply** 5:10 24:16,17
48:19 62:13 79:18
152:20 161:3,17
163:19 165:15
200:18 201:6 253:11
254:17 293:15
- applying** 74:13
- approach** 29:5 31:7
46:13 59:13 62:16
83:21 145:22 194:15
195:3,4 215:11
- approached** 289:15
- appropriately** 174:10
- approval** 108:22
110:14 113:5 115:1
117:6 119:2 121:20
132:12 149:23
- 170:21 171:4 174:20
181:5 234:4
- approve** 127:2
274:18,22 275:5
301:23
- approved** 5:14 29:16
149:2 164:19 168:22
169:3 173:22 174:18
178:14 198:2 209:6
238:23
- approving** 274:14
279:7
- approximately** 52:6,
15
- approximation** 250:5
- archetypical** 79:19
- area** 92:6 115:21
185:8 248:23 274:20
- areas** 83:16 95:15
118:1
- arguably** 133:11
- argued** 204:12
244:13
- arguing** 205:10
- argument** 19:20
95:23 298:4
- arguments** 201:2
- arise** 221:15
- arrangement** 236:18
291:17
- array** 197:19 238:12
258:10
- arrays** 25:9 93:18
251:3
- arrived** 79:4 151:3
186:5
- articulate** 36:2
- Asbury** 103:20
106:21 117:16,17,21
118:4,9,12,15,18,23
119:5 148:19 150:9
190:15,20 191:5,9
192:3,23
- Asbury's** 193:3
- asks** 159:17
- aspect** 194:4 232:14
- aspects** 19:11 162:5
195:4 208:10
- assert** 108:21 110:13
113:5 115:1 117:6
119:1 121:19
- asserted** 194:1
- assertions** 193:14
- assess** 83:11
- assessed** 31:18
46:21 64:19 151:5,
12
- assessing** 43:19
- assessment** 28:15
31:2,4,20 32:7 38:6
40:6,8 41:11 43:11,
13 44:4 48:18 53:1,
2,8 56:21 59:15
61:15,18,23 62:15,
19 64:5 74:11 75:6
81:5 83:8 90:13,19,
21 91:22 94:17 95:6
- assessments** 131:6
- assessor** 104:10
- assigned** 60:2
192:18
- associate** 27:20
104:5 124:16
- assume** 85:11 86:20
159:3 160:18 173:2
- assumed** 38:18 74:9
75:13 80:12
- assumes** 38:7
- assuming** 78:17
91:10 160:12 228:21
300:16
- assumption** 70:21
74:18,20 75:17,20
80:10 123:6 159:6
160:8 169:2 203:9
212:10 265:7 295:21
- assumptions** 131:1
156:7 167:21
229:21,23
- attached** 253:8,22
- Attachment** 156:5
- attachments** 108:3,7
109:18 110:1 111:23
114:6 118:5 119:21
175:13
- attempt** 198:14
220:18
- attempting** 199:15
- attending** 199:14
- attention** 71:9 124:21
181:2
- attorney** 14:19 17:3
18:5 45:11 55:6
65:12 98:16 100:11,
21 101:2 123:1
127:16 142:22 143:1
146:15 159:16
171:12 181:12 196:4
197:15,18 199:12
204:8 206:12 209:10
278:16 279:4 281:11
300:21 303:3
- attractions** 123:13
- attributable** 97:16
98:2
- attributed** 60:11
78:13 79:1 99:20
- audiences** 250:10
- audio** 30:1 48:13
65:23 76:6
- August** 107:22 108:3
109:18 118:6 119:21
120:9 252:4 282:10
- authority** 217:4
222:15,18 301:2,4,
16 302:16 303:23
- authorized** 242:17
- authors** 125:1,2
- automated** 183:18,19
- Availability** 187:1
- average** 34:7 36:16
40:17,20 51:9,12,20,
23 52:16 58:8 86:1
- 156:6 207:10 256:18
271:5,9
- avoid** 50:21 59:4
173:7,11 180:12
244:22 273:22
- avoidance** 259:2
- avoided** 31:12 33:11
34:23 35:6,7 36:21
37:17 38:7,9 43:18
49:17 52:5 59:23
62:2,4,11,14 68:4,
16,20 69:4,6,9,10
70:15 76:21 77:10,
14,15,22 78:6,7,9,
13,19,23 79:7 80:2,5
81:1,8 82:19 83:2,5,
18 84:2,16 85:3
88:5,8,13,19,23
89:7,8,13,17 90:6
91:18,19 99:12,20
144:21 203:11 205:9
206:8 208:16 228:4,
9 244:16 245:3
278:5,7,8 280:4
- avoiding** 50:2 60:17
205:15
- aware** 56:16 137:3
222:4,8 226:6
230:13,19 231:7
- awful** 26:14
- awkward** 101:2
182:16
-
- B**
-
- back** 6:16 11:16,19
67:20 98:15 99:1
101:7 105:17 106:4
141:16 149:6 152:3
163:10 169:10
172:17 181:12 194:2
211:20,22 216:9
225:1 226:13 230:22
237:4 238:6,9 246:3,
20,22 247:20
248:12,13 251:14,
15,21,22 252:14,21
256:16 258:23
264:16 277:15
283:10 287:20
299:13 301:10
303:3,9
- back-and-forth** 173:5
- backbone** 282:22
- background** 290:22
- backtrack** 148:9
- backward** 252:16,21
- backyard** 249:2
- bad** 49:2 221:2 229:4
- baked** 90:20 295:3
- balance** 134:9
135:21 145:23
146:10 216:17 224:2
291:23
- balanced** 12:8
128:14 129:3 132:23
194:15
- balancing** 144:23
- Bank** 289:4
- banks** 288:19 296:14
- bare** 237:22
- bare-bones** 139:14
237:2
- barrier** 233:19
- base** 81:13 141:17
276:12
- based** 5:17 21:13
29:6 40:15 46:14
59:18 60:8 61:6 64:5
78:2,3,16 80:13
85:23 86:8 89:19,21
90:6 113:15 130:23
131:15 150:22
152:19 153:22
155:23 156:5,8
160:15 203:5 214:23
223:10,11 255:6
281:18 294:9 297:13
- basic** 176:20
- basically** 95:20
173:15 191:9 196:17
278:10 302:1,4
- basis** 16:1 20:7 31:18
79:15 88:21 89:13
95:3 154:12 183:16
185:10 274:3
- Bates** 54:8,20 55:3
66:13,19,20 67:16
68:22 69:20 71:8,15
76:17 80:20 93:5
96:9,16 99:2 148:7
149:6 152:4 153:15
155:18 171:15
174:15 177:6
- battery** 242:14,19
266:21 285:19
- BCM** 9:5
- Beach** 56:17 57:6,13
103:22 104:1,2
107:1 113:10,11,13,
19 114:3,9,12,15,18,
22 115:4 131:3
134:23 138:5 204:8
205:22 206:1,13,20
208:12,14 216:19
219:2,6 220:21
263:22 265:2 269:5
293:6
- Beach's** 56:5,7,9,11,
19 83:10 95:16
138:9 139:1,3 207:5
243:8 272:23
- bear** 59:9 102:22
130:14 215:20
- bears** 67:21
- beat** 13:21 300:15
- began** 144:5 162:9
- begin** 5:21 19:1,9
135:7 161:3 169:4
171:5,10
- beginning** 7:4 11:21
76:8 103:3 107:9
110:21 122:23 137:5
182:17 211:16 212:2
232:9
- begins** 56:8 163:16
165:12
- behalf** 7:8,12,17,22
8:11,14 11:23 14:4
17:16 103:18 104:5
107:7 108:21 110:13

111:6,8 113:4,19 114:23 117:5,15 119:1 121:19 124:4, 17 127:19,20,23 133:7 134:21	billings 134:1 183:6, 10 184:14,19,20 260:23	bringing 44:23 269:15	calls 208:23	Chairman 5:2 7:6,14, 20 8:1,5,9,12,16,20 9:2,8 11:19 13:11 14:1,3,19 15:8 17:2 18:5,8,13 22:14 23:1,6 24:21 25:23 26:8,21 27:7,10,15, 16,18 29:18,22 39:4, 6,10 45:10,18 46:1 47:20 48:22 49:7 53:22 54:4,12 55:5,6 65:3,17 66:18,22 67:17 76:7 92:23 93:4 98:8,15 100:10, 15,18 101:1,15 102:1,7 103:6,9 104:7,14,16,23 105:7,10,18 106:6, 12,16 107:3 122:16, 21 123:5,9,17 127:12 129:16,18,22 130:4 142:21 143:1, 4 147:3,4,13,16 167:11,14,17 179:19 181:11,16 185:18 188:2,5 191:13,21 192:1 193:9,16 195:14,19 196:2 197:15 199:8 200:20 201:1 202:9,18,22 203:16,20 211:15 218:3 231:17 237:16 279:11 280:8,11 300:14 301:19 302:11,15,23 303:15,19	
behind-the-meter 28:17 283:21	bills 34:3,10 40:20,22 41:2,5 94:6 189:5,7 272:19 289:18	broad 80:10	capabilities 183:3,10	capture 76:21 97:21	
belabor 13:21	billions 227:20,21	broader 175:4 239:15	capability 184:18,21	captured 81:15 228:9	
Below's 194:5	bills 34:3,10 40:20,22 41:2,5 94:6 189:5,7 272:19 289:18	broadly 177:11	capacity 5:11 23:22 43:18 57:23 67:11 68:11 83:7 96:1 132:20 207:19 220:1 233:4,22 242:21 256:9,19 278:7 283:19,23	capturing 83:6 243:6	
bench 202:1	bind 209:16	broken 150:22 280:18	capital 96:14,22 280:14,16,20,23 281:4,8,14	car 252:23	
beneficial 132:8 197:20 248:14 258:9 263:20 273:21	biomass 242:10	brought 269:20	capture 76:21 97:21	carbon 49:21	
beneficiaries 229:1	bit 15:11 43:8 47:4,8 48:14 67:20 79:6 89:10 93:8 102:6 129:20 136:1 152:14 169:9 181:13 182:20 187:11 200:7 211:21 228:14 240:4 266:8, 18 287:12 298:3	Brown 24:23 25:1,2	care 122:17 224:14 240:23	care 122:17 224:14 240:23	
benefit 23:21 36:10 50:1 53:1 64:22 78:1 79:22 81:1,13 83:2 84:3 85:3 94:20,21, 22 138:15,16,22 173:9 183:7 187:6 199:19 205:15 248:5 262:9 263:18,21 264:12 271:14 273:10 283:14,16 284:5 289:18	blistoid 79:20	bucks 251:17	career 263:5	carry 37:14	
benefit-to-cost 85:5 91:13	Bob 161:5,6 294:3,4	budget 18:1 141:2	cars 219:23	cars 219:23	
benefit/cost 91:22	Bonazoli 103:21 106:21 119:6,11,19 120:4,8,14,17 151:18 155:11 190:15 231:6,13	Bueller's 252:23	carving 128:18	case 7:13 12:16 13:6 14:6 15:18 26:14,17 42:8 44:12 45:5 63:23 70:23 89:16 93:16 96:21,23 141:12 146:14 149:3 161:8 165:22 169:16 191:8 194:20 196:13 197:3,5 198:20 199:16 200:2,4,7 247:2 251:16 257:23 258:1 260:9 266:7 280:17,20 281:1,9, 14,16 290:8	cases 12:17 38:15 116:13 141:14 151:7 185:5 197:10 295:9
benefiting 81:18 216:22	bottom 137:10 296:18	build 16:6 176:10 246:17 247:5 248:22	catch 48:9 52:11	catch 48:9 52:11	
benefits 16:22 31:20 32:5 35:3 38:18 50:7,16,18,19 51:9 60:11,18 61:3,5,12 63:10 64:3,10,12,16, 20 77:19 81:22 87:10 94:15 130:13, 17 131:16 144:21 171:21 183:9 195:5, 7 196:14 206:3,9 234:11 245:2,11 249:8 258:5 261:20, 21 262:3,8,10,23 263:2 269:2,6 273:1, 5 274:4 294:15 297:16,19	boxed 168:20	building 283:22 295:12	catchup 24:4	categories 156:9	
benefitting 85:11	Borden 103:23 104:4 106:23 123:12 124:10,11,15,20 125:4,5,6,10,11,17, 18,23 126:1,12,13, 21 127:6,7 143:10 146:20,23 203:2 204:2	builds 217:9 219:13 238:11	category 236:17 237:14 269:4 297:7	caucus 210:23	
Bennett 106:4,9,10 107:2	bottom 137:10 296:18	built 157:17 158:12 214:8 217:5,13 223:1 254:22	caught 219:7	caused 143:17	
Berkeley 113:15	bounce 149:6	bulk 187:23 188:1 252:9	Causer 238:18	causing 220:13	
Bernstein 103:15 111:2	box 267:23	business 7:19 123:15 141:20 154:6 190:1 210:13 262:6 287:20 290:22 291:8 297:7	caution 275:14	ceases 247:2	
bidding 256:9	bread 267:22	businesses 115:14 291:3,5	CENH 8:16 96:6 273:1	center 189:10	
big 58:20 175:10 215:4 249:11 267:22 287:15 289:16	break 11:16 93:3 101:6,17 127:15 147:7,17 198:5,7 199:10 200:21 215:4 301:9 302:22 303:12	button 6:8	central 144:7	cents 20:1 33:11,12, 14 51:8,19 52:1 60:2 99:5,6 142:6,7 246:13 291:7	
bilateral 159:19,20 161:12	break-up 230:1	buy 137:22 265:15	centuries 229:3	certainty 223:17 290:4	
bill 28:15 31:2,23 32:2 34:8 53:13 55:14,20,21 56:12 57:17 59:14 61:18 74:11 75:21 93:7 94:10,17 95:5,13 130:22 131:5 134:6 144:6 145:16 183:16 189:12,14 260:20 268:17,19,22 269:12 270:2,6 276:15,21 277:11,16,19 279:5 286:18 297:9,10	breakdown 151:1	buying 265:4 266:16	calling 165:3 189:10		
calling 165:3 189:10	breaking 296:23				
	Brian 103:11 106:20 109:6 128:4 133:14 149:15 150:11 151:2 165:18 168:3 171:8 175:7 177:22 178:19 188:14 218:5 223:14 224:16 230:7,21 232:7 236:3 245:21 258:13 260:13 272:6 280:22 299:12				
	briefed 202:7				
	briefing 26:13 201:19				
	briefly 26:9 31:9 39:2 43:1 87:22 116:7 144:1 155:20 174:13 282:3 287:21				
	briefs 278:3,12 279:21				
	brightly 19:22				
	bring 19:9 26:9 216:9 283:10				

C

18 80:16 81:7,10 83:7,20 86:15 87:9 99:5,6,19 205:14 256:19,23 259:3 272:20	clarifying 173:15 301:13	collaborate 132:2 150:14	278:18 279:6 289:1 292:8 293:14 301:1, 15,21 303:23	206:6 213:21 218:10,22 245:9 246:15 254:15,22 255:4 285:13,17 302:10
chart 71:10 72:4 99:3 295:14	clarity 237:5	collaboration 39:20 42:12	Commission's 5:16 140:3 182:7 192:22 301:4 302:16	compensation- 254:5
Chattopadhyay 5:4 76:9,10,11 77:18 86:11 90:7,23 92:2, 21 98:11,13,14 99:4 101:16,18,19,23 211:17,18,19 219:4 221:21 228:19 231:15 279:8,9,12, 13 280:2 297:21 298:9,11,12	classes 34:1 56:4 58:22 91:21 94:8 99:22 269:22	collaborative 154:11	Commission- approved 257:3	compensations 15:14 16:17
Chattopadhyay's 98:23	clause 214:14	colleague 37:21 39:21 42:13 82:11 125:3 150:10	commissioner 5:3,4 44:22 65:18 67:18 76:8,9,11 77:18 86:11 90:7,23 92:1 93:1 96:10 98:8,14, 16,23 99:4 100:9 101:16,19 105:8 185:23 198:9 202:5, 9 203:20 211:16,17, 19 217:23 219:6 220:21 221:21 228:19 230:23 231:18 235:15 243:20 245:14 259:20 270:12 279:8,9,13 280:2 297:21 298:9,12 303:1	competing 224:2
cheapest 239:22 240:2	clean 8:18 54:2,11 55:10 103:16 104:3 110:19 111:6 112:20 113:4,19 114:23 130:11 131:2 137:12 139:10 176:5 206:11 214:4 274:7 284:7,9, 12 285:18 291:14 296:17	collect 132:4 175:12 176:6 217:9	Commissioners 7:17,22 8:23 9:5 15:11 120:15 137:3 139:5 145:18 274:20	competition 16:21, 22
check 17:4 51:13 65:11,23 67:12 98:10 100:18 123:11 187:2 293:6 303:2	clear 84:9 100:9 137:7,13 172:2 214:12,21 228:20 257:20 267:1 281:17 283:8,14 296:9 298:23	collected 94:2 174:23 175:19 260:22	commissions 111:15 138:7 217:6 222:12, 14,19 242:22	competitive 15:23 215:14,17 220:14 240:22 273:15
check-in 147:7	Clerk's 22:18	collecting 178:6,23	commitment 280:13 committed 132:11	compile 178:3
checking 205:18 262:14 293:10 301:22	CLF 8:12,15 48:2 50:20 51:16 52:2,21	collection 132:3,5 143:19,20 145:3 174:14,17 175:3 176:11 177:19 178:9,16,20 179:7 181:21 209:1,8 265:10	common 223:17 224:17 288:5 299:18	compiled 175:22
Chiavara 7:16,17 11:22,23 13:19 18:10,11 45:14,21 100:11 101:2,8,20 102:4 103:22 105:23 106:1 107:5,6 117:11 123:1 126:2 127:16,18,19 133:5, 6 134:20 140:5 142:19 278:16 281:11 300:22 301:12 302:9,12,21 303:17,21	CLF's 278:2	collective 282:6	commonly 69:12	complete 14:23 85:18 127:13 179:8 235:10 294:14
Chiavara's 303:3	client 211:3,5 278:1 296:11	collectively 257:2	commence 171:21	completed 233:21 234:19 237:8
chime 143:10	clients 211:8 240:8 285:20	collects 273:8	commenced 5:6	completely 159:4,11 162:17 202:15 216:5
choice 16:21,22 183:8 257:21	Clifton 9:6	Colleen 106:4,9 107:2	commences 163:13 165:8 171:17 213:20	completes 26:1
Chris 8:19	Climate 28:4	Columbia 122:8	commensurate 131:16 151:13 248:5 261:4	completion 116:18
circle 277:15	Clinic 23:19	column 81:22	comment 6:15 9:23 26:1 29:15 76:3 97:8	complex 255:3 284:22
circles 111:18	clipping 274:16	combination 87:7 151:4	comments 6:17,19, 23 7:2 18:9,16,18,19 24:20 225:8	compliance 133:9, 16,20
circuit 232:2,4 233:6 235:1 246:2,23 247:1,3	clock 213:7	combined 78:1	commence 171:21	complicated 134:4 223:21
circuits 233:1,2 246:17 249:10	close 58:9,13 75:19 160:1 191:11 246:15 249:23	comfortable 91:2 250:8	commenced 5:6	complicates 262:16
circumstances 197:23	closed 168:1	commercial 250:23 297:5 298:8	commences 163:13 165:8 171:17 213:20	comply 178:3
cited 297:11	closely 23:19 38:1 92:20 125:3 187:7 203:10	commission 5:8 9:15 10:14 22:19 24:7 26:17 29:2,6,10,15 45:2 46:14 47:1,18 98:10 102:22 107:20 109:15 111:12,14, 16,17 112:14 114:2 116:4 118:3 119:18 122:8 127:2 137:19 138:11 145:22 146:17 149:8 154:23 158:18 174:21 176:16 181:7 192:15 198:1,11,23 199:20, 21 201:7,20 203:8 214:20,22 217:2,4 235:20 237:9 238:1 240:4 245:18 250:16 267:21 268:21 270:15 271:20 274:13 277:21	communities 23:16, 20,23 24:10,14	component 31:5 38:4,20 64:18 88:4 134:13 187:12 218:12 303:22
City 25:3,7	cluster 225:23 226:1	commentary 6:15 9:23 26:1 29:15 76:3 97:8	community 23:8,13, 21 25:4,6,7,17 115:15 136:5 180:5 259:10 291:9	components 30:19 31:10 35:6 36:19 64:13 68:10 80:1,6 88:14 99:18
clarification 120:8 121:11 163:9 179:16 191:23 202:5,13,16 267:18 277:10	co-counsel 7:9	comment 6:15 9:23 26:1 29:15 76:3 97:8	companies 107:18 109:13 151:4 152:22 197:5 290:14 292:11 296:18 297:10	computation 95:11
clarifications 7:1 120:5,23	Coalition 25:5,17 65:10 66:7 180:5,12 194:7 202:16 210:2 211:12	comments 6:17,19, 23 7:2 18:9,16,18,19 24:20 225:8	company 7:18 117:19 119:9 122:7 149:23 197:23 272:11 273:7 280:19 281:13,17	computational 43:15
clarified 56:21	Coalition's 195:11	commercial 250:23 297:5 298:8	compare 80:3 89:3 259:6	computer 282:22
clarify 44:9 46:10 135:14 163:18 200:12,16 209:23 238:4,7 256:15 301:17	Coast 138:21	commission 5:8 9:15 10:14 22:19 24:7 26:17 29:2,6,10,15 45:2 46:14 47:1,18 98:10 102:22 107:20 109:15 111:12,14, 16,17 112:14 114:2 116:4 118:3 119:18 122:8 127:2 137:19 138:11 145:22 146:17 149:8 154:23 158:18 174:21 176:16 181:7 192:15 198:1,11,23 199:20, 21 201:7,20 203:8 214:20,22 217:2,4 235:20 237:9 238:1 240:4 245:18 250:16 267:21 268:21 270:15 271:20 274:13 277:21	compared 36:14 40:11 53:14 70:3,5 204:14	conceivably 178:18
	code 86:21	commence 171:21	compensate 221:10, 12 244:16	concept 61:1 185:3 253:3 290:7
	codes 86:6 87:4 89:3	commenced 5:6	compensation 80:3 89:3 259:6	conceptual 76:13 215:6
	coincidence 89:4	commences 163:13 165:8 171:17 213:20	compensated 94:18 207:13 253:8,9 297:4	concern 210:20 227:5
	coincident 80:8 184:14,18	commensurate 131:16 151:13 248:5 261:4	compensated 94:18 207:13 253:8,9 297:4	concerned 189:1 228:18
	coincides 80:15	comment 6:15 9:23 26:1 29:15 76:3 97:8	compensation 15:20 32:17 90:6 128:12 135:6 136:23 137:2 146:5 160:7 163:13 164:2 165:9 171:18 172:4 194:15 196:19 203:10,14 205:8	concerns 100:19 182:23 186:6

73:5 75:6 89:1 91:22 229:22	constructed 5:10	82:11 89:22 91:10 99:10,17 100:2,4 125:19 126:9,13 165:2,6 168:7 202:8, 10,18 204:15,17 205:3 231:13 251:7 257:12 258:12,14 264:22 265:9 288:16	151:7,16 183:1,2 186:7,14 188:20,21 190:3 195:2 203:11, 12 205:10,14,15 215:12 216:15,18 218:23 220:14 221:1,6,12,18,19 224:14,19,22 225:16 226:17 227:7,9,12, 22 228:9 233:12,18 234:22 235:2 241:3, 4 245:4 261:1,4 263:15 269:19 273:22 278:5,7 281:7,8 283:19,20 286:11,15,18	Crossborder 104:2 113:15	
conducted 34:22 82:18 95:6	constructive 12:8 133:19	corrected 40:14 43:14,16	counsel 126:14	crux 195:11	
conducting 29:5 46:13	consult 47:11 115:17	correcting 40:10	count 262:10	CSR 189:11	
confer 174:21 211:9 236:4	consultant 28:6 29:1, 9 113:14	correction 41:14 44:2 57:21 58:3 140:7,17 155:7	counterargument 19:20	cumulative 96:18	
confidence 86:14 132:6 274:3	consulting 113:14	corrections 39:22 41:16 42:15,19 55:17 57:16 95:11 125:7	counting 50:10,16,22	curiosity 155:9	
confidential 210:12 240:10	consumer 8:6,8 103:19 123:14 183:8,9 237:19 300:13	correctly 44:5 66:17 67:13 69:16 70:16 237:15,18 251:6 256:4	couple 18:21 66:9, 11,12 116:1 122:7 157:3 161:20 190:14 195:8 267:14 274:20 280:9 281:23 301:13 302:13	curious 230:4	
confidentiality 210:20	consumers 63:11 139:11 183:8	correlation 265:14	cover 185:6 194:5 227:16 269:6	current 15:19 24:2 28:6 33:7 34:2 40:14 55:22 63:6 67:3 69:14 90:3 94:19 120:12 128:7 129:14,15 130:6 131:6,21 139:22 142:2 146:6 157:17 160:1 163:5 167:6 173:8 194:13 204:20 206:3 218:9 226:21 233:9 234:17 238:17 254:14 268:15 293:19 301:23	
confirm 69:3,15 70:10 80:17 203:7	consumes 260:2	cost 15:16 19:15 20:17,20 22:9 32:11, 15 33:11 35:6,8 36:21 37:17 49:17, 20 52:5 53:5,9 59:23 62:3,11 68:20 69:4, 6,11 77:10,14,15,22 78:6,7,9,13,19,23 79:7 80:5 81:1 84:2 88:5,8,13,19,23 89:9 90:6 91:20 94:20 97:14,22,23 98:7 99:20 130:10 131:7 134:16 138:15 148:13,14,23 151:5 183:20 184:5 189:9 190:1,2 195:6 207:17 208:16 215:15 221:6,9,14, 16 224:7 225:6 226:19 227:2,10 232:5,15 233:8,9,15 234:4,6,13,16 235:9, 12 237:21 238:13, 17,18 239:9,11 244:22 257:16 261:6,9,12 267:8,20 268:4,22 269:16 270:7,16,17,23 271:9,21 272:2,13, 14 274:19 275:13 276:4 277:2 280:4 283:17 284:23	covered 13:20	curve 21:5 75:5,9,23	
confirmation 80:21	contained 41:19,21 203:6	cost-based 255:6	covering 26:14 31:18	cushion 223:1	
confirming 68:2	contemplate 153:1	cost-shifting 228:11	creation 135:2 241:6	customer 5:10 15:18 16:21,22 20:13,18 22:8 32:3,11,17 33:5 34:6 40:18 41:1 56:4 58:15,22 78:2,10,14, 20 79:1,3 80:23 81:14,16,19 82:1,7, 21 84:17 91:20 94:10,11 95:13 99:22 100:7 103:12 109:7 120:12 122:11 131:20 134:18 152:13 155:7 175:21 184:3 189:9 204:3, 23 205:8 206:15 212:23 213:5,6 218:20 221:11,13 225:3 233:11 235:12,22 238:11 247:17 248:15 250:1,18 251:20,21 255:11,15 256:1 257:11,19,23 258:2, 5,18 259:5,13,23 260:1,23 261:15 269:1,3 270:1,5 280:7 281:6,7 291:1 294:17 299:14 300:1	customer's 258:22
confuse 189:16	contemplated 131:11	cost/total 271:14	creating 128:8 154:10 215:12 243:17 248:11	customer-installed 31:1	
confused 170:11 189:5 205:4 211:21 294:16	contemplates 175:8	costly 233:7	critical 135:9	customers 15:6 16:2 19:15 22:11 28:16 34:8 40:17,21 41:4,9 53:6 56:4 57:18 61:20 64:9 81:14 82:8,22 83:3,5,20 84:3,7,18,19 85:1,6, 7,8,14,21 91:15 93:10,11 94:7,16,18 95:4 115:16 116:14 128:9,10,22 129:8 130:8,19,23 131:17 132:6,8 133:4,21 134:4,10 137:20,22 145:1,12 146:9 151:7,13 168:5,8,15 172:22 183:15,22 184:12,16 185:8 186:20 187:2,9,19, 23 189:4,16 194:17,	
confusing 165:4 213:3	context 89:10 131:8 200:19 275:15,20 276:20 278:6,11,14	costs 31:1,12,13 32:5 34:23 38:7,9, 12,13 43:18 59:4,10 60:18 62:5,7 68:4,16 69:9 70:15 76:21 81:8 82:19 83:2,5,18 84:5,17 85:3 89:7, 13,17 91:19 94:10 96:18 97:2 98:6 99:12 107:17 128:11,23 130:20 131:19,21 132:15 133:11 144:21 148:12 149:9 150:1	CPCNH 9:3 10:5,10, 11,12,21,22 11:8 15:9 65:7 80:19 147:8,13 179:20 196:16 201:2,18 202:2		
confusion 131:20 134:18 189:2,10 197:6 212:7 214:16	contextualize 208:21	covered 13:20	credit 128:16 129:1 131:15 133:10,17,21 134:11,15 148:11,13 187:14,20 188:12 218:13 224:1 248:3 259:9 268:19,22 270:8 272:19 273:7		
conjecture 75:22	continually 221:7	creation 135:2 241:6	credits 246:8 253:20 268:18 269:7,10 272:17		
conjunction 184:19	continuation 24:1 187:18 188:8	creating 128:8 154:10 215:12 243:17 248:11	critical 135:9		
Connecticut 285:6	continue 71:1 72:16 73:1 74:22 101:23 142:17 160:4 163:14 165:10 178:23 179:1,3,10 185:20 224:7	creation 135:2 241:6	criticized 138:13		
connection 28:9	continuing 14:7,22 30:11 218:8 219:1	creating 128:8 154:10 215:12 243:17 248:11	cross 53:23 147:9, 11,15 179:18,20		
connects 21:5	contract 159:19,20 218:20	creation 135:2 241:6	cross-exam 13:20		
consensus 238:2	contracting 175:20	creating 128:8 154:10 215:12 243:17 248:11	cross-examination 45:13 46:3 55:8 66:4 147:21 180:2,10 195:9 196:1 197:12 198:10 199:5 211:13		
conservation 8:14 22:3 26:10 45:22 46:5 49:13	contractor 47:11	creation 135:2 241:6	cross-examine 10:12 65:4		
conservative 135:16 139:7 142:17	contribute 38:18 60:8	creating 128:8 154:10 215:12 243:17 248:11	cross-subsidies 229:2		
considerable 132:22	contributing 20:17 75:7 134:16	creation 135:2 241:6			
consideration 126:18 130:14 132:11 140:4 182:6, 8	contribution 71:11 73:6 74:1,2	creation 135:2 241:6			
considerations 92:11 299:16	conundrum 199:10	creation 135:2 241:6			
considered 22:17 31:17 38:12 44:11 82:16 90:18 126:23 226:3 237:12	convene 5:8	creation 135:2 241:6			
considers 32:16	convert 21:21	creation 135:2 241:6			
consisted 234:7	converted 35:7 266:12	creation 135:2 241:6			
consistency 141:7	cooling 249:14	creation 135:2 241:6			
consistent 59:13 67:15 74:13 75:20 137:18 138:3 140:8 150:14 151:15,16 152:1 171:5 203:12, 15 205:20 206:1 224:5 265:1 301:21	coordinated 126:14	creation 135:2 241:6			
consistently 67:8 128:15	copy 192:8	creation 135:2 241:6			
consists 33:1	core 141:20	creation 135:2 241:6			
consolidate 278:21	corner 289:4	creation 135:2 241:6			
constitute 301:7 302:19	Corp 8:4 117:23	creation 135:2 241:6			
	corporation 199:13	creation 135:2 241:6			
	correct 47:2,12,14 49:18 50:12 54:19 57:15 59:7 60:4,23 62:1,2 69:19 76:22 77:1 78:12 81:2	creation 135:2 241:6			

18 205:13 206:7 215:1,9,14,20,22 216:4 218:14 224:3 226:20,22 229:18 234:8,14,15,18 235:13 241:14,19 242:15 244:10 245:2,11,17 250:22 253:6 254:12 259:8 266:1,2,3 267:20 269:8,11,13,17,23 272:18 273:2,13 277:3,7 279:16 280:1 289:14 290:2, 5,8 293:2 296:21 298:14,18 299:17,19 300:5,8	days 202:1 DCS 60:8 DE 5:6 114:4 192:16 dead 300:15 deal 75:11 277:23 286:12,21 dealing 210:12 286:14 dealt 15:4 210:23 Deana 9:6,7 death 13:22 decade 24:5 decades 285:15 286:1 December 29:17 46:15 111:21,23 114:6 124:23 decide 153:10,11,13 166:5,12 239:9 decided 85:9 decision 102:9 166:8 decision-making 262:11 decline 264:3 declining 221:9,16, 18 decrease 34:5 40:19 131:5 decreases 56:13 69:7 decreasing 69:9 default 133:22 137:1 142:3,5 207:7,8 218:13,14 250:20,21 251:2,9 252:5 255:13,20 256:2,11 257:22 273:14 294:18 295:1 302:2, 6 defaults 159:22 defense 19:13 definite 264:12 degree 37:14 83:12 95:13 deliberations 234:2 delivering 116:12 delivery 148:20 delta 295:19 demand 43:16,17 64:15 83:19 205:14 244:11 278:9 demonstrating 131:4 Dennis 9:7 dense 248:23 Department 7:4,9 14:2,4,21 24:8 30:17 35:9 130:21 147:12 177:3 179:18 237:7 Department's 14:23 295:12 depend 141:10 dependant 98:7 depending 293:9	depends 58:14,15 98:5 depicted 74:22 deploy 94:12 deployed 269:15 deployment 32:4 depth 86:12 DER 31:20 33:16 59:22 60:9,16 61:16 62:7,12 70:12 77:19 80:4,8 81:19 99:21 261:18 272:23 DERS 31:1,18 33:9, 13 61:10 91:19,21 95:22 96:16 97:1 99:21 227:19 describe 28:7 31:9 34:13 40:1 43:1 113:17 115:11 152:7 248:22 describes 174:16 describing 120:11 256:4 260:15 description 32:1 43:9 239:12 247:12 250:14 251:7 descriptions 152:11 design 34:2 113:23 219:18 285:4 designated 148:4 designed 132:8,9 196:19 197:1 designs 222:16 detail 41:17 152:6,15 193:23 detailed 14:9 29:4 51:3 details 148:8 190:10 197:17 determination 272:12 274:8 determine 72:1 75:15 86:7 89:16 267:7 determined 20:19 182:15 detrimental 215:17 develop 87:9 177:20 288:3 developed 80:1,2 176:1 178:9 developer 156:12 157:13 233:14 developer's 156:13 developers 116:10 140:23 144:23 developing 70:22 175:3 288:5 development 129:4 130:7 142:18 178:15 209:2 245:10 288:9 developments 183:7 device 273:9 Dexter 7:5,6 14:3,4, 20 15:2 17:8,14 27:18,19,22 29:18	30:3 39:4,5,9,13,14 42:1,14 44:18 45:11 51:2 54:4,5,13,15 55:4,7 98:17,19,20 100:8,15,21,23 Dexter's 53:4 DG 40:15 41:1 52:7 61:22 81:6 94:7 144:23 145:7 234:8, 14,17 235:7 263:10 279:17 280:7 281:10 differ 208:17 difference 80:18 235:21 256:13 257:7 268:21 284:3 292:14,22 294:19,23 295:4,20 differences 83:9 differentiate 255:2 290:12 292:2 differentiated 248:8 differentiating 207:16 differentiation 207:14 245:23 292:1 differing 150:17 differs 36:4 difficult 22:22 73:21 97:19 130:15 134:5 188:16 190:9 263:1 difficulty 76:6 137:14 digress 287:12 diligently 20:5 direct 27:17,19,21 39:15 55:11 101:12, 14,21 104:20 107:4, 23 112:3 117:13 120:15 122:3,14 123:20 127:10,13,17 142:20,22 143:3,6,8 147:5 155:20 192:13 199:17 232:19 directed 5:8 29:8 148:2 154:23 176:16 234:5 280:15 294:5 direction 32:8 41:12 108:8 110:1 112:5 114:11 118:11 120:3 195:12 203:13 directionality 61:19 75:5,16 directionally 51:12 75:23 directive 5:19 directly 30:6 38:12 47:6 78:10 82:7 116:16 126:8,9,13 213:19 247:15 283:18 Director 103:7,11 107:12 109:6 117:22 disagree 178:1 212:21 disagreement 285:9 disassociated 208:1 discern 71:23 discipline 243:13	disciplined 129:2 disclosure 175:14 disconnect 197:3,9 discontinue 178:22 discount 290:17,19 discovered 43:21 150:1 discrepancy 54:7 discuss 116:7 124:17 discussed 59:5 173:6 210:6 230:20 300:18 discussing 186:9 discussion 211:20 256:6 280:4 discussions 108:17 110:10 112:23 114:20 117:2 118:20 121:16 126:4,8,10 144:18 154:11 173:4 175:17 177:3 230:14 dismissed 100:17,22 dismissing 100:19 dispatch 80:11,13 dispatchable 285:17 displacing 248:12 distinguish 208:3 distributed 19:10 20:8 28:13,21,23 29:13 30:23 31:15 33:5 109:11 119:16 128:8,20 129:4,5,9, 13 130:7,13 132:15 135:13 151:6 154:4 175:19,23 176:3 179:2 224:4,8 226:4, 6 227:19 228:6,8 232:12,14,16,21 233:6 237:7 243:16 258:19,22 266:21,22 268:5 269:2 273:20 280:18,21 281:5,6, 15 299:19 300:9 distribution 20:10 21:13 35:2 36:22 38:10 83:18 119:12, 14,15 152:21 187:12,21 227:17,21 228:9,15 234:12 238:14 245:4 246:9 248:3 249:9 251:11 258:3 261:2,23 273:23 302:3 distributor 242:4 District 122:8 dive 79:5 254:18 diverse 12:4 133:1 divide 271:4 division 151:20 docket 5:6,8 6:18 10:15 14:21 15:2,13 16:10,13 17:11,16 21:17 22:17 30:18 97:3 104:22 111:5,8 113:18 114:4 115:12 116:7 130:12 131:3 182:6,8 190:19
---	--	---	---	--

D

dangers 231:23
data 86:7,8 132:2,3,5
143:19,20 144:16,
17,18,19 145:3
146:2 155:23 159:2
174:14,17,22 175:3,
15 176:7,10 177:19
178:4,9,15,20,23
179:7 181:21 209:1,
7 217:10,11 240:10
256:17 265:10 266:4
268:10
database 174:7
databases 174:6
date 46:18,19 157:10
163:3,5 174:5,8
dates 108:3
Dave 279:19
David 103:15 106:23
110:21 111:1 156:21
157:12 158:17
159:7,14 160:9
161:12 163:21 164:7
165:20 167:18
171:11 172:7 173:1
176:19 204:16 205:2
206:18 210:4 213:9
214:17 216:7 222:3
225:8 226:17 236:9
237:16 240:6 248:17
277:22 283:2
295:11,23
David's 140:21
Davis 103:3,5,6,7
106:20 107:9,10,12,
16,21 108:6,9,12,15,
20 109:2 177:5,15
181:19 182:14,15
184:9,15,17,23
185:12 186:10,22
230:11 250:12 252:2
256:5 257:12 258:17
268:7,18 271:3,7
day 18:16,20 26:23
100:17,22 169:1
207:22 208:6,11,17
252:23 264:4 269:14
271:17 303:5,16

191:2,7 192:16,18,
20 193:10,12,13,15
195:12 197:17,18
198:17 202:15 203:8
217:2 227:1 239:20
244:9 271:16 274:2
275:3 278:17,23

dockets 201:12

document 71:7
125:1,13 192:9,12,
16,21,23 193:18
198:20

documentational
154:7

documents 30:9 71:4

DOE 10:5,10,11,12,
21 11:8 26:6 98:17
131:23 147:8,11
177:7,11,14 282:18
303:6,7,8,9

DOE's 63:1

dollar 59:23 60:10
62:6 79:15 276:19
277:20 278:4 279:6

dollars 33:20 36:12
227:21 275:5,14
277:6,13 291:7

domestic 287:4

Donald 8:7

Doran 26:7

Doria 25:2

double 50:9,15,21
79:11

double-check 268:8

doubt 73:17 74:21

downloads 104:12

downstream 22:11

downward 57:17
58:1

dozens 138:6

DPU 234:3 238:23
287:8

DR's 89:15

draft 126:11 173:6,7

drafted 173:11

drawing 71:9

drew 17:18

DRIPE 35:3 36:22
38:17,19,22 57:23
64:16 83:1,2 245:4
278:8

drive 71:1 229:14

driven 41:6 134:11

dropped 63:4

due 199:2 219:16,17
227:6 285:5

duly 27:14 107:3

Dunsky 7:11 10:20
11:4 15:17 17:7,10,
21 18:3,9,12 26:5
27:2,19 28:1,3,8
35:10 44:10,15,23
45:3,15,23 97:7
100:13,16,20 138:4,
9 205:16 207:5
240:16 241:11 243:7

259:22

Dunsky's 28:11

duty 238:1

dynamic 20:8 21:12

dynamics 21:8

dyslexic 22:21

E

eager 190:16

earlier 44:1 122:2
123:1 165:23 170:9,
11 177:14 201:12
209:20 253:19 254:4
257:4 258:7 260:18
280:12 282:9 295:11
297:3,15

early 115:21 246:7,
17 252:18 282:10

easier 157:5 203:3
242:13

easily 149:1

eastern 185:10,15

easy 223:18 224:1
261:6

easy-to-understand
259:12

eat 276:7,8

EBCS 234:5

EC 235:13

ECB 90:5

economic 129:9
166:6 246:17
297:16,17

economics 103:18
104:5 124:4,16
292:20

economist 85:9

economy 219:20
297:18

Ed 103:7 177:5
181:19 182:15
184:17,23 186:10,22
230:11 250:12 252:2
257:12 268:7 271:3

educate 240:4

Edward 106:20
107:9,12

effect 64:15 164:17
197:19

effective 32:19 133:2

effectively 260:4
270:3

effects 43:18

efficiency 22:2,4
139:18 183:2 186:7
228:7 244:5

efficient 10:8 19:19,
23 20:4,12 21:23
22:6 127:14 133:2
186:16

effort 132:3,14
143:21 144:9 174:17
175:4 177:19 178:16
209:2 296:5

elaborate 274:9

elect 166:11

elected 166:4

electric 8:4 16:23
28:15 107:18 149:7
164:13 185:7 209:1,
3 263:19

electrical 181:4

electricity 32:14
33:12 228:1 247:18

electrification 74:3
229:7

electrify 219:20

elects 269:18

element 145:2
162:14 300:12

elements 35:8
174:22 235:14
256:11 257:14

eligibility 170:16

eligible 33:6 162:6,
11 163:14 164:4
165:10 171:18 224:1

else's 193:3 199:18

email 287:8

embedded 69:14

emissions 49:23
50:8

emphasize 136:16

employer 28:2
117:18 119:8

emulation 20:23

enable 234:19 281:5

enabling 24:12 281:9

encountered 40:5

encourage 22:15
29:23

encouraging 247:14

end 18:1 26:19
157:19 159:3,10,18
163:5 182:6 205:1,
17 212:3 213:15
216:15 217:6,7
234:3 252:22 269:14
284:22 303:5

endeavor 231:2

ended 163:4 212:1,2

ending 193:19

enemy 16:14

energy 7:4,9,19,23
8:18 14:2,5 23:19
24:8 25:2,10 26:6
28:4,13,17,21,23
29:13 30:17,23
31:15 32:18 33:5,7
34:10,23 35:9 36:2,
9,21 37:17,23 38:5,
9,19 40:19 50:11
54:2,11 55:10 63:3,
17 64:1,8,9,14,16,21
67:9 68:11 69:9 70:2
77:9,13,14,15 78:4,
13 82:21 83:4 87:16
88:3,13,19,22,23
89:2,7,9,13,17 90:20
91:19 99:5,18 103:8,
12,16,18 104:2,3,5

105:22 106:11,15
107:13 109:12
110:19 111:7 112:21
113:4,15,20,22
114:23 115:13
119:16 121:3 124:3,
16,18 128:4,9 129:7,
10 130:9,11 131:2,9
133:14 135:12,13
136:18 137:1,12,20,
23 138:17 139:10,
14,22 149:15 151:2
165:19 168:3 175:7
176:5 177:3,22
178:19 183:14 185:7
188:14 192:12
193:7,8,13 206:11
207:7 214:4 218:6,
15 223:14 224:16
227:19 228:7 230:7,
12,21 232:7 236:3
237:8 239:21 244:3,
5 245:21 249:2,4
250:2,12,19 251:4
253:20 255:12,16
256:8 258:13
259:15,17 260:2,13
263:5 272:6 280:18,
21,22 282:16 284:7,
12 285:18 296:17
297:9,10,23 299:12

Energy's 130:21
237:7 284:9

energy-price-driven
38:22

engage 29:9

engineer 119:14

Engineering 119:12

engineers 239:3

England 59:10,20
60:4,6,16 61:8 67:3
68:5,17 85:22 88:18
128:14 136:19
138:20 225:12 232:2
240:20 255:17,19
256:3,18,22 257:8,
21 263:4,7 282:5
286:19,23 294:23
295:17

England's 87:3 231:8

enhancement 195:13

enjoy 141:5,13

enroll 163:3

enrolling 134:6

ensure 10:8 301:5
302:17

entertain 11:11

entire 59:19 233:16

entirety 127:4

entities 115:22
154:23 209:13

entitled 43:10 93:6
198:17 282:14
283:4,11,12 284:3

entity 238:15 239:7

environment 63:6,8
243:6

environmental 33:18
46:21 47:2,5,12,15
48:4,11,18 49:16
50:6,10 51:7,18

52:5,14 54:18 77:6,7

envision 154:18
170:5

envisioned 178:2

equal 187:21 204:4
206:16

equally 207:3,12
301:6

equation 271:12
277:12,14

equipment 97:23

equitable 24:18

equitably 132:7

ERAM 149:2

Eric 104:4 106:23
124:15

erroneous 295:22

error 40:5,7,10
43:15,21 44:3

ES 107:18

ESC 86:7,9

escaped 281:11

essential 33:1
135:11 136:3,11,15
139:7 140:22

essentially 79:23
128:2 139:13 213:5

establish 28:13
235:20

established 29:7
46:8 87:1

establishing 231:23

estimate 32:8 80:5
81:6 87:4 88:21 94:6
97:15,16,19 145:10
280:16

estimated 79:21
130:22

estimates 88:8 144:6
293:7,8

estimation 292:16

et al 231:21

EV 227:22 229:8

evaluate 138:8
217:11

evaluated 61:11
238:3

evaluating 64:11

evaluation 59:16
139:20

Evans-brown 8:17,
18 54:2 55:9,10 56:6
57:1,14 58:5 59:21
60:13 61:9 62:1,22
63:20 65:1

evening 264:3,7,13
265:3

eventually 219:21
232:23

Eversource 7:15,19
94:8 96:20,21,23
103:8,12 106:3,11,
14 107:6,8,11,13,15
108:21 109:5,7,9,12
110:13 127:20 128:4

133:7,14 134:21 148:13 149:15,16 151:2,9 154:1 155:8 165:19 168:3 171:8 175:7 177:22 178:19 180:19 183:14 185:7 186:5 188:14 189:1, 23 209:20 218:6 223:14 224:16 227:14 230:7,11,21 231:7 232:7 236:3 239:3,11 245:21 250:12 254:10 258:13 260:13 262:17 267:16,17,19 268:1 270:21 272:6 273:14 276:16 280:15,22 299:12	67:15 68:23 69:20 71:4,15 76:16 78:16 80:20 93:5,16 95:10, 12 96:9 99:2 108:4, 5,19 109:19,20 110:11 112:1,2 113:1 114:7,8,21 117:3 118:7,8,22 119:22,23 120:10 121:17 122:4 124:22 126:6 139:2,3 141:22 148:7 149:5 152:4 163:11 174:16 175:14 181:2 182:5, 22,23 191:7 192:14 200:13,16 203:6 204:11 209:7 231:19	explain 9:14 37:8 107:14 144:1 154:4 157:10 explained 41:17 156:4 189:17 220:8 226:17 281:2 explanation 128:1 209:11,18,19 248:19 282:1 explanatory 136:2 exported 22:10 exports 187:15 expressed 33:19 expressing 77:4 expression 20:8,9 expressly 170:17 extend 136:21 214:9 293:18 extending 300:11 extension 135:18 185:9,12,13 extensive 116:10 185:3 extent 199:11 201:21 212:6 278:20 external 77:5 148:20 externalities 33:18 46:22 47:2,5,12,15 48:5,11,18 50:10 51:7 52:5,14 77:6,7 externality 49:16 50:19 51:18 54:18 extra 212:13 213:16 214:11 247:5 248:2 extra-large 184:12 extraordinarily 188:16 190:8 extrapolate 196:22 extremely 279:18	facts 268:9 factual 198:16 199:19 fail 142:13 fair 11:5 57:4 71:14 72:23 125:19 126:7 132:23 143:14 186:4 214:7 fairly 127:14 221:10, 12 fall 137:10 249:18 falling 72:11 161:8 falls 131:7 familiar 154:1 190:18,22 191:6 223:16 224:18 fast-forward 253:1 fast-forwarded 286:2 faster 247:8 fate 101:9 favor 14:7 111:9 feasible 233:13 features 146:12 fed 149:1 federal 24:11 fee 148:6 149:9 150:2,13,23 151:3, 14 152:6 194:6,7 224:19 225:7 feeders 227:18 feel 12:7 101:8 169:9 180:9 210:6 feeling 29:19 feels 91:2 190:16 fees 14:13,17,22 15:1,4,5 132:16 148:11 149:21 150:14,21 151:12,16 153:18 155:4 224:10,13,17 fell 292:10 felt 214:13 FERC 231:1 Ferris 252:23 fewer 93:19 field 258:10 figure 93:15 153:21 239:6 267:12 270:18 286:12 288:6 291:20 Figured 251:12 figures 99:11 100:2 figuring 153:8 file 21:16 22:16,18 23:4 108:2 109:17 111:22 114:5 118:5 119:20 181:6 201:18 filed 10:23 23:2 29:12 30:17 43:2 54:20 71:5 87:14 108:14 110:6 111:20 112:12,13 114:6,7, 17 118:17 121:12 125:8 126:19 153:9 193:9,11 209:5 227:15 272:12	filling 10:17 14:20 43:6 108:4 109:20 111:23 112:1 118:6, 7 119:21,22 126:5 179:7,9,12 209:4 267:17,18 277:17,18 293:3 filings 109:18 final 30:12,16,20 31:10 33:1 55:15 178:11 182:4 199:8 finally 10:22 24:22 43:7 115:6 296:8 302:19 finance 137:10 140:23 159:23 233:23 240:13 290:22 294:6 296:9, 12 299:1 financeability 136:13 298:22 299:6 financed 136:4 289:5 financial 16:1 141:19 142:14 215:21 financier 291:17 financiers 137:9 288:18 financing 136:8,9 137:14 141:7 156:7 288:14,21 290:9 296:15 299:4,15 find 18:22 21:19 34:9 36:15 58:18 63:7 95:2 146:20 159:19, 20 168:8 204:19 220:12 256:12 275:3 finding 30:21 53:17 findings 52:20 fine 18:12 140:16 finish 251:6 fire 301:11 firm 113:14 firsthand 116:20 fit 55:12 161:20 242:4 five-minute 199:9 282:5 fixed 20:10 fixed-price 218:19 flat 72:7 flexible 285:17 flip 231:20,21 284:1 flow 60:19 flowing 235:13 flows 60:3 283:18 fluctuates 137:2 218:15 fluctuating 38:5 focus 241:5 286:9 focused 299:15 folks 159:17 160:18 268:5,6 285:20 296:11 299:3 follow 6:10 66:15 155:22 161:15
F				
exceeded 233:3 exceeds 195:5 excellent 216:20 exception 38:17 67:7 excess 133:22 134:12 259:1 excited 12:3 176:8 exciting 239:18 exclude 33:17 181:22 211:5 excludes 77:7 excuse 69:5 100:13 184:6 195:3 execute 176:12 exercise 45:8 exhibit 28:12 30:7, 10,11,15 33:9,21 34:11,13,14,15,17 35:10,11,15,18,19, 20,21 36:1,15 37:6, 8,10,18,19 38:3 39:3,14,19,23 40:3, 4,9,12,13 41:18,19 42:7,11,17 43:7,10, 14,23 51:22 52:4,20, 23 53:12,15 54:17, 21 55:3,16,18 56:2, 3,8,23 58:18 59:2,6 63:17,19 64:6 66:14	exhibits 10:3 182:23 200:3,6 exist 170:23 195:10 274:4 existence 162:20 existing 14:8 32:18 135:2 159:12 161:1 162:8 170:23 174:6 183:9 233:4 301:6 302:18 exists 248:1 expand 25:15 132:3 232:4 expanded 151:10 152:19 185:6 expanding 233:15 expansion 25:19 132:5 expect 147:11 151:8 153:3 173:22 175:12,16 178:21,23 260:16 281:8,13,18 287:2 expectation 116:16 142:11 219:19 234:23 262:22 273:20 expectations 224:6 expected 31:13 33:10 41:4 152:17 expecting 147:9 expedite 152:13 expenditures 262:7 281:14 expense 268:11 expenses 281:4 expensive 188:17 190:9 282:21 experience 40:19,22 41:2 92:5 115:13 116:20 152:13 156:14 157:13 160:15 experienced 238:21 experiences 189:13 experimentation 185:4 expert 111:3 113:23 126:23 131:2 experts 12:10 expired 164:16	factored 59:3,8 60:1 62:4 factors 34:18 73:23 74:5 75:4,8 297:17	faced 84:23 facilitate 36:12 116:18 facilitating 7:10 facilities 25:8 67:7 116:2 159:12 160:3 161:2,16 162:8,21 246:10 247:10 248:3,9 252:19 253:7,12 254:1,2 268:13 269:9 299:7, 10 facility 100:1 160:12 183:4 214:8 248:10 fact 13:4 25:5 37:1,4 57:16 58:9 69:23 116:22 185:1 221:8 223:18 227:6 242:23 243:15 258:17 283:9 294:10 295:18	

245:14	fun 239:16	generations 260:5	106:9,13 123:17	guys 180:6
follow-up 297:21	function 112:16	generator 32:4,17	138:13 144:16,17	
298:10 303:2	fund 23:8,13 224:18	154:4 225:13 240:22	145:16 220:15	<hr/> H <hr/>
Footnote 148:8,14	233:15 234:22 235:3	258:18	221:16 239:12 242:4	habit 72:11 286:17
forced 159:19	266:15	generators 5:10	243:14 244:6 256:3	half 147:14 156:23
forecast 37:17 81:6	fundamental 208:7	15:18 32:12 33:6	258:7,11 267:4	255:19 256:6 271:5
forecasted 33:13	funded 235:11	34:5,6 41:1 100:7	279:1,20 288:20	Hampshire 7:18 8:18
40:15 61:22	funding 24:10 128:23	152:13 161:10	gotcha 177:10 200:7	14:2 16:6,23 23:8,
forecasting 227:20	225:5 235:10 281:7	204:4,23 205:8	gotta 196:18,21	12,13,17 25:3,5 26:6
forecasts 37:11,12	funneled 45:19	206:15	governing 26:17	28:14 29:2 30:17
228:3	future 25:15,20 31:14	generic 253:13	government 24:12	32:4 33:8 54:3 55:11
foregoing 204:21	32:14 36:13 37:13	gentleman 219:14	grabbed 274:23	59:8,14,16,19,22
forget 49:3	73:2,8,18 75:6 83:4	gentlemen 76:6	grandfathered	60:3,12,20 61:5,7,
form 24:2 28:20	132:7,9 139:23	126:7	168:17 289:23	12,13,17,21 62:9,17
97:22 210:15 239:22	149:20 161:9 215:10	geographically	grandfathering 92:4,	63:9,10 64:2,3,12
240:2 254:15 292:8	216:4 217:2 220:13	211:8	11,19 135:23 215:10	69:12 71:11,17
forma 288:19	226:19,20 228:13,14	gift 303:18	222:2 287:19,22	79:13 87:6 88:18
formally 194:5	229:7 234:17 260:5	give 24:3 30:13 31:23	288:2,12 290:4	103:16 104:3 110:19
formas 156:8	261:23 262:8,10	32:20 43:9 57:10	293:13 300:12	111:7 112:21 113:5,
forms 175:14	284:18 285:15 301:4	61:18 89:10 97:7	Granite 8:3	20 115:1 121:2,4
formula 293:15	302:16	145:11 179:23	grant 201:3	124:7,18 128:8,13,
302:1,7	future-looking 32:8	197:16 198:3,6,21	granular 255:3	14,21,22 129:6
fortunately 263:13	<hr/> G <hr/>	199:1 201:22 210:21	granularity 89:6	130:8,12 136:17
forum 153:19,22	Garcia 104:15,16,19	211:8 214:7 244:18	graph 71:10,15,20	137:13 138:19
154:3	105:1,4,5 106:22	257:10 289:19 290:4	72:21 73:11,18,22	139:11 141:1 145:7
forward 12:9 13:3	148:22 150:16	giving 249:19 295:1	93:15 94:5 95:9	156:4 176:1,5 179:3
16:5 74:10 145:13	gas 25:9 34:19 35:11	glad 22:12	great 75:11 137:14	180:6 183:15 192:15
193:15 194:19,23	36:8,20 38:8 63:8	glide 170:20 224:5	141:11 183:11	205:16 206:4,12
198:18 199:6 216:23	64:7,21 88:12	goal 282:6,8	236:21	214:4 222:23 223:10
238:4,15 239:10	242:10 285:19,20	goals 244:19	greater 5:11 15:21	225:22 233:10
252:16,20 297:20	gathered 174:4	Goldner 5:2,3 7:14,	67:4 69:10 70:15	235:8,18 236:2
299:5	gave 86:18,19 122:9	20 8:1,5,9,12,16,20	71:1 132:6 205:9	238:11 241:21,22
forward-looking 36:8	171:14	9:2,8 11:19 13:11	232:1 247:10 249:9	244:20 246:14 248:6
37:11	geared 207:23	14:1,19 15:8 17:2	286:10	257:2 281:2 284:8
found 51:15,17 206:2	gears 187:11	18:5,8,13 22:14	greatest 249:16	287:6 292:12 293:2
242:13	general 11:1 15:3	23:1,6 24:21 25:23	Green 242:14	296:18 298:18
Foundation 8:14	24:4 40:21 41:8 52:4	26:8,21 27:7,10,15,	grid 19:10 20:7	Hampshire's 16:20
26:11 45:22 46:6	93:9,11 95:3 111:19	16 29:22 39:4,6	187:15 227:14,18	44:16 73:6 131:2,8
49:14	116:16 142:16 148:2	45:10,18 46:1 47:20	246:20,22 247:20	204:20 246:6 248:7
foundational 17:11	179:15 230:18	48:22 49:7 53:22	248:1,14 249:3	Hampshire-specific
fourth 216:14	236:13 242:18	54:12 55:6 65:3,17,	250:19 251:4,14,15,	31:12
frame 142:10 165:22	243:19	18 66:18,22 67:17,	21 253:21 255:12,16	hand 12:18 106:19
246:12	generally 24:1 28:8	18 76:7 92:23 93:1,4	258:9 259:1 282:16	186:11
framed 267:21	56:13,14 190:22	96:11 98:8,9,15,16	grid's 283:17	handled 232:5
framework 90:6	204:10 205:18	100:10,18 101:1,15	grid-connected	hands 27:12
frank 137:11	242:21	102:1,7 103:9 104:7,	253:17	handwriting 24:23
frankly 259:4	generate 15:19 67:9	14,23 105:7,10,18	grounds 201:10	happen 75:23 157:16
frees 95:23	70:15	106:6,12,16 107:3	group 29:12 59:17	166:19 170:7 216:3
freight 223:7	generated 30:22	122:16,21 123:5,9,	139:9 154:10 176:17	228:22 235:6 247:13
frequently 247:13	77:23 100:5	17 127:12 129:16,	184:3 210:3	253:10 261:10 262:4
friends 285:6	generating 5:11 21:3	18,22 130:4 142:21	groups 154:2,17	263:9 289:22
front 65:19 88:3	131:16 196:22 250:3	143:4 147:4,13,16	176:11	happened 87:13 92:6
109:14 111:11,13,14	generation 19:10	167:11,14,17 179:19	growing 128:21	145:9 241:23 252:17
114:1 116:3 179:21	22:7 25:7 38:23	181:11,16 185:18	growth 129:5,10	262:15 263:14
180:1 224:23	43:19 58:1,2 64:17	188:2,5 191:13,21	142:17 227:22,23	264:15
frugal 136:17 139:15	82:22 90:22 109:11	192:1 193:9,16	GSHA 8:20	happening 173:20
141:1	128:20 129:4,5,9,13	195:14,19 196:2	guarantee 136:22	229:7 252:1 255:22
frugality 136:21	130:7,13 132:15	197:15 199:8 200:20	301:2,17,18 302:6	288:12,16
223:2	133:22 134:12 151:6	201:1 202:9,10,18,	guaranteed 300:16	happy 104:21 123:18
frustrating 189:13	175:20,23 176:4	22 203:16,20,21	302:7	130:2 156:18 162:21
full 19:14 62:6 69:1	179:2 187:20 189:8	211:15 218:3	guess 19:12 52:4	188:21 190:4 231:2
84:5 137:5 233:12	196:15 224:4,8	231:17,18 235:15	103:10 127:12	261:11
246:8 271:11	232:12,16 233:6	245:15 259:20	143:13 148:3 154:18	hard 71:22 91:11
	242:9 247:1,19	270:12 279:11	157:3 159:5 164:5,	97:16 129:22 181:13
	250:3 254:18	280:8,11 300:14	11 173:20 178:10	189:7 274:4 275:7
	258:19,22 261:2	301:19 302:11,15,23	187:6,23 199:23	Hayden 8:22,23
	281:6,15 287:2	303:15,19	274:11 294:1 295:4	103:13 106:22
	299:20 300:9	good 5:2 7:5,16,21	300:3	110:20 115:6,7,9,13
		8:2,7,10,13,17,22		116:5,9,22 117:4,10
		9:4,7,8 11:22 15:10		121:13,18,23 134:23
		16:14,16 23:9 27:5,8		136:12 140:18,21
		65:8 66:6,8 76:11		160:22 161:5,6,19
		103:6 104:16 105:4		

162:2,12,19 167:8, 13,16 294:2,3,5 295:7	history 26:16 221:3 252:8 253:14 255:17	identifying 39:7,10 185:20	incentives 69:13 128:18 129:12 232:19	individually 168:15
he'll 243:8	hit 223:8 249:5,12	illustrate 157:16	include 36:21 62:3 77:5 132:9 143:17 154:2 159:1 160:19 174:7 175:15 176:21 177:7,20 297:6	induced 43:17 64:15
head 188:19	hits 223:9	illustrated 175:13 240:16 241:13	included 40:9 90:14 105:15 112:9 177:11,12,13 210:3 281:1	induction 43:17
heading 152:3	hockey 21:5	illustrates 158:1	includes 6:7 28:14 80:7 121:1 187:19 236:13 273:6	industrial 116:13
heads 96:7	hold 97:12 117:18 119:8 303:7	illustrative 156:1 169:12	including 30:22 54:18 174:5 189:23 232:12	industry 116:11
hear 35:16 48:8 66:1 136:11 138:5 179:22 236:22	homeowner 259:14 289:7	immature 288:3	inclusion 176:15	infer 212:18
heard 126:2 136:5 138:4 145:15 210:11 239:19 245:3 248:21 249:21 250:9 254:4	homeowners 289:13, 14	immediately 261:7	inclusive 178:7	infinite 21:5
hearing 5:5 6:4,16 9:13,20 10:7 17:23 25:11 26:20 29:15 47:3 67:19 143:9 144:5 201:21 214:23 296:10	honor 210:19	impact 31:2,23 32:2, 3 34:7 36:2,8 37:19 38:5,13,23 41:13 53:1,13 55:14,20 57:11,17 59:14,15 61:16,18,20 62:12 74:11 75:4,21 81:7 83:6,19 84:21 88:5 89:18 94:17,22 95:1, 5 99:19 130:22 145:16 219:17 227:2 264:20 273:15 276:15,19,22 277:12,16,20 279:1, 5,6	income 23:20,23 24:13	inflating 142:2
hearings 201:6	hope 29:22 83:23 162:13,19 179:8,10	impeach 198:14 201:9	inconsistent 201:11	influence 88:13
heat 220:1 227:23 265:16 266:9,13,14, 15	hoping 17:20 146:2 246:22	impeachment 202:14	Incorporated 192:13	influenced 36:20
heating 266:12,13	Horne 8:10,11	impacted 38:8	incorrect 87:19	inform 179:3,7
hedge 242:22	horse 300:15	impacting 220:14	increase 34:1,4 41:4, 7 64:6,7 72:1,3,7,8, 9,14,16,22 73:1 74:3 81:11 95:3 120:19 121:4,9 131:14 134:8 195:2,5 275:22,23	informal 154:3,12
hedging 242:16	host 141:13,14 235:23 236:12 299:10	impacts 28:15 32:9, 16 34:8 38:14,19 39:1 40:11 43:19 57:23 58:20 90:14 93:7 95:13 97:14 144:6,7 146:4 187:6 230:6 235:6 273:21 275:19,20 276:4 277:7 279:23 280:1	increased 64:10,13 221:19 227:21	information 9:16 16:11,15 17:18 85:13 145:4,5,15 153:5 154:5 155:13, 14 174:4 175:11,12, 18 178:6 179:11 189:3 210:13,14 223:23 240:11 272:9,11
held 29:11,15	hot 263:8 282:8	impeach 198:14 201:9	increases 41:6 55:21 56:3,12 70:12 71:22	informed 181:21
helpful 90:8 156:19 157:2 163:8 172:1 173:14 193:22 277:14 278:22 279:18 289:1	hour 33:14 78:8,14, 20 147:15 207:10 208:17 246:13 251:1,13,19 256:19, 22 257:5 282:11 295:20	impeachment 202:14	increasing 64:9 67:10 71:17	infrastructure 93:21 95:21 260:7,8 262:1
helps 141:20 278:5	hourly 31:18 80:2 89:2,12	impediment 199:4	incredibly 19:18 22:22	initial 34:17,21 40:6 53:6,17 55:20 58:6 63:2,14,16,19 149:20 152:23 175:16 176:17 201:4 217:20
hey 213:15 287:1 288:19	hours 79:17 84:7 86:19 204:3 206:14 254:21 283:13,16	implement 23:21 187:14 188:17 242:13	increasingly 169:20	initiate 35:11
hiding 276:22	house 93:23 260:1,2 266:12,13	implementation 131:18 134:18 183:1 186:6 188:20,21 190:8 231:1	increasingly 169:20	innovative 16:1 137:21
high 63:8 266:9 288:5	housing 23:14	implemented 158:14 186:13	incurred 31:13 84:6 96:18 235:3 263:15 273:23 286:20	input 152:19 153:17, 19,23 175:5
high-level 241:9	huge 142:8 223:6 286:16	implementing 183:23 189:22	incurring 151:5,8 261:1	inside 293:19,22
higher 15:19 34:20 35:10 36:17 84:23 129:7 150:2 221:12 235:6 239:17 241:15 247:22 249:19 264:9 265:23 285:17	hydro 67:7,8 70:14 285:20,21	imply 100:5	incurs 224:23 262:7	insight 32:3
highest 79:15 80:14, 16	hydroelectric 25:8 115:19,21	implying 212:7	independently 233:15	insisted 217:10
highlight 185:15	hypothetical 90:5 166:16	important 19:18 25:13,18 85:13 143:22 144:3,15 176:10 211:2 218:7 240:15 258:16 259:15 266:19 267:2 272:8,10 274:13 295:6 299:16,22	install 70:4,19 94:12 189:8 205:13	install 70:4,19 94:12 189:8 205:13
highlighted 257:4	hypotheticals 166:21,23	improve 280:5	installation 99:13	installation 99:13
highlighting 259:22	<hr/> I <hr/>	improved 16:3 138:12	installed 69:13 93:22 171:3	installer 100:1 175:20 225:2
highly 98:7 197:20	idea 20:10,13,14 144:10 147:8 200:3 216:19	in-person 5:23	installer 100:1 175:20 225:2	installers 154:4 176:4
Hill 27:5,6,13 28:3,10 29:20 30:4,15 31:11 32:2 34:15 35:16,19 37:9 39:18 41:22 42:4,10,18,23 43:3, 12 44:6,13 46:11,17 47:3,8 48:13,15 63:12 66:8 67:14 72:19 73:4 74:8 75:1 82:9 95:7	ideas 25:16	inappropriately 210:22	installs 79:2,3	installs 79:2,3
historic 233:8	identification 102:14 124:22	incentive 70:4 129:2 161:23 167:22 173:8	instance 226:5	instances 83:13 225:19
historical 36:3	identified 17:13,15 30:12 79:17 84:15 143:20 152:22		instant 282:18	instantaneous 284:11
historically 73:12 75:12 145:8	identifies 276:4		instinct 171:12	instituted 132:17

intended 32:7,13 149:19 201:9	67:3 68:5,17 73:7 87:3 88:18 225:11, 15 231:8 255:16,19 256:2,18,22 257:8, 21 282:4 286:18,23 294:22 295:16	justified 131:15	KWH 51:8 77:10 99:6,7 187:22	led 34:22 40:7 126:4
intending 169:13	issue 6:20 18:6 21:21 58:23 59:3 92:10 97:8 158:10 194:7 201:14 202:6,17 208:7 210:6 224:10 299:14 301:2	<hr/> K <hr/>	<hr/> L <hr/>	left 104:8 122:6 137:16 226:20 240:19,21 282:1
intensive 185:17 186:4	issue-specific 202:8	Karen 103:20 106:21 117:16,21 148:19 150:9 190:20 192:3	labeled 71:11 192:16	legacy 91:3,8 135:2, 8,11,22 136:1 140:19 155:17,21 158:10,11,13 162:11,12,17,19 163:2,17,18 164:5,6, 12,15 168:18,23 172:20 180:22 211:20 215:11,15 293:13 294:2
intent 193:17 211:4 217:16	issued 29:1 35:19	Keeping 24:15	lack 168:18 207:14, 15	legal 198:4,16 199:4, 10 222:13 300:22 301:1 303:20
intention 149:22	issues 13:7,9 144:8, 11 215:17 221:4,5, 15 245:7	KES-1 192:14	Ladwig 7:10 147:10, 22,23 149:4 150:6, 19 153:6,14 154:15 155:3 156:10,20 158:6,22 159:9 160:2,21 161:14,22 162:7,15 163:7,23 164:10 167:1 168:10,11 170:10 171:23 172:19 173:12 174:12 177:8 178:10 179:13 180:8	legible 22:23
intentional 164:9	item 23:2 272:21	Kevin 191:2 192:14	laid 14:14,17 138:22	legislation 131:11
intentions 291:11	itemize 273:9,18	key 52:19 144:10 145:2	landed 283:1	legislative 26:16
interact 285:3	items 17:5 97:17	kid 276:7	landfill 25:9	legislature 236:20 243:22 244:23
interconnect 234:13 235:1	iteration 226:22	kid 12:17 51:3 123:22 153:20 170:18 175:14,16 179:15 225:3 228:8, 11 234:21 235:5 239:23 241:15 247:23 252:22 253:23 260:14 267:21 276:4 282:19,22,23 288:14 300:7,13	language 165:7,15 169:12 170:1 171:13 174:1	lengthy 12:1 234:1 238:9
interconnecting 116:12 233:11 235:11,12	iterations 226:18 228:14	kilowatt 33:14 78:8, 14,20 84:7 204:3 205:9 206:14 246:13 253:4 254:21 270:4	large 40:20 41:8 93:11 141:14 142:18 184:15 186:16 189:4 204:23 205:12 225:12,21 242:9 245:16 246:10 247:9 250:18 251:2,21 252:7,9 256:1 257:23 258:10 276:12 291:5 294:17 298:14,18 299:8	less-sophisticated 300:8
interconnection 15:3 119:15 132:17 141:3 152:12 174:4,5 224:23 225:11,13 234:19 281:5,10 294:11	<hr/> J <hr/>	kilowatts 255:11	largely 140:21 141:11	lesser 294:9
interconnections 287:13	James 27:6	kind 12:17 51:3 123:22 153:20 170:18 175:14,16 179:15 225:3 228:8, 11 234:21 235:5 239:23 241:15 247:23 252:22 253:23 260:14 267:21 276:4 282:19,22,23 288:14 300:7,13	larger 151:22 157:22 206:7 225:9 241:19 253:16 289:13 290:8 291:4,15 294:5	lessons 24:6,16
interest 6:21 21:20 22:13 108:23 110:15 113:6 115:2 117:8 119:3 121:21 127:2 163:4 236:21	January 71:5 107:23 108:5 109:20 111:21 112:1 114:7 118:8 119:23	kinds 12:11 227:16 253:2	largest 25:6 187:2 218:12 276:17	let all 13:13
interested 160:20 163:6	Jeannie 23:11	Kingston 190:19 191:2 194:22 297:14	lastly 132:13	letter 10:23
interesting 266:6	Jeff 105:21	knowledge 92:14 116:10,21,23 191:6, 11 199:17	late 125:8 264:5,10	level 89:5 120:12 128:15 139:15 207:2 239:18 245:10 246:15 253:6 254:9
interests 12:5 133:1 134:9 144:23 145:23 224:3	Jeffrey 105:16 107:1	Kommineni 122:6	latest 88:1 218:1	levelized 31:1 91:20
interfere 301:3 302:16	Jessica 7:17 11:23 18:11 101:20 105:23 107:6 127:19 133:6 134:20 140:5 301:12	Krakoff 8:13,14 18:5, 6 26:7,8,10,22 46:2, 4,5 47:21 48:1,2,23 49:6,10,12,13 50:20 51:16 52:2,21 53:20 65:12,14	launch 288:7	levels 149:9 151:3, 14,15 255:4
intermittent 240:12	job 286:7	Kingston 190:19 191:2 194:22 297:14	launched 288:8	LGIA 225:12
interrupt 120:14 156:22	jobs 297:16	knowledge 92:14 116:10,21,23 191:6, 11 199:17	law 8:14 9:5 23:18 26:10,14 45:22 46:5 49:14 162:14 169:10	Liberty 8:1,3 104:8,9, 18 105:5 122:5,17 148:16,17,22 150:7, 16 155:8 242:19
interrupting 129:19 261:8	Joe 106:13	Krakoff's 54:6	laws 131:9	life 160:11
intervenor 43:5	jog 140:15	Kreis 8:7,8 123:14, 18,21 127:8 142:22 143:1,2,5,7 146:15 147:2	lay 9:19 231:23	lifts 266:21
introduce 123:16,22 127:11 131:21 199:15 258:15	John 103:21 106:21 119:11 151:18 155:11 231:6	Kshemendranath 27:8,9,14 28:5 30:4 32:23 35:23 39:21 40:2 42:13 47:13,19 48:8 49:19 50:4,5, 13,23 51:11,21 52:10,18 53:10,18 54:5,16,23 56:1,18 57:7,19 58:11 59:11 60:5,22 61:14 62:10 64:4 66:8 68:7,19 69:18 70:18 71:19 72:4 73:20 76:23 77:3,12,21 78:11,21 79:8,9 80:10 81:3 82:12 86:2,16 87:20 88:10 89:23 90:15 91:5,16 92:8,17 93:13,14 94:3 97:10 99:15 100:3	layers 257:15	light 6:8 18:23
introduced 185:3	join 65:19 122:8	Joseph 106:4 107:2	lays 136:19	likelihood 87:5 89:4 145:12
investigate 5:19 190:4	joined 5:4	judge 271:23	lead 88:7,19,22 122:10,11 178:7,11 220:19,20 231:8	likewise 21:2 78:15
investigated 146:13, 14	joint 10:5,7,9,17,21 11:1,3,9,21 13:15,16 45:12,20 54:1 65:4 95:19 96:4 97:5,9 102:12 149:12 152:8 154:21 187:13 204:11 283:1 301:3	judgment 126:23	learn 186:14	limit 6:23
investment 20:23	Joseph 106:4 107:2	July 263:8	learned 24:17 226:23	limitations 215:5
investments 16:4 224:4 227:16 261:23 300:10	judge 271:23	jump 190:17 219:2	learnt 24:6	limited 182:9 183:9, 23 266:20
investors 294:8 295:9	judgment 126:23	June 29:15 35:19 87:14 282:9	lead-up 173:15	limiting 17:22
invite 143:9 177:2	jurisdiction 5:16	jurisdiction 5:16	learn 186:14	lines 193:21 239:5 262:20 267:15
involved 154:19 186:15 190:21 196:8 259:15	jurisdictions 151:13 154:2 224:12	justification 249:19 250:7	leave 62:20 157:6 177:4 293:23	list 103:4 155:5 198:12 267:18
involves 176:3	justification 249:19 250:7		leaving 263:16 300:8	listed 55:16 56:7 148:16 155:10
IR 14:21 15:2				listing 76:20 81:17
ironically 286:23				lists 150:21
ISO 59:9,19 60:6 61:7				LITELL 103:15
				litigated 185:5

- litigation** 185:4
- Littell** 103:15 106:23
110:21,22 111:1,6,
13 112:3,6,8,19
113:3,8 134:22
135:10,11 140:5,10,
12,15,17 156:2,13,
21 157:12 158:16,17
159:5,8,14 160:8,9
163:21 164:7,21
165:17,20 167:10,18
169:9 170:15 171:11
172:7,8 173:1
176:19 204:8,16
205:2,18 206:12,18
209:10 210:4 212:6
213:9 214:17 216:7
222:3 225:8 226:17
236:8,9 237:16
240:6 248:17 265:1
277:22 279:4,19
283:2 284:14 287:12
288:15 289:10
290:11 295:23 296:1
298:17 299:9
- live** 122:14 125:13
- living** 229:2
- LMP** 87:22 88:3,17
- LNS** 79:12,18
- load** 22:6 35:1 59:18
60:12 61:7 62:9 67:5
71:12 73:7 74:2,6
79:16 86:4,6,21 87:6
106:10,14 191:3
194:23 195:7 241:14
243:8 246:21,23
247:4,9,15 248:1,13
252:11,20 253:9,21
254:1 258:20 263:16
264:6 265:19,21
273:11,16 284:5
285:8 291:8
- load-reducer** 283:16
- loading** 20:14 21:1,
10
- loads** 60:17 248:16
264:10
- loan** 23:8,13 288:22
- local** 195:6 253:12
- locally** 137:22 253:22
258:9
- located** 254:2
- location** 7:7 98:3
124:12 239:4 253:12
- locational** 36:3
197:19
- locationally** 86:13
- locations** 21:11
- logical** 18:4 262:11
- long** 18:20 62:6
101:18 217:14 235:4
238:10 248:8 262:12
285:14 290:15
- long-term** 62:8
218:19 285:11
- longer** 37:23 102:2,6
217:6 222:2 229:4
290:23
- longstanding** 254:15
- looked** 47:15 49:17
61:17 68:9,10 79:12
81:4,20 82:13 85:19
86:4,5 87:22 88:3
89:1,11,12 90:2,5
91:8,18 92:10,18
151:11,19 167:20
187:7 241:12 262:17
265:11 295:22
- lose** 290:2 297:18
- losing** 265:7
- loss** 68:4,15,20
- losses** 35:2 36:22
38:11 274:16
- lost** 81:13
- lot** 12:5 26:14 86:13
111:15 116:22 156:3
173:14 209:18
215:8,12 216:1
221:11,14 228:4
229:6,8 231:10
232:9 241:20,21,22
242:9,11,15 245:23
246:16 254:5 255:8
257:15 258:4 259:8
260:2 265:4,13
283:22,23 284:18,22
285:3,6 290:2
291:10 301:14
- lots** 216:4
- low** 23:20 136:13
- low/moderate** 23:23
24:13
- lower** 53:13,16 58:2,
7,12 87:17 88:2,7,
17,19,22 136:14
224:7 232:15 264:8,
13 265:4 285:13
- lower-cost** 285:13
- lowered** 95:12
- lowest-cost** 244:3
- lunch** 101:4,9 127:15
147:7,18
- luncheon** 147:20
-
- M**
-
- made** 5:13 14:12
50:21 57:10,16,20
58:3 72:17 80:10
95:11 118:7 133:8
195:13 224:3 246:16
258:6 260:10 293:7
- magnitude** 32:9
41:12 56:14 61:19
235:5 252:3 268:16
- Maine** 225:21 266:9
287:6 292:7,11
- maintain** 194:12
- maintained** 74:19
- maintaining** 128:6
129:14 130:5 150:14
194:2
- maintains** 235:10
- maintenance** 183:1
- major** 20:16 21:11
- make** 6:14 9:11 12:2
13:16 15:14 16:10
18:23 39:7,23 42:15,
19 57:3 66:16 71:12
73:21 74:18 75:22
76:2 99:7 100:9
102:9 104:11 108:10
110:3 112:7 114:13
118:14 125:7 134:2
137:8 140:6 146:20
149:19 150:5 151:23
152:1 166:6 167:11
172:2,22 173:19
174:7 183:5 203:9
206:5 214:20 220:18
237:23 238:7 244:22
250:16 260:11
261:22 270:13
272:12 274:7 278:19
279:14 281:12,16
286:4 288:21 291:7
292:14 298:13
301:16
- makes** 15:18 123:9
141:2 166:7 259:12
282:13 292:2,21
- making** 5:23 6:7
16:17 74:20 169:2
176:10 199:5 204:10
221:17 229:21 243:2
- manager** 25:2 103:14
105:5 106:10 115:9
119:12
- managing** 152:11
- mandated** 236:11
- manner** 202:17
- manually** 185:17
186:3
- manufactured** 23:14
- manufacturing**
141:17
- Manzelli** 9:4,5 15:10
65:8,9,15,22 66:5,6,
20,23 67:1,22 68:1,
2,13,21 72:12 73:15
74:16 76:4,5 147:14
180:3,4,9,11 181:12,
15 182:1,2,18
184:22 185:22
186:1,2,18 187:16
188:10,13,18 189:18
190:6,17 191:14
192:7,11 193:6,11,
20 194:3 195:16,23
196:4 197:15 198:8
199:12 200:11
202:4,11,20,23
203:1,22 204:18
205:6 206:10 208:22
211:7,11
- March** 29:3
- margin** 36:3 295:9
- marginal** 38:23 49:23
50:8 64:18,22 95:4
284:23
- marginally** 72:9,13,
15,21,23
- marked** 30:10 42:17
54:21 55:2 66:14
108:4,5,19 109:19,
20 110:10 112:1,2
113:1 114:6,8,21
117:3 118:7,8,21
119:22,23 120:10
121:17 124:22 126:6
- market** 16:22 20:1,23
35:2 63:4,6 67:3,11
128:20 129:11
135:12,13 137:2,11
161:12 176:1 179:2
183:7 219:17 240:17
241:12,17 242:21
243:5 256:12 257:16
273:7 278:8 285:4
290:13,14 292:3,10,
15
- market-based** 16:21
218:10,22
- market-driven** 129:3
- markets** 67:6 68:6,17
159:17,22 160:1
215:14,18 220:14
222:21 223:7 241:5,
9 242:3,16,22 243:2,
12,14,16 259:15
284:20 285:10
286:5,17
- married** 84:11
- Maryland** 297:12
- mashed** 276:8
- Mass** 184:13 185:14,
15 234:3 238:23
- Massachusetts**
121:2 184:11 186:9,
21 223:20 227:13
228:2 232:10,17,18
233:9 238:22 239:1
246:3,4,7 287:7,17
- materialize** 274:5
- materialized** 263:16
- materials** 44:23
112:4 114:10 118:10
120:2
- math** 239:4 240:22
- matter** 5:17 116:23
141:12 184:5 199:6
201:4 242:12,18
243:19 244:18
296:16 298:22 299:1
- matters** 89:15 107:17
116:21 182:10
207:1,2
- meaning** 77:20 215:8
228:23
- meaningful** 178:4
276:19 277:8
- means** 141:3 168:4
275:21
- meant** 44:21 156:1
157:15 177:10
- measure** 22:4 242:20
- measurement** 21:10
59:16
- measures** 131:10
- mechanism** 148:16,
18,21 149:1 185:5
196:19 224:18 245:9
269:18
- mechanisms** 92:19
146:5 185:13
- median** 156:6,8,14,
15
- meet** 70:21 129:10
248:15
- meeting** 87:5
- megawatt** 5:12 79:15
157:21 232:1 233:5,
14 235:17 246:16
251:1,13,19 256:19,
22 257:5 282:11
291:21 295:19
298:15,16
- megawatts** 161:11,
16 225:23 232:21
236:1 237:10 238:13
246:11 266:22
- Melissa** 8:10
- melting** 21:4
- member** 6:13 25:4,6
156:3 291:6
- members** 6:22 18:17
45:16 214:5 296:10
- membership** 137:12
- memorialize** 173:23
- memorialized** 174:8
- memory** 140:15
200:15
- mention** 202:13
- mentioned** 23:3 30:7
33:19 46:20 75:3
122:2 185:9 252:13
254:12
- mentioning** 265:6
- mentions** 153:15
- merited** 150:2
- merits** 95:16
- meter** 44:16 141:11
167:6 206:15 222:6
225:4 247:16 252:15
- metered** 5:9,14 31:15
32:9 33:23 34:9
151:12 161:2,17
163:20 164:3 167:4
232:1 257:11
- metering** 5:14,20
12:9 14:8,14 15:6,
14,19 16:1,17 24:2,
15,17 25:12,14,16,
19 28:9,17 32:18
33:7 34:2 40:15
44:11,17 48:6,7,12
50:3 51:5,10 55:23
61:13 63:9 64:2
72:17 73:2,10,19
78:3,4,10,20 85:21
86:13,23 89:20 90:4
94:19 97:23 112:11
114:4 115:18,20
116:1,17 120:13
124:18 128:7,12,16
129:1 130:18,22
131:4,9,11,15,22
132:4,5,7 133:2,10,
11,17 134:3,7,10,15
135:4,8,12 136:18
137:5 138:17
139:14,22 141:10,19
157:18 158:12,20
159:3,10 160:7
161:4,8,9,18 162:1,
3,9,22 163:12,16
164:16 165:12,16
166:2 168:6,9,20,22
169:1,4,21,23 170:2,
3,4,13,16 171:1,7,16

179:3 182:8 189:6 194:13,16 195:13,17 203:14 204:3,13,20 206:4,7 207:15 215:7 216:1,2,16 217:3 218:13 219:10 220:5 222:5 223:20, 23 232:19 246:8 252:15,19 253:2 254:21 255:11,15,23 257:19 259:9 265:8, 14,20 266:2,11 267:19 268:4,12,23 269:8 270:1 272:17, 18 279:2 283:13 284:4 292:8 294:15	128:15 142:17 modest 131:5 132:16 modifies 158:20 moment 93:22 96:1 102:21 173:18 181:11 200:7 211:9 236:4 276:23 287:22 monetized 62:16 money 15:22 85:10 94:2 141:15 223:4 242:15 262:21 288:22 290:6,17 291:13 292:17 299:5 monitor 215:4 monitored 126:10 month 79:16 252:22 255:14 270:5 monthly 34:3,10 40:19,22 41:2,5 79:15 85:22 86:21 224:13 225:16 226:7 254:21 269:21 months 177:19 178:1,5,22 286:19 morning 5:3 7:5,16, 21 8:2,7,10,13,17,22 9:4,7,9 11:22 15:10, 12 23:9,10 27:5,8 65:9 66:6,7,8,9 76:11 103:6 104:10, 16 105:4 106:9,13 229:14 303:10 morphed 253:14 motivated 292:16 motivation 255:23 257:19 292:22 motivations 291:12 Mountain 242:14 mouth 282:8 move 22:10 23:7 26:2,12,18 27:1 45:12 65:6 100:11 124:10 162:1 164:14 179:20,21,23 203:14 219:21 280:10 286:11,12 288:8,9 moved 203:10 247:6 266:23 movement 141:19 moving 39:14 75:5 119:6 204:7 MRVS 68:9 multi-month 139:8 multiple 73:23 74:5 112:11 265:19 297:16 municipal 115:23 235:23 236:12 253:19 297:6 299:10 municipalities 291:10 municipality 136:7 muted 37:20 47:4 Mystic 286:15 287:14	<hr/> N <hr/> names 6:15 27:23 106:7 narrative 152:10 narrow 184:2 Nashua 25:3,4,8 National 227:14 native 71:7 246:4 natural 34:19 35:11 36:8,20 38:8 64:7,21 88:12 227:22 285:19,20 naturally 84:20 nature 37:14 141:1,3 NDA 210:15 necessarily 45:19 149:17 181:22 183:17 208:11 221:2 223:18 228:21 necessitate 235:7 needed 177:20 205:11,12 240:1 257:14 280:17 negative 19:22 20:2 142:1 157:20 158:4 227:3 295:10 negligible 133:18 216:18 negotiated 12:6 188:7 237:2 negotiation 132:23 negotiations 139:9 neighborhood 249:7 neighboring 128:16 neighbors 249:3 NEM 38:14,19 39:1 41:3 69:14 77:10,20 78:8,14 79:1 80:8 81:23 82:7 84:17,19 85:6,8,10 87:13 91:14 98:2 146:4,12 162:9 163:13,14,15 164:2,6,16 165:7,8, 9,10 167:5 168:15, 17,23 169:3 170:13 171:17,21 172:4,5, 22 181:6 187:12 188:15 189:22 190:8 212:1,23 213:4,20, 21 214:23 215:9,22 216:18 222:2 226:18 229:17 301:23 nerves 101:9 net 5:9,13,14,19 12:9 14:8,14 15:5,14,19 16:1,17 24:1,15,17 25:12,14,15,18 28:9, 16 31:15 32:9,18 33:7,10,23 34:2,9 40:14 44:11,16 48:6, 7,12 50:2 51:4,10 55:22 61:13 63:9 64:2 72:17 73:2,10, 19 74:5 78:3,10,19 85:21 86:12,23 89:20 90:4 94:19,20, 21 95:1 99:18	112:10 114:4 115:18,20 116:1,17 120:12 124:17 128:7,12,15 129:1 130:18,22 131:4,8, 10,14,22 132:4,5,7 133:2,10,11,16 134:1,3,6,9,15 135:4,7,12 136:18 137:5 138:17 139:14,22 141:10,19 142:11 157:18 158:12,20 159:3,10 160:7 161:2,4,8,9, 16,18 162:1,3,9,22 163:12,16,20 164:3, 16 165:12,16 166:1 167:4,6 168:6,9,20, 22 169:1,4,21,23 170:2,3,4,12,16,23 171:1,7,16 179:3 182:8 187:20 189:6 194:13,15 195:13,17 196:13,22 203:13 204:3,13,20 206:3,7, 8,15 207:15 209:2 215:7,23 216:2,15 217:3 218:12 219:10 220:5 222:4,6 223:20,23 232:1,19 246:8 252:15,19 255:11,15,23 257:11,19 259:6,9 264:6 265:8,14,20 266:2,11 267:19 268:3,12,23 269:8 270:1 272:17,18 279:2 283:13 284:4 292:8 294:15 300:18 net- 221:3 Net-metered 70:12 neutral 31:20 80:3 128:17 newer 235:12 newly 5:10 NH 156:3 nice 81:20 274:6 Nick 8:13 26:10 46:5 48:2 49:13 50:20 51:16 52:2,21 nodes 250:2 non-customer 32:12 34:5 non-dg 56:4 61:20 95:13 234:7,14 245:11 280:1 non-distributed 269:1 non-engineer 233:2 non-engineer's 247:11 non-generator 41:3 non-nem 80:22 81:16 82:1 84:18 85:1,6 91:14 215:20 229:18 non-net-metered 194:16 non-net-metering 53:6 204:22 non-participants 56:13 83:3	non-participating 57:18 non-residential 83:20 non-settling 12:20 nonlinear 20:22 normal 13:14 294:7 Northeast 240:20 notable 41:2 120:19 121:4 note 5:22 6:16 9:12 46:17 132:13 137:17 201:4 218:7 noted 37:21 40:3 57:22 83:21 152:17 notes 46:11 140:12 notice 199:23 201:20 notion 196:12 NPV 197:22 NREL 87:2 nuclear 222:11 number 17:20 18:21, 22 46:20 58:6,7,8,9, 10 142:3 175:15 186:23 187:8 192:18 207:4 241:8 268:14 269:19 271:2,7 276:13 298:1 300:18 numbers 33:19 54:8, 9 58:19 71:7 79:5 85:20,23 86:14 87:16 121:1 134:8 141:22 145:21 155:23 156:2,9,11, 15 222:20 250:15 252:19 255:18 276:10,11 277:21 278:19 279:6,16
			<hr/> O <hr/> O&m 225:16 OAC 124:4,17,23 127:1 139:11 143:11,15 144:2 oath 102:16 object 176:15 191:12 193:2 209:21 210:2 objecting 10:23 objection 17:5,9 18:3 191:4,17 197:11 201:3 objectionable 153:4 191:15,18 objections 13:17 objective 61:18 obligate 177:1 obligated 183:15 obligation 35:1 165:1 273:11 301:5 302:17 obligations 213:1 273:16 observation 167:2 obvious 138:16 OCA 104:6 217:10	

occasional 48:14	opposition 12:23	116:8 123:3,7 148:2	parties' 11:2,20	penny 271:5 282:15
occur 86:8 153:19	opt 166:18 167:22	165:14 196:8 208:20	12:19,20 26:5	Pentti 19:8
occurred 129:10	169:14 173:8 212:20	211:14 212:22	127:21	Pentz 105:16,19,21
222:18 232:23 263:7	213:16 215:1	239:16 282:7 300:23	partner 28:3	107:1
occurring 272:14	opt-in 185:10,16	panels 13:13 240:3	parts 146:11 303:22	people 50:11 177:1
occurs 84:20	opt-ins 166:13	paradigm 216:5	party 111:10 171:15	196:10 197:8 211:1
October 30:18 87:12,	opted 170:1	paragraph 69:1,20	177:10 180:16	219:22 232:9 243:3,
18	optimize 16:4	149:7,18 163:12	193:12 198:19	6 248:22 249:22
oddy 122:7	opting 212:16	164:12 171:15	236:22 260:17 284:8	265:4,14 285:19
off-peak 219:23	option 129:9 169:13	174:19 213:18	party's 9:14	290:16 292:15
off-site 30:2	181:23 214:19	214:12	pass 94:15 245:22	people's 297:2
offer 16:1 120:6	222:11	Paragraphs 143:18	273:13 281:20	percent 36:17 37:21,
137:6 150:18 169:13	options 128:9 130:9	pardon 35:16 184:16	passingly 191:6	22 52:6,7,16 56:15
183:12 230:22 285:8	153:3,4 254:23	parentheses 155:8	passively 67:5	58:7,8 59:9 60:10,11
offered 191:7	order 5:15 10:8,18,20	park 23:15	passthrough 38:12	62:3,4,13,18 69:10,
offhand 186:23	18:4,14 29:6,7,10	parks 23:15	64:14 90:18	22 74:12 75:14,19
office 8:5 22:18	46:8,9,14,15,18,20	part 17:5 30:18 33:21	passthroughs 82:20	93:8,9,10 94:1
103:18	47:9,17 56:14 58:6	47:19 48:17 55:18	past 26:16 73:14	120:20 130:23
offset 132:14 224:22	103:10 123:15 185:2	57:5 61:23 95:19	75:12 164:3 178:18	142:12 155:6 160:17
272:20 273:1,2	189:6 214:22 230:5,	96:13 102:9 110:9	Pat 105:8	172:15 187:21
291:8 297:8,9	14 231:1 252:3	118:6 119:21 144:22	path 12:8 170:20	188:12 189:6 197:4
old-school 166:20	301:8,21 302:20	145:3 152:5 172:14,	224:5	259:2 260:20 270:7
Oliver 23:7,9,11	ordered 209:21	16,17 175:10 177:15	patience 76:5 211:12	275:22 285:7
one's 244:13	orders 26:17 243:22	182:20 188:7 195:19	Patnaude 29:19	percentage 34:4,6
one-for-one 246:9	ordinary 137:22	209:13,14,17,22	Patrick 7:22 117:15	71:12
one-time 225:6	organization 209:13	210:3 212:1 213:3	Paul 7:6 14:4 17:14	perf 91:11
one-to-one 299:9	organized 180:16	214:15 219:16	27:19 39:14 42:1,14	perfect 16:14 282:11,
ongoing 183:1	origin 252:15	230:15 237:2	54:5 98:20	16
online 234:23	original 35:21 36:6	277:12,13 283:15	pause 211:10 236:7	perfection 274:15
onset 115:20	38:2 54:20 55:2 63:5	284:4,14,15 286:22	pausing 205:22	perfectly 238:8
onsite 247:15 258:20	66:14	partially 96:17 196:5	pay 19:23 81:2	performance 152:7
onwards 87:23	outcomes 220:20	201:2	205:13 229:1 234:21	performed 32:22
open 14:21 182:5	outgoing 153:16	participant 59:15	254:12 260:8 269:23	37:5
217:2	output 233:3 247:3,5	212:15	272:21 287:4,8,17	period 31:19,21
opening 9:11,18,23	outset 26:10 30:8	participants 94:22	288:22 290:15	35:14 37:13 40:16
11:16,20	44:21	204:22 269:7	292:17 297:22	69:7 74:13 91:3,8
operate 23:15 183:21	Overcompensating	participate 114:3	payback 145:10,11	135:3,8,11,21,22,23
191:3	67:23	115:22 122:5 126:4	289:19 290:14 292:4	136:22 137:15
operated 196:15	overly 206:22 262:16	participating 55:21	293:1,17,19	139:6,19 140:19,22
operates 198:12	oversimplified	67:5 145:13 175:10	paying 81:2 268:12	155:17 157:19
operating 107:18	249:23	210:18 241:16	287:7	158:5,10,11,13
109:13 241:18	overview 30:21 31:6	participation 68:5,17	payment 225:14	160:14 162:11,12,
248:11 262:5 296:3	57:10	120:12 145:6 146:3	226:2 250:19 251:3,	18,19 163:2,17,18
operational 160:12	owned 33:5 196:15	174:1 187:3 216:6	16 294:20 298:5	164:5,6,13,15 166:3
operator 282:12,14	owner 251:14	parties 6:5 9:11,12,	payments 226:7	167:22 168:16,18
opinion 12:19,20	ownership 299:18	16,22 10:2,6,7,9,18,	pays 93:23 95:2	169:1 172:6,12,13,
37:10 44:10,15		21 11:3,6,9,12,21	232:5 238:19	20 177:18 178:5
75:17 80:18 81:22	P	12:1,2,5 13:1,15,16	peak 5:11 60:17 62:9	180:22 181:22 185:4
91:3,7 92:12		17:6,17 45:4,12,16,	67:9 70:1,21 71:11,	211:20 217:9 221:7,
opinions 91:1	p.m. 263:11 264:1,5,	20 54:1 65:4 95:19	17 73:7 79:16 80:9	20 256:21 268:16
opportunities 24:11	7,9,15	96:4 100:19 113:20,	85:22 86:21 184:14,	288:17 289:19
153:16 162:2 224:6	package 239:7	21 128:1 131:12,13,	18 249:11,12 263:6,	290:14 292:4,7,12
opportunity 9:11	pages 59:5 80:20	17 132:1,14,21	10 264:3,7,8,13,14,	293:17,19 294:3,6
10:11,13 11:7 15:13	138:23 139:1,3	133:7,17 134:21	19 265:3 266:20	295:18
16:9 24:3 25:15	152:7 275:2 278:18	139:10,12 145:20	274:16	periodically 144:12
45:2,4,5 97:8 112:13	303:8	150:23 154:21 155:1	peaked 264:1	periods 67:10
123:3 126:16 149:19	paid 22:8 96:3	165:6 171:16 174:20	peaking 249:12	145:10,11 155:21
158:9 162:4 169:4	238:14 255:13 296:6	175:2,9 176:21,23	peaks 86:8 87:6	219:23
175:4 201:23 244:11	pair 255:5	177:2 178:1 188:7	263:3	permission 192:23
261:21	paired 70:13 77:16	194:1 209:16,21	peas 276:7,9,22	permitted 211:4
opposed 63:3 154:12	82:14 84:12 99:21	210:1,5,9,18,21	pencil 137:9	permutation 169:21
opposite 213:11	panel 7:8 10:22 11:6	214:3,7 218:8	pending 149:2	permutations 82:15
	12:14 13:7,8,16	229:15 235:19	penetration 74:4	165:21 169:18
	18:10,11 101:13	236:22 260:9 283:1,	145:7 263:10	189:16
	102:12 105:12 107:7	4 291:22 301:3	penetrations 266:10	person 19:3 122:14
				199:16 200:9 213:14
				230:8,17
				personal 285:16
				perspective 67:3
				154:7 173:16 239:2

249:8 260:16,17 289:7	policies 179:4 246:5, 6	predicted 36:5	pricing 20:10 21:23 22:6 215:16 250:2 254:6 256:12	profile 79:19 80:4 86:5 87:1,4 89:15
perspectives 176:9	policy 16:20 111:3,8 113:22 129:2 138:3 140:8 206:23 233:8, 10 235:9 238:18,20 281:3	prefer 11:3 101:3,6 204:9	primarily 69:8 175:9 176:3,4 292:16	profit 295:8
persuaded 199:1	poll 101:10	preferred 152:20	primary 44:22 45:8 117:23 292:22	program 23:13 33:7 38:14,19 39:1 55:23 61:13 63:9 64:2 116:1,17 133:2 141:1 145:13 162:22,23 173:8 232:16,17 242:15 291:2 296:19
perverse 173:7	pollutant 49:17	premium 36:23 90:12,17,20 295:3	principal 104:2 113:14 124:15 143:15	programs 16:2 60:16,19 61:3 103:12 109:7,12 115:16,18 116:12 129:2 224:8 232:11, 15,20
petition 149:8,12,13 182:5	pollutants 50:2	premiums 35:4 38:11	Principle 104:4	progress 14:13
Phase 163:10	ponying 287:17	preparation 40:4 122:18	prior 6:8,10 9:13,18 53:3 169:10 201:12, 21 209:3,11 259:7 264:14 301:21	project 72:14 73:8 98:4,7 120:19 121:5 132:18,19 150:22 151:1 157:16,21,22, 23 158:12 159:23 163:12 164:1 165:8, 15 166:1,4,6,7 167:4 171:17 172:3 174:4 190:19 191:3 194:22,23 195:8 196:9 213:20 233:14,18,22 238:16 239:3,8,10 291:21 296:10 297:14
phased 262:13	population 24:4	prepare 34:14 35:10 40:7 280:23	pro 156:8 234:21 288:19	projected 28:16 34:4, 9,21 36:9 40:21
phonetic 79:20	portfolio 232:13	prepared 34:16 39:16,20 42:8,12 59:15 108:8 110:1 112:5,6 114:10 118:11 120:3 198:22	probability 247:23	projecting 73:18 74:10
phrase 70:9	portion 112:20 133:10 137:1 141:13,14 234:20 254:3 259:10 269:20 270:6 271:10	preparing 43:22 58:3	problem 23:1 96:5 207:14,15 259:19,21 286:16 287:15	projection 32:14 37:13 73:13
physical 249:4	position 9:13 10:4 14:6,15 15:5 23:18 28:2 44:10,16 56:21 75:15 76:2 117:18, 20 119:8,10,13 140:20 163:1 176:6 190:23 191:1,16 192:5 195:12 210:7 240:9 282:13 283:3 284:2,9,12	present 10:10,13 11:8 122:4 195:9 201:14 239:6	problematic 208:8	projections 35:13 36:9 38:9
pick 303:5	positioned 160:23	presentation 7:11	problems 67:19 294:11	projects 16:7 23:21 24:13 33:22 115:17 116:11,19 132:4 136:4,13 137:10,21 140:23 141:5,8,9,13 142:13 156:7,12,17 163:19 164:15 169:4 170:23 171:3 174:10 195:8 196:20 225:10,21,22 226:4, 6 234:20,23 240:13 241:20 246:16,19 247:9,14 249:1 291:15 294:5,8,12, 13 297:2,5,6,8
picked 180:6	positions 9:14 11:9	presented 28:12 34:17 35:11 40:12, 13 43:22 63:17,19 64:6 67:15 73:11 75:10 86:9 91:20 95:12 99:18 138:10 145:4 198:1 233:17	proceed 181:18 202:2 300:2	promised 280:12
picking 181:14	positive 197:22 227:4	presenting 10:19 44:23	proceeding 5:21,22 28:9 30:10 42:3,22 104:13 113:21 125:21 130:17 131:13 153:11,21 158:8 178:13 190:21 274:8	promoting 244:21
picture 175:23 179:1 228:11	possibility 228:21	presents 15:13 133:1	process 9:20 10:9 13:12,14 143:21 144:17 151:21 152:8 153:8 154:14 175:10,21 176:3,11 177:13 178:8,15,20 186:12 187:5 200:5 209:9,14,22 239:2 262:12 288:10	prompt 130:3
piece 140:2 145:14 251:6,8,10,11	possibly 199:22	preserve 25:13,18	processes 15:22 151:9 152:2,12 154:5,20 183:4,6,10 186:15 234:2	prompted 34:13 129:8
pieces 76:22	post 115:23	preserving 128:2	procure 285:7	proof 264:18,19
pile 106:2	post-hearing 26:13 201:19 202:7	reside 197:16	procured 261:14	proper 210:15
pilot 242:19	posture 135:15	resident 23:12 124:3	procuring 223:4	properly 22:2,9 229:12
pin 263:2	potatoes 276:8	press 6:7	produce 38:13 62:8 160:5 188:21 264:2	propo 158:7
place 16:16 93:19 95:22 96:2,15 135:18 152:1 158:21 160:16 184:21 185:6 200:15 219:9,11,12 220:6,11 260:7	potential 32:11 41:13 50:7,9 57:11 68:11	pressure 58:1	produced 33:12,15 78:14 131:3 137:23 204:3,5 206:15,17	proposal 10:23 11:2 148:6,8,10 150:5 152:6 157:18 167:3 181:20 182:10 209:3,4
plain 194:12	potentially 166:15	pretty 18:1 176:9 215:7 234:1 237:22 262:6	produces 195:6 247:19	
plan 18:15 148:17 280:20	pounded 278:18	prevent 226:19	producing 78:20 159:13 259:7,11,17	
planned 148:23 193:22	power 8:21 9:1 20:1, 7 22:10 25:4,17 102:7 103:14 110:20 115:10,15 117:5 136:5 159:13 160:5 180:5 239:22 240:2 246:20,21 247:20 248:11 258:8 263:19 268:10 271:9 291:14	preview 123:12	production 69:13 70:3,20 77:11 78:8 79:19 80:4 81:6 82:13 85:21 86:13 87:1,3 89:2,3,14,15	
planning 119:14 193:19 230:16	power's 242:14	previous 21:17 23:18 62:23 168:5 215:3	products 135:3 235:11	
plans 227:15	power-producing 161:1	previously 29:11 134:14 135:23 163:20 176:14 246:1 281:2		
plant 25:10	practical 173:16 282:20 296:16	price 16:3 19:22,23 20:4,6,9,19,21 21:2, 4,5,8 22:7,8 35:12 36:4,8,9 38:8 43:18 63:8 64:15 89:11 215:14 243:13 251:15 257:16 278:10		
plants 67:8 115:19	practice 203:17	price-wise 254:5		
play 24:4 104:11 144:8 229:5	pre-file 39:15 116:9	prices 21:22 34:19 35:11 36:2,20 37:23 38:5 50:12 63:4,17 64:1,7,8,14,21 87:13,16,23 88:12, 17 89:2 90:20 218:15 250:3 251:19 252:4,5,6,13 254:12 256:14 282:10		
played 28:8	precise 212:8			
plenary 222:14,18	precision 83:15,17, 22			
plenty 161:10	precisions 95:17			
point 21:3,16 22:21 82:10 84:1,13 95:8 96:13 97:4 102:10 127:15 138:18 139:17 158:11 168:1 175:17 177:5 182:15 185:12 186:17 193:4 197:18 198:17 199:1,14 220:8,15, 17 225:17 229:3,10 232:18 246:18 249:4 252:22 258:6 260:12 267:4 268:23 270:21 271:1 273:17 282:20 287:13 292:6 296:5, 13,23 297:11 303:4	predetermined 29:6 46:14			
pointed 82:20 297:3				
points 51:12 175:15 217:21				
poles 93:20 227:18 260:2				

proposals 10:14
13:2,3,5 28:22
145:22 182:13

propose 12:15 20:15
148:18 149:8 150:3,
13 181:9

proposed 10:2,18,19
13:12 17:9,19 37:4
56:9,17,19 134:7
155:17 162:10 209:2
236:17 283:10 301:2

proposes 158:8

proposing 14:13
196:16 236:18,23
239:8

proposition 89:21

protection 300:13

proud 246:4

provide 9:10 11:13
21:12 24:19 33:10,
13 44:14 48:17 57:9
67:4 69:10,22 73:13
83:14,21 92:12
127:23 132:6 152:9
154:6 155:14 157:6
171:14 179:9 184:9,
18 192:23 197:9
198:21 200:3,5
206:6 241:19 245:8
248:2 257:15 274:3
275:20 288:20
296:14 302:5

provided 62:12 76:15
80:20 81:21 87:12
130:8 134:12 156:2
175:21 189:3 196:13
200:9 204:13 232:19
239:11 255:7 272:18
275:17

provider 115:14

providing 44:10
152:14 154:3 193:4
205:8 206:8 223:16
224:3 246:8,15
273:14 299:4

provision 144:2
182:3 184:15

public 6:14,18,22
7:18 18:16,18 24:7
26:1 29:2,15 48:5,7
108:23 110:14 113:6
115:2 117:7 119:3
121:21 127:2 192:15

published 53:14
87:23 255:5

Puc 6:3 124:8 201:5
209:21

pull 172:9 278:3

pump 266:9

pumping 249:14

pumps 220:1 227:23
265:16 266:14,16

purchase 23:15
268:11 271:10

purchases 265:22

pure 256:12 257:16

purpose 31:9 32:1
36:1 43:1,4,10 44:22
45:8 48:6 74:11
135:8 140:8 186:11

207:6 287:21

purposely 173:10
211:5

purposes 26:11 48:7,
12 74:15,17 75:10
139:18

pursuant 5:7 6:2
201:5

pursued 230:1

pursuing 224:6

push 258:23

pushing 246:21
247:20

put 6:15 13:3 14:9
15:7 22:16 35:15,18
93:19 96:15 123:3
135:17 185:5 191:8
194:22 198:17 238:3
243:1 246:19 249:3
253:21 255:12,16
258:9 260:6 265:15
273:4,6 276:20
278:11,14 282:7
286:23 289:16 290:6
291:19 297:20 299:5

puts 199:6 260:1
278:6

putting 45:1 139:21
193:15 208:6 238:15
248:13 250:19
251:3,14,15,20,22
282:16 291:3

PV 28:18 32:10 33:23
34:10 69:9 77:16
80:9 82:13 84:12
233:3 244:3,12,22
245:2 247:18 262:5

Q

qualifier 247:12

qualify 110:18

qualifying 107:8

qualitatively 97:18

quantification 275:3

quantified 36:7 50:6
96:19 97:2

quantifies 33:4

quantify 31:11 261:7
263:14 274:21
275:8,13

quantifying 274:15

quantity 130:15

quants 274:20

quarter 251:11 258:2
302:3

quarterly 152:9,16

question 31:22 35:17
47:4 48:9,15 50:15,
16 52:12 53:4 54:6,7
58:13 63:22 68:14
69:2 72:20 74:18
81:15 83:23 85:2
90:11 94:14,16 95:1,
21 96:3,12 98:21,23
100:12 101:2
120:11,18 123:2
127:9,22 134:22
142:14 143:2,8

155:4 160:22 165:1,
13 167:12 168:12
169:22 172:10,14
173:16 174:14
177:17 178:11
180:22 181:3,8
183:5 184:8 191:4,
12,14,18 192:6
193:18 198:4 203:2
204:1 206:11,21
208:21 210:8 212:8,
10,13,19 215:7
216:13,14 218:1
219:7 221:23
226:13,16,21 229:13
241:9 244:7,15
245:12 260:19 267:9
268:1 270:14
280:12,15 284:7
289:10 300:21,22
303:20,22

questionable 142:4

questioner 47:22

questioning 30:9
42:1 139:5 147:23
149:4 150:19 153:6,
14 154:15 155:3
156:10,20 158:6,22
159:9 160:2,21
161:14,22 162:7,15
163:7,23 164:10
167:1 168:11 169:11
170:10 171:23
172:19 173:12
174:12 177:8 178:10
179:14 193:21 201:9
202:14 205:6 267:15
295:13

questions 12:12
22:12 41:18 43:5,
44:19 45:3,6,15,19,
22 51:3 52:22 53:21,
23 54:3 55:11,13
62:20 63:1 65:2
66:9,12 76:8,12
84:11 93:2 95:19
96:8 97:6 98:12
124:5,19 125:12,14
145:17 146:17 148:1
157:4 172:8 179:17
180:16,18 190:14
196:11 198:13 202:3
204:7 211:13,16
216:10 217:19
230:23 239:15 267:6
280:9 295:23 301:14
303:11

quick 11:15 147:6
198:5 202:5

quickly 21:21 42:6
183:19 224:9,10
233:18 249:4 260:14
277:1

quo 14:8 72:18 73:3
74:19 128:3,6 132:1
187:18 188:9 194:2,
12 219:1 237:14

quotation 205:19

quote 182:4,6 204:20
205:1,10,17

quote/unquote
289:16

quoted 116:15 174:2
268:14

R

raise 27:11 58:23
106:18

raised 43:5

range 12:4 58:19,21
141:23 263:12 293:8
294:7

ranging 132:18

rapidly 128:21

rare 141:12

rata 234:21

rate 24:2 28:15 31:2,
22 32:2 33:23 34:1
38:14,19,23 41:13
43:19 53:13 55:14
56:3 58:20 59:14
60:9 61:10,17 74:10,
11 75:20 81:19
84:23 89:18 90:14
91:20 94:8,17,19
95:5 96:21,23
113:23 133:22,23
136:14,23 139:22
142:2,5 144:6
145:16 146:3,12
149:3 157:18 181:7,
10,20 182:4,10,13
183:13 184:9 185:13
186:20 187:12,14,
15,21,22 188:1,12
207:13 209:3,4
218:14 219:8,18
220:10,11,13 222:16
227:2 250:21 251:2
254:7,10,11,16,21
255:17,19,21 256:3,
18,22 257:1,3,8,9,
10,21,22 269:22
270:2,10 275:19
276:3 277:7 279:23
280:17,20 281:1,14,
16 290:18,19
294:18,23 295:17
301:2,16,18 302:5

ratemaking 5:18

ratepayer 77:20 78:2
80:23 212:1,4 298:7

ratepayers 16:23
31:14 32:4,10 55:22
64:3,12,20 85:1
94:15 138:16,17
215:9 216:22 243:18
257:2 283:15,18
284:2,5

rates 5:20 15:20
32:14 41:6,7 53:1
55:14,19 57:11 58:1,
2 60:7 64:17 78:4
82:22 84:22 89:20
90:22 94:22 95:4
103:7 105:5 107:12,
16 109:1 110:16
113:7 115:3 117:9
119:4 121:22 129:7
132:10 133:3 142:6
145:6,7 146:7,13
207:8,9,11,13 208:8
215:15 219:11,16,21
220:4,17,19 222:2,
15 223:3 228:23
235:7 244:16 245:5
252:12 253:9 254:19
255:5,6 267:7

275:22,23 277:3
281:9 282:18
284:11,12,19,21
301:4,6 302:17,18

rational 276:14

rationalize 57:9 59:17
61:1 182:20 194:14

ratios 85:5 91:13

RBI 31:3,8 32:16
33:3,22 38:4,6 40:5,
8,11 41:11 43:11,13,
20 44:4 52:23 53:8
56:10,20 59:5 62:15,
18 74:14 80:17 81:4
82:2,12 83:8 84:4,21
90:21

re-modernization
227:15

re-rating 21:12

reached 12:4 132:22

reaching 275:4

reaction 242:3

read 24:22 66:15
67:12 69:1,15 70:9,
16 71:20 78:16
99:11 171:13 239:22

readdress 158:9

reading 66:16 93:12

reads 67:2

ready 27:17 225:4
302:21

real 33:20 35:8 36:2,
12 46:9 85:2 144:22
189:9 220:9 228:4
285:23 297:10,17
300:7

realize 227:12 248:4
259:2

realized 259:17
261:22

reason 73:17 74:21
98:3 123:23 124:13
136:3,15 143:11,15
175:11 212:11
216:23 240:14 258:7
282:17 290:3 294:16

reasonable 5:17 12:8
109:1 110:15 113:7
115:3 117:8 119:4
121:22 133:3 194:18
216:2 220:20 229:5
245:10 261:20 262:9
263:17 267:8,10
270:17,19 271:23
272:15 301:6 302:18

reasoning 56:22

reasons 170:19
248:7

reassessment 34:22

rebuilding 234:10

rebuttal 10:22 11:6,
14 12:14 13:4,6,15
40:4 42:7,11,16,20,
21 43:2,22 56:22
58:4 59:1 71:5 78:17
104:21 105:12 106:3
107:23 112:3 122:20
123:3

recall 14:20 156:6 187:1 190:2,10 229:13 239:1 258:16 283:7	reducer 191:3 195:1 241:14 284:6	relevance 201:15	293:20 302:8	67:14 72:19 73:4 75:1 82:9 86:3,17 87:21 88:11 90:1,16 91:6,17 92:9 93:14 94:4 95:7 97:11 99:16 128:4 144:4 179:5 275:11 277:1 289:11
receive 100:2 135:5 163:15 165:10 172:11,13 205:14	reduces 195:1 218:23	relevant 26:16 63:14 85:12 201:22	requested 35:9	response 11:13 63:21 74:8 75:3 112:10,14,15,20 150:8 200:9 268:9 275:11 278:9,13 296:2
received 6:17 10:3, 17 50:1 100:6 121:8 269:11	reducing 60:17 67:5 195:7 243:8 265:21 273:10	reliability 67:10	requesting 123:2 201:19	responsibilities 107:14 109:8 117:19,23 119:9
receiving 160:6 163:13 164:2 165:8 171:17,21 172:4 259:9	reduction 40:22 41:2 43:17 49:23 50:7,8 60:10 61:4 62:8 64:15 72:5 81:9 93:8 94:1,6,9 260:20,21 261:5,6,9,12,13	reliable 259:17	requests 189:4	responsibility 233:17 235:13
recent 145:9	reductions 261:4 297:10	relied 174:9	require 21:22 133:21 181:9	responsible 107:16 109:10 119:13 215:22 233:11 273:12 281:7
recently 129:6 227:15	reevaluation 217:13	relieving 260:4	required 134:2 223:22 225:14 233:7 235:10 257:15 274:8 281:4	responsive 225:18 226:8
recess 11:18 147:20 200:23 303:14	refer 10:6 31:3 56:5 139:1	rely 216:21 272:11 274:6	requirement 20:20 21:9 47:1,17 48:3,10 198:12	rest 60:3 122:17 136:18 194:9,11
recognition 234:8	reference 66:10 76:17 84:10,13 203:7 204:10	remain 74:12	requirements 98:1 154:7	restore 135:21
recognize 22:1 129:8 131:18 248:9 263:1	referenced 182:11	remained 128:17	requires 145:8,10 183:17	restrictions 222:15
recognized 205:16 245:1	references 21:19 139:8	remaining 10:6 160:10	requiring 155:7 229:15	restrictive 169:20
recognizes 20:16	referred 35:3 139:4 184:17 238:18	remains 72:7 233:9	reserve 149:19	restructured 240:17, 20 242:3,7,17 243:5, 12 285:10
recollection 263:6	referring 46:11 54:16 95:9 120:16 182:4, 22	remember 30:5 39:11 156:23 171:9 197:17 220:3 260:19 293:3,11	resident-owned 23:16	result 33:23 34:3 41:6 44:15 61:5 63:10 64:2,7,9,13 68:5,16 69:8 70:14 81:11 90:21 99:12 108:23 110:15 113:7 115:3 117:8 119:3 121:21 128:22 131:5 133:3 134:17 170:21 189:14 234:3
recommend 133:12, 15 140:3 189:15	refers 178:5	remembered 173:21	residential 40:18 41:7 55:22 56:4 77:15,23 79:2 93:9 99:13,22 250:21 251:8,20 252:6,20 253:5 254:8,11 258:1,5 259:5,8,23 290:5,16 291:1 292:10,15 293:2 296:20,22 297:1 298:7 299:14,17,19 300:1,8	resulted 59:22 108:18 110:10 113:1 114:20 117:2 118:21 121:16 129:3 200:8 234:1
recommendation 18:2 133:8 237:13 238:3	reflect 87:12 206:7	remind 6:5 47:21 276:22	residential 292:4	resulting 28:16 38:21 39:1 41:3 43:15 58:1
recommendations 9:15 56:20 154:9	reflected 36:3	reminds 276:6	residents 23:14,22 24:3	results 30:21 32:21 34:16 36:13,14 56:11 58:14 60:9 74:14 76:14 78:19
recommended 26:6 57:6,12 131:12 134:19 203:13 223:11	reflecting 16:3 88:2	remote 124:12	resolve 198:5 199:10	retail 19:14 137:5 246:8 249:19,23 250:1 252:11,12 254:16 284:21 290:13
recommending 132:16 188:8 237:22	reflective 63:5	remotely 246:14	resolved 145:20	retail-type 250:4
recommends 128:2, 5 131:23 174:15 187:18	reflects 20:22 21:8 22:9 60:1 62:5	removal 133:16	resource 60:9 80:4 87:2 100:5 135:13 237:8 244:3	retroactive 222:16
reconciling 148:15	refraining 128:17	removed 133:9	resources 28:14,21, 23 29:13 30:23 31:15 33:5 62:12 67:6 87:5,8 98:5,6 99:21 119:16 227:20 228:7 232:14 242:5 243:17 247:22 253:17 269:16 280:18 284:23 285:14 286:6	return 101:4 136:14 141:23 147:18 198:6 200:22 293:21 303:12,20
reconsideration 217:14	refresh 200:14 208:21	renewable 77:9 137:20 225:10,11 232:13 269:16	respect 10:16 15:5 31:22 57:21 58:13 59:19 61:7 80:11 89:8 90:12 118:19 121:14 186:8 189:21 218:18 285:5	returned 38:1 63:18
record 11:17,20 25:1 27:4 45:1 70:10 102:13,18 112:10, 13,15,20 120:6 140:6 147:19 155:13 188:22 189:3 190:5 192:19 197:8 200:22 210:1 278:13 303:13	regard 144:2	repeat 9:16 66:19 72:20 110:22 115:7 237:4 238:8 264:16	respective 176:9	returns 136:15 157:20 158:3
recording 6:1,11	region 240:14 242:7, 23 249:12 263:11	rephrase 189:20 191:13	respond 43:5 63:22 91:3 124:5 197:16 198:4 220:22 221:22 227:22,23 274:12 279:22	revenue 20:20 21:3 81:13 141:19 160:13 162:2 260:21 261:5
records 231:2	regional 59:9,23 62:6 71:17 195:6 263:3,9	reply 112:15 198:6 199:9 201:23	responded 28:22	
recovery 32:15 148:14 190:3	registered 162:23 273:8	report 29:14 30:12, 16,20 31:6,10 33:1 37:7 40:8 53:14 54:8,20 55:2,16,20 66:13,14 74:23 86:10,11,18 96:13 134:5 153:1 243:7	responding 39:18 40:2 41:22 42:4,10, 18 43:3,12 44:6,13 48:16 62:23 63:12	
RECS 207:20,22,23 295:17	registering 256:9	reported 153:2 233:12		
red 6:8 18:23	regression 73:5,14	reporter 103:1		
redirect 54:6,14 93:2 98:17,18,22 122:18 280:10 303:3,16,18	regular 184:20 235:21	reporting 152:8,21 282:18		
reduce 34:10 64:17 133:11 244:11	regulator 111:16	reports 37:12 86:9 87:2,8 152:9,16 153:8 282:5		
reduced 40:11 43:17 283:19 289:18	regulatory 105:6 111:17 117:22	representation 86:20		
	reimburse 235:2	representative 45:20 280:7		
	REK 251:6,16 258:3	represented 176:4		
	REKS 294:18	representing 19:8 23:23 66:7 104:3		
	related 38:14 48:5,11 50:15 83:19 96:12 99:19 107:17 160:15 179:4	represents 12:4,7 94:9 260:21		
	relation 35:20 73:9	request 11:11 13:16 28:22 188:22 190:5 197:8 214:7 231:3		
	relative 15:1 88:8 298:7			
	release 17:21			

265:8 296:4 299:2	roofs 94:13 265:15 297:2	scheme 288:2	servicing 111:4 113:17 115:11 116:8 246:20 247:9,15	Sheehan 8:2,3 104:9, 17
revenues 160:6 256:10 273:7	rooftop 25:9 244:3 245:2 249:1 252:11 266:15 292:18	school 23:18 169:10	sessions 29:12 45:6 97:12	sheet 6:16 18:17 26:2 291:23
review 6:18 126:16 164:14 168:14 169:3,6 193:1 198:22 217:5 222:13 224:23 272:9	room 6:16 24:9 101:10 143:9 203:3 206:5 210:14 229:1	schools 115:14 116:13 141:16,21	set 37:5 47:9 51:4 81:10 128:15 145:21 152:23 178:4,21 180:18 194:8,19 197:7,22 234:1 240:18,21 241:5 300:4 301:4 302:17 303:23	shift 53:5,9 222:21 223:7 263:20,21 264:4,18 277:2
reviewed 22:19 138:6 169:5	root 221:8 252:14	scope 9:19 17:12,15 29:4,7,13,16 46:7,12 47:9 48:17 61:15 82:17 84:5 175:3,6 177:21 178:9,15	settling 11:23 12:2, 19,23 13:2 18:10,11 45:16 127:21,23 131:13,17 132:1,14, 21 133:7 134:21 150:23 174:19 175:2 176:23 188:6 194:1 214:3 218:8 284:8	shifted 264:13 266:20 267:2 268:5 272:2
reviewing 268:9	rough 250:5 291:20	SCRC 267:16 269:18 270:2,6,10 271:16, 19 272:10,12 273:5, 6 274:7 278:16,22	sets 60:6 137:7	shifting 15:17 32:11 130:10 131:8 134:16 215:16 227:2,11 244:22 266:21 267:9 270:16,18,23 271:22 272:13,14 274:19 275:13 276:5
reviews 164:19 166:10 173:17,20 217:5,7	roughly 80:9,15 251:12 255:19 256:20,21 291:19	section 26:3	setting 223:2 228:23	shifts 221:6
revised 57:17 58:7	round 255:18	Sections 55:15	settlement 7:8 12:3, 7,18,21,23 13:8 14:15,17 15:7,22 25:12 91:4,9 101:13 106:10,14 107:7 108:16,17,18,22 110:8,9,10,14 111:9 112:22,23 113:1,6, 22 114:19,20 115:2 116:8 117:2,3,7 118:19,20,21 119:2 121:14,15,16,20 124:6 126:5,17 127:3 128:2,5 132:12,23 133:12,15 135:4,9,20 136:20 137:7 139:13,14 140:3,7 143:12,16, 17,19,23 148:2,6,7, 10 149:5 152:4,18 153:1 154:22 155:17 158:7 163:11 164:18 167:3 168:13,21 170:21 171:4 173:4, 21,22 174:15,18,21 175:8,9 177:14 178:1,12 181:3,6 182:12,21 187:17 188:8 194:4,9,11 205:5 208:19,22,23 209:5,7,12,15 210:1, 5 211:13 212:9,12, 14,19,22 213:13,18 217:8,17 223:12 236:17,23 237:3,11 260:16 283:6,11 291:6 293:13,20	shining 19:22
revisit 144:14	routine 189:19	seeks 194:12	settled 12:23 133:12,15 135:4,9,20 136:20 137:7 139:13,14 140:3,7 143:12,16, 17,19,23 148:2,6,7, 10 149:5 152:4,18 153:1 154:22 155:17 158:7 163:11 164:18 167:3 168:13,21 170:21 171:4 173:4, 21,22 174:15,18,21 175:8,9 177:14 178:1,12 181:3,6 182:12,21 187:17 188:8 194:4,9,11 205:5 208:19,22,23 209:5,7,12,15 210:1, 5 211:13 212:9,12, 14,19,22 213:13,18 217:8,17 223:12 236:17,23 237:3,11 260:16 283:6,11 291:6 293:13,20	short 19:12 28:20 37:22 60:1 131:7 292:7 302:22
revisited 144:12	routinely 262:7	sees 22:8	settlements 126:11	shortly 280:10
RFP 29:1,4 47:19	row 78:15 90:12	segment 20:20 21:7 184:2	settling 11:23 12:2, 19,23 13:2 18:10,11 45:16 127:21,23 131:13,17 132:1,14, 21 133:7 134:21 150:23 174:19 175:2 176:23 188:6 194:1 214:3 218:8 284:8	show 35:20 51:6 53:5,12 73:11 131:6 141:23 157:20 256:13
RGI 50:18	rows 76:21 81:17,21 82:5 84:14	segments 20:16	shur 103:16 111:2	showed 53:8 295:11, 14
Rice 103:11 106:20 109:4,6,10,16,22 110:2,4,7,12,17 127:22 128:4 129:16,21 130:2,5 133:6,14 134:20 149:15 150:11 151:2 152:17 153:12,22 154:21 165:4,18 168:3 170:15 171:8 173:22 175:7 177:22 178:19 183:11 187:17 188:2,3,6,14, 19 190:2,12 217:23 218:5 223:14 224:16 230:7,21 231:14,21 232:7 236:3,8 238:6, 17 239:12 245:21 250:8 258:6,11,13 260:13 261:11,17 262:22 264:22 272:6 280:22 281:20 299:12	RPS 133:9,16,20	senior 28:6 103:13 115:9 124:3	side 122:10 269:6 270:4	shows 51:22 55:20 56:3 71:16 72:2,8,21 78:23 216:18 264:20
Rice's 210:11	RSA 5:7,18,20 6:2 137:18 140:8 237:6	sense 86:18 87:15 97:13 123:10 166:6 169:19 183:6 223:6 264:19 278:19 282:13 291:8	signed 18:18 143:15	significant 34:6 37:16 71:23 88:13 129:1 215:8 224:4 233:19 234:10 276:11 298:6
rights 118:1	RTOS 284:20 285:4	sensitive 237:20	signing 143:11	significantly 34:20 36:5 87:17 88:17 89:16 130:19 151:10 218:23 301:7
rise 64:1,22	Rule 26:13 201:5	sensitivities 54:19 241:12	sign-up 6:15 18:17 26:2	simple 6:11 14:7 248:20 250:10,11 288:23 290:18 295:18
risk 35:4 36:23 38:11 90:12,17,19 131:20 215:20,21 218:23 295:2 300:7	rulemaking 301:7 302:19	sensitivity 47:16 48:19 49:16 51:7,18 52:15	signal 215:16	simplified 206:22 250:7,10
risks 131:21 228:17	rules 67:4 198:11 200:18 201:5 300:6	sentence 70:7,9	signals 16:2,3 101:11 215:14	
RNS 79:12,14,18	ruling 6:19 202:1	sentences 66:12	significant 18:18 143:15	
Robert 8:23 103:13 105:4 106:22 115:6, 9 148:22 150:16 167:16 295:7	run 60:1 62:6 103:4 287:19	sentiment 214:3		
robust 179:12 228:16	running 255:10 282:12	separate 10:4 13:7 130:16 151:20,21		
ROC-NEW 23:12,17	S	separately 91:14 279:16		
role 28:8,11 44:14 104:11,22 107:11,15 109:5,8 111:4 113:17 115:11 116:7	safe 241:7 244:2	September 32:19		
roles 138:7	sales 271:5	series 29:11 97:6 232:12		
roll 171:1	salespeople 300:3	serve 32:7 135:9 184:2 258:19 283:23		
rolled 12:17 168:6,9	salvage 296:4	served 115:15 254:7 264:11		
rolling 171:5	Sam 8:17 55:10 56:6 57:1,14 58:5 59:21 60:13 61:9 62:1,22 63:20	service 7:18 40:21 41:8,9 58:16 93:10, 11 107:17 117:23 133:22 142:3,5 184:20 185:8 187:23 188:1 207:17 218:13,14 225:4 246:9 250:20,21 251:2,9 252:5 255:13,20 256:2,11 257:15,22 270:3 273:14 294:18 295:1 302:2,6		
Roman 5:7 6:2	Sasso 122:3,11	services 34:23 36:21 38:10 68:12 117:22 184:10 255:7 257:14		
roof 260:6 289:5,17	saturation 232:3,5 246:2			
	save 262:21 291:13 292:17			
	saved 62:7 242:15			
	savings 60:2 242:21			
	scale 24:9,12 183:22 244:4,5			
	scaleable 186:16			
	scenario 40:15 154:16 157:9 158:15 168:8 293:9 299:23			
	scenarios 89:19 90:3 146:4 155:20 156:5, 17 157:15 158:23 159:3			
	schedule 11:2 273:5 274:7			
	schedules 281:1			

- simplify** 102:20
249:22
- simply** 63:15 84:10
136:12 137:8 158:1
183:18 196:23 210:8
221:15 237:1 243:2
296:14
- single** 58:21 67:7
196:14 278:21
- site** 94:13
- sited** 247:14
- sitting** 7:6 105:17
106:4 185:19 190:10
- situation** 166:12,17
170:5 200:8 217:1,
15 222:17,23 243:23
249:17
- size** 7:7 150:22 151:1
253:11
- sized** 252:10 258:22
- sizing** 252:18
- skeptical** 298:3
- skepticism** 298:23
- skip** 180:23
- Skoglund** 8:19
- slice** 85:4
- slight** 33:23 41:4
53:5 56:12 71:22
72:3,6,8,9,13,15,22,
23 81:11 95:3
138:15
- slightly** 88:2 227:3
- slow** 29:20 49:8
129:19 130:2 141:3
- slowly** 6:6 29:23 30:5
247:13
- small** 34:4 38:20
40:20 41:8 55:21
56:3 93:9 134:12
140:6 187:8 196:19
206:3 227:3,4
245:17 251:20
252:9,10,18 253:6
258:8,18 259:9
260:11 276:13 297:7
- smaller** 53:8 157:21
196:20 225:21
226:3,6 249:1 253:8
297:2
- smallest** 132:18
157:23
- smart** 16:20 232:17
- smarter** 15:15 16:17
- so-called** 167:23
- societal** 49:20
- society** 221:17
- solar** 21:22 23:21
25:9 28:18 32:10
33:23 34:10 64:10
70:13,23 74:4 79:2,
3,20 81:5 82:13,14
84:12 87:3 89:3,7,14
93:18,22 99:13,21
103:12 109:7 115:17
116:10 128:19
138:8,19 142:18
155:1 159:16 190:19
191:3 194:22 204:14
- 205:13 221:9,11,13,
18,19 225:20 228:8
232:14,21 233:14,
20,22 234:13 238:12
239:21 240:11 241:4
244:5 246:16 248:22
249:14 251:3,13
252:11 260:1,6
263:23 264:2,11,20
266:21,22 282:12,14
283:21 285:14 287:2
290:14 291:10
292:11 294:8 296:11
297:12
- solar-only** 69:8
- solid** 138:13 145:16,
21
- solution** 186:5,10,11,
16 239:11 285:5,7
286:22 287:10
- solutions** 183:13
184:1
- someone's** 249:1
- sooner** 166:11
- sort** 13:9 17:10 76:12
96:12 135:16 139:15
144:19,20 154:13
180:16 194:8 197:22
207:1 215:12 217:16
222:11 223:2 225:17
230:3 240:19,21
241:2,8 242:5
243:11 253:13
254:17 262:16
264:18 265:10
268:22 270:3 271:9
276:14 282:19 283:5
286:11 288:3 294:18
295:2 296:17 298:22
- sound** 6:1 169:8
- sounds** 127:14
164:22 165:2 205:19
206:1 238:2 258:7
- soup** 180:7,13
- source** 79:5
- sources** 160:6
- south-facing** 69:12
70:1,2,5 77:16,23
99:13
- speak** 6:6,22 12:10
13:7 23:10 29:23
30:5 47:6 49:8
212:9,12 230:8
243:9 291:23
- SPEAKER** 192:10
- speaking** 6:10 13:8
17:14 19:2 80:9 90:9
149:16 161:5,6
165:19 171:9 182:16
214:4 257:12
- speaks** 213:19
- special** 184:15 202:8
- specific** 46:18 51:14
75:15 98:4 128:18
153:2 155:23 156:3,
8,11 157:4,13 165:3
190:2 196:14 230:23
232:13
- specifically** 34:18
85:20 86:12 99:19
153:15 168:14
- 182:22 184:13
188:11 224:21
- specifics** 181:20
- specifies** 137:19
- speed** 29:20
- spend** 17:23 85:10
- spending** 189:11
280:14,17,23
- spent** 111:15 173:14
- spinning** 252:20
- spins** 252:16
- split** 81:23 151:23
- spoken** 55:17
- Sprague** 191:2
192:14 193:7
- spread** 84:8 269:17
276:10
- spreading** 276:16
- spreadsheet** 155:19
295:21
- spring** 249:18
- SREC** 246:11
- stabilize** 135:12
- stable** 71:21 73:12
- stack** 36:16 37:20
38:21 51:4,9,19
52:8,17 64:18 68:9
69:4,6 80:2
- stacks** 207:4
- staff** 29:9,11
- stage** 249:6
- stakeholder** 29:11
143:21 152:19
153:17,19,23 176:11
177:13 209:8,14,22
210:3 234:2
- stakeholders** 7:12
17:17 24:8 132:2
153:10,12,20 154:19
175:5 176:16,18
- stamp** 66:13,21
68:22 71:15 197:4
- stamped** 71:8
- stand** 125:14 201:16
- standalone** 253:16
- standard** 5:18 8:21,
23 103:14 110:20
115:10 117:5
148:14,23 167:23
207:16 215:12
220:13 221:6 225:14
285:8
- standards** 225:22
232:13
- Star** 185:7
- start** 16:16 26:5
70:20 107:8 117:16
135:10 141:2 145:20
148:5 157:10 161:17
164:14 165:23
166:10,12,13 169:23
170:4,8,22 173:17,
20 174:8 189:5
213:7,23 231:19
265:4 296:12 303:9,
16
- started** 166:1,17
169:1,23 170:2,3
180:17 263:5
- starting** 123:19
144:15 168:22 172:3
175:17 213:5 252:22
- starts** 157:17 163:3
262:5
- state** 8:3 20:6 27:4
28:1,18 29:1 31:16
32:15 40:14 45:7
57:15 61:21 107:10
109:4 113:11 115:19
117:17 119:7 141:20
142:18 148:12
196:23 207:1 232:22
236:14 242:7 244:9
276:3,17 298:20
- stated** 27:23 63:13,
15
- statement** 10:5 12:1
15:11 66:15 67:2
68:3,15 69:3,19,21
73:21 120:18 168:5
182:18 191:10 272:7
- statements** 7:1 9:11,
13,14,17,18 10:1,4
11:17,21 62:23
- states** 60:4,16 61:4,
11,22 75:8 92:7,15,
19 112:11 128:16
137:6 138:20,21
222:1,6,12,14,22
223:5 232:2,6
241:20 245:1
- states'** 60:19
- static** 220:4
- status** 14:8 72:17
73:3 74:19 128:3,6
131:23 187:18 188:9
194:2,12 219:1
237:13
- statute** 48:6,7,12
137:18 138:1 238:1
244:21
- statutorily** 236:11
- stay** 75:18 167:23
219:8 292:13
- staying** 219:10,12
- stenographer** 5:23
30:2
- steps** 6:11 173:23
- stick** 21:5
- stop** 159:15 166:22
177:2
- storage** 70:13,20,23
74:4 77:16 78:1
79:2,3 80:12,13
82:14 84:13 99:14,
22 285:21
- STP** 87:2
- straightforward**
274:17
- stranded** 221:1,14
- stranding** 218:23
- strange** 185:18
- strategy** 80:11 131:9
- streamline** 151:8
- 152:12
- streams** 31:17 36:10
84:2 88:6 207:20
208:4 217:12
- stress** 235:8
- stressing** 279:15
- strictly** 288:17
- strikes** 146:9
- strong** 15:18 16:20
18:3 237:19 265:13
- stronger** 70:4
- strongly** 132:21
- structurally** 172:21
- structure** 22:1 24:2
69:14 128:7,13
131:22 134:3 135:6
149:9 154:10 159:18
204:21 206:4 218:9,
11,22 219:8,10
220:5,10,11,13
223:10 224:20
235:23 240:17
286:13 302:10
- structures** 179:4
243:17 254:22
- struggle** 223:9
- struggling** 271:13
- stuck** 286:4
- studies** 33:2 138:3,6,
8,14 229:16 245:5
265:12 266:7 278:4
297:13
- study** 7:12 15:17
17:10 28:12,23 29:8,
13,16 30:12,14,20
31:7,10,11,21 33:1,
2,4 34:12,17 35:21
36:6 40:6 43:14
46:7,21 47:1,10,16
48:4 49:15 50:4,6
51:6,15,17 52:4 55:2
56:2 62:19 63:3,5,
14,16 69:7 75:18
76:15 79:23 87:11
88:9,15 89:1,6,11
91:10,18 97:18
130:21 205:17
225:23 226:1,23
229:11 237:8 240:16
261:18 272:23
297:12,14
- study's** 41:14
- stuff** 210:17 213:2
229:21
- stuffed** 276:7
- subdivisions** 236:14
- subject** 116:21 187:1
209:8 222:15 293:10
- submission** 135:17
- submit** 13:4 116:6
152:16
- submitted** 6:23 7:12
9:13 10:2 14:12 37:7
96:23 130:16
- submitting** 132:11
- subsequently** 61:5
- subset** 187:4 266:2

- subsidies** 288:6,8
subsidization 15:16
subsidizing 266:3
subsidy 19:16 240:1
 244:18 245:8,16,19
substance 239:13
substantial 14:12
 19:13 135:15 216:13
 241:3 257:8
substantially 160:17
 208:17 217:15
 222:21 265:23
substantive 135:1
substation 227:17
 233:7,21,23 234:6,
 10 235:3 249:5
substations 233:4
success 142:15
 187:20
successful 131:22
 153:23
successfully 128:8
 173:7
succession 124:20
sudden 197:12
suddenly 21:22
 227:7
sufficient 299:5
sufficiently 179:8
suggest 127:13
 182:7 266:7 272:8
 278:1
suggested 126:15
 170:19 219:15
 244:10 265:10
suggesting 195:20
 219:8 237:12 245:5
suggestion 85:16
 214:20 278:2 279:3
suggests 166:9
suited 180:20
summarize 160:3
 186:19 193:17
 237:15
summarized 237:18
summary 30:13
 32:20 157:6 222:5
summed 242:5
summer 67:9 249:11,
 13
sun 19:21
sunset 264:5
superimpose 79:19
superior 243:19
supervised 234:3
supervision 39:17
 42:9
Supervisor 105:21
 106:14
supplier 273:15
suppliers 15:23
 273:11 286:20
supply 105:22 129:7
 133:10 195:1
 207:11,13 261:13,
 14,16 283:17
support 14:16 15:6
 24:1 25:11 136:20
 139:16 150:10 154:8
 179:9 205:7 209:2
 218:8 232:11,20
 280:17
supported 129:12
 130:18
supporting 16:20
 108:2,7 109:17
 111:22 112:4 114:5
 118:5,10 119:20
 120:2 205:5 224:7
 270:9
suppose 122:19
 169:22 191:23 196:5
suppressing 83:4
suppression 35:3
 278:10
Surely 163:2
surrendered 226:17
suspicion 287:9
sustaining 130:6
swapped 225:4
swear 102:2,14,23
 104:21 105:2,13
swearing 101:4
sweep 166:14
sweeping 139:21
sweeps 170:8
Swift 106:5,13 107:2
switch 48:23 155:16
 164:6 170:14 172:5,
 23 212:5,12
switchover 170:7
sworn 27:15 42:2,22
 107:3 125:20
Synapse 103:17
 104:5 124:3,16
sys 74:1
system 19:17,20
 20:6,14,15,17 21:1,
 2,9,11 22:10 29:21
 33:16 50:8 51:20
 59:20 61:8 62:17
 67:2 69:23 70:21
 71:12 74:2 77:16,23
 79:20 80:9,12,13,14
 81:8 82:21 85:22
 86:5,6,21 87:5 98:1
 119:15 183:10,19
 193:7 196:21 203:11
 220:2 227:17 228:2,
 15 234:12 238:13
 247:6,18,19 258:6,
 22 259:6,10 262:5
 263:3,10,19 264:1,
 21 268:13 281:3
 283:22 284:23 286:1
 289:17
System's 193:8
system-level 253:23
system-wide 33:10
 60:7 263:6
systems 7:23 15:21
 21:13 51:10,14 52:7
 67:4 69:8,10,12,21
 70:1,2,3,5,6,15 74:7
 82:15 94:12 121:3
 134:2 151:22 183:6,
 18 192:13 233:3
 269:15 274:1 291:4
-
- T**
-
- T&d** 70:15 71:1
T5 184:12
table 76:19,20 82:23
 84:10 93:6
takes 62:15 133:1
 154:8
taking 251:5 254:17,
 20 270:6 298:2
 303:21
talk 78:6 90:13 96:22
 97:4 173:4 284:16
talked 41:17 52:23
 155:19 224:9 253:18
 270:22 272:16
 273:19 297:15
 299:23
talking 6:8 77:9 79:6
 83:11 99:3 144:11
 148:5 168:2 215:21
 220:9 222:20 245:13
 246:1 256:21 270:23
 281:12 285:15
 298:13,14 299:6
talks 96:17 237:6
tandem 248:1
tangential 230:3
tape 29:21
targeting 224:19
tariff 5:14 24:15
 25:13 32:18 41:3
 44:17 69:14 78:4
 90:4,5 94:19 118:1
 130:6 131:7,18
 135:2,5 159:18
 160:16 162:10
 163:14,15,20 164:16
 165:9,11 167:7
 168:1 171:7 174:1,
 11 184:16 186:8
 223:17,20 225:16
 232:1,16 235:17,18,
 20,21,23 237:9
 241:18
tariff-related 184:10
tariffs 5:9 14:8 28:17
 44:11 107:16 109:12
 112:11 120:13
 223:15 248:8 254:13
tasks 134:18
Taylor 7:21,22 105:8,
 9,11 117:14,15
 122:2,19,22 123:6
 191:4,22 193:2
 196:3 199:11 200:17
Taylor's 197:18
TD 289:4
team 239:1
tech 80:2 288:5
tech-neutral 36:16
technical 45:5 111:3,
 7 122:10 162:4,5
 183:3
technically 64:19
technologies 128:19
 227:19
technology 16:15
 31:20 128:17 221:15
 288:3,4
teed 275:10
temp 89:12
temperature 21:14
temporal 16:3,4
 89:12
tempting 275:12
ten 101:22 201:23
 255:20 262:19
 289:20
ten-foot 159:7
ten-minute 11:16
 101:6
ten-year 131:9
tend 253:16,17 255:5
term 37:22,23 171:6
 181:4 285:14 300:12
terminated 295:15
terminology 236:13
 266:19 298:17,20
terms 20:5 85:20
 91:4,9 92:5 126:16
 127:3 129:14 130:6
 135:2 137:23 174:1
 184:3 194:12 222:8
 229:16,17 261:22
 275:5,13 298:7
 299:15,21
terribly 222:17
Terrific 66:2
territories 41:10
territory 58:16,21
 86:22 94:8 185:11
testified 99:9,10
 107:19 109:14
 111:11,13,14,18
 114:1 116:3 118:2
 119:17 124:7 130:12
 191:1 232:8
testify 97:9 191:16
 196:5
testifying 13:13
 100:14 102:12 111:8
testimonies 112:4,19
testimony 10:16
 11:10,13,14 13:5
 14:9,11 17:6 26:5
 27:2 39:3,15,19
 40:5,13 41:19 42:3,
 7,11,16,20,21,22
 43:2,4,22 44:2 56:5,
 7,9,11,17,22 58:4
 59:1 71:5 78:17
 95:20 99:23 101:5
 104:12,20 107:23
 108:1,2,7,13 109:17,
 23 110:5 111:19,20,
 22 112:12,18 114:5,
 10,16 116:6 118:5,
 10,14,16 119:20
 120:2,9 121:12
 122:4,6,15 124:5,17,
 23 125:8,20,21
 136:6,19 138:23
 140:21 144:10 145:4
 182:21 192:13
 193:3,4,6,8 194:6
 195:15,18,21,22
 196:1 198:15
 199:17,18 201:10,
 11,14,16,21 203:5
 204:12 205:4,20,21
 206:2 223:4 271:8
 276:2 281:18 283:7
 284:15 287:1 293:6,
 10 297:12
that.let's 147:17
theme 144:10
there'll 146:7
thing 12:13 70:7
 81:10 85:19 144:17
 146:1 151:11 173:11
 176:14 188:23
 207:23 221:2,16
 243:15 253:14
 258:15 276:14
 282:19,23 288:7,9,
 14
things 13:20 18:19
 136:16 165:5 216:14
 227:7 228:1 229:4
 230:6 242:14 256:20
 265:9,16,18 274:21
 275:7 295:3 302:13
thinking 12:16 23:2
 85:8 164:21 169:15
 215:13,18 229:17
 230:15 285:3
third-party 136:7,8
 137:9 288:18 291:17
 299:17
Thomas 57:13 95:16
 107:1 113:10,13
thought 136:1
 151:14 167:20
 169:11 214:6 243:21
 288:2
thoughtfully 132:9
thoughts 140:19
 165:5
thousands 275:2
threatening 286:16
Three's 295:23
three-year 217:7
threshold 253:4,5
thriftiness 223:3
throw 240:3 291:19
Thursday 303:10
tie 255:5,9
tight 18:1 141:2
Tim 103:17 106:22
 124:2 144:4 179:5
 203:18 226:12
 275:11 277:1 279:22
 289:11
time 6:21 13:18
 17:22 20:5 25:21
 27:3 35:5 37:14
 39:8,23 40:1 42:16,

20 44:20 47:23 49:4 65:23 70:13 71:18 73:9 78:5 91:12 96:1 97:15 101:3 105:3 108:11 111:15 114:14 128:6 135:18 136:21 137:15 142:10 144:9 151:23 155:12 157:1 158:4, 10 160:14 161:10 163:1 164:17 165:22 167:22 173:14,18 176:1 177:20 178:3, 6,7 181:14 184:5 185:1 188:16 189:7, 11 190:9 198:21 214:8 217:3,9 219:16,18 221:10 226:18 227:7 228:16 239:23 246:12 248:8 253:15 255:1 256:21 282:12,16 284:9,10 288:17 292:7,12 294:7 295:18 302:7	85:15 115:16 121:1 130:22 134:11,14 239:9 270:7 271:14 279:1 totaling 77:2 totally 232:11 290:1 TOU 181:6 182:3 touch 12:13 touched 208:20 217:21 tough 139:8 273:4,17 towns 115:14 116:13 141:16,21 track 152:23 223:22 tracks 13:10 traditional 238:19 250:3 294:6 train 223:7 transaction 289:9 transactions 141:16 250:4 transcribed 6:2,12 transcript 26:11 transcription 47:23 transition 221:18 transitioned 226:3 transitions 284:21 translate 271:14 translations 30:2 transmission 20:9 21:13 35:1 36:22 38:10 59:4,10,23 60:7,18 61:12 62:5, 7,14 68:4,16,20 78:15,23 79:7,11,21 80:16 81:7,8,9,12 83:17 85:23 86:15 87:9 99:6 184:14,20 187:22 195:2,7 203:12 205:10,11, 12,14,15 206:8 207:19 226:1 238:14 245:3 246:10 247:6 248:4 251:10 258:2 262:1 273:23 278:8 283:20,23 302:2 treat 185:13 202:16 treating 199:13 treatment 223:17 trend 71:16 73:9 74:21 75:15 trends 73:17 trial 116:6 trigger 98:6 trouble 47:3 true 53:7 60:14 63:7 69:3,17,22 70:17 184:11 208:16 252:14 256:15 turn 18:16 26:4 39:2 42:6 76:8 117:12 124:21 140:18 146:19 211:16 228:3 turning 34:11 43:7 68:22 71:3,4 109:4	115:6 181:2 two-part 181:10 two-year 181:22 217:5 type 21:18 33:16 173:11 175:11 210:17 225:10 286:1 296:14 types 49:18 50:2 156:16,17 247:22 248:9 256:10 268:12 typical 87:3 159:17 typically 31:3 160:11 200:5 253:22 263:7 281:4	<hr/> U <hr/> U.S. 238:20 ultimately 20:11 22:5,7 134:11 175:19 198:1 215:13 228:22 269:21 unable 104:10 unaware 241:23 unbundled 254:18 uncertainty 37:15 under-compensates 204:14 under-compensating 204:23 undermine 37:6,9 63:16 undermines 198:16 underscores 235:5 understand 44:5 76:14 77:8 82:2 92:13 99:7 129:23 134:6 184:9 196:17 203:6 211:2 217:22 220:8,17 227:6 229:10 232:10 239:8 240:1 257:18 259:16,22 260:12 261:10 262:13 267:2 270:14,16,20 271:15,18,21 272:4 274:21 275:4 277:16,17 280:3 282:1 290:17 293:18 295:5 298:22 299:11,23 understanding 46:12 50:14 54:22 59:7 70:6 82:23 90:19 144:7 167:3,8,19 168:13 170:12 177:23 179:6 189:7, 13 198:10 199:12 202:6 214:21 228:17 235:17 236:10,15 238:21 252:1 274:14 275:7 279:7 280:19 299:20 understands 214:22 250:16 281:13 understood 44:1 84:9 220:7 238:8 279:15	undertake 209:1 234:9 undertaken 174:17 underwater 300:9 undo 277:19 undue 226:19 unfair 15:16 unfinanceable 158:3 uniformly 185:14 unique 130:13 197:22 238:22 unit 196:15,22 Unitil 7:20,23 103:20, 21 105:11,22 117:12,15,22 119:1 120:19 121:1,3,19 148:16,19,20 150:7, 9,11 151:18 155:9, 11 190:15,18,20 191:1 192:4,12 193:7,8,12,13,14 194:22 198:20 199:5 201:2,9,11 227:14 231:6 Unitil's 201:3,12,15 unjust 130:10 131:7 222:17 unknown 192:10 294:9 unreasonable 130:9 131:7 134:16 150:4 222:17 unreasonably 128:9 unsupportable 20:11 up-front 175:20 225:6,7 update 34:16 35:12 112:9,14,17 120:9 121:8 updated 15:23 35:6 37:18 38:8 52:23 53:12 87:12 179:1 updates 36:11 39:22 108:10 110:3 112:7 114:13 118:13 120:6 125:7 134:1 updating 35:5 upgrade 98:1 233:7, 16,21,23 234:9,21 235:3 262:20 upgrades 226:2 233:12 234:6,18 235:10 247:5 281:3 upgrading 178:21 uplift 286:18 uptake 28:18 upticks 253:5 usage 134:1 253:11 usual 7:7 utilities 8:3 14:12 24:7 29:2 31:13 32:6 33:17 34:1 45:14 59:9 60:3,20 84:6 97:5,9,13 130:11 132:4,10 133:21 139:10,17 148:11 149:7,11,12 152:9,	16 153:10,13 154:6 164:13,23 166:11 170:6 173:19 174:3 175:22 176:5 181:5, 9 187:14 189:2,22 192:15 194:21 209:1,4 223:19 225:15 227:14 230:4 241:18 242:17 243:1 265:8 270:22 utilities' 85:20 182:9 utility 10:22 11:5 12:14 13:4 28:16 38:13 41:9 58:15 67:2 86:4,6,21 94:21 96:15 97:22 111:17 128:10 134:1 136:14 149:13 150:12 152:11 166:8 180:16 196:14 203:10 223:22 224:22 235:2 244:4,5 260:15,22 261:4 265:22 266:17 276:17 282:20 289:15 utility's 74:1	<hr/> V <hr/> validate 130:15 191:9,10 validity 37:7,10 63:16 valuable 154:5 207:3,6,12 valuation 237:8 value-based 90:13 valued 246:12 values 16:4 33:17 35:7,8 36:5,11 37:13 38:1,2,22 40:12 43:15 51:13 53:12 63:19 64:9 73:14 83:15 88:20 99:17 207:21 208:5,16 240:18 241:15 293:20 variability 282:4 variably 168:15 variation 75:12 142:7 varied 139:9 vary 33:16 142:5 208:10 298:20 302:6 varying 52:7 VDER 15:17 28:19 29:5 8,16 30:13,16 31:7,11 33:2,4 34:12 36:6,10,19 37:19 38:7 43:14 46:13 48:19 49:15 54:17 62:19 63:2 66:14 76:14 87:11 88:8 130:21 205:16 vegetable 180:8 vendor 289:15 venue 153:2 verbatim 6:1 Verification 59:17 Vermont 23:18
---	--	--	---	---	--	--

242:8,13
version 135:16 250:8
versus 81:13 235:22
 255:20 256:2 298:8
vetted 144:19
vice 23:12 124:3
video 30:1 65:20
 179:22
view 37:6 150:17
 218:9 249:5 268:23
 270:21 271:1 278:21
 282:20 285:16
viewing 220:16
VII 6:2
vintages 223:23
violent 277:11
virtual 116:1
virtually 124:14
visibility 280:6
vision 179:6
volume 84:6 151:9
 183:22 186:16,20
 189:4
volumetric 58:20
 70:2
volunteered 287:8

W

wait 16:7
walk 156:18 157:3
 243:11 245:17,20
 268:20 289:2,7
Walmart 8:9,11
 139:12
wanna 219:21
wanted 12:13 45:7
 54:5 97:7 100:8
 143:2 150:2,12
 151:22 155:22 177:5
 200:16 214:5,9
 238:4 240:3 280:13
 281:12 287:20
warranted 35:12
wave 170:22
ways 15:15 85:17
 241:8 242:2 277:6
weeds 239:17
week's 6:4
weeks 122:7
weight 199:2
well-established
 87:8
West 138:21
west-facing 69:9,21
 70:3,5
western 184:13
 185:14
whichever 190:16
who've 285:6
wholesale 35:2,4
 36:23 38:11 50:11
 159:21 161:11 162:3
 240:17 241:17

243:13 257:9,22
 273:11,16 284:20
 286:5,17
wind 240:8,9,11
 241:3 244:4 285:14
window 293:23
winter 67:9 266:13
 287:3
wire 21:4
wires 93:20 227:18
 260:3
wise 254:6
wishing 6:22
witness's 200:14
 201:10
witnesses 7:11
 10:17,18,19 13:4
 27:4,17,20 28:1
 39:7,12 47:21 65:5,
 23 92:1,3 98:12 99:1
 100:13,16,20 101:5,
 7 102:2,6,14,23
 103:2,4 106:3,19
 107:8 110:19
 122:18,23 123:16
 126:3 127:1,9 143:2
 180:20 196:8 197:13
 201:12,16 206:12
 231:22 260:17
 271:17

wondered 301:17
wondering 177:12
 224:11
wonk 206:23
Woolf 103:17 106:23
 123:11,19,22 124:2,
 9,19 125:2,9,16,22
 126:9,20 127:5
 143:8,22 144:1,4
 146:16 179:5 203:2,
 3,15,18,19,23 204:2,
 6 226:10,12,16
 244:1 266:18 274:9,
 12 275:9,10,11
 277:1 279:22 281:22
 287:11 289:11 292:2
 293:5
word 48:15 91:12
 168:19
wording 213:20
words 20:6 49:9
 236:19 268:11 282:7
work 13:12 14:23
 19:9 20:4 141:11
 152:15 156:3 210:16
 228:13 241:9
 243:16,21 276:3
 284:18 285:9 286:5
 289:9 292:9 294:12
 296:20
worked 23:19 125:3
 213:12
working 24:6 29:12
 59:17 127:1 138:7
 154:2,10,17 161:20
 162:5 166:8,20
 215:4,5 221:3 225:2
 231:9 247:23 279:10
works 146:8 208:7
 289:3 296:19

world 274:15
worried 216:3
worse 222:23
wrap 300:20 303:15
wrapped 178:17
write 106:6
writing 14:10 22:22
 45:1
written 6:17 7:2
 24:19 108:14 110:5
 114:17 118:17
 121:12 124:23
 162:12,14,18 163:22
 164:9
wrong 82:11 170:14
 282:6

X

XXIII 5:7 237:6

Y

year 52:7 99:4
 112:12 125:1,8
 135:7 163:16 164:14
 165:11 166:15,19
 259:7 269:22 289:23
 290:1
yearly 168:14
years 5:6 16:8,9 19:9
 21:17 23:3 24:18
 72:3,16 73:1 75:13
 77:5 111:18 115:15
 132:12 135:7,19
 136:10,22 137:16
 139:21,23 141:4,6,
 23 142:6,10,13,14,
 16 144:13 145:9
 158:9,19 160:11
 163:15 165:11
 166:17 169:5
 171:19,20 173:9,18,
 21 174:9 178:13,17,
 18 181:5 209:5
 212:14,16 213:16,22
 214:1,11 215:2
 218:21 219:9,11,12
 220:4,11 221:5,11
 255:20 256:16 257:6
 262:19 289:20
 290:20 292:20
 293:4,16,21 294:7,
 10,12,14 295:5,8
 296:14 297:22
 299:21 300:3,6,17
 302:8
yield 142:10
younger 274:10

Z

zone 60:12 61:7 74:6
 79:14 87:6 88:18
zone's 74:2