1		STATE OF NEW HAMPSHIRE
2		PUBLIC UTILITIES COMMISSION
3		
4	21 South Frui	
5	Suite 10 Concord, NH	ONLY
6		
7	[Hearing also conducted via Webex]	
8	RE:	ELECTRIC DISTRIBUTION UTILITIES:
9		Electric Vehicle Time-of-Use Rates.
L 0	DDECENM.	Chairman Danial C. Caldran Draaidina
L1	PRESENT:	Chairman Daniel C. Goldner, Presiding Commissioner Pradip K. Chattopadhyay Special Commissioner F. Anne Ross
L2		
L 3		Doreen Borden, Clerk Corrine Lemay, PUC Hybrid Hearing Host
L 4		
L 5		
L 6	APPEARANCES:	Reptg. Eversource Energy: Jessica Chiavara, Esq.
L 7		Reptg. Unitil Energy Systems, Inc.:
L 8		Patrick H. Taylor, Esq.
L 9		Reptg. Liberty Utilities (Granite State Electric) Corp. d/b/a
20		Liberty Utilities: Michael J. Sheehan, Esq.
21		michael o. Sheenan, Esq.
22		
23	Court Rep	orter: Steven E. Patnaude, LCR No. 52
2 4		

1		
2	APPEARANCES:	(Continued)
3		Reptg. Conservation Law Foundation: Nicholas A. Krakoff, Esq.
4		Reptg. ChargePoint, Inc.:
5		Nikhil Vijaykar, Esq. (Keyes & Fox)
6		Reptg. Clean Energy New Hampshire: Chris Skoglund, Dir./Energy Transition
7		Reptg. the City of Lebanon, NH:
8		Clifton C. Below, Asst. Mayor
9		Reptg. Residential Ratepayers: Julianne Desmet, Esq.
10		Maureen Reno, Dir./Rates & Markets Office of Consumer Advocate
11		Reptg. New Hampshire Dept. of Energy:
12 13		Brian D. Buckley, Esq. (Regulatory Support Division)
13		
15		
16		
17		
18		
19		
20		
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22		
23		
24		

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11	* * *	
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24			

1			
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5	22	Liberty Response to DOE 2-5 (08-04-21)	premarked
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10		Liberty 1-1 and Data Request Liberty 1-2 to City of	
11		Lebanon, including Spreadsheet to be filed)	
12			
13			
14			
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# 1 PROCEEDING

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CHAIRMAN GOLDNER: Good morning,
everyone. I'm Chairman Goldner. I'm joined by
Commissioner Ross and Commissioner Chattopadhyay.

We're here this morning in Docket DE 20-170 for a hearing regarding Electric Vehicle Time-of-Use Rates, which include a Liberty/Unitil Settlement Agreement and an Eversource proposal. We would propose starting with the schedule from the DOE dated 01-24-22, and written closings. After appearances, we'll take comments on the proposed outline.

All right. So, with appearances, let's start with Liberty.

MR. SHEEHAN: Good morning,

Commissioners. Mike Sheehan, for Liberty

Utilities (Granite State Electric) Corp.

CHAIRMAN GOLDNER: Thank you.

Eversource?

MS. CHIAVARA: Yes. Good morning,

Commission. This is Jessica Chiavara, here for

Public Service Company of New Hampshire, doing

business as Eversource Energy.

CHAIRMAN GOLDNER: Thank you. Unitil?

8

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1
                   MR. P. TAYLOR: Good morning,
 2.
         Commissioners. Patrick Taylor, on behalf of
 3
         Unitil Energy Systems, Inc.
 4
                   CHAIRMAN GOLDNER: Thank you. Clean
 5
         Energy New Hampshire?
 6
                   MR. SKOGLUND: Good morning,
 7
         Commissioners. Chris Skoglund, with Clean Energy
         New Hampshire.
                   CHAIRMAN GOLDNER: ChargePoint?
 9
10
                   MR. VIJAYKAR: Good morning,
11
         Commissioners. Nikhil Vijaykar, of Keyes & Fox,
12
         LLP, on behalf of ChargePoint.
                   CHAIRMAN GOLDNER: Okay. Thank you.
1.3
         Conservation Law Foundation?
14
15
                   MR. KRAKOFF: Good morning,
16
         Commissioners. Nick Krakoff, on behalf of
17
         Conservation Law Foundation.
18
                   CHAIRMAN GOLDNER: Thank you. City of
19
         Lebanon?
20
                   MR. BELOW: Good morning,
2.1
         Commissioners. Clifton Below, on behalf of the
2.2
         City of Lebanon.
23
                   CHAIRMAN GOLDNER: Thank you.
24
         Hampshire Department of Environmental Services?
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C

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1
                    [No verbal response.]
 2.
                    CHAIRMAN GOLDNER: Okay. I had an
 3
         appearance from a Ms. Ohler. I'll strike that
 4
         from the list.
 5
                    The New England Convenience Store &
 6
         Energy Marketers Association?
 7
                    [No verbal response.]
 8
                    CHAIRMAN GOLDNER: I had a Mr. Moran.
 9
         No?
10
                    [No verbal response.]
11
                    CHAIRMAN GOLDNER: Okay. Office of
         Consumer Advocate?
12
                   MS. DESMET: Good morning,
1.3
14
         Commissioners. Julianne Desmet, with the OCA.
15
         And also in attendance is one of our directors,
16
         Ms. Reno, also.
17
                    CHAIRMAN GOLDNER: All right.
                                                    Thank
18
         you. And New Hampshire Department of Energy?
19
                    MR. BUCKLEY: Good morning, Chairman
20
         Goldner, Commissioner Chattopadhyay, and Special
2.1
         Commissioner Ross. My name is Brian Buckley.
2.2
         And I'm appearing on behalf of the Department of
23
         Energy.
24
                    CHAIRMAN GOLDNER:
                                       Thank you. So, for
```

1 preliminary matters, I'll open the hearing to 2. comments on the order of presentation and written 3 closings? Maybe start with Liberty. 4 MR. SHEEHAN: Thank you. We are 5 supportive of the DOE's letter from yesterday to 6 proceed according to that. And, more 7 specifically, for Liberty, my intention is to qualify Ms. Tebbetts, have her adopt her 8 testimony, then, frankly, turn her over to Mr. 9 10 Buckley to ask questions as part of the 11 Settlement panel. 12 CHAIRMAN GOLDNER: Okay. Thank you. 1.3 Eversource, any comments? 14 MS. CHIAVARA: Eversource assents to 15 the Department of Energy's proposed schedule. 16 CHAIRMAN GOLDNER: Okay. Unitil? 17 MR. P. TAYLOR: Unitil also assents to 18 the Department of Energy's proposed schedule. 19 And picking up the thread that Mr. Sheehan left 20 off there, today, on the stand, I will be 21 qualifying Cindy Carroll, Carol Valianti, and 2.2 John Taylor as witnesses on behalf of the 23 Company. 24 CHAIRMAN GOLDNER: Okay. Thank you.

```
1
         Clean Energy New Hampshire?
 2.
                    MR. SKOGLUND: Clean Energy New
         Hampshire assents to the proposed schedule.
 3
 4
                    CHAIRMAN GOLDNER:
                                       Thank you.
 5
         ChargePoint?
 6
                    MR. VIJAYKAR: Thank you, Commissioner.
 7
         ChargePoint assents to the schedule proposed.
 8
         And, similar, as some of the other parties have
 9
         already spoken, we plan on having our witness
10
         qualified and adopting and swearing in his
11
         testimony, and then turning over our witness for
         cross-examination and Commissioner questions.
12
1.3
                    Thank you.
14
                    CHAIRMAN GOLDNER:
                                       Thank you.
         Conservation Law Foundation?
15
16
                    MR. KRAKOFF: Thank you, Chairman.
                                                         CLF
17
         assents to the proposed procedural schedule.
                                                         As
18
         noted on the procedural schedule, our witness
19
         will be available tomorrow [sic] to answer
20
         questions.
2.1
                    Just a point of clarification.
2.2
         think, earlier, did you say that closing
23
         statements would be in written form?
24
                    CHAIRMAN GOLDNER: Yes.
```

1	MR. KRAKOFF: Okay. Thank you.
2	CHAIRMAN GOLDNER: Thank you. City of
3	Lebanon?
4	MR. BELOW: The City concurs. I just
5	want to mention that, as a volunteer, because of
6	other demands on my time, I wasn't able to
7	provide any comment as the Commission requested
8	on Friday. But I am available Friday afternoon,
9	and in the time slot, to adopt my testimony and
10	respond to any questions, if so desired. But I
11	won't be able to participate in the entire
12	hearing because of other commitments.
13	Thank you.
14	CHAIRMAN GOLDNER: Thank you. Office
15	of Consumer Advocate?
16	MS. DESMET: Yes. Thank you. There is
17	no objection to the proposed schedule. And the
18	Office of Consumer Advocate does not have any
19	additional witnesses to put forward.
20	CHAIRMAN GOLDNER: Thank you. And New
21	Hampshire Department of Energy?
22	MR. BUCKLEY: The New Hampshire
23	Department of Energy supports the proposed
24	schedule.

```
1
                   CHAIRMAN GOLDNER:
                                       Thank you.
 2.
                   Okay. Exhibits 1 through 24 have been
 3
         prefiled and premarked for identification.
 4
         there any confidential information in any of the
 5
         exhibits? I didn't see any.
 6
                   MR. BUCKLEY: I don't believe so.
 7
                   CHAIRMAN GOLDNER: Okay. Thank you.
 8
         Is there anything else we need to cover regarding
         exhibits?
 9
10
                   MR. BUCKLEY: I do not believe so.
11
                   CHAIRMAN GOLDNER: Thank you. Okay.
12
         Any other preliminary matters, before we have the
1.3
         witnesses sworn in?
14
                   MS. CHIAVARA: Chair Goldner, I believe
15
         Eversource will not be participating today.
16
         if they want to demote us to attendees, so that
17
         you can focus on the witnesses, then, that's
18
         fine.
19
                   CHAIRMAN GOLDNER: Okay. Thank you.
20
         Does anyone object --
2.1
                   MR. P. TAYLOR: Chairman Goldner?
2.2
                   CHAIRMAN GOLDNER: Yes. Go ahead.
                   MR. P. TAYLOR: Oh, excuse me. No, I
23
24
         didn't mean to interrupt you. Why don't you
```

14

```
1
         finish what you're asking about the objection,
 2.
         and then I'll make my point.
 3
                   CHAIRMAN GOLDNER: Okay. Thank you.
                                                          Ι
 4
         was just asking if anyone objected to the
 5
         witnesses that we're about to swear in?
 6
                    [No verbal response.]
 7
                   CHAIRMAN GOLDNER: Go ahead, Mr.
         Taylor.
                   MR. P. TAYLOR: I'm just going to note
 9
10
         this as a preliminary matter, although we're also
11
         going to deal with it on the stand. Hearing
12
         Exhibit 2 is testimony sponsored by Carleton
1.3
         Simpson, Cindy Carroll, and Carol Valianti. And,
14
         as I said, we'll walk through this on the stand
15
         with our witnesses. But the Company has -- is
16
         withdrawing Mr. Simpson as a witness on that
17
         testimony, because he's no longer employed by the
18
         Company. And the testimony will be adopted in
19
         its entirety by our witnesses on the stand today.
20
                   CHAIRMAN GOLDNER: Okay. Thank you,
21
         Mr. Taylor.
2.2
                   Anything else for preliminary matters?
23
                   MS. OHLER: Yes. Excuse me, Mr.
24
         Chairman.
                    This is Rebecca Ohler, with the
```

1 Department of Environmental Services. 2. troubled joining. So, I just wanted to let you 3 know that I am here on behalf of the Department. 4 CHAIRMAN GOLDNER: Okay. Thank vou 5 very much. 6 MR. BUCKLEY: Excuse me, Mr. Chairman? 7 CHAIRMAN GOLDNER: Uh-huh. MR. BUCKLEY: One other preliminary 8 9 matter regarding exhibits. I do think that there 10 is one late-filed exhibit that might be coming 11 your way from the City of Lebanon, I believe, 12 Exhibit 25, which is a data response from the 1.3 Department of Energy to Liberty. Am I correct in 14 stating that? 15 MR. BELOW: No. As I said, when I 16 filed just the cover page for that discovery 17 response, the actual document is an Excel file, that I couldn't submit in conformance with the 18 19 PUC rules. It would have taken over 2,200 pages 20 to print it as a pdf. And, as a live file, it's 21 a .xlsx, and the Commission on its website says 2.2 it only accepts .xls files. 23 So, if the Commission would like me to 24 file it as a live spreadsheet in its current

```
1
         format, I can do that. But that's why I didn't
 2.
         previously file it.
 3
                    MR. BUCKLEY: I stand corrected.
 4
                    (Chairman Goldner conferring with
 5
                    Special Cmsr. Ross.)
 6
                    CHAIRMAN GOLDNER: Yes. Mr. Below, if
 7
         you could file the live spreadsheet, we can mark
         that "Exhibit 25".
                    MR. BELOW: Okay. Thank you. I will
 9
10
         do that in a few minutes.
11
                    CHAIRMAN GOLDNER: Thank you.
                    (Exhibit 25 reserved.)
12
1.3
                    CHAIRMAN GOLDNER: Anything else?
14
                    [No verbal response.]
15
                    CHAIRMAN GOLDNER: Okay. Let's proceed
16
         with the witnesses. Mr. Patnaude, would you
17
         please swear in the Settlement Agreement Panel of
18
         witnesses.
19
                    (Whereupon Heather M. Tebbetts,
20
                    Cindy L. Carroll, Carol Valianti,
2.1
                    John D. Taylor, and Sanem I. Sergici
2.2
                    were duly sworn by the Court Reporter.)
23
                    CHAIRMAN GOLDNER: Okay. Let's move to
24
         direct examination. We'll begin with -- I'll
```

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recognize Mr. Sheehan, at Liberty Utilities.
 1
 2
                    MR. SHEEHAN: Thank you.
 3
                  HEATHER M. TEBBETTS, SWORN
 4
                    CINDY L. CARROLL, SWORN
 5
                     CAROL VALIANTI, SWORN
 6
                     JOHN D. TAYLOR, SWORN
 7
                    SANEM I. SERGICI, SWORN
 8
                       DIRECT EXAMINATION
 9
    BY MR. SHEEHAN:
10
         Ms. Tebbetts, could you please introduce yourself
11
         and describe your position with Liberty?
12
         (Tebbetts) Yes. My name is Heather Tebbetts.
13
         And I am the Manager of Rates and Regulatory
14
         Affairs. And I'm employed by Liberty Utilities
15
         Service Company. And I'm responsible for
16
         rate-regulated dockets for Granite State
17
         Electric.
18
         And what's been marked as "Exhibits 1" and "10"
19
         are two pieces of testimony that bear your names.
20
         Exhibit 1 is the Testimony of Heather Tebbetts
21
         and Melissa Samenfeld, dated June 15th of '21.
22
         And Exhibit 10 is the Rebuttal Testimony of you
23
         and Ms. Samenfeld, dated December 10, 2021. Is
24
         that correct?
```

```
1
          (Tebbetts) Yes.
 2
         And did you participate in the drafting of that
 3
         testimony?
 4
         (Tebbetts) Yes.
 5
         Along with Ms. Samenfeld, who is seated behind
 6
         me?
 7
    Α
         (Tebbetts) Yes.
 8
         And do you have any changes you'd like to make to
 9
         either of those testimonies here this morning?
10
         (Tebbetts) I do not.
11
         And do you adopt those testimonies as your sworn
    Q
12
         testimony here this morning?
13
         (Tebbetts) Yes.
    Α
14
                    MR. SHEEHAN: And, Mr. Chair, Ms.
15
         Tebbetts has adopted the testimony, and Ms.
16
         Samenfeld is behind me, I can tell you she would
17
         make the same statements. So, we had elected not
18
         to put her on the stand. And, if sufficient, we
19
         can just move forward with Ms. Tebbetts' sworn
20
         testimony.
21
                    CHAIRMAN GOLDNER: Thank you. Thank
22
         you. And I think you said, Mr. Sheehan, you
23
         wanted to move to Mr. Buckley next?
24
                    MR. SHEEHAN:
                                  When Mr. -- Mr. Buckley
```

```
1
         will be asking questions of the Settlement Panel.
 2
         And I have just basically deferred to him to
 3
         include whatever questions he would have of Ms.
 4
         Tebbetts as part of that, rather than me asking
 5
         questions and him asking his witness questions.
 6
                   CHAIRMAN GOLDNER: Okay. Very good.
 7
         Would you like to proceed, Mr. Buckley?
                   MR. BUCKLEY: It might be easier,
 8
         processwise, to move to Unitil, and then to the
 9
10
         DOE.
11
                   CHAIRMAN GOLDNER: Okay. Very good.
12
         Mr. Taylor.
13
                   MR. P. TAYLOR: My first questions will
14
         be to Cindy Carroll.
    BY MR. P. TAYLOR:
15
16
         Ms. Carroll, please state your name, employer and
17
         position, and your responsibilities for the
18
         record?
19
         (Carroll) My name is Cindy Carroll. I am
    Α
20
         employed by Unitil Service Corporation. And I'm
21
         the Vice President of Customer Energy Solutions.
22
         My primary responsibilities are the development,
23
         implementation, and advancement of Unitil's
24
         distribution utilities' business expansion and
```

```
1
         economic development programs, energy efficiency
 2
         programs, and critical customer management.
 3
    Q
         Have you previously testified before the
 4
         Commission?
 5
         (Carroll) Yes, I have.
 6
         Please refer to Hearing Exhibit 2, which is the
 7
         Testimony and Attachments of Cindy Carroll,
         Carleton Simpson, and Carol Valianti. Can you
         please briefly describe Hearing Exhibit 2?
 9
10
         (Carroll) Yes. Hearing Exhibit 2 is testimony
11
         that Unitil Energy Systems, Incorporated,
12
         submitted as part of its rate case in DE 21-030.
13
         In that case, the Company requested, among other
14
         things, approval of a suite of Electric Vehicle
15
         Time-of-Use rates, an EV infrastructure proposal,
16
         including a residential charger program, and a
17
         make-ready program for DC Fast and Level 2
18
         chargers, and an EV Time-of-Use marketing,
19
         communication, and education plan.
20
         Thank you. And why did the Company submit
21
         testimony from the concurrently pending rate case
22
         in this case?
23
         (Carroll) The Company submitted its comprehensive
24
         EV Time-of-Use, infrastructure, and education
```

```
1
         proposal several months prior to the time that
 2.
         proposals were due to be submitted in this
 3
         matter. And, so, because the Company's EV
 4
         Time-of-Use proposal was designed in accordance
 5
         with the guidelines set forth in Commission Order
 6
         Number 26,394, the Company believed it was
 7
         appropriate to provide the same testimony to the
 8
         Commission in this case.
 9
         Was this testimony prepared by you or under your
    Q
10
         direction?
11
         (Carroll) Yes. It was.
12
         And were the schedules and attachments that
13
         accompany the testimony prepared by you or under
14
         your direction?
15
         (Carroll) Yes, they were.
    Α
16
         Do you have any changes or corrections to your
17
         testimony or schedules that you'd like to note on
18
         the record today?
19
         (Carroll) No, I do not.
    Α
20
         Carleton Simpson is named as a witness on this
21
         testimony. He is no longer a witness sponsoring
22
         the testimony, correct?
23
    Α
         (Carroll) That is correct. Mr. Simpson is no
24
         longer employed by Unitil. And the Company has
```

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1
         withdrawn him as a witness.
 2
         And, to the extent that Mr. Simpson was a sponsor
 3
         of this testimony, will you act as a substitute?
 4
         (Carroll) Yes. I will.
 5
         And other than those portions of the testimony
 6
         for which Ms. Valianti is the primary witness, do
 7
         you adopt the testimony in its entirety as your
 8
         own?
         (Carroll) Yes, I do.
 9
    Α
10
         Please refer to Hearing Exhibit 24, which is the
11
         Settlement Agreement and attachments. Did you
12
         participate in the negotiation and drafting of
13
         the Settlement Agreement that's before the
14
         Commission today?
15
         (Carroll) Yes, I did.
    Α
16
         And are you familiar with the terms of the
17
         Settlement Agreement?
18
         (Carroll) Yes, I am.
    Α
19
         Can you please provide a brief overview of the
20
         Settlement Agreement, as it pertains to Unitil's
21
         EV Time-of-Use rate proposals?
22
    Α
         (Carroll) Yes. The Settlement Agreement contains
23
         a Residential EV Time-of-Use rate for Unitil
24
         customers.
                      The customer charge on this rate is
```

\$5.26 per month. This is a separately-metered residential EV charging rate, and it will have three time-of-use periods: Off-peak, mid-peak, and peak. The peak period is no more than five hours in duration. And the ratio between the total dollars per kWh paid by a customer during the peak period to the dollars paid per kWh by a customer during the off-peak periods will be no less than three-to-one on average annually.

Unitil's proposed methodology for developing the transmission and generation rate time-of-use ratios is largely adopted in the Settlement, but subject to certain clarifications described in the Settlement. And the DOE's proposed methodology for developing the distribution rate time-of-use ratios, as described in the Settlement is also adopted.

The Agreement also provides for a

Commercial Customer EV Time-of-Use rates for

Unitil customers. To qualify for this rate, the

customer's projected individually metered load

must be at least 90 percent EV charging.

Customers can opt-out to the appropriate -- oh, pardon me. Customers can

2.

1.3

opt-in to the appropriate EV Time-of-Use rate for their demand, on their demand, and can opt-out at any time, but must, thereafter, after they opt-out that is, wait at least 12 months before returning to the rate.

The customer charge for these rates will be the same as that of the analogous or corresponding commercial customer rate class.

These are separately-metered commercial EV charging rates that will have three time-of-use periods: Off-peak, mid-peak, and peak. These commercial charging rates will have time-varying transmission, distribution, and generation components, with the exception that there will be no time-based generation component for the G1 class in this rate. The time-varying generation component will be imputed from the default service load. However, if doing so will result in an unreasonable cost shift, the utility can choose not to offer an imputed time-varying generation rate.

Transmission, generation, and distribution rate time-of-use ratios will be developed in the manner similar to the method

```
1
         used for the residential rate, except maintaining
 2
         a demand charge representing 50 percent of the
 3
         demand charge for the analogous or corresponding
 4
         commercial customer rate class.
 5
                   Also in the Settlement, rates will take
 6
         effect June 1st, 2022, or 90 days from an order,
 7
         whichever is later. Unitil will pursue targeted
 8
         marketing opportunities. And there are certain
 9
         reporting and update requirements in the
10
         Settlement.
11
         Thank you very much. That's very helpful.
    Q
12
         you believe that the Settlement Agreement, if
13
         approved, is consistent with the guidelines
14
         established by the Commission in DE 20-004, Order
         26,394?
15
16
         (Carroll) Yes, I do.
17
         And do you believe that the Settlement, if
18
         approved, is in the public interest and will
19
         result in just and reasonable rates?
20
         (Carroll) Yes, I do.
21
         Thank you. I'll move next to Ms. Valianti.
    Q
                                                       Ms.
22
         Valianti, can you please state your name,
23
         employer and position, and your responsibilities
24
         for the record?
```

```
1
          (Valianti) My name is the Carol Valianti.
 2
         for Unitil Service Corporation. I am the Vice
 3
         President of Communications and Public Affairs.
 4
         And I'm responsible for external communications
 5
         with all Unitil stakeholders.
 6
    Q
         Have you previously testified before the
 7
         Commission?
 8
         (Valianti) No, I have not.
 9
         Please refer to Hearing Exhibit 2, which I had
    Q
10
         also presented to Ms. Carroll, is the Testimony
11
         and Attachments of Cindy Carroll, Carleton
12
         Simpson, and Carol Valianti. Was this testimony
13
         prepared by you or under your direction?
14
         (Valianti) Yes, to the extent not already adopted
    Α
15
         by Ms. Carroll.
         And were the schedules and attachments that
16
17
         accompany the testimony prepared by you or under
18
         your direction?
19
         (Valianti) Yes, they were.
    Α
20
         Do you have any changes or corrections that you'd
21
         like to note on the record today?
22
    Α
         (Valianti) No, I do not.
23
         And, again, I'll refer you to Hearing Exhibit 24,
24
         which is the Settlement Agreement and its
```

```
1
         attachments. Did you participate in the
 2
         negotiation and drafting of the Settlement
 3
         Agreement that is before the Commission today?
 4
         (Valianti) Yes, I did.
 5
         And are you familiar with the terms of the
 6
         Agreement?
 7
         (Valianti) Yes, I am.
    Α
 8
         Do you believe that the Agreement, if approved,
 9
         is consistent with the guidelines established by
10
         the Commission?
11
         (Valianti) Yes, I do.
    Α
12
         And do you believe that the Settlement Agreement,
13
         if approved, is in the public interest and will
14
         result in just and reasonable rates?
15
    Α
         (Valianti) Yes.
16
         Thank you. All right. I'll move to Mr. Taylor.
17
         Mr. Taylor, please state your name, your employer
18
         and your position, and your responsibilities for
19
         the record?
20
         (J. Taylor) Yes. It's John Taylor. I'm a
21
         Managing Partner with Atrium Economics, and was
22
         retained by Unitil to support the development of
23
         a time-of-use proposal initially in Docket
24
         21 - 030.
```

28

- 1 Have you previously testified before this 2 Commission or any other commission? 3 Α (J. Taylor) Yes. I provided direct testimony in 4 Unitil's 21-030 docket, as well as the Northern 5 natural gas case, which I don't have the docket 6 number, I believe DG 21-104. 7 Please refer to Hearing Exhibit 12, which is the Q 8 Rebuttal Testimony and Attachments of John D. 9 Taylor. Was this rebuttal testimony prepared by 10 you or under your direction?
- 11 A (J. Taylor) Yes.
- 12 Q And were the schedules and attachments that

  13 accompany the rebuttal testimony prepared by you

  14 or under your direction?
- 15 A (J. Taylor) Yes, they were.
- Do you have any changes or corrections to the testimony or schedules that you'd like to note on the record today?
- 19 A (J. Taylor) Yes. We have a few updates to the
  20 last table of that testimony, which is Table 7,
  21 on Page 26.
- Q Okay. And is that Bates Page 029 of Hearing
  Exhibit 12?
- 24 A (J. Taylor) I believe so. Yes.

```
1
         Okay. Go ahead.
 2
         (J. Taylor) Yes, it is. So, these tables are
 3
         presenting some illustrative bill impacts related
 4
         to some time-of-use proposals that we discussed
 5
         and talked about during this proceeding.
 6
         Table 7, the first column, "Current Rate",
 7
         inadvertently had actually been based off of a
         load factor of 15 percent, but the intent was for
 8
         it to be off of a 10 percent load factor. So, as
 9
10
         a result of that, the row that stated the
11
         "Monthly Energy (kWh)", instead of the "102,600",
12
         it should be 70,794. So, that's the correct
13
         amount of kWh related to a 10 percent load
14
         factor.
15
                   As a result of that update, nothing
16
         changes in the second two columns. But the
17
         "Current Rate" column, there's an update to the
18
         "Energy Charge", as well as to the "Total Monthly
19
         Charge". The Energy Charge, which, as filed, was
         "3,726.70", would be updated to "2,571.42". And,
20
21
         as a result, the calculation that derives the
22
         Total Monthly Charge would be updated to
         "4,937.91".
23
24
                    Those are the updates to the "Current"
```

```
1
                  And there's two more updates that result
 2
         from the change of the kWh. It's the last row,
 3
         which is the "Difference from Current Rates".
 4
         The difference -- the first difference, which is
 5
         comparing the Unitil's proposal to the current
 6
         rate, would be "907.48". And then, the
 7
         difference between the current rate and the DOE
         method would be "2,731.63".
 8
 9
                    So, again, it's just an error in that
10
         first column in the calculation of the load
11
         factor that was used to derive the current rates'
12
         illustrative bill impact.
13
         Thank you. And does this correction in any way
    Q
14
         impact the conclusions or recommendations
15
         discussed in your rebuttal testimony?
16
         (J. Taylor) No.
17
         So, I'll ask you the same questions that I asked
18
         Ms. Carroll and Ms. Valianti, and I apologize to
19
         everyone else for being repetitive.
20
                   Refer to Hearing Exhibit 24, which is
21
         the Settlement Agreement and attachments.
22
    Α
         (J. Taylor) Yes.
23
         Did you participate in the negotiation and
24
         drafting of the Settlement Agreement that's
```

```
1
         before the Commission today?
 2
         (J. Taylor) I did.
 3
         Are you familiar with the terms of the Agreement?
 4
         (J. Taylor) I am.
 5
         Do you believe that the Settlement Agreement, if
 6
         approved, is consistent with the guidelines
 7
         established by the Commission?
 8
         (J. Taylor) Yes.
 9
         And do you believe that the Settlement Agreement,
10
         if approved, is in the public interest and will
11
         result in just and reasonable rates?
12
         (J. Taylor) Yes, I do.
13
                   MR. P. TAYLOR: I have no further
14
         direct questions for the Unitil witnesses.
15
                   CHAIRMAN GOLDNER: Thank you. Attorney
16
         Taylor, can Unitil file a corrected exhibit that
17
         Mr. Taylor just went through?
18
                   MR. P. TAYLOR: Indeed, yes. It would
19
         be a corrected page of his testimony, but we can
20
         certainly get that filed.
21
                   CHAIRMAN GOLDNER: Thank you. Okay.
22
         Very good. So, let's now move to the New
23
         Hampshire Department of Energy.
24
                   MR. BUCKLEY:
                                  Thank you, Mr. Chairman.
```

# 1 BY MR. BUCKLEY: 2 Dr. Sergici, can you please state your name and 3 employer for the record? (Sergici) My name is Dr. Sanem Sergici. And I am 4 5 employed by the Brattle Group. 6 Q And can you please describe the nature of your 7 participation in this proceeding? 8 (Sergici) Yes. I participated in this proceeding 9 on behalf of the New Hampshire Department of 10 Energy. I reviewed proposals, served discovery, 11 reviewed discovery response, I filed testimony, I 12 answered discovery requests, and participated in 13 technical sessions, and I took part in the 14 settlement negotiations that ultimately led to the Settlement filed on Friday, January 14, 2022. 15 16 And is that Settlement Agreement the one that has 17 been premarked as "Exhibit 24"? 18 (Sergici) Yes. That is correct. Α 19 And do you believe that approval of the 20 Settlement is in the public interest, and would 21 result in just and reasonable rates? 22 Α (Sergici) Yes. I do believe that rates developed 23 consistent with that Settlement Agreement would 24 be just and reasonable, and approval of that

```
1
         Agreement by the Commission would be in the
 2
         public interest.
 3
    Q
         Thank you. And, now, did you file testimony in
 4
         this proceeding marked as "Exhibit 8"?
 5
         (Sergici) Yes, I did.
 6
         And do you have any corrections to make to this
 7
         testimony?
 8
         (Sergici) I do have an important clarification to
 9
         make relating to the illustrative rates presented
10
         in my testimony for the commercial customer
11
         rates.
12
                    To develop those rates, one must make
13
         several assumptions due to the very limited
14
         number of separately-metered commercial class
15
         charging stations currently deployed in New
16
         Hampshire, and the lack of information relating
17
         to the usage patterns for those charging
18
         stations. And one of these important assumptions
19
         is the utilization rate. My assumed utilization
20
         rate to develop these rates that would lead to
21
         the same amount of revenue collection as the
22
         analogous Non-EV commercial class was reasonable,
23
         given the information I had possessed at the
24
         time.
                However, later I came to understand that
```

#### Tebbetts|Carroll|Valianti|Taylor|Sergici] [PANEL:

1 utilization rate would be much lower than I used 2 in my testimony. 3 Q And, so, you mentioned the "utilization rate". 4 Can you just briefly explain what a "utilization 5 rate" is? 6 (Sergici) Yes. A charging station's utilization 7 rate is a description of the level of charging, 8 measured in kilowatt-hours, that happens over a given period, usually a month or a year, as a 9 10 percent of the overall level of charging that 11 could have occurred in that charging station, 12 based on the installed capacity of a charger or 13 chargers on a single meter. 14 So, I can give an example here. If one 100 kilowatt EV charger is used every day at full 15 16 capacity of 100 kilowatts for out of 12 out of 17 the 24 hours in a day, then that utilization rate 18

for the charger would be 50 percent.

Again, when determining utilization rate, it's important to remember that the numerator is the actual usage, actual consumption of kilowatt-hours, and the denominator is the maximum possible usage based on the installed capacity. This contrasts with how one calculates

19

20

21

22

23

24

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1
         the load factor, which is based on actual usage,
 2
         as the numerator, divided by the maximum possible
 3
         usage based on the billed peak demand, rather
 4
         than the installed capacity.
 5
         Okay. So, just to make sure I have this clear,
 6
         am I correct to say that load factor is based on
 7
         actual billed peak demand, while utilization rate
 8
         is based on installed capacity --
 9
         (Sergici) Yes, it is.
10
         -- or potential demand?
11
         (Sergici) Yes. That is correct.
12
         And, so, you mention that the utilization rate
13
         that you replied upon to develop your revenue
14
         neutral illustrative rates was too high, is that
15
         correct?
16
         (Sergici) This is correct. And I think it might
17
         by helpful to show you what I mean exactly. So,
18
         if you could please turn to Exhibit 13, Bates
19
         Page 022 and 023. And, in that request, we asked
20
         Eversource to identify the high demand EV
21
         charging stations in its service territory. And,
22
         at the time of the response, there were nine
23
         known high demand draw charging customer
24
         locations, representing about 47 charging ports
```

in the Eversource service territory. And we asked for the utilization rates for those stations, which Eversource provided in early August. And that data is also available within Exhibit 13, at Bates Page 7-10.

And, in that data set, the Company's utilization rate appears all the way to the right in the column labeled "Utilization percentage (%)". I want to take a moment to make sure everyone is caught up with the exhibits.

And, then, if you look at that "Utilization %" column, it appears that the utilization rates reported in that column are somewhere in between 5 and 20 percent, with the average being about 15 percent.

However, after further inquiry during a subsequent technical session, it came to the attention of the parties that the utilization percentage reported in this column was actually based on the billed demand, again, instead of installed capacity of the chargers at the station, and therefore would be more accurately represented as a load factor, instead of the utilization rate. And that distinction was later

identified and corrected in a follow-up data request, which is available at Exhibit 13, Bates Page 034, and then with supporting information detailed at Bates 36-39.

And then, I'm just going to pause a moment here to make sure everybody has access to those exhibits.

And, on those sheets, again, Bates 36-39, it contains two percentage columns showing the billed demand utilization and installed capacity utilization, and that it is clear that the separately-metered electric vehicle charging customers generally had an installed capacity utilization between 1 to 5 percent range. So, essentially much lower than my original assumption of 15 percent, which I originally interpreted to be the installed capacity utilization rate, but then later discovered to be a load factor.

Q And, so, what impact does the use of the 15 percent utilization rate assumption instead of the arguably more accurate 1 to 5 percent utilization rate assumption have on the illustrative rates described in your testimony?

A (Sergici) Sure. So, you said "illustrative", but
I want to highlight one more time and iterate one
more time that all the rates that I developed in
my testimony are illustrative only. I am not the
utility analyst overseeing the revenue
requirements and the rate design for a given
utility, nor I am the responsible party or person
for the tariff filing that will follow a
Commission order on this Settlement.

Having said that, throughout my engagements, I have spent a fair amount of time researching the transmission, distribution, and supply revenues applicable to each utility rate class based on various data responses and utilities' own testimonies.

Then, I allocated those revenues across time periods through methods that would send economically efficient price signals, while limiting the cost shifts and subsidies to the new customer group at the expense of non-EV customer classes. But that implied that the illustrative rates in my testimony were only recovering similar revenues to those that would be recovered under the analogous rate class, under this

original 15 percent utilization rate assumption. Given the reality that most charging stations in New Hampshire are nowhere near that utilization rate, and they are much lower, in the 1 to 5 percent rate, that these illustrative rates in my original — in my testimony would under-recover costs for these lower utilization stations.

However, with the exception of this utilization rate assumption, all the recommendations and rate development methods proposed in my testimony remain economically sound.

- Q And, so, how might one remedy this change in the assumption when designing EV TOU rates?
- A (Sergici) Sure. As I just mentioned, due to the 15 percent utilization rate assumption, the illustrative volumetric rates would not be recovering sufficient revenues for these lower utilization stations. As it happens, however, that this situation can be remedied by leaving all other assumptions in rates in my modeling the same, and also leaving the resulting volumetric time-varying rates the same, but also maintaining a demand charge at half of the demand charge rate

```
1
         of the comparable commercial customer class.
 2
         this is, in fact, the rate design adopted for
 3
         commercial customers within the Settlement
 4
         Agreement.
 5
         And, given that clarification and acknowledgment,
 6
         do you adopt that testimony as representative of
 7
         your position on the matters addressed therein at
 8
         the time of filing?
 9
    Α
         (Sergici) Yes.
10
         Thank you. Now, moving to the Settlement itself.
11
         And I'm going to start with some table setting
12
         and framing of the Settlement before the
13
         Commission.
14
                    The Settlement before the Commission
15
         today, labeled as "Exhibit 26" [24?], adopts
16
         time-of-use rates for several classes of
17
         separately-metered vehicle charging customers --
18
         electric vehicle charging customers in the Unitil
19
         and Liberty territories. They're not the
20
         Eversource territory, is that correct?
21
         (Sergici) Yes.
    Α
22
    Q
         And the Settling Parties include the two
23
         aforementioned utilities, the Department of
24
         Energy, the Consumer Advocate, Department of
```

1 Environmental Services, but not Clean Energy New 2 Hampshire, Conservation Law Foundation, and City 3 of Lebanon, is that correct? 4 (Sergici) Yes. That is correct. 5 Now, turning to time-of-use rates generally. Can 6 you tell me just briefly what is the value of 7 electric utility time-of-use rate offerings, 8 generally? 9 (Sergici) Sure. Time-of-use rates allow 10 customers to receive a price signal based on the 11 actual cost of providing service during a given 12 time period. And these price signals give 13 customers the opportunity to respond to these 14 signals by shifting their load to times when it 15 causes lower costs for the system, and, as a 16 result, benefits all customers. 17 Historically, most electric utility 18 rates include some combination of a customer 19 charge, a flat volumetric kilowatt-hour charge, 20 and, for commercial classes, in addition to these 21 two, a kilowatt-based demand charge. However, I 22 should note that this trend has been changing 23 rapidly recently, as several jurisdictions have 24 started to make time-of-use rates their default

1 rates for the residential customers, such as 2 California utilities and Consumers Energy in 3 Michigan, and there's some movement towards 4 implementing time-of-use rates, both as an opt-in 5 and as well as an opt-out rate offering. 6 And, so, this question is for Dr. Sergici, but 7 it's possible that Ms. Tebbetts might want to 8 weigh in, too. But do the New Hampshire electric distribution utilities currently offer 9 10 time-of-use rates? 11 (Sergici) Yes. My understanding is that Α 12 Eversource and Liberty Utilities currently offer time-of-use rates. 13 14 Eversource offers R-OTOD, which has a 15 13-hour long peak period and a customer charge 16 twice that of their regular residential customer 17 rate. And there's about 50 customers on this 18 rate out of Eversource's 400,000 residential 19 customers. 20 Eversource also offers a G-OTOD rate to 21 commercial customers, again, using the same 22 13-hour long peak period, and that it assesses 23 demand charges only during that period. And 24 approximately 150 of Eversource's 80,000

1 commercial sector customers are on this voluntary 2 rate. 3 And, as I understand it, all of this 4 information was summarized in the Staff 5 Recommendation that opened the Docket Number 6 20-004, an investigation that preceded this 7 proceeding. 8 And, so, you mentioned that Liberty Utilities Q 9 currently offers time-of-use rates. I'm 10 wondering if Ms. Tebbetts may care to supplement 11 that response a bit? 12 (Tebbetts) Sure. So, for right now, our 13 customers at Liberty, electric customers, have 14 the opportunity to take -- we have an EV 15 residential charging rate. And that rate is a 16 five-part rate, meaning that, on the weekends, 17 they have an on-peak and off-peak period, and, 18 during the week, they have three periods: 19 Critical peak, mid-peak, and off-peak. This 20 offering is available to our residential 21 customers only. And it is a separately-metered 22 offering. 23 We do have customers in the process of 24 getting on that rate. But, as I think I've

mentioned in other hearings, we've had difficulty getting the meters. And, so, our customers are waiting. But they are -- we do have customers enrolled and waiting to get on that rate.

The other time-of-use rate we offer is only to a subset of customers who are participating in our Battery Storage Pilot. And those customers have that exact same rate. And the only difference is that the customer charge for the Battery Storage Pilot is the same as our Rate D rate. And the customers who are taking the EV charging rate have a lower customer charge.

And the other rate we do offer is Rate D-10, which is also a time-of-use rate. And it only is time-of-use for the distribution component. And it only is for a subset of hours during the day, during the week, I believe it was 9:00 a.m. to 9:00 p.m. So, it's a 12-hour distribution rate only.

Q And, Ms. Tebbetts, is it fair to say that the

Residential Time-of-Use -- Electric Vehicle

Time-of-Use rate described in the Settlement for

Unitil, that rate has a very similar structure to

1 the Liberty Utilities' Residential Electric 2 Vehicle Time-of-Use rate? 3 Α (Tebbetts) Yes. 4 Thank you. Now, this is for the panel more 5 broadly, but I think that maybe Dr. Sergici might 6 answer. Why would the Commission offer a 7 time-varying rate for separately-metered electric vehicles within an existing residential dwelling? 8 (Sergici) So, in its order closing the 9 10 investigation that preceded this proceeding, the 11 Commission found that separately-metered EV TOU 12 rates would be appropriate. And I agree with 13 that assessment. And it is simply because EV TOU rates will lead to a more efficient charging 14 behavior and a more efficient utilization of the 15 16 grid. So that, essentially, these rates would 17 provide the right price signal to these 18 customers, so that they could take this very 19 flexible load, and then charge it during the 20 times that it doesn't cost too much for the grid 21 to support this charging behavior. 22 And, as I mentioned, electric vehicles 23 are uniquely flexible. And, as the way our grid evolves, we will need to harness all the flexible 24

load potential that is available to us. And these separately-metered EV rates -- TOU rates would be a really effective way of harnessing that flexibility potential.

I also want to highlight that there is a direct analogy to be drawn to controllable water heating previously offered by most electric distribution utilities. Again, that's another uniquely flexible load, that was also separately—metered and offered as a separate rate, apart from the residential rate within which the dwelling existed.

- Q And, so, we've heard some discussion of both the
  Unitil residential rate and the Liberty
  residential rate for separately-metered electric
  vehicles. I'm wondering if you can just observe
  for the record the similarities between those two
  rates?
- A (Sergici) Sure. So, those two rates are similar, in that they follow the guidelines set forth by the Commission Order Number 26,394. And those guidelines directed that the rates would be based on cost causation; that they would incorporate time-varying energy supply, transmission, and

#### Tebbetts|Carroll|Valianti|Taylor|Sergici] [PANEL:

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distribution components; that those rates would have three periods, namely off-peak, mid-peak, and peak; that those rates would be seasonably differentiated; and that they would have an average price differential between off-peak and peak of periods of no less than a three-to-one ratio; and that the peak window in these rates would be no longer than five periods [hours?] in duration. And both Liberty and Unitil's separately-metered EV TOU rates are consistent with that directive from the Commission. And, so, you mentioned the ratios that are used for peak to off-peak. I'm wondering if you, or maybe Mr. Taylor, can speak a bit to how those

- ratios are developed for transmission rates, generation rates, and distribution rates under the proposed Settlement?
- (Sergici) I can give my overview, and then maybe Α Mr. Taylor wants to supplement later.
- 21 (J. Taylor) Yes, that's fine. Go ahead.
- 22 Α (Sergici) Sure. So, essentially, we followed, in 23 order to develop the illustrative rates in my 24 testimony, we followed a different approach to

allocate the costs to time periods for each of the generation, transmission, and distribution elements of the rate.

Essentially, for generation components, we take the annual energy supply revenue requirements, found out the capacity market FCM-related portion of that revenue requirement and allocated it to the summer peak periods, because it's entirely a summer peak driven expense.

And then, for the rest, non-FCM related generation supply revenue requirements, we allocated to the relevant time periods determined in our rate design, based on the average weighted marginal cost of generation, and created price signals by doing that allocation, and then trued it up to the actual embedded cost revenue requirement for the supply. So, that's the generation piece.

For the transmission piece, the transmission expenses or transmission revenue requirement is driven by the coincident -- monthly coincident peak imposed by the utilities. So, we essentially allocated the transmission

revenue requirement to summer and winter seasons initially. And then, we calculated the probability of the monthly peak occurring in each of the peak and off-peak windows by looking at the ISO New England monthly peak occurrence between 2010 and 2020, and allocated those expenses, again, based on the likelihood of a peak falling into a summer peak, summer off-peak, summer mid-peak, and then similarly a winter peak, winter off-peak, and winter mid-peak. So, that's how the transmission costs were allocated and then later trued up.

And, then, last, but not least, for the distribution revenue requirement, we started with the hourly system load profile, and we wanted to allocate the distribution revenue requirement more heavily towards those hours that had a much higher load requirement, on the basis that the higher demand is essentially responsible for driving the distribution system cost requirements. And using our system load profile, taking the square of the load in each hour and creating a percentage allocation factor based on each hour's allocation, we distributed the

1 distribution revenue requirement to each of the 2 hours, and then grouped them based on our 3 predefined seasonal and time period definitions. 4 So, it's at a very high level we went 5 about doing this allocation. But I want to 6 highlight that the premise of this method, in its 7 entirety, was to adhere to the cost causation 8 principal. So, we determined, again, what was the main driver of the cost causation, and 9 10 crafted our allocation approach based on that 11 cost causation, and adhering to the marginal cost 12 principles, because we understand that this 13 Commission is really focused on reflecting 14 marginal cost price signals in the rates. So, 15 that's how we approached DOE's illustrative rate 16 designs. 17 And, so, for my non-analyst brain here, the 18 overarching goal appears to be that these rates 19 are based on cost causation, with assignment of 20 costs to those hours when usage is highest? 21 (Sergici) That is correct. And this is essential 22 to ensure that the recovery of costs are better 23 linked to the time periods during which those

system assets are utilized.

24

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1
         Mr. Taylor, anything to add?
 2
         (J. Taylor) Yes. I would just add that, you
 3
         know, just for clarification, for purposes of the
 4
         Settlement, the distribution, you know, we're
 5
         just doing the process for half of the revenues
 6
         not recovered through the customer charge. So,
 7
         it's not the full distribution revenues that are
         recovered through a time-varying rate. It's just
 8
         half of the commercial customers that have a
 9
10
         demand charge.
11
                   So, I don't know if you're going there,
         Brian. But that would be my only clarification.
12
13
         Very helpful, Mr. Taylor.
14
         (Tebbetts) I just would like to add something as
15
         well.
16
                   So, when we talk about the recovery of
17
         costs that are linked to time periods, for
18
         Liberty, there is a nuance. And I just want to
19
         make sure we're clear on that. Our rate is going
20
         to start at 3:00 p.m., for critical peak hours,
21
         and go until 8:00 p.m. That doesn't align with
22
         our system peak at Liberty. Our system peak is
23
         usually between 2:00 p.m. and 3:00 p.m.
24
                   But, when looking at data, and looking
```

at when customers may charge, especially in the summer, we don't want to have a six-hour period, we want to have a five-hour period. And, so, what we've done is shifted that period from, instead of 2:00 p.m. to 7:00 p.m., of 3:00 p.m. to 8:00 p.m. And we're going to look at that data and see how that added hour in the evening is affected, and are customers charging?

Because we think it's important that we meet the New England -- ISO New England peak, but we don't want off-peak rates to start at 7:00 p.m. That's just -- we believe it's too early, especially in the summertime, when folks are out-and-about, and they may be charging on their way home from things that they're doing in the evening.

So, I just want to make it clear that, yes, we are looking at this to assign costs to those hours when usage is highest, but we also believe that customers will not be charging necessarily from 2:00 to 3:00 p.m. So, we don't think that there will be that impact on the system. But, as this rate, assuming it's approved, develops, and we get more data from

customers who are charging, we can further make 1 2 that data available to review, and determine if that -- those 3:00 p.m. to 8:00 p.m. hours are 3 4 appropriate. 5 I just want to make sure we got that on 6 the record. 7 Q Thank you. That's very helpful, Ms. Tebbetts. 8 So, now, I want to move to the section 9 of the Settlement Agreement that is labeled "Section 10. Rate Development Method, Demand 10 11 Charge, and Revenue Neutrality". And that can be 12 found at Bates -- Exhibit 24, Bates Page 007. 13 And I can just briefly observe, there 14 is a numbering issue in the Settlement Agreement. The Section B, on Page 6, the numbering does not 15 restart at "1" below "B". So, it starts at "5". 16 17 Just wanted to note that for folks who might be 18 still searching through the Settlement for the 19 section we're discussing now. 20 So, on that page, and in that section, 21 can you just briefly talk to me, Dr. Sergici, 22 about what is labeled as "Section 10. Rate 23 Development Method, Demand Charge, and Revenue

24

Neutrality"?

1 (Sergici) Sure. So, maybe I can start with 2 briefly summarizing the merits of demand charges 3 and, again, their role in the customer rate 4 structure. So, as we previously mentioned, the 5 demand charge is a rate component that is very 6 common in the commercial sector distribution 7 rates. And this is because of a direct line of 8 cost causation between customer's peak loading and the need for capacity-related improvements 9 10 and investments on the distribution system. 11 So, even though this is a typical 12 rate -- demand charges are a typical rate design element for commercial customers, the Commission 13 14 simply expressed its expectation that utilities 15 may consider demand charge alternatives for high 16 demand draw charging stations. 17 Q And can you tell me what portion of the overall 18 commercial customer revenues, that is 19 transmission, distribution, generation, demand 20 charges would represent in the proposed 21 Settlement rates? 22 Α (Sergici) Sure. So, demand charges generally 23 represent a significant portion of the overall 24 distribution revenues that the utilities collect

1 from a distribution customer, but a relatively 2 small portion of the customer's overall bill, 3 again, when including generation and transmission 4 expenses. And, in particular, though, a rather 5 small portion of the bill that would result from 6 the rates proposed in the Settlement Agreement. 7 So, it would, obviously, vary by utility, but, under the Settlement, the demand charge is 8 roughly, you know, 20 percent, to maybe 30 9 10 percent in some cases, of the overall revenue 11 requirement the utility would need to collect 12 from an EV charging customer. 13 And, just for some context here, what percent of Q 14 distribution revenue is collected from the demand 15 charge for Unitil's G1 class, for example? 16 (Sergici) My recollection is that Unitil's demand 17 charge represents more than 90 percent of its 18 distribution revenues from the G1 class. And 19 that Liberty's demand charge represents 85 20 percent of distribution revenues. 21 And, so, the method for rate development outlined Q 22 in this Settlement provides for a 50 percent 23 demand charge, and that is, in fact, designed to 24 limit cost shifts associated with the rate

```
1
         methodology, is that correct?
 2
         (Sergici) That is correct.
 3
         And maybe at this time it would be helpful to
 4
         pull up Exhibit 24, and turn to Bates Page 020
 5
         through 021. I'm wondering if you could just
 6
         briefly highlight what that revenue neutrality
 7
         analysis provides for?
 8
         (Sergici) Sure. So, as we indicated previously,
 9
         so, our objective was here to design a rate that
10
         maintains the price signals embedded in the class
11
         load and cost allocation. Because, essentially,
12
         we didn't have data on the separately-metered
13
         commercial charging stations in a cost of service
14
         construct. So, we had to rely on this commercial
15
         class cost information, cost of service
16
         information to design these rates.
17
                    So, what this means is that, when we
18
         are creating this alternative rate, we still
19
         needed to pay attention to, like you said, one,
20
         maintaining price signals, limiting the extent of
21
         the cost shifts that might happen between this
22
         new rate and customers who are taking this rate,
23
         as well as the other customers.
24
                    So, as you can see on Bates 020-021,
```

Q

our analysis of what a customer bill would be under the original time-of-use and 50 percent demand charge, versus the standard commercial customer offering.

And then, again, based on those pages, at 5 percent utilization rate, labeled as "Facility 1", the rates collect the same amount of revenues as the original class rate. And I have to note that this analysis does not assume any load shifting. That's essentially how one ensures the revenue neutrality before any load shifting happens. The goal is to make sure that the same amount of revenues are collected.

And, then, I think that was for Unitil.

This analysis was also conducted for one of the

Liberty rates at Bates 023.

But the idea is that the original TOU and half demand charge is recovering the same amount of revenues as the standard commercial customer offering, roughly.

Thank you. And, now, I think I'm going to turn to the section of the Settlement entitled "Other Matters". And that would be at Bates Page 008.

And just I want to briefly touch on the

"Marketing" section. And this question is for 1 2 whoever on the panel might feel most comfortable answering, and maybe it's actually directed to 3 4 Ms. Tebbetts. 5 Ms. Tebbetts, you had mentioned that 6 there's -- thus far there's been somewhat limited 7 participation in the Residential EV TOU rate 8 offering that Liberty has or provides, and that 9 was because of meter issues, is that correct? 10 (Tebbetts) Yes. Yes. So, the difficulty of 11 getting these meters. We have done some 12 marketing, social media marketing. And, while 13 we're excited that customers are asking about it, 14 we aren't able to get a meter to serve them. So, 15 to market something that we can't offer them 16 today isn't really fair to the customer. Though, 17 we're excited that customers are excited that 18 we're offering the rate. 19 And you mention there has been some degree of Q 20 customer interest thus far? 21 (Tebbetts) Yes. We have, last I knew, three or Α 22 five customers who are waiting to take the rate. 23 They -- a couple of them need a few upgrades to 24 serve their car that they're going to be plugging

```
1
         in, such as an upgraded transformer. But, then,
 2
         the others are just waiting for a meter.
 3
    Q
         And you mentioned a moment ago that thus far the
         marketing that Liberty has done has been social
 4
 5
         media based largely?
 6
         (Tebbetts) Social media based, it's on our
 7
         website. And, on social media, we do direct them
         to our website, which explains the time-of-use
 8
 9
         rates, and also the benefits of plugging in a
10
         car.
11
         And, so, there's this commitment in the
    Q
12
         Settlement Agreement, Section C.2, around
13
         "targeted marketing opportunities". Do you think
14
         it's possible that those -- pursuing those
15
         targeted marketing opportunities might draw even
16
         more customer interest than the social media
17
         marketing opportunities thus far?
18
         (Tebbetts) I do. I do. Again, we are hoping
    Α
19
         that we can order a bulk of meters, in the event
20
         that customers really do want to take this rate.
21
         And, hopefully, we'll be able to get all those
22
         meters and get them out to deploy to customers.
23
         And it's just merely a supply chain issue right
24
         now with Itron.
```

1 But, yes. We do believe that there is 2 great opportunity to do more targeted mailings, 3 and either be, you know, through the mail or more 4 social media. We are definitely looking forward 5 to more marketing. 6 Q Thank you, Ms. Tebbetts. And, now, I want to 7 move ahead to the section entitled "Update Rate and Class Revenue Requirement to Reflect Actual 8 Cost of Service". That is on Bates Page 009 of 9 10 the Settlement Agreement, Exhibit 24. And I 11 think this question is for Dr. Sergici. 12 Can you tell me just a little bit more 13 about this section? It's fairly brief, but I 14 think maybe it could use just a bit of 15 explanation. 16 (Sergici) Yes. Yes, this section is actually 17 extremely important, and really is the 18 underpinning of offering in this 19 separately-metered rate. So, as I previously 20 mentioned, we use the best available information 21 and data to design these rates. But, again, 22 given that the specific data for these customer 23 charging stations as a separate class did not 24 exist at this time, the choices were to just wait

until the data becomes available or rely on the available cost of service data from the class as a whole and use those price signals to design this rate, with the expectation that these rates would be modified as more data becomes available.

And, more specifically, that these rates should be treated as a separate customer class for the purpose of cost of service studies developed in each utility's next rate case.

Again, this wasn't — this wasn't possible at this time. But we approached this with the expectation that next time there's a rate case that the utilities will take a hard look. And, to the extent that there are sufficient number of customers, charging customers, that they would be represented as a separate class for the cost of service purposes.

And this is important, and because distribution revenue responsibility is allocated to each customer class within the cost of service studies, based on a number of factors. And one of the important factors is that class's contribution to system peak, or the peak coincidence. So, there are, you know, many

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reasons for why this separately-metered high demand draw customer class could have a different peak, impact peak coincidence, compared to the current commercial class that they are embedded And that, through these rates, our objective is to send the right price signals. And, then, if you are sending the right price signals, these customers hopefully will respond to these price signals. And, then, over time, their load shape will have a low contribution to peak, because, again, they're responding to signals by shifting their load from peak to off-peak periods, reducing their contribution to peak. And, then, this would mean less system costs to be incurred, and then the cost of service studies would and should reflect this reality when sufficient data was compiled, and that these customer classes would be assigned a more accurate amount of costs under these developments. That's very helpful, Dr. Sergici. Now, I want to move to the next section of the Settlement Agreement entitled "Alternative Metering Feasibility Assessment". Can you tell me just a little bit more about this commitment, and maybe

provide some background on it?

separately meter the EVs.

A (Sergici) Sure. As part of the Commission's order preceding this proceeding, it directed Staff and the parties to further develop the concept of alternative metering feasibility assessment. So, this is the idea that metering embedded in electric vehicle chargers, or the vehicle telemetry itself, could be relied upon, instead of the additional Company-owned meter to

And there are examples of this being done in various places throughout the country, including Baltimore Gas & Electric, and I believe Xcel, in Minnesota. And consistent with the Commission order, and agreed upon procedural schedules in this proceeding, each of the utilities developed outlines of what an assessment would look like.

For example, Eversource's outline is provided in Exhibit 12, Bates Page 020-021. And, although no utility actually filed a full feasibility assessment at this time, Unitil has, in fact, proposed, as part of its rate case, a pilot to test the feasibility of using embedded

1 And, as part of the Settlement, the metering. 2 Parties have agreed that Unitil will report on 3 the results of their pilot, and that the Parties 4 will consider expansion of the pilot, including 5 potentially to Liberty Utilities. 6 Q And does this Settlement preclude other electric 7 vehicle rate offerings, for example, if the Commission were to direct that the utilities 8 differentiate between public charging rates, 9 10 fleet charging rates, or some other type of 11 electric vehicle rate? 12 (Sergici) No, it does not. 13 And these separately-metered electric vehicle 14 rates are, in fact, optional for a customer, is 15 that correct? 16 (Sergici) That is correct. Those are voluntary 17 rates. The customers may very well choose to 18 stay on their existing rate, or, if they think 19 that they could benefit from these rates by 20 shifting their usage from peak to off-peak rates, 21 they might opt-in to these rates. 22 What's happening here is that utilities 23 are giving customers additional options, in case 24 they choose to be on these rates.

And, now, I just want to preemptively discuss some -- a few critiques that might be offered about the rates and approaches defined in the Settlement.

to an argument that "the Settlement does not go far enough to facilitate deployment of electric vehicle charging stations", specifically with respect to the treatment of demand charges? (Sergici) So, my recollection is that no one in this proceeding has proved that the current deployments of commercial sector charging is inadequate, insufficient at this time. In fact, as we have seen earlier, the utilization rate for high demand draw charging stations in New Hampshire remains quite low, at around 1 to 5 percent. A higher utilization rate would tend to indicate the need for further deployment. But, again, the utilization rates remain quite low in New Hampshire.

The first one is, what's your response

And my take on this is that, if New
Hampshire really is interested in accelerating
transportation electrification, there are other
ways and approaches that don't rely on electric

utility rates that favor one customer class to the detriment of other customer classes or other customers.

So, the rates are a great tool in order to achieve multiple objectives. But their utmost responsibility is to recover costs in an equitable and efficient manner. So, once we start to assign multiple missions on the rates, such as advancing the adoption of one technology versus the other, all of a sudden rates start to not deliver on their primary objective, creating all kinds of issues around cost shifts, inequity, and whatnot.

So, as I mentioned, again, if New Hampshire decides that acceleration of transportation electrification is one of the state goals, there are other ways to do that, such as participation in the zero-emission vehicle compact, or, you know, if utilities expanding their make-ready and EV car and rebates program, so that the demand in the market will be accelerated, and then the demand, in turn, can manifest itself in the form of higher utilization on these charging stations.

So, I guess the bottom line is that my 1 2 preference is not to use rates to choose one 3 technology over the other, but rely on other 4 methods to facilitate the deployment of charging 5 stations, if New Hampshire chooses that to be one 6 of its state goals. 7 MR. BUCKLEY: Thank you, Dr. Sergici. 8 Actually, the Department of Energy has no further 9 questions for the panel. 10 CHAIRMAN GOLDNER: Okay. Thank you, 11 Mr. Buckley. Would you be able to have your witness provide amended testimony? During the 12 13 first part, there were some corrections. 14 MR. BUCKLEY: That is maybe a question 15 that I would turn to my witness. To the extent 16 that a revised utilization rate could be inputted 17 into the -- input into the testimony, would there 18 be expansive reverberations requiring, 19 essentially, a rewrite of the testimony. Could 20 you tell me how that would impact the testimony? 21 WITNESS SERGICI: No, I don't think so. 22 As I, essentially, I -- I indicated earlier this 23 modification doesn't really change the original 24 rates that we designed. It just adds an

```
additional rate component. So, this could very
 1
 2.
         well be done as an addendum, in a couple of
 3
         pages, explaining the basis, and perhaps
 4
         providing some details about the additional
 5
         revenue collection that becomes possible by
 6
         introducing this 50 percent demand charge.
 7
                   So, no. No, Brian. I don't think it
 8
         would be a big effort.
 9
                   MR. BUCKLEY: Okay. So, we can provide
10
         that.
11
                   CHAIRMAN GOLDNER: Thank you.
                   MR. BUCKLEY: And that would be
12
1.3
         "Exhibit 26", by my count now, is that correct?
14
                   CHAIRMAN GOLDNER: You can -- I think
15
         you can amend your current exhibit. I don't know
16
         that you need to add one. Would that be
17
         acceptable?
18
                   MR. BUCKLEY: Yes. That's acceptable.
19
         Or, we could take it as a record request as well,
20
         if that's possible?
21
                   CHAIRMAN GOLDNER: Okay, we'll
22
         take that offline and sort through that at the
23
         break. Okay. Very good. But I appreciate your
24
         willingness to update the exhibit.
```

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1
                   What I'd like to do before a break, if
 2
         acceptable to everyone, is to finish the
 3
         examination of the witnesses by the signing
 4
         parties, and then move to cross-examination after
 5
         a short break. Is that okay with everyone?
 6
                   Which would mean that the Office of
 7
         Consumer Advocate and the New Hampshire
         Department of Environmental Services would have
 8
         the opportunity to examine the witnesses before
 9
10
         the break.
11
                   So, perhaps we move to the Office of
         Consumer Advocate?
12
1.3
                   MS. DESMET: I have nothing additional
14
         to add.
15
                   CHAIRMAN GOLDNER: Well, we might get
16
         to a break more quickly then.
17
                   Does the New Hampshire Department of
18
         Environmental Services have anything? I see Ms.
19
         Ohler on the line, but don't see her picture.
20
                   MS. OHLER: Sorry. No. The Department
21
         of Environmental Services does not have
2.2
         anything --
23
                    [Court reporter interruption.]
24
                    CHAIRMAN GOLDNER: Can you repeat that
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please, Ms. Ohler? Ms. Ohler, we couldn't hear
 1
 2
         you.
 3
                   MS. OHLER: I'm sorry. Let me take my
 4
         mask off.
 5
                   CHAIRMAN GOLDNER: Okay.
 6
                   MS. OHLER: This is Rebecca Ohler, with
 7
         the Department of Environmental Services, and we
 8
         have nothing to add.
                   CHAIRMAN GOLDNER: Thank you. Okay.
 9
10
         Let's take a ten-minute recess, coming back at
11
         10:45, to begin the cross-examination of the
12
         witnesses.
13
                   Thank you. Off the record.
14
                    (Recess taken at 10:36 a.m., and the
15
                   hearing resumed at 10:50 a.m.)
16
                   CHAIRMAN GOLDNER: Okay. We'll go to
         cross-examination of the Settlement witnesses.
17
18
         And we'll begin with Clean Energy New Hampshire?
19
                   MR. SKOGLUND: Clean Energy New
20
         Hampshire has no comments -- or, questions at
21
         this time.
22
                   CHAIRMAN GOLDNER: Thank you. We'll
23
         move to ChargePoint?
24
                   MR. VIJAYKAR: Thank you, Commissioner.
```

```
ChargePoint has no questions of the Settlement
 1
 2.
         panel.
 3
                    CHAIRMAN GOLDNER: Okay. Thank you.
         The Conservation Law Foundation?
 4
 5
                    MR. KRAKOFF:
                                  Thank you, Chairman.
 6
         Conservation Law Foundation does have questions
 7
         for cross-examination.
                    And I would like to start with Mr. John
 8
 9
         Taylor, for Unitil.
10
                       CROSS-EXAMINATION
11
    BY MR. KRAKOFF:
12
         Now, Mr. Taylor, isn't it -- you would
1.3
         acknowledge that fast charge stations, public
14
         charge stations, can result in a high peak demand
15
         due to elevated power levels from quick charging,
16
         correct?
17
    Α
         (J. Taylor) Yes. Their peak demand requirements
18
         can be high, but so can other -- I don't know
19
         that that -- what relevant to what, when you say
20
         the word "high"?
21
         Well, you know, I think you stated that in one of
    Q
22
         your testimonies. So, as Exhibit 18, which was
23
         your response -- was an attachment to Unitil's
24
         2-6, and if you look at Bates 006. And, for
```

```
1
         context, this is your testimony that you filed in
 2
         a Massachusetts rate case that's considering
 3
         demand charge alternatives, correct?
 4
         (J. Taylor) Okay. I don't have that in front of
 5
              But, yes. In general, you know, DCFC, or
 6
         high demand draw fast charging stations, can have
 7
         higher demands than, you know, like a Level 2 or
         smaller ports.
 8
 9
         I mean, and, you know, just very briefly, can you
    Q
10
         just provide an example of, you know, say you
11
         have a DCFC charger with two cars charging
12
         simultaneously, two EVs charging simultaneously?
13
         How much power, you know, on average, would that
14
         use? Or, could you just provide an estimate?
15
         (J. Taylor) Assuming that each port is 100 kW,
    Α
16
         and you had two ports that were charging
17
         simultaneously, then the demand draw would be
18
         200 kW.
19
         Okay. Now, if a charging station has a low
    Q
20
         utilization rate, which I think you defined in
21
         one of your testimonies as the time during the
22
         month when EV station owners are charging at a
23
         station, the demand charge portion of a bill can
24
         be substantially higher than the actual energy
```

1 Would you agree with that? costs. 2 (J. Taylor) Yes. I think, as we discussed 3 earlier, it depends on the particular rates that 4 are in place, and if we're talking about 5 distribution only, versus distribution, 6 transmission, and generation. But, you know, 7 depending on the particular circumstances, the rates and the jurisdiction, there can be, you 8 know, a high portion of the distribution bill 9 10 that's related to the demand charge. 11 And, you know, it obviously depends, but the Q 12 demand charge portion of a bill, in your words, 13 can be substantially higher than the actual 14 energy costs. And, if you want, I can point that 15 out in your testimony, but I don't think that's a 16 controversial statement. But let me know if you 17 would you like me to point that out from your 18 prefiled testimony. 19 (J. Taylor) Right. For distribution cost Α 20 recovery in the State of New Hampshire, demand 21 charges can be a substantial portion of the bill. 22 I think Dr. Sergici mentioned that it's close to 23 90 percent for Unitil's class, which, you know, I 24 agree with, for G2, and G1, I think it's closer

```
1
         to about 78 percent.
 2
                   So, for an average customer, that would
 3
         be the percentage that would be, you know, within
 4
         their bill.
 5
         Okay. And I'm going to ask you about something
         you stated in Exhibit 18. Are you able to find
 6
 7
         that exhibit at this point in time or, you know,
 8
         would you like me to just read what's stated
 9
         there?
10
         (J. Taylor) Yes. What is Exhibit 18?
11
         So, yes, Exhibit 18 is what I just asked you
12
         about, it was filed by Unitil as an attachment to
13
         your response to DOE 2-6, which I --
14
         (J. Taylor) 2-6.
15
         -- which I have attached here as -- or, that I
16
         provide as "Exhibit 17". So, Exhibit 17 is
17
         Unitil's response to Staff -- I think it was
18
         "Staff" at the time, Staff 2-6. And, then, you
19
         provided an attachment in response to that.
20
         (J. Taylor) Oh. That's the mentioned
    Α
21
         Massachusetts testimony that was filed. Yes.
22
    Q
         That's correct. Yes.
23
    Α
         (J. Taylor) Yes.
24
         So, turning to Exhibit 18, Bates 006, Lines 11
```

```
1
         through 14, is it true that you stated that "For
 2
         EV chargers, demand charges can be initially
 3
         challenging because EV equipment is likely to be
 4
         used sporadically to start but still see high
 5
         power demands, resulting in a final bill heavily
         tilted towards the demand charges." You stated
 6
 7
         that, correct?
 8
         (J. Taylor) Correct.
 9
         So, you know, in other words, you would agree
10
         that, for low utilization rate charging stations,
11
         demand charges can represent a significant
         portion of the monthly bill?
12
13
         (J. Taylor) Yes. I mean, the way I would word
    Α
14
         that is that, for stations with low utilization,
15
         resulting in low load factors, the distribution
16
         portion of their bill that's recovering
17
         distribution revenue requirement, the demand
18
         charges can be a large portion of that bill.
19
         Okay. And, also, you stated, this is also that
    Q
20
         same exhibit, same page, Bates 006, Lines 14
21
         through 16. This is the next sentence in your
22
         testimony there. You stated that "Such a rate
         structure", with the demand charge, "may make the
23
24
         economics of EV charging stations challenging,
```

```
1
         particularly during the early days of charger
 2
         installation where EV market penetration is still
 3
         relatively low." You stated that, correct?
 4
         (J. Taylor) Correct.
 5
         So, would it be fair to say that you would agree
 6
         that, for early stage -- early stage public
 7
         charging stations, the demand charge component of
         bills can be a large portion of the total bill,
         and could even be cost-prohibitive in the
 9
10
         development of public charging stations?
11
         (J. Taylor) I think it all depends. Yes, the
12
         demand charges can be a high portion of the bill
         for those. You know, for the conclusion that
13
14
         they're "cost-prohibitive", I'm not sure I'd go
15
         that far. You know, it does impact the
16
         economics. But, you know, there is a lot of
17
         other make-ready infrastructure programs.
18
         There's a new federal infrastructure bill that
19
         has allocated seven and a half billion dollars to
20
         the development of EV infrastructure charging
21
         facilities.
22
                   So, yes. The demand can be a high
23
         portion. But the economics of a new facility,
24
         from the standpoint of the facility owner, is
```

```
1
         dependent on a plethora of items, the utility
 2
         bill just being one of those items.
 3
    Q
         So, I mean, I think you stated that you don't
 4
         think they're cost-prohibitive. But, if you look
 5
         at Exhibit 12, that is your rebuttal testimony in
 6
         this docket, on Bates 030, did you not, in fact,
 7
         say that "While the demand component of EV
         stations bills can be a large portion of total
 8
         costs and prohibitive in the development of these
 9
10
         stations, so too can time-varying costs" --
11
         "time-varying energy costs".
12
                    So, there didn't you state that demand
13
         charges can be prohibitive?
14
         (J. Taylor) On which lines?
         Yes. Bates 030, sorry, Lines 1 through 2.
15
16
         (J. Taylor) And that was Page what in my
17
         rebuttal?
18
         That's Bates 030, or "Page 27 of 27", that's the
    Q
19
         original number.
20
         (J. Taylor) I'm sorry. Let me get to that.
21
         I stated that.
22
    Q
         Okay. Now, I mean, I think this is a
23
         non-controversial statement, but you've noted
24
         that "hurdles caused by demand charges for early
```

stage charging investments demonstrate the dilemma that tends to follow EVs, where consumers are less likely to buy EVs if chargers are not readily available, but entities are less likely to build capital-intensive chargers until greater market penetration of EVs." Would you agree with that?

(J. Taylor) Yes. I think that is generally understood by the industry, that there's a balance here between the adoption rates of electric vehicles and availability of public charging stations. There's some interconnection there between individual consumer choices and competitive enterprises' choices to put capital to work by building this infrastructure.

But, again, you know, the total utility bill is just one piece of the equation that an EV facility -- a charging facility would be making when deciding to invest capital into a new charging station or not. The cost of, you know, building that facility, you know, the purchase of land, the upstream distribution facilities that would be required, and may very well be charged to the customer through a line extension policy

1 or not, you know, the forecasted utilization and 2 load growth. You know, if the site host has, you 3 know, any other desires for the charging facility 4 based on the attraction of people to their mall 5 or to their gas station, or whatever. 6 So, there's a lot of aspects to those 7 decisions. And I don't think I'd simply state that it's all about the utility bill. 8 Sure. I understand there are a lot of factors. 9 Q 10 But you would agree that, you know, the utility 11 bill, including the demand charge component, is one of the factors? 12 13 (J. Taylor) Yes. Α 14 And I think you'd agree that the greater EV 15 charging availability there is, it will allow for 16 more EV purchases in the future, correct? 17 Α (J. Taylor) I mean, that would be one of the 18 decisions a consumer would take into account when 19 purchasing a car for those consumers that would 20 charge at a public charging station. A lot of 21 consumers charge at home, I think some surveys 22 have indicated about 80 percent. So, you know, 23 it depends. 24 Now, in this docket, you initially designed a

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1
         demand charge alternative that would have had a
 2
         75 percent demand charge reduction for the first
 3
         year of the rate. Is that right?
 4
         (J. Taylor) I think it was 100 percent the first
 5
         year, 75 the second, and 25 the third.
 6
    Q
         Okay. Perhaps, I got that wrong. And, you know,
 7
         your -- Unitil's purpose in designing this rate,
 8
         you know, would it be fair to say that was
         partially to help solve this problem with, you
 9
10
         know, the demand charges being, you know, a
11
         barrier to EV charging investments?
12
         (J. Taylor) I think the purpose of that initial
13
         proposal was to recognize that, you know, demand
14
         charges can be concerning, and to, you know, have
15
         a program that was limited in duration and
16
         limited in the direct subsidies that would occur
17
         to just a very, you know, a small period of time.
18
         You know, these things aren't built overnight.
19
         So, you know, over the course of a few years, you
20
         might have some participation in that direct
21
         rebate, but it would represent a direct subsidy
22
         to those customers.
23
                   So, it was in recognition of the demand
24
         charge, you know, that the demand charge can be a
```

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1
         concern for facility investors. But, also, we
 2
         wanted to make sure that was limited to a short
 3
         time period. And it also is, you know, fairly
 4
         transparent and easy to account for.
 5
         Sure. Now, I think you just stated that, under
 6
         that initial proposal, Unitil proposed a 100
 7
         percent demand charge reduction. And, as Dr.
 8
         Sergici explained a little bit earlier, here the
 9
         Settlement proposal would -- there is only a 50
10
         percent demand charge reduction, right?
11
         (J. Taylor) Yes. I did find my direct testimony
12
         in Docket 21-030, in which I describe the demand
13
         discount. And I did want to correct my answer.
14
         It was 75 percent the first year.
15
         Okay.
    Q
16
         (J. Taylor) So, sorry for the error there. But,
17
         yes. So, the Settlement Agreement, that was a
18
         compromise amongst the Parties, is to have a
19
         50 percent demand charge, which represents, you
20
         know, I quess the similar -- somewhat similar to
21
         the second year discount, but with the remaining
22
         50 percent of those costs being recovered in a
23
         time-varying kWh charge.
24
         And, you know, you just kind of alluded to the
```

1 fact that this, you know, your earlier proposal, 2 which was the 75 percent reduction, you know, 3 might try to sort of resolve some of the issues 4 with demand charges. 5 Have you analyzed, you know, the extent 6 to which the Settlement proposal, which is a 7 50 percent demand charge reduction, the extent to which this proposal would have the same effect in 8 9 sort of ameliorating some of those demand charge 10 issues we just discussed? 11 (J. Taylor) Let me think about that. I don't 12 know if we prepared a bill impact that did that 13 analysis or not. I know, in my rebuttal, the 14 last couple of tables, and the one that I had to 15 correct, we did compare the current rate with a 16 75 percent reduction, but that was not compared 17 to the final Settlement Agreement, which is, you 18 know, the 50 percent demand, 50 percent 19 time-varying. 20 So, I'm not sure if I've prepared that. 21 But I can speak to directionally, if you'd like? 22 Q Well, let me just rephrase that. Because my 23 question was really, you know, have you analyzed

the extent to which, you know, this new proposal,

24

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1
         the 50 percent demand charge reduction, would
 2
         have an impact on the economics or the viability
 3
         of charging stations, you know, to sort of deal
 4
         with that barrier?
 5
         (J. Taylor) Yes, I think I can speak to that.
 6
         You know, I think there's a couple of points to
 7
         be made here. You know, first, you know, and I'm
         most familiar with Unitil's rate structures.
 9
         Yes, Unitil's demand rate, if you compare it to
10
         demand rates in other jurisdictions, is moderate.
11
         It's not overly high. You know, it's like $10 or
12
         $11 per kW. You know, in California, in
13
         comparison, its demand rates are in the $19
14
         range.
15
                   So, you know, to start off with, that,
16
         while there is a demand charge for commercial
17
         customers, it's not as heavy as other
18
         jurisdictions, because Unitil still is recovering
19
         generation and transmission costs through a kWh
20
         rate.
21
                   With that being said, obviously, you
22
         know, there are some -- there would be a lower
23
         bill if the demand rate was decreased. And, at
24
         the level that is prepared in the Settlement
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Agreement, you know, the assumed load factor and the consumption during the different periods of time, you know, it's pretty much revenue neutral. So, the revenues that would be generated from the current rates and those generated under the proposed Settlement rates would equate to each other under those load factor assumptions and percentage of consumption in a different -- over the three periods of time.

You know, to the essence of the question, which is, you know, "how is this going to impact the appetite for, you know, competitive enterprises to build DCFC charging stations in the state?" Again, there's a plethora of considerations. You know, they're not seeing —they won't see a demand charge in the same levels as other jurisdictions, in which there are a lot of EV development.

There is, you know, proposals related to make-ready infrastructure, as well as, you know, state -- potentially state and federal funding that would be there to, you know, provide additional subsidies to the development of this industry. So, you know, I don't know to what

1 extent the 50 versus 75 is even on the radar of 2 EV charging facility owners and investors. 3 Q Now, shifting gears a little bit, I want to draw 4 your attention back to Exhibit 12, and Bates 023, 5 at Lines 5 through 7. Well, I quess it really is 6 3 through 7. 7 There you were asked "Can public charging stations simply charge more for peak 8 periods than during off-peak periods?" This is 9 10 address time-of-use rates. And you said "They 11 may not be able to do so. EV charging stations that are offered to the public or support daytime 12 13 charging may have limited ability to control or 14 move use from one time period to another, i.e., 15 their price elasticity can be very low." 16 So, you would you agree -- well, you 17 stated there that "charging stations have a low 18 price elasticity of demand", correct? 19 (J. Taylor) I stated that "some public charging Α 20 stations would have a low price elasticity of 21 demand." These rates aren't just available for 22 public charging stations. They're available for 23 separately-metered charging facilities, which 24 would include both residential, in which there is

1 a high elasticity of demand, as well as, you 2 know, fleet overnight, you know, offices, any 3 other Level 2. 4 So, yes. There is one subset of 5 customers that may have a lower price elasticity 6 than another subset. But, on balance, the 7 options that are provided in the settlement, you know, are -- I think they're well-balanced. 8 9 gives options to the customers to make the 10 choices, and to respond to the price signals when 11 they can. 12 And I'm not disputing here, you know, the price 13 elasticity of demand for, you know, the 14 residential proposal or for, you know, fleet --15 fleets, for example. 16 But, you know, just focusing on the 17 public charging stations, you'd agree that the 18 price elasticity there can be low? 19 (J. Taylor) Yes. I think it can be low. Α 20 Although, the nice thing about this industry, 21 which is a benefit and also a challenge, is that 22 it evolves extremely quickly. And, in 23 California, for instance, they are -- you know, 24 there is indication that public charging stations

1 are pushing down prices that reflect on and 2 off-peak differentials, and individual consumers 3 are choosing when to charge at those public 4 stations based on prices. 5 So, you know, it's a hypothetical that 6 there's some low elasticities of demand, but time 7 will tell as to, you know, to what extent there 8 is elasticity, and, you know, how that might differ by uses and by states. 9 10 Looking back at Exhibit 18 again, which is, 11 again, your prefiled testimony in that 12 Massachusetts docket. And I guess, just to provide the Commission with a little bit of 13 14 background, you know, was this testimony that you 15 filed in a Massachusetts DPU docket in regard to 16 a demand charge alternative proposal that Unitil 17 is proposing there for its Fitchburg Gas & 18 Electric Light Company territory? 19 (J. Taylor) Yes. Just for some clarity here, you Α 20 know, Atrium was retained to develop the 21 time-of-use proposals that were presented in the 22 general rate case, and another project was 23 initiated between Unitil and Atrium to support 24 the development of proposals for Fitchburg, under

1 the context of a law that was passed that had a 2 specific directive that I think the Company might 3 be able to speak a little bit more to than 4 myself. But it was a collaborative effort under 5 this docket in Massachusetts between the three 6 electric utilities. And there are some 7 differences as to the directive from the Commission here in New Hampshire versus the law that was passed in Massachusetts. 9 10 Sure. And I don't doubt that there are. But I 11 just have a question about one of your general 12 statements again. 13 It's on, again, Exhibit 18, Bates 022, 14 Lines 15 through 18. There, so, at Lines 15 15 through 18, you say "the benefit of time 16 differentiated rates for public EV charging 17 stations may be limited given public charging 18 stations provide charging service to their 19 customers for which they have little control in 20 when their facilities are being utilized." You stated that, correct? 21 22 Α (J. Taylor) Yes. And, as I just indicated, this 23 is a changing industry, and there is some 24 indication that some time-differentiated rates in

1 California are incentivizing consumers to charge 2 during mid- and off-peak periods. 3 Q But, you know, I'm sure you acknowledge that 4 customers of public charging stations may have 5 limited ability to shift charging to other time 6 periods, right? 7 (J. Taylor) Yes. I think the way I would put it Α 8 is that they would probably choose not to use the public charging station, and would instead, you 9 10 know, charge at home. You know, if you're 11 commuting to work, and you're hitting a public 12 charging station twice a week during a peak 13 period, and that's your only time, then you'd 14 probably avail yourself of that and charge 15 somewhere else. 16 Okay. I know you just tried to put it a little 17 bit differently, but, you know, you did state in 18 your sworn testimony here that "public charging 19 station users" -- you know, "the benefit of 20 public charging stations may be limited" --21 sorry -- "time-differentiated rates for public 22 charging stations may be limited given those 23 customers may have little control over when they 24 charge", did you not?

1 (J. Taylor) That is correct. 2 Okay. Turning to Exhibit 16. 3 (J. Taylor) And what is that exhibit? Can you 4 remind me what is Exhibit 16? 5 I'm sorry. This is Request Number CLF -- it's 6 Request Number 1-23 from CLF and CENH. And this 7 is Unitil's response to that. 8 (J. Taylor) Okay. 9 Yes. So, there, the latter part of that Q 10 question, CLF and CENH asks whether -- it asked 11 you to "produce all analyses and workpapers relating to any evaluations that Unitil has 12 conducted regarding either the effect that its 13 14 proposed rates would have on shifting charging station use to other time periods or the level at 15 16 which Unitil expects that charging station 17 owner/operators will adopt its commercial EV TOU 18 rates." 19 And I'm looking at your response, about 20 two-thirds of the way down in your response, you 21 wrote "The Company did not perform any analysis 22 or create any work papers relating to the 23 anticipated effect of commercial EV TOU rates on 24 charging station use, as customer behaviors will

1 vary significantly." So, at least with respect 2 to your initial proposal, you didn't do any 3 analysis on the impact that the time-of-use rates 4 you developed there would have on public charging 5 station use? 6 (J. Taylor) Yes. I think we can speak generally 7 to, you know, the direction that price signals 8 can have. But, as to how much the price signal 9 is sent out to the EV owners, and, you know, when 10 they decide to charge? You know, we haven't done 11 a thorough analysis of that. And one of the 12 benefits of the Settlement Agreement is that 13 there are annual, you know, some annual 14 reporting. And, once there's more infrastructure 15 in place, there will be an opportunity to review 16 and better understand, you know, how these 17 stations are being used, so that that question 18 can be, you know, better responded to in the 19 future. 20 Now, with respect to that Massachusetts docket, 21 you know, there Unitil proposed a different 22 demand charge alternative than in this case. 23 Just basically a sliding scale approach to demand 24 charges. Is that kind of a correct

1 characterization? 2 (J. Taylor) Yes, I can describe it briefly. So, 3 in Massachusetts, the three electric utilities 4 worked through a collaborative process in which 5 they jointly decided and/or were required to 6 jointly decide and file the same type of 7 structure. And that structure is that the demand 8 charge is reduced based on the load factor from 9 the facility, and the remaining costs are 10 recovered through a kWh charge. So, in fact, 11 it's somewhat similar to the Settlement 12 Agreement, where, you know, there's a portion 13 recovered in demand and there's a portion recovered in kWh. The difference being that 14 there's no sliding scale in the Settlement in 15 16 this New Hampshire docket, so that, you know, 17 that it doesn't -- it isn't based on a load 18 factor. And, then, of course, the Commission 19 looking for time-varying rates and sending some 20 price signals in New Hampshire, the kWh is 21 time-differentiated. And, in Massachusetts, the 22 kWh is just a flat rate. 23 Sure. And, so, for that demand charge 24 alternative in Massachusetts, you know, you

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1
         didn't design it to have a time-of-use rate.
 2
         However, is it correct that, for the 5 percent --
 3
         under 5 percent utilization rate, you designed a
 4
         demand charge of zero, right?
 5
         (J. Taylor) Yes. I don't have that filing. But
 6
         I'll, you know, agree to that. I think that
 7
         sounds about reasonable. I don't remember the
         exact cut-offs.
 8
         Yes. I mean, I can, you know, if you are able to
 9
    Q
10
         find the testimony, I can point you to the --
11
         (J. Taylor) Oh, is that in the attachment? Yes.
    Α
12
         Let me go to the attachment.
13
         Yes. It's mentioned in the testimony, on Page, I
    Q.
14
         think, Bates 009 and 010. Yes, 009 and 010 has
15
         just a little --
16
         (J. Taylor) Oh, yes, you're right. It is right
17
         there. Okay. Yes.
18
         Okay. So, for that, you know, given the caveat
    Q.
19
         that there is no time-of-use rate with that
20
         proposed rate, for that demand charge
21
         alternative, it would have a zero percent demand
22
         charge for a utilization rate of under 5 percent,
23
         correct?
24
         (J. Taylor) Yes. That was the joint proposal by
```

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1
         the three utilities in Massachusetts.
 2
         Okay. And, then, wasn't that -- wasn't the
 3
         Massachusetts proposal, you know, again, given
 4
         the caveat there was no time-of-use rate, but
 5
         wasn't that proposal designed to be revenue
 6
         neutral?
 7
         (J. Taylor) Yes. I used the class load factors
    Α
 8
         and the existing rate design to, you know,
         develop these sliding scale demand and kWh rates,
 9
10
         so that, you know, ceteris paribus, all else
11
         equal, you would get the same amount of revenues.
12
         Okay. All right. I think I'm done with my
13
         questions for you, Mr. Taylor.
14
                   Now, for Ms. Tebbetts, I have a few
15
         questions for her as well.
16
                   Ms. Tebbetts, so, Liberty initially
17
         designed a high demand draw commercial rate that
18
         was filed with the Commission in this docket, and
19
         that did not include a time-of-use rate, correct?
20
         (Tebbetts) Yes.
21
         And, in your -- in Exhibit -- do you have the
22
         exhibits in front of you or do you have a
23
         computer, a way to look at the exhibits?
24
          (Tebbetts) Let me pull it up.
```

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1
         Okay. So, the exhibit I'm going to ask you
 2
         questions about is Exhibit 22.
 3
    Α
         (Tebbetts) Oh. That's the Liberty response to
 4
         DOE 2-5? Am I correct?
 5
         Exactly. Yes.
    Q
 6
         (Tebbetts) Okay. Let me get there. Thank you.
 7
         Just let me know when you're able to locate it.
    Q
 8
         (Tebbetts) I'm there. It's just slow. Okay, I'm
 9
         there.
10
         All right. Thanks. So, in DOE 2-5(a), the
11
         Department of Energy asked you to "Please explain
         why the Company did not develop an EV TOU rate
12
13
         proposal for separately-metered high demand draw
14
         commercial customer applications." And that
15
         Liberty's response was "The Company does not
16
         agree that offering EV TOU rates for
17
         separately-metered high demand draw commercial
18
         applications is the appropriate rate design for
19
         such electric vehicle charging installations."
20
         Is that what Liberty's response was to DOE in
21
         that data request?
22
    Α
         (Tebbetts) Yes.
23
         And could you just please explain to me why, at
24
         that point in time, it was Liberty's view that
```

1 time-of-use rates were not appropriate for high 2 demand draw applications? 3 Α (Tebbetts) Sure. So, you know, initially, when 4 we looked at offering time-of-use rates, we were 5 unsure, really, that customers were going to want 6 to charge at really high peak hours. And one of 7 the, you know, arguments we had, I believe, in our testimony initially was that "when customers 8 9 need to charge, they need to charge." There are 10 not enough charging stations out there where, unlike a gas station, you can, you know, find, 11 12 like Gas Buddy, the cheapest gas price around. 13 know that there certainly is systems in the cars 14 that allow you to find a charging station and 15 their pricing. But the concentration of charging 16 stations is not as nearly as much as gas 17 stations. 18 So, one of the concerns that we had was 19 we were not -- that offering a time-of-use rate, 20 we were not providing customers with a quick 21 charge that they may need. We were sending a 22 price signal, which is part of what the 23 Commission originally ordered us to do. But 24 sending a price signal that said, you know, "You

```
1
         shouldn't charge at this time. And, if you want
 2
         to during critical peak, then you're going to pay
         for it."
 3
 4
         And then, also in that same response, in DOE
 5
         2-5(a) [b?], you know, that it asked you "Please
 6
         explain why the Company could not utilize the
 7
         same method it used to develop EV TOU rates for
         residential and small commercial customers, and
 8
         develop an EV TOU rate for high demand draw
 9
10
         commercial customer applications." And then, in
11
         response there, Liberty wrote "The premise of the
         residential rate is completely different than
12
13
         separately-metered commercial customer
14
         applications. Residential customers will charge
15
         when they are home, most likely on the weekends
16
         and evenings, thus charging during off-peak
17
         hours. Commercial applications provide charging
18
         for any time during the day when drivers are out
19
         in the community and need to charge; thus,
20
         completely different use cases are being compared
21
         in the question."
22
                   You know, so, what does that actually
         mean in that response?
23
24
          (Tebbetts) So, when looking at the Order of
```

Notice saying to parties, in the original order in this docket, saying to parties that we should be creating a time-of-use rate, you know, we said "We can't compare the residential use cases to commercial use cases."

We have a residential time-of-use rate.

And we know that customers are going to use it

when they're least -- when the price of

electricity is the lowest. And we know a lot of

this information from our Battery Pilot. And,

you know, customers are obviously using their

electricity on off-peak rates.

And, so, when you're home, and you have the option to charge, because you're not going anywhere, you are going to program your car or you're just not going to plug it in, if you can't program it, until after that off-peak rate is in effect.

So, the difference is a commercial application would be considering that "I need to charge my vehicle. I'm out and about, and I need to charge my vehicle. I'm not home. I need to get home or get to do more errands, etcetera."

Or, if I'm a commercial fleet customer, we'll

1 call it, and, you know, I need to get to my next 2 appointment to do whatever it is I'm doing, I 3 need to find a charging station, then I need to 4 find a charging station then. 5 And, so, we believe that those are very 6 different use cases. 7 So, would it be fair to say you agree that, you Q 8 know, if your -- somebody that's a public 9 charging station user has a limited ability to 10 shift the time when they charge to another time 11 period? (Tebbetts) I don't know that. Because I'll be 12 13 honest with you, like, and maybe it's me, but, if 14 I have to go purchase gas, I don't know, I pay 15 attention to the day that it's cheapest when I 16 drive by the gas stations, and I say "Meh, I 17 don't have to get it today. I can get it 18 tomorrow, because I know Wednesday is going to be 19 cheaper than Tuesday", etcetera. And that's just 20 an example, right? 21 So, if I don't have to charge, then I 22 may not decide to pull over and charge. If I 23 absolutely cannot get to my next destination 24 without charging, then, yes, I may have to bite

```
1
         the bullet and have to go and pay the higher
 2
         price.
 3
    Q
         And I think in one of the tech sessions, you
 4
         know, you might have stated that your household
 5
         at one point owned an EV. You know, was it a
 6
         cause of concern when you owned an EV to try to
 7
         find, you know, be able to find charging
         stations?
 8
         (Tebbetts) Well, I had an EV in 2013. So, there
 9
10
         were no charging stations around at the time.
11
         And, you know, I was perfectly okay with that,
12
         and I was perfectly fine with charging at home.
13
         And, when I did have to travel, which I traveled
14
         frequently, from my home in Nashua, all the way
         up to our Lebanon office, I would stop at the 93
15
16
         and charge up, if I wanted to, and then make my
17
         way back. And I actually didn't really have to
18
         charge.
19
                   So, people do get range anxiety, I know
20
         that. That's one reason why we didn't keep the
21
         car, it was significant range anxiety for some of
22
         us in the household. So, I do understand that.
23
                   But, at the same time, you know, I
24
         think that customers will make that decision.
```

```
1
         And I think that, you know, if they need to
 2
         charge, they will charge. And, if they don't
 3
         need to charge, then they will continue on their
 4
         journey until they go home to charge.
 5
         Now, a high demand draw rate that you designed
 6
         and filed with the Commission initially, that had
 7
         a 10 percent demand charge, correct?
 8
         (Tebbetts) I want to say "yes".
 9
         You know, and if you have your testimony in front
    Q
10
         of you, I can point to -- I think it's
11
         Attachment HT/MS, I think, Attachment 1.
12
         (Tebbetts) Yes, I am there. And that is correct,
13
         yes.
14
         Yes. It's a 10 percent demand charge?
15
         (Tebbetts) Uh-huh. Yes.
    Α
16
         Okay. And, turning to Exhibit 21, which is
17
         Liberty's response to CLF and CENH 1-17. Were
18
         you able to find that? Just let me know once you
19
         found that.
20
         (Tebbetts) I'm there.
21
         So, there CLF and CENH asked you whether
    Q
22
         "Liberty's two proposed commercial EV rates would
23
         decrease demand charges for commercial customers"
         -- or, sorry, why -- or, "Please explain why
24
```

Liberty chose to reduce [demand charges to 10 percent], but not eliminate, the demand charges?"

And the response that Liberty wrote was "The Company believes that the design of the rates" which was at the 10 percent demand charge,

"provides a balance to the customer with regards to the revenues necessary to serve customers with higher loads, but keeping with the ideals of electrification of transportation."

Now, your initial rate that you designed had a 10 percent demand charge. And, as you heard today, it's a 50 percent demand charge under the Settlement proposal. Have you analyzed whether this 50 percent demand charge rate sort of strikes the same balance that you describe in Exhibit 21?

(Tebbetts) I do. I do think it does. So, first of all, we have time-of-use rates that are designed in the Settlement Agreement. And, so, I'm looking at -- you know, if you look at the breakdown of those time-of-use rates for Liberty, we do not have -- in our initial proposal, we don't have time-of-use rates, which means the customers will be paying the full transmission

charge, fixed transmission charge and the fixed energy service charge, if they take energy service from us.

And, so, you know, one of the things that we looked at in designing this rate was trying to keep in the spirit of, and I think we put it in the data response as well, a mix of volumetric charges is appropriate, but we were trying to keep with the ideals of electrification of transportation.

And, you know, so, we didn't touch any other parts of the rates, because those rates are already recovering our costs, and they're pass-throughs to customers. And I'll also be really clear. We have -- Liberty/Granite State Electric, you know, we looked at this and we said "2022 is a test year for us. We'll be filing a rate case in 2023." Which gives us an opportunity to see what happens with this rate. And, in the event that customers don't take it, then maybe we redesign it. And, in the event that customers do take it, and there's cost shifting in that year, 2022, we will redesign the rate.

1 So, we have a great opportunity here, 2 and that's why we filed it in the manner that we 3 did, to take a look and see what would the market 4 hold, what would they take. 5 And, so, when we look at this, I think 6 we need to add a context that we actually have an 7 opportunity in 12 to 18 to 24 months to actually 8 redesign a rate, in the case that we find there's 9 any cost shifting. 10 So, I just want to make sure that's 11 clear, and this is one reason why. And I believe 12 we had provided that in one of our responses as 13 well. Thanks. Now, looking at Exhibit 20, this was 14 15 Liberty's response to then Staff 1-3. Were you 16 able to find that? 17 Α (Tebbetts) I have that. Yes. Go ahead. 18 Okay. Great. And, so, there I think Staff Q 19 referenced the Commission's order in the 20 investigatory docket, to say that "we anticipate 21 that any high demand draw rate design proposals 22 filed in an adjudicative proceeding will be informed by an assessment of the costs and 23 24 feasibility of offering a peak coincident demand

charge rate component." And, then, Staff asked 1 2 you to "Please provide the Company's assessment 3 of the costs and feasibility of a peak coincident demand charge rate component." You know, and 4 5 then, in your response there, the second 6 sentence, Liberty wrote "Creating a rate that 7 would be higher during the potential peak coincident demand hours will prohibit drivers 8 9 from charging when they need it most." 10 You know, wouldn't that apply to 11 time-of-use rates as well? 12 (Tebbetts) Yes. And I still agree with that 13 sentence. I think that is absolutely the case. 14 But, in the event that what we're trying to do is 15 avoid increased peak usage, critical peak hour 16 usage, which for us would be that 3:00 to 8:00 17 p.m. period, then, you know, you're looking at 18 time-of-use rates that would make that 19 appropriate. 20 And, in this case, when we talked about 21 this, you know, what we were looking at was "how 22 do we get more EV drivers on the road?", in that 23 originally. And maybe even time-of-use rates 24 will provide more EV drivers on the road, though

they'll charge at different times. But that is yet to be seen for us. We certainly don't know what the results of usage is going to be, because we don't have any in our territory. We have a few, I shouldn't say that, we have a couple that have just come on line. They're not ours, but we shall see how that works.

So, I think, for us, you know, the overall arching issue for us in this whole docket was "We don't have data to make decisions, so we're going to go in with the best that we have."

And when we made our initial filing in June, this was the best that we had.

And, so, going through the course of this docket, you know, we've learned a lot.

There's been a lot of information shared, and we're appreciative of it. And that is why we looked at this as an opportunity for us to say "You know what? Maybe we really should offer this to our customers, and see what they think about it." Let them tell us "we don't like these rates, we don't want to take them", or, "You know what? This is fantastic." We have more customers who want to have EV charging stations

1 And, you know, this is a great rate installed. 2 design, and we're going to go forward with that. 3 So, you know, I can answer your 4 questions, and I'm very appreciative of what 5 you're getting at. But, at the same time, we 6 just don't have any data to make a decision on 7 what is right and what is wrong. So, we're trying to just offer something to customers in 8 hopes that they take it, and that they give us 9 10 that feedback of what really we should be 11 offering our customers in the next one, two, 12 three, five years. 13 So, you are saying that you're not sure how 14 customers will respond to these rate proposals, 15 but that, you know, when you have more data, 16 you'll have a better idea of how they would 17 respond or do respond? 18 (Tebbetts) Yes. I think that we don't know how Α 19 customers will respond. We are optimistic that 20 the rate design that we have signed in our 21 Settlement Agreement will bring about more 22 charging stations. We're very optimistic about 23 that. We're optimistic that it will allow for 24 more EV drivers in New Hampshire as well. We are

```
1
         very optimistic that there is an opportunity
 2
         there. But the data will follow, and the data
 3
         will tell us if our optimism was correct, or if
 4
         we need to relook at these rates down the road.
 5
         But, at this time, we are optimistic that this
 6
         could be a benefit to drivers in New Hampshire.
 7
         Okay. Just a last couple questions for you.
    Q
 8
         that initial proposal that Liberty designed, was
         initially filed with the docket at the
 9
10
         Commission, you know, again, there was no
11
         time-of-use rate there for the high demand draw
12
         proposal. That was designed to be revenue
13
         neutral, right?
14
         (Tebbetts) For distribution rates, yes, because
    Α
15
         their energy service, transmission, other rate
16
         components, would just be the rate component
17
         associated with Rate G-1 or Rate G-2.
18
         Okay. So, for the distribution component, it was
    Q
19
         designed to be revenue neutral?
20
         (Tebbetts) Yes.
21
         And, so, I think looking at, you know, your
22
         testimony, the attachments again, you know,
23
         Attachment -- I quess it's Bates 008 of your
24
         testimony, which is Attachment 1, you know, it
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109

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1
         looks like there you sort of show the revenue,
 2
         under the current Rate G-1 and then under the
 3
         proposed rates, and that's the same, correct?
 4
         (Tebbetts) Yes.
 5
         And, so, there, you were able to sort of -- you
 6
         were able to maintain revenue neutrality by
 7
         increasing the volumetric charge, while at the
 8
         same time you were introducing this demand
 9
         charge, right?
10
         (Tebbetts) Yes.
11
         Okay. Ms. Tebbetts, I have no further questions
12
         for you.
                   Thanks.
13
                    Okay. Finally, for Ms. -- or, for
14
         Dr., excuse me, Sergici -- did I pronounce that
15
         correctly?
16
         (Sergici) Sergici.
    Α
17
    Q
         Sergici.
18
         (Sergici) Close enough.
19
         Okay. Sorry about that, Dr. Sergici. So, in
20
         this docket, your recommending time-of-use rates
21
         for public charging stations, right?
22
    Α
         (Sergici) High draw charging facilities,
23
         including public charging stations, as well as
24
         Level 2 clustered chargers.
```

```
1
         Okay. So, you're recommending time-of-use rates
 2
         for DCFC charging stations, which would be high
 3
         draw, correct?
 4
         (Sergici) One of which it is. But it also
 5
         includes, like I said, Level 2/Class II charging
 6
         stations as well, which could be used for fleet
 7
         charging.
 8
         Understood. And Ms. Tebbetts just testified
    Q
 9
         that, you know, at least from Liberty's
10
         perspective, they're not entirely sure how
11
         customers -- how EV users will respond to, you
12
         know, the rate design here or the time-of-use
13
         rates for public charging stations or DCFC
14
         charging stations. You know, DOE hasn't
15
         conducted any sort of analysis here on, you know,
16
         the expectations of how customers will respond
17
         to, you know, your rate design proposal, is that
18
         right?
19
         (Sergici) That's correct. We have not done that
    Α
20
         analysis here, simply because there is no data.
21
         Okay. So, you know, I mean, it would be fair to
    Q
22
         say you don't know how the customers will
23
         respond, maybe they will respond well, maybe they
24
         won't, right?
```

1	А	(Sergici) That is correct. And I, you know, I do
2		a lot of work in the area of time-varying
3		pricing, and mostly for residential and
4		commercial customers. And, when they are given
5		these price signals, they conclusively shift
6		their usage from peak to off-peak periods. But
7		there are new applications, and definitely this
8		is a new application, how these charging station
9		customers would respond to these price signals.
10		But, again, given some of the research, you know,
11		there's all the reason why at least some of the
12		customers who would voluntarily want to be on
13		this rate find the ways to shift usage from peak
14		to off-peak periods. This could be done in the
15		form of their updating their own pricing
16		structures for customers, and, as Mr. Taylor
17		indicated, this is already happening in
18		California, or by adopting certain load
19		management technologies in solar storage devices
20		and the like to facilitate that responsiveness.
21		But, again, we
22	Q	But I'm sorry.
23	А	(Sergici) There is not a lot of research out
24		there that quantify these impacts.

```
1
         And you mentioned the California example.
 2
         you seen any research for analyzing customer
         response to those time-of-use rates for public
 3
 4
         charging stations?
 5
         (Sergici) I have not. I have anecdotal evidence
 6
         that at least one person that I know is taking
 7
         advantage of peak and off-peak prices offered in
         one of the Tesla stations in California.
 8
         But you haven't seen any more sort of empirical
 9
    Q
10
         or statistical evidence?
11
         (Sergici) That is correct.
    Α
         Now, the Settlement proposal for the -- the
12
13
         Settlement proposal for the high demand draw
14
         rate, it's designed to be revenue neutral at the
15
         5 percent utilization rate, is that correct?
16
         (Sergici) That is correct.
17
         And, you know, I realize that we're not talking
18
         about Eversource today, but, you know, just by
19
         way of example, in your testimony on Page 19, I
20
         guess it's Bates 021, sorry about that,
21
         Eversource designed a demand charge alternative
22
         to revenue neutral at 10 percent. And, on Bates
23
         021, you stated that, you know, if it was -- if
24
         the utilization rate were lower than that 10
```

1 percent, Eversource "would produce less revenue 2 which could represent a reduction in cost recovery." 3 4 You know, wouldn't you have the same 5 issue here if utilization were under the 5 6 percent level? 7 Α (Sergici) Yes. So, that's not really precisely 8 anchored around 5 percent. So, there's a range, 9 similar to Eversource, I think. These rates are 10 collecting the same amount of revenues in this, 11 you know, 5 to 10 percent range. And it's really 12 impossible to design a rate which will, you know, 13 recover the right amount of revenue for every 14 single customer. But I believe that the rate 15 design that we came up with really well balances 16 potential limited amount of those cost shifts, 17 with providing an upside that, you know, even if 18 some of these very, very low utilization 19 customers is creating some cost shifts, that 20 they're balanced by their response to these price 21 signals and shifting their usage from peak to 22 off-peak periods, and creating benefits for the 23 system and also for all customers. 24 Which was missing in Eversource's rate,

1 it was a flat rate, no time-varying price signal. 2 So, there will be no upside for non-participant 3 customers. 4 Now, on Page 32 of your testimony, I quess it's 5 Bates 034, and at Lines 20 through 25, you know, 6 you were asked about Liberty's initial proposal, 7 you know, its initial high demand draw proposal, 8 and why it had not, you know, design a 9 time-of-use rate for high demand draw customers. 10 And you wrote, on Lines 20 through 25, that "the 11 Company should not second-quess the abilities of 12 its public station owners to pass on some of 13 these efficient price signals to their own 14 customers. When faced with a TOU rate that 15 charges them higher rates during the peak period, 16 the owners of the public chargers are likely to 17 respond with altering their own pricing 18 structures, and passing on these price signals to 19 this own customers." 20 Now, are you -- have you conducted your 21 own analysis of the ability of New Hampshire 22 public charging station owners to pass on price 23 signals to customers? 24 (Sergici) No, I have not.

```
1
         And you just heard Ms. Tebbetts' testimony about
 2
         Liberty's, you know, Liberty's initial proposal
 3
         for high demand draw customers. You know, and
 4
         there, you know, she stated that they had
 5
         designed a revenue neutral proposal. And, so, at
 6
         least their, you know, again, given the caveat
 7
         that there's no time-of-use rate, but their --
         you'd agree that Liberty was able to design a
 9
         revenue neutral proposal that, you know, at least
         more significantly reduced demand charges than,
10
11
         you know, the Settlement proposal, and that also
12
         maintained revenue neutrality, right?
13
         (Sergici) That is correct. But, like you
14
         indicated, it's missing the price signals.
15
                   MR. KRAKOFF: Sure. And, you know, I
16
         acknowledge that caveat.
17
                   Okay. I have no further questions for
18
         Dr. Sergici or for any of the other Settlement --
19
         Settling Parties' witnesses.
20
                   CHAIRMAN GOLDNER: Okay. Thank you.
21
         Mr. Below, do you have any questions?
22
                   MR. P. TAYLOR: Commissioner?
23
                   CHAIRMAN GOLDNER: Oh, sorry. Go
24
         ahead.
```

```
1
                                    Sorry. Commissioner,
                   MR. P. TAYLOR:
 2
         sorry to interrupt. This is Patrick Taylor, from
 3
         Unitil. I just wanted to let the Commission and
 4
         the other parties know that one of our witnesses,
 5
         Carol Valianti, is going to have to leave the
 6
         hearing for a period of time due to an unplanned,
 7
         but, unfortunately, unavoidable conflict. So,
         she will be available later today, but, for the
 9
         time being, she is going to have to leave the
10
         hearing, and so will no longer be visible on the
11
         screen.
12
                   CHAIRMAN GOLDNER: Okay. Thank you.
13
         Mr. Below, did you have any questions, the City
         of Lebanon?
14
15
                   MR. BELOW: I have no questions. No
16
         questions. Thank you.
17
                   CHAIRMAN GOLDNER: Okay. And I didn't
18
         see Mr. Moran join from the New England
19
         Convenience Store and Energy Marketers
20
         Association.
21
                   Is there any other -- any other
22
         requests to examine the witnesses?
23
                   [No verbal response.]
24
                   CHAIRMAN GOLDNER: Okay. So, we are
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1
         at, I think, a natural breaking point, before we
 2
         go to Commissioners' questions, and also
 3
         following Mr. Buckley's proposed schedule. I
         would -- let's take a break until 12:30. We'll
 4
 5
         return with Commissioner questions, redirect, and
 6
         then we'll move to ChargePoint directly
 7
         afterwards.
 8
                    So, we'll return at 12:30. Thank you.
 9
                    (Whereupon upon the Day 1 Morning
10
                    Session was adjourned at 11:53 a.m. for
11
                    the lunch recess, and the hearing to
12
                    continue under separate cover in the
13
                    transcript noted as "Day 1 Afternoon
14
                    Session ONLY".)
15
16
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20
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22
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24
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