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STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

July 14, 2020 - 9:20 a.m.

[Remote hearing conducted via Webex]

RE: IR 20-004
ELECTRIC DISTRIBUTION UTILITIES
INVESTIGATION OF ELECTRIC VEHICLE RATE
DESIGN STANDARDS, ELECTRIC VEHICLE
TIME-OF-DAY RATES FOR RESIDENTIAL AND
COMMERCIAL CUSTOMERS
(HEARING)

PRESENT: Chairwoman Dianne Martin, Presiding
Commissioner Kathryn M. Bailey
Commissioner Michael S. Giaimo

Jody Carmody and Doreen Borden, Clerks
Eric Wind, PUC Remote Hearing Host

APPEARANCES: Reptg. Eversource Energy
Jessica Chiavara, Esq.

Reptg. Unitil Energy Systems, Inc.:
Carleton B. Simpson, Esq.

Reptg. Liberty Utilities:
Michael J. Sheehan, Esq.

Reptg. Residential Ratepayers:
D. Maurice Kreis, Esq., Consumer Adv.

Reptg. PUC Staff:
Brian D. Buckley, Esq.

Court Reporter: Susan J. Robidas, NH LCR No. 44

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1 P R O C E E D I N G S

2 CHAIRWOMAN MARTIN: We're here this
3 morning in IR 20-004, which is the
4 investigation into rate design standards for
5 electric vehicle charging stations and
6 electric vehicle time-of-day rates. We're
7 here to consider and take comments.

8 I need to make the necessary
9 findings because this is a remote hearing.
10 As Chairwoman of the Public Utilities
11 Commission, I find that due to the State of
12 Emergency declared by the Governor as a
13 result of the COVID-19 pandemic, and in
14 accordance with the Governor's Emergency
15 Order No. 12, pursuant to Executive Order
16 2020-04, this public body is authorized to
17 meet electronically. Please note that there
18 is no physical location to observe and listen
19 contemporaneously to this hearing which was
20 authorized pursuant to the Governor's
21 Emergency Order. However, in accordance with
22 the Emergency Order, I am confirming that we
23 are utilizing Webex for this electronic
24 meeting. All members of the Commission have

1 the ability to communicate contemporaneously
2 through this platform, and the public has
3 access to contemporaneously listen and, if
4 necessary, participate. We previously gave
5 notice to the public of the necessary
6 information for accessing the hearing in the
7 Order of Notice. If anybody has a problem,
8 please call (603)271-2431. In the event the
9 public is unable to access the hearing, the
10 hearing will be adjourned and rescheduled.

11 Okay. Let's start by taking roll
12 call attendance of the Commission. When each
13 Commissioner states their presence, please
14 also state whether there is anyone in the
15 room with you, and if so, please identify
16 them.

17 My name's Dianne Martin. I am the
18 Chairwoman of the Public Utilities
19 Commission, and there is no one with me.

20 Commissioner Bailey.

21 COMMISSIONER BAILEY: Commissioner
22 Kathryn Bailey, and I'm in a room by myself.
23 Good morning, everyone.

24 CHAIRWOMAN MARTIN: Thank you.

1 Commissioner Giaimo.

2 COMMISSIONER GIAIMO: Good morning.
3 Michael Giaimo. I, too, am in a room by
4 myself.

5 CHAIRWOMAN MARTIN: Okay. Great.
6 And I want to recognize Brian D. Buckley to
7 give some background.

8 MR. BUCKLEY: Great. Thank you,
9 Madam Chair. So as you mentioned, we are
10 here today to receive comment on the Staff
11 recommendation of April 3rd in Docket 20-004.
12 A little background on how we got to where we
13 are on today.

14 On August 11th, 2018, SB 575, a
15 bill establishing requirements for and
16 restrictions on electric vehicle charging
17 stations went into effect. Among other
18 things, SB 575 requires the Commission to
19 determine within two years of its effective
20 dates whether certain rate design standards
21 for electric companies and public service
22 companies should be implemented for electric
23 vehicle charging stations. It also requires
24 the Commission to determine whether to

1 implement electric vehicle time-of-day rates
2 for residential and commercial customers.

3 In light of the passage of that
4 bill, Staff provided a recommendation that
5 the Commission solicit comment on a number of
6 issues related to electric vehicle charging
7 time-of-use rates, as well as a number of
8 other issues. The Commission did so. As a
9 result of the review of those comments, Staff
10 then filed its April 3rd recommendation,
11 which we are here to receive further comment
12 on today.

13 So I think the plan for today's
14 hearing, as set forth in the secretarial
15 letter establishing the hearing, is to hear
16 from each participant for a period of ten
17 minutes or less, and then we will open it up
18 for Commissioner questions of the
19 participants, if they have any.

20 I will note that, in addition to
21 the list of participants that was provided to
22 the Commission in advance of this hearing,
23 there are two more participants that were not
24 on that list, the first being the City of

1 Lebanon, which will be represented by
2 Assistant Mayor Clifton Below, and second
3 being Liberty Utilities, which I believe will
4 be represented by Michael Sheehan and
5 possibly Heather Tebbetts.

6 Staff thinks that the
7 recommendation largely speaks for itself. It
8 doesn't feel the need to review the various
9 recommendations therein. And now I think I
10 can hand it back over to Madam Chair to
11 receive comment from the various parties.

12 CHAIRWOMAN MARTIN: Okay. Thank
13 you, Mr. Buckley.

14 I'm going to read you the list I
15 have just to make sure we're not missing
16 anyone and also to give you an idea of the
17 order when we'll get to you. Also want to
18 clarify that I'm going to open it up for
19 questions from the Commission following each
20 presenter so that we can ask and answer
21 questions when the person is presenting.

22 So I have Eversource, then Unitil,
23 then the Office of Consumer Advocate, then
24 the Department of Environmental Services,

1 then Chargepoint, then Clean Energy New
2 Hampshire, then Conservation Law Foundation,
3 then Greenlots, then New England Convenience
4 Store and Energy Marketers Association, then
5 City of Lebanon, then Liberty Utilities. Is
6 there anyone missing?

7 [No verbal response]

8 CHAIRWOMAN MARTIN: Okay. Great.
9 Seeing none, let's get started. We will
10 start with Eversource.

11 MS. CHIAVARA: Jessica Chiavara,
12 counsel for Eversource. Good morning to the
13 Commissioners, Madam Chair, and all the other
14 parties in attendance. Today I'm going to
15 make introductions and then turn it over to
16 those parties.

17 Today we have Ed Davis, director of
18 Rates for Eversource, who will be presenting
19 our initial remarks. And then we have two
20 other Staff members on hand to answer
21 questions from the Commissioners and the
22 other parties in attendance. We have Kevin
23 Boughan, manager of Research and Business
24 Development, Strategy and Policy for

1 Eversource, and Michael Goldman, director of
2 Regulatory Planning Support and Evaluation
3 with the Energy Efficiency Group for
4 Eversource. And with that, I'm going to turn
5 it over to Ed Davis to make his comments.

6 MR. DAVIS: Good morning, and
7 thanks for the opportunity to participate and
8 provide additional comments today.

9 You know, we have participated
10 fully through the docket, both in the
11 technical sessions and written comments.
12 We've endeavored to provide meaningful input,
13 share our experiences and insights, and
14 engage in a dialogue to explore the topics
15 being addressed in this investigation. We
16 believe in our written comments on the Staff
17 recommendations that we have also prepared
18 those comments in that same spirit of
19 participation. I'll highlight where we have
20 general alignment and also areas where we may
21 have some differences or where there are
22 areas that we think could benefit from
23 further examination, exploration and
24 discussion. We hope that by participating

1 today we'll help address the Commission's
2 questions, provide further information in
3 support in assessing the recommendations.
4 And we'll look forward to your questions.
5 Thank you.

6 CHAIRWOMAN MARTIN: Okay. Do we
7 have any other comments from Eversource?

8 MR. DAVIS: I think at this point
9 we're basically, you know, depending on
10 questions or areas of further exploration,
11 that we had hoped to, you know, be ready and
12 then talk to any of the questions either
13 directly within comments or anything related
14 to those that might fall out of that. So we
15 basically stand ready for that. Thank you.

16 CHAIRWOMAN MARTIN: All right.
17 Thank you.

18 Questions from the Commissioners?
19 Commissioner Bailey, do you have questions?

20 COMMISSIONER BAILEY: Yes. Can I
21 just get a minute to open up their comments,
22 please?

23 CHAIRWOMAN MARTIN: Of course.

24 COMMISSIONER BAILEY: I thought,

1 Mr. Davis, you were going to tell us a little
2 bit about where you disagreed with Staff.
3 And so just to summarize that, if you could
4 do that while I'm opening up your comments,
5 that would help me.

6 MR. DAVIS: Sure. I'll just try to
7 get the highlights. I don't know if I'm
8 going to hit every point. But I think, first
9 of all, there's some general alignment on
10 where this is heading and on the ideas on
11 time-of-use rates. And I think you're
12 also -- you know, the alignment on trying to
13 focus on, given this is, as we've heard, a
14 nascent market. It's very early in terms of
15 the deployment of electric vehicles. And we
16 are in different places, not just Eversource,
17 but each utility, on where the current rates
18 are versus what the goals and objectives
19 might be. I think it's important that we
20 think about public charging, all the
21 different sectors, whether it's residential,
22 you know, at home, etc.

23 And I think, further, the concepts
24 that kind of I think formed the foundation of

1 the whole set of recommendations cost-based
2 ratemaking, different time-of-use structures,
3 we may be getting a little ahead of ourselves
4 in what the detailed structure might need to
5 be. And that might vary by the type of
6 charging and the configuration. So I think
7 we are certainly learning. We have our
8 experience from what we've done so far in the
9 other states and obviously with the industry
10 as we work with colleagues.

11 There are a few different areas
12 that I think probably need certainly more
13 discussion and exploration. The idea of
14 separate classes or separate metering points,
15 separate services, you know, we commented
16 along the lines of, for example, for years,
17 through a number of decades we have had
18 separate services for things like water
19 heating. I think that had become a basis for
20 deciding, well, should we have rates that are
21 designed for the whole house or the whole
22 business, rates that should be separately
23 metered and designed for that purpose and --
24 (connectivity issue)

1 (Court Reporter interrupts.)

2 CHAIRWOMAN MARTIN: Mr. Davis,
3 you're coming in and out.

4 MR. DAVIS: I apologize. I'll go
5 slower and --

6 CHAIRWOMAN MARTIN: I think it may
7 be a connection issue. Keep talking and
8 we'll see if we can continue to hear you. We
9 lost you for a minute.

10 [No verbal response]

11 CHAIRWOMAN MARTIN: No, I don't
12 think we can hear you at the moment.

13 Ms. Chiavara, do you want to take
14 over or -- you're on mute.

15 MS. CHIAVARA: Sorry about that. I
16 don't have Ed's comments. I can contact him
17 and let him know that he needs to try to
18 reconnect or something.

19 CHAIRWOMAN MARTIN: Okay. Another
20 option we can do is move on to the next
21 person on the list or the next entity on the
22 list and come back to Eversource once the
23 connection issue is fixed.

24 MR. DAVIS: Can you not hear me

1 now?

2 CHAIRWOMAN MARTIN: I can see you
3 now. Why don't we proceed and we'll see if
4 it happens again. If so, we'll go out of
5 order.

6 MR. DAVIS: Okay. Can you hear me
7 now?

8 CHAIRWOMAN MARTIN: Ms. Robidas, do
9 you know where you last heard to give him an
10 idea?

11 (Record read as requested.)

12 MR. DAVIS: That was very close.
13 At that point I think I was just talking to
14 that there may be different designs for all
15 these different type of applications. I
16 think there's a very targeted focus on, for
17 example, having a so-called three-part rate
18 for seasonal differentiation or a particular
19 price differential and also peak period
20 definitions. So I think those are areas that
21 might air for more review of the purpose, you
22 know, for each of those types of charging.

23 The feasibility of those, I think
24 that certainly has been raised in the

1 comments -- or in the recommendations I
2 should say. The idea of having company-owned
3 meters versus third-party metering, I think
4 that's an area where we think the most
5 important thing is to have Commission
6 jurisdictional utility-owned metering. I
7 think that was an area of concern of ours.

8 I also think that there's some time
9 lines in here that are a little aggressive,
10 where we're not exactly sure where we
11 necessarily want to go with certain
12 applications. I think those are reflected in
13 our comments.

14 I think in some ways the question
15 of the demand charge is an open issue. The
16 idea of deciding or developing end-use
17 specific rates -- again, I mentioned
18 controlled water heating, where we've had
19 those in place for years. That was raised as
20 an exception. I think that does provide a
21 framework possibly for certain applications.
22 But there's a lot of questions around that:
23 What does it cost? How do we charge for that
24 service?

1 And I think the really important,
2 fundamental, underlying issue might be when
3 you look at developing rates and the fact
4 that we are in an unstructured environment
5 where we have separate distribution,
6 transmission, energy supply and other types
7 of charges, not all of those charges vary by
8 time. That, I think, is a question that
9 should be addressed when you look at any rate
10 design for any application. The question of
11 are we setting rates in a particular way to
12 incentivize a particular type of charging
13 behavior compared with assuring that we have
14 a balance with cost-based ratemaking, and
15 what are the basis for those costs. And I'm
16 not so sure that we agree so much as I think
17 those are areas that are not developed or
18 understood. And I do point out in our
19 comments where many costs are not necessarily
20 time-varying.

21 So there's a lot of challenges, and
22 so we need to provide some insight and
23 experience from developing time-of-use rates
24 and where we need to probably dig in deeper

1 and better understand that.

2 I also want to point out that we
3 don't necessarily have to go to a three-part
4 rate, per se, as an absolute standard, that
5 there may be applications for that. So I
6 think we need to explore and discuss that
7 further.

8 And I think those are the
9 highlights, Commissioner. I probably have
10 missed a couple of items. I think there's a
11 lot of things we offer as positives or areas
12 to maybe steer the discussion and expand it a
13 little bit. But those are kind of the
14 fundamental areas in terms of rate design.

15 I did want to say, though, that
16 when I mentioned it's possibly the idea of
17 incentivized rates, things like demand
18 charges are cost-based. They have a purpose.
19 Structures like not having a demand charge or
20 having some charge or rate mechanism that
21 doesn't fully recover costs, you know, again,
22 we haven't -- we're early in the market here.
23 But when you design a rate that's discounted,
24 for example, or that's priced differently

1 than the way costs are incurred, there's
2 always an inherent question or need to look
3 at who's supporting that, is there cost
4 shifting, things like that. So, again, if
5 we're looking at cost-based ratemaking and
6 trying to balance that with rate design
7 objectives, time-of-use rates do make sense.
8 We just need to look at that for each type of
9 service more comprehensively to better
10 understand the underlying cost components in
11 deciding what path to go down for rate
12 design.

13 The last comment I want to make is
14 we always have to look at feasibility. I
15 just want to call that practical
16 considerations. What's do able? What might
17 make sense that should be done in a short run
18 versus the long run? For example, a two-part
19 off-peak rate structure might be something we
20 can implement now. A longer-term goal might
21 be to go to a different rate structure. Is
22 it feasible to do that? When can we do that?
23 What are the costs, the economics of that?
24 Pretty important considerations here.

1 COMMISSIONER BAILEY: Okay. Thank
2 you. Can you talk a little bit -- well,
3 let's start with the two-part peak, off-peak.

4 Why is it difficult to design rates
5 that would encourage customers to charge
6 electric vehicles during the night?

7 MR. DAVIS: So let me clarify,
8 please. The two-part rate is something we
9 have in place today. And we can
10 differentiate pricing, whether it's
11 volumetric pricing or demand-based pricing,
12 between peak and off-peak periods. So that's
13 not difficult. We have a longstanding
14 structure today in terms of the peak period.
15 So I think what we're looking at here is, as
16 I mentioned, short run versus long run. A
17 two-part rate with a different peak period,
18 maybe a shorter one, maybe a higher peak to
19 off-peak differential, those are the kinds of
20 structures that could be implemented in the
21 short run.

22 Recommendations go further to look
23 at three-part rates. So you might have an
24 off-peak, a shoulder and a peak period as an

1 example, question of whether those would be
2 volumetric or demand-related. But those are
3 not structures that we have in place today.
4 They're not -- they take some development.
5 There's metering and meter data and billing
6 and a process that has to happen. So that's
7 something that could not be implemented
8 immediately, at least not on any large-scale
9 basis, perhaps on a more manual basis. But
10 that's something that should be looked at.

11 And then there's questions within
12 that about what should the pricing be, the
13 price levels, the price differentials, which
14 costs are -- which rates would be
15 time-differentiated and which would not be.
16 Some costs are not. They're more fixed.
17 Some are more variable. Some vary by time.
18 Also the peak to off-peak, the price levels,
19 price differentials and the duration of those
20 periods. So those are all questions that
21 would need to be answered in the design part
22 of this. But the implementation of that
23 that's something -- that kind of structure,
24 as an example, would take longer and would

1 involve more systems, meter data, et cetera,
2 to develop and implement.

3 COMMISSIONER BAILEY: How long do
4 you think it would take to develop a
5 time-of-day rate that was meaningful? Can
6 you talk a little bit about the Staff
7 recommendation that the peak be only four
8 hours?

9 MR. DAVIS: So I guess there's a
10 couple dimensions to that. One is just
11 having a four-hour period, and then to the
12 extent there's a demand charge, the
13 investigation looking at possibly having a
14 coincident demand. So that gets a little
15 more complex with that second item. But in
16 terms of the duration, in some ways it's a
17 matter of trying to measure those costs,
18 trying to identify what costs vary. And
19 given the four-hour period, you select, try
20 to optimize, for example, try to get a cost
21 curve. Let's say it's for, well, energy
22 supply. It's a very common question of
23 should we differentiate the energy service
24 part of rates and have a four-hour period.

1 Currently we have flat rates. If we were to
2 have a two-part rate where you had peak and
3 off-peak and you chose a four-hour period, we
4 would, I assume, want to choose that period
5 where energy costs are the highest or where
6 capacity costs are incurred. And so that
7 would be an exercise in trying to obtain
8 that.

9 Now, the immediate challenge is we
10 have default service and competitive supply.
11 And you have to -- the utility would have to
12 procure power so that the suppliers are
13 pricing the power for the four-hour period
14 and for all the other hours, just as an
15 example. And then if a customer switches to
16 competitive supply, you would expect -- and
17 this is a real challenge, trying to get that
18 customer's supply rates to be differentiated
19 on that basis as well.

20 So you try to align the structure
21 with the different types of service. So I
22 just talked about energy supply. We talked
23 about transmission. We could do the same
24 thing looking at cost curves. Identify when

1 transmission costs occur in a given month or
2 throughout the year and see if that fits
3 within that same targeted four-hour window.
4 Distribution costs, the same thing. We have
5 run marginal cost studies where we have
6 identified a very long, flat peak period for
7 some of our costs. And as an example, not
8 all of those costs are time-differentiated.
9 And the same thing is true for transmission
10 and even generation supply.

11 So we want to choose the period,
12 see if, among all those components of
13 service, you can have a four-hour window
14 where you can identify costs attributable to
15 that period versus the other periods and
16 further determine which costs may not be
17 time-varying and how you deal with that
18 structurally. So those are just examples,
19 more kind of on a high-level structural
20 approach.

21 In terms of implementing and the
22 time to do that, I mean, I think by designing
23 it, choosing a window, that would require
24 then an assessment of what meter data would

1 we need, how would we collect that, how would
2 we process it, what changes to our billing
3 process do we need to implement, things of
4 that nature. I don't have a direct answer.
5 I don't know how long that would take. I
6 think that's kind of what this recommendation
7 is calling for, potentially a feasibility
8 study to evaluate that.

9 COMMISSIONER BAILEY: Have you
10 implemented time-of-day rates in any of your
11 other states?

12 MR. DAVIS: Absolutely. In
13 Connecticut, for example, more than ten years
14 ago we actually had some regulatory
15 processes, hearings, different dockets opened
16 up, where we first evaluated all of the
17 underlying costs and determined which are
18 time-varying. So, as with New Hampshire, we
19 have unbundled transmission, distribution,
20 energy supply. We have other components that
21 are also time-differentiated. And so looking
22 at those, we have, since the '80s, 1980s,
23 have had time-varying rates. And we've
24 always had mandatory. And then more -- as

1 time went on, more C&I customers have
2 switched and been placed on mandatory
3 time-of-day rates. And we have had optional
4 time-of-day rates for residential and small
5 C&I customers. So we've had those for many
6 years.

7 Ten years ago, we did a review to
8 update the costs, refresh underlying costs.
9 For example, in our residential classes we
10 have an optional rate for residential
11 customers, whether heating or non-heating.
12 Customers can switch to that rate. We have a
13 meter data process that brings in data for
14 the peak and off-peak periods. And we have
15 differentiated costs for transmission, energy
16 supply. We have a component called FMCC.
17 It's federally mandated congestion charge.
18 And those prices, when you add up the price
19 differential from those components and you
20 compare the peak to off-peak, in total,
21 they're on the order of around 13 cents
22 difference between peak and off-peak.

23 The other important part of that
24 investigation ten years ago was to determine

1 new time periods. We had 16-hour peak
2 windows. Those are legacy left over from
3 when we owned and operated intermediate and
4 peaking fossil plants primarily, and that was
5 our cost curve for supply. We designed rates
6 around that 16-hour period. So, again, this
7 is actually over ten years ago. We
8 determined there would be an eight-hour
9 window, and so 12 noon to 8 p.m. became the
10 new period within which we would set prices
11 for peak, and every other hour would be
12 off-peak-based.

13 Challenges with energy supply, as I
14 mentioned a few minutes ago, were the same.
15 And that's actually where we got a lot of
16 experience on this issue. We procured supply
17 asking for peak and off-peak prices. We did
18 not get that. Or when we did get pricing,
19 they were set the same.

20 As a policy matter, the utility
21 commission decided, through collaborative
22 discussion, that we had to impute a mandatory
23 peak to off-peak differential for supply.
24 Residential, that's 3-1/2 cents -- and that's

1 in place today, it still remains -- whereas
2 the actual prices in the market between peak
3 and off-peak are much lower than that. So
4 for energy supply, that's how we tackled
5 that.

6 For all the other components, we
7 did cost analyses to determine which costs
8 were more -- which costs were attributable to
9 the peak period and which were attributable
10 to the off-peak period. So we designed rates
11 around that.

12 We have had time-of-use rates in
13 Massachusetts. We do have peak and off-peak
14 demand charges. We have moved away from
15 time-of-day volumetric charges. And again,
16 we're an unbundled state there as well, but
17 we retain and measure peak-period billing
18 demands, and we design rates and bill
19 accordingly. And that applies to both
20 distribution and transmission components of
21 service. So we have a lot of experience with
22 that.

23 Obviously with the advent of
24 distributed energy and other resources,

1 particularly net metering, you know, we've
2 had to look at the time periods. There's
3 ongoing investigation on how to possibly
4 price things differently, more granularly,
5 whether it's peak or off-peak, or even
6 hourly, as low as hourly.

7 In Connecticut, we do have some
8 customers, when they net meter, we do
9 actually differentiate peak and off-peak
10 periods and net over those periods.

11 So those are examples where we
12 actually have I'd say longstanding
13 time-of-use rates that we've implemented for
14 a large number of our customers in the C&I
15 categories, and optionally for a relatively
16 small number, but still available, for
17 residential and a number of C&I customers.

18 COMMISSIONER BAILEY: So what do
19 you think you need to decide or to determine
20 is feasible in New Hampshire with all that
21 experience in the other states?

22 MR. DAVIS: Well, you know, we do
23 have time-of-day rates in New Hampshire.
24 We're in a rate case now, and that's a topic

1 in that case. But I think the same kind of
2 analyses would need to be done to determine
3 what a new period would be. I think we do
4 need to look at -- and my Connecticut
5 experience I think had been well over two
6 years' work just to get the cost data
7 evaluated -- but to understand and decide
8 where we might want to move -- for example,
9 if we want to choose a new time period. Our
10 marginal cost standard in a rate case, for
11 example, indicates 12 noon to 8 p.m. Or
12 11 a.m. to 7 p.m. might be the more
13 appropriate time period for some of our
14 distribution costs. Transmission I think
15 would fall within that period. We'd have to
16 evaluate that. That's not a big analysis
17 there. I almost think what I described for
18 energy supply is probably the same kind of
19 questions and structures that we would need
20 to look at there.

21 So I think, you know, it would take
22 analysis, evaluation. I think setting our
23 goals and objectives so we can pursue that
24 would probably be the most important, you

1 know, starting point for that, so we can
2 determine where do we want to go. So, for
3 example, if we want to pursue a three-part
4 rate or a different two-part rate with
5 different time periods, which has been vetted
6 in this docket and in this investigation, and
7 if we set those goals, then I think we would
8 pursue those.

9 I don't want to lose sight of when
10 you look at these types of things, you also
11 look at the other dynamics. For example, in
12 this investigation we're looking at managed
13 charging or controlled resources and how that
14 plays, how these different costs -- time
15 period, how that interplays and affects each
16 of the components. If you choose a period,
17 what does that mean for metering and billing.
18 And also how we incur costs and how we
19 recover and charge customers for those costs,
20 the kinds of information, billing systems,
21 all those things come into play. Very
22 important things to consider.

23 COMMISSIONER BAILEY: How do you
24 reconcile the imputed rate in Connecticut

1 with the default service, the supply, the
2 energy supply rate that you bid?

3 MR. DAVIS: So we procure -- we
4 have two types of procurement. One is for a
5 six-month period for residential, small and
6 medium C&I. Then we have monthly pricing
7 procured quarterly for our large C&I
8 customers. And so those supply costs come to
9 us. I think they're priced peak and
10 off-peak. I can doublecheck that. But we
11 pay directly what the cost of supply is based
12 on actual load settlement, and we set our
13 rates according to those prices. So it's a
14 passer price reconciled by looking at the
15 differences and flowing that through as an
16 adjustment to each subsequent period as you
17 procure, charge customers, develop rates,
18 implement those, and track and identify the
19 differences. So it's basically a tracking
20 mechanism.

21 COMMISSIONER BAILEY: So you
22 procure the default service based on peak
23 rates and off-peak rates? You have two
24 different rates?

1 MR. DAVIS: We do. And we price it
2 accordingly for the large C&I customers. For
3 small C&I, we price it based on the
4 prevailing rate structure. And as I said
5 earlier, we're imputing -- actually, for some
6 residential we impute 3-1/2 cents. And
7 actually for the other customers, small C&I,
8 typically under 500 kilowatts, we impute a
9 3-cent differential in those rates. So given
10 those, we charge customers and bring in
11 revenue based on those prices at the retail
12 side. On the wholesale side, we obviously
13 will pay the cost that's priced to us. And
14 if there's any differences, you know, we will
15 reconcile that and pick that up at a future
16 period.

17 COMMISSIONER BAILEY: And do you
18 know what the general rate differential is?
19 Is that what you said was the 13-1/2 [sic]
20 cents rate differential, a wholesale
21 differential?

22 MR. DAVIS: No, the wholesale is
23 3-1/2 for residential and 3 for
24 non-residential.

1 COMMISSIONER BAILEY: Wait. Excuse
2 me a second. I want to make sure I
3 understand this.

4 So the wholesale rate that you
5 procure is always a 3-1/2 cent differential?
6 Isn't it a market rate?

7 MR. DAVIS: Yeah, let me restate.

8 So it is a market rate, yes. We
9 are procuring based on what the supply
10 contract determines. So it's a market rate.
11 But for setting prices at the retail
12 customers, we price based on this imputed
13 price differential. So it's not a perfect
14 match between the cost, the price that we pay
15 for the supply, so the wholesale cost, and
16 the actual price we pay for charging
17 residential customers for that service.

18 COMMISSIONER BAILEY: So what --

19 MR. DAVIS: Customers who are
20 taking that supply -- those who take
21 competitive supply, it depends on the
22 contract prices for those arrangements.

23 COMMISSIONER BAILEY: Yeah, I'm
24 just asking you about default service. So I

1 understand that the rate that you charge is
2 3-1/2 cents difference.

3 MR. DAVIS: Correct.

4 COMMISSIONER BAILEY: What is the
5 wholesale rate, the cost of energy? What's
6 the general difference between peak and the
7 off-peak period?

8 MR. DAVIS: I don't know the number
9 currently. But I've seen numbers that have
10 been fairly low, a penny. At times they've
11 been higher. Sometimes they'll go to two,
12 three cents. It varies by month. We procure
13 by month. I think prices have been low, and
14 the price differential's been relatively low
15 for some time now. That's just a function of
16 the market.

17 COMMISSIONER BAILEY: And what's
18 the difference between the peak and the
19 off-peak? What are the hours that you
20 solicit?

21 MR. DAVIS: Yeah, we define our
22 peak as 12 noon to 8 p.m. That is a
23 universal time-of-day peak period. So
24 whether it's energy supply or any other

1 component where we have a time-varying rate,
2 we use 12 noon to 8 p.m. And that came out
3 of our evaluation, you know, ten-plus years
4 ago, where the PURA Staff, we worked together
5 and analyzed market data, tried to identify
6 where the cost curves were and which period
7 made more sense. And again, it's a long
8 window. We set our demand charges on that
9 same period as well.

10 COMMISSIONER BAILEY: I think
11 Commissioner Giaimo has a follow-up question
12 for you.

13 COMMISSIONER GIAIMO: I do. Thank
14 you. We normally don't alternate and go back
15 and forth, but I don't want to lose track of
16 this thought, and we're on topic here.

17 So for your default solicitation,
18 is there one number that comes out and then
19 and adder of three cents?

20 MR. DAVIS: No. What we do is we
21 solicit based on, you know, the procurement
22 rules that we have. So we'll solicit and get
23 bids and accept prices exactly as accepted
24 and as the supplier has bid at the wholesale

1 level. That's our price. That's exactly
2 what we pay for that supply. So we take that
3 supply, and we know what the pricing is and
4 what our costs are, and we redesign the rate
5 for each customer class so that the peak
6 differential between peak and off-peak is
7 3-1/2 or 3 cents. And then it's a
8 revenue-neutral design. So it's exactly
9 matching what our costs are for supply. But
10 we just adjust the peak to off-peak
11 differential for that period that I
12 mentioned, 12 to 8, to come up to the same
13 revenue and we go from there.

14 COMMISSIONER GIAIMO: Thank you.
15 That's an important clarification.

16 MR. DAVIS: Good question, yeah.

17 COMMISSIONER GIAIMO: And how
18 familiar are you with New Hampshire's default
19 service procurement, and to what extent would
20 the Company need to do something similar?

21 MR. DAVIS: So I haven't -- I'm not
22 super close to it at the moment. But we do
23 not impute such a rate. So I think it's pure
24 pass-through is my understanding. So

1 whatever our pricing is, we will set the
2 retail price. And it's a flat cent per
3 kilowatt hour. It's easy enough for any
4 given period to choose a peak period, impute
5 such a rate. I will say, if for some reason
6 we were unable to obtain supply from a
7 wholesale supplier, we would go to the
8 market. So we would have to then pull in
9 those costs and do the same kind of process.
10 But it's a relatively straightforward rate
11 design process to say here's my total costs
12 on a flat cent per kilowatt hour for a given
13 class and redesign the rate for a given time
14 period and at a given price differential.
15 It's kind of like baby algebra, basically.

16 COMMISSIONER GIAIMO: That makes
17 sense. Thank you.

18 And one other question. I just
19 want to make sure I understand.
20 Massachusetts and Connecticut, there are only
21 two-part rates, not three-part rates; is that
22 correct?

23 MR. DAVIS: That's correct.

24 COMMISSIONER GIAIMO: Thank you.

1 COMMISSIONER BAILEY: I think I'm
2 finished with my time-of-use rate questions.
3 I have other questions on other topics. Do
4 you have any other questions, Commissioner
5 Giaimo, on time-of-day that you want to ask
6 now, or Chairwoman Martin, or should I move
7 on?

8 COMMISSIONER GIAIMO: I think you
9 can move on.

10 CHAIRWOMAN MARTIN: You can move
11 on.

12 COMMISSIONER BAILEY: Okay.
13 Thanks.

14 So let's talk a little bit about
15 third-party metering. Can you explain to me
16 what your concern is there?

17 MR. DAVIS: You know, well, I think
18 in our comments I covered -- tried to address
19 that issue. There's a lot of -- you know, we
20 basically rely, for lots of reasons, on
21 consumer protection, control of the data,
22 cyber security, and basically the need to
23 rely on and use that meter information for
24 all the business transactions. Having

1 utility metering in place for electric
2 service that we provide, you know, is really
3 important to us.

4 Third-party metering, you know, I
5 don't know a lot of about the potential
6 issues that come up. But some of the issues
7 fall into the area of security; fall into the
8 area of uniform systems; the ability to
9 gather information, manage that, utilize it
10 for all the different purposes in the
11 services we provide; the reliability of that
12 equipment. The information that customers
13 and the company utilize from those meters are
14 among the sets of the kind of areas that I
15 think, you know, we could certainly follow up
16 and provide more detail. Pardon me. I'm
17 trying to find in my comments where we
18 addressed this issue a little bit.

19 But I think we really think that
20 having utility-owned and controlled meters
21 under the jurisdiction and review and
22 control, you know, under regulatory control,
23 and that provides all the necessary measures,
24 security information, and provides and

1 supports the services that we provide for
2 electric service, wouldn't just be for the
3 purpose of measuring the electric vehicle
4 charging, but all the services we provide to
5 provide electricity. Again, I'm just trying
6 to find my comments here to further elaborate
7 on that.

8 COMMISSIONER BAILEY: Well, would
9 it make a difference if it was a
10 utility-grade electric meter that was
11 required and it was only to support an EV
12 charging station?

13 MR. DAVIS: Well, the idea of
14 utility-grade and the standards that that
15 dictates I think have always been important.
16 I think that would still be the case; so
17 what's known as utility-grade or
18 revenue-grade metering and the standards, the
19 accuracy, all the technical requirements that
20 go with that.

21 And, you know, as we move forward,
22 cyber security is an issue, for example. I
23 clearly -- I was even on a call yesterday
24 where we were just reviewing potential for

1 suppliers to obtain meter data. And again,
2 the question -- you know, we always review
3 that: How secure is that information? And
4 customers rely on that. We rely on that.
5 That's our real point of interface. So
6 having accurate and timely measurement,
7 having the appropriate data and managing
8 that.

9 And, you know, we talked earlier
10 about water heating as an example of separate
11 service, something that's contemplated in the
12 recommendations here potentially for
13 separately metering electric vehicles. Well,
14 those meters are utility-grade meters on
15 those services. And they're managed, they're
16 maintained, they're reliable. They're set to
17 a certain utility standard and accuracy and
18 other requirements. So I think there's a lot
19 of -- that and other important factors that
20 come into play. And we do have a concern if
21 we were to need to use or rely on third-party
22 metering as opposed to the company-owned
23 meters.

24 COMMISSIONER BAILEY: Are

1 third-party-owned meters used in any other of
2 your service territories for any other
3 service at this point?

4 MR. DAVIS: Well, you know, we came
5 up -- I think there's third -- for example,
6 most net metering, like solar facilities, for
7 example, will have a meter on those because
8 they'll measure kilowatt hours, for example.
9 I know we had, for example, a need to rely on
10 metered data when we started net metering in
11 Massachusetts a number of years ago. And
12 there was a reporting requirement, but there
13 was missing data. There was lags in
14 reporting. There were a number of issues
15 that were raised that made our use of that
16 data difficult. But that really wasn't what
17 we used for providing utility service. That
18 was more for calculating credits and things
19 of that nature, or just for trying to
20 understand the usage characteristics. So I
21 think we found those to be a very unreliable
22 process and very, very spotty.

23 Generally the answer is no, though.
24 I think we do have some production meters in

1 Connecticut, for example, that we rely on,
2 but those actually are utility-specified
3 meters. We install those. We read those.
4 And that assures that we're getting proper,
5 accurate and timely information. It is
6 controlled. It's secure. And it allows us
7 to provide monthly, in that case, net
8 metering credits. So it's just an example of
9 kind of a secondary meter behind our regular
10 revenue meter. There are sub meters for
11 customers who master meter. But those are
12 not something we rely on necessarily. But it
13 allows us to provide a master meter service,
14 and then the owner of the facility would
15 utilize those meters. But really, by and
16 large, we do not have that kind of situation.

17 COMMISSIONER BAILEY: What's the
18 Company's position on having a Company-owned
19 meter that is separate, maybe with some
20 specific time, more specific time-of-use
21 rates applied to it for EV charging?

22 MR. DAVIS: Just to clarify, would
23 that be a situation where we have a main
24 service coming into a house or building or

1 business and to be a second meter deeper into
2 the facility --

3 COMMISSIONER BAILEY: Yes, just to
4 meter the electric vehicle charging.

5 MR. DAVIS: So if that's not a
6 separate service, there's a number of things.
7 I know there's concerns about getting access
8 and working on customer equipment. So I'm
9 not going to necessarily have a position on
10 this, but I'd be glad to take that back and
11 follow up. But that's a concern.

12 I think, as we said earlier a
13 little bit, but this kind of gets into, well,
14 how would that work, and would we be taking a
15 meter and subtracting a meter reading off of
16 that main meter and charging one service for
17 the difference and charging differently or
18 crediting or some other mechanism for the
19 charging load itself and designing rates
20 accordingly for that. So you've got --
21 you're working with two meters, more complex
22 billing, more complex data, calculations.
23 Meter data has to be subtracted, has to be
24 time-based now. So you've got a lot of

1 complexities, a lot of dimensions to address
2 and try to implement that kind of a
3 structure. So that's something I think we
4 would have to look into. And I think it's
5 not necessarily something that's not doable
6 or that wouldn't be useful and applicable for
7 a particular application, but I think we
8 would have to come back and understand better
9 what we're trying to accomplish. But in that
10 simple example we just discussed, I think
11 that's something I would certainly want to
12 take that back and give you more information
13 on that.

14 COMMISSIONER BAILEY: Okay. That
15 would be good.

16 Would it make sense to have a
17 separate service drop and a separate meter
18 for a charging station, or would that just be
19 outrageously expensive?

20 MR. DAVIS: Well, no. See, it's a
21 separate service. And like I said, we do
22 that for water heating, as an example. So we
23 actually have that in place in New Hampshire
24 today, or something similar to it. You know,

1 things like if you're adding charging, it's
2 like any other additional load. Are you
3 going to have to re-evaluate the service?
4 Are you going to have to expand your service
5 size or even the conductors on the street or
6 the transformer? All those come into play.
7 Kind of like in a line extension
8 consideration, but it's more important. It
9 is a service upgrade indeed. So it's a lot
10 of other kind of operational and engineering
11 elements that go with that.

12 But in terms of rate design, like I
13 said, we have a structure today that can be
14 used as a framework to explore that further
15 with the water heating rates.

16 COMMISSIONER GIAIMO: And do you
17 have the same issues that you described with
18 the water heating rates that you'd have to
19 work out, I mean, you know, the netting of
20 the charges and whether the meter for the hot
21 water heater is behind the service meter, or
22 is it a totally separate service?

23 MR. DAVIS: If it's a separate
24 service, we don't have those issues. I would

1 also say we don't know a lot about the load
2 patterns and all that. So when you're doing
3 cost analysis, you obviously also need to
4 understand the charging characteristics. But
5 that's more of a rate design problem. That's
6 really more a separate service. Let's
7 identify what's involved in providing the
8 service, and then the cost for providing that
9 will help provide guidance, along with
10 customer usage characteristics.

11 COMMISSIONER BAILEY: Wouldn't it
12 make sense to design the rates to get the
13 load shape that you want?

14 MR. DAVIS: Again, this is almost
15 the question of the carrot and stick. So we
16 could design rates with an intended outcome
17 or behavior. Doesn't necessarily provide a
18 guaranty, but it certainly would be designed
19 based on our, you know, cost to provide that.
20 But again, knowing the pattern and the
21 characteristics if we design it to an assumed
22 characteristic -- my suggestion in this kind
23 of case is it's a new load, a new type of
24 service, and it could be different depending

1 on whether it's business or home, for
2 example. You put an initial design out and
3 you track and monitor those costs. I think
4 even in the recommendations there was a
5 concept of let's get, you know, 500 services
6 in place, and let's look at the data from
7 that. So you might do a phased approach.
8 You design it, as you indicated, with some
9 assumptions. And then you understand how
10 that works, how customers respond to that,
11 whether that's the right design, and work
12 from there.

13 COMMISSIONER BAILEY: Okay. Thank
14 you. I will accede to my colleagues. I've
15 taken up enough time. Thank you very much.

16 MR. DAVIS: You're welcome.

17 CHAIRWOMAN MARTIN: Thank you.

18 Commissioner Giaimo, do you have
19 other questions?

20 COMMISSIONER GIAIMO: I just have
21 one more question on this, and then I'll
22 defer to the Chair.

23 What I heard was that Eversource
24 thinks that some of the time lines associated

1 in the recommendations are too aggressive.
2 And I think one of the points there was with
3 respect to the 90-day turnaround for a
4 feasibility study. Is there a longer time
5 period, Mr. Davis, that the Company would be
6 amenable to turn that study around?

7 MR. DAVIS: Commissioner, I'm just
8 trying to understand. I guess I'm thinking,
9 as you're asking the question, that what are
10 we trying to assess in that kind of a study?
11 So I think part of what I struggle with I
12 think in trying to look at those time lines
13 is what are we trying to accomplish in that
14 study. So I think if you're talking about
15 metering or you're talking about rate design
16 or -- I think you have to look at all the
17 economics and all the factors that go into a
18 feasibility study here. So I don't have a
19 direct answer. I don't know if there is a
20 particular time line. I guess it depends on
21 what the goals and objectives are. And maybe
22 if we could -- if there's a particular aspect
23 of the recommendations that we wanted to
24 focus on --

1 COMMISSIONER GIAIMO: Okay. Since
2 we're talking about metering, maybe we'll
3 just isolate it to metering. Third-party
4 metering within 90 days if it's possible. Is
5 that possible?

6 MR. DAVIS: Third party. Okay. I
7 think 90 days -- I mean, feasibility studies
8 I understand are often relatively 90 days or
9 even a little longer. But I don't know
10 everything that's involved with having to
11 evaluate a third party. You're talking about
12 both understanding whatever the third-party
13 specific devices are and how they operate,
14 and the bigger question: How does that
15 integrate or not with our equipment? There's
16 a lot of extra work when you start looking at
17 equipment that's not ours and that we're not
18 familiar with and how that might work.

19 So to me, it's almost like there's
20 still questions about, you know, what is that
21 equipment? What are we trying to accomplish
22 with that? And I think if the goals are
23 clearer, we could probably better identify
24 what type of study would be -- you know, what

1 would be involved in the study and the amount
2 of time we would need. But I think it's kind
3 of premature to be able to answer that
4 without some of those questions answered.
5 And there's probably additional questions, in
6 my experience. And I think Mr. Goldman is
7 with us today, and I know he probably has
8 some experience with energy efficiency space
9 analyses for implementing certain types of
10 programs that might involve metering. But I
11 don't think we would be able to give you a
12 solid answer today without better knowing
13 what all is involved and what we need to go
14 off and start looking at.

15 COMMISSIONER GIAIMO: Okay. Well,
16 thank you, Mr. Davis. I appreciate the time.

17 CHAIRWOMAN MARTIN: I had a
18 question about that same issue, and I'm
19 trying to decide -- I guess it sounds like
20 Eversource is saying that the feasibility
21 study is not reasonable, and you're saying --
22 in that time frame it's not reasonable. And
23 you're saying that's because you don't have
24 enough information to actually know what

1 you're studying. Do you have any suggestions
2 as to how we could get to that place so it
3 would be reasonable?

4 MR. DAVIS: Yeah, I think the most
5 important thing is having enough of an
6 understanding of specifically what the
7 objectives might be or just the overall goal.
8 You know, it's almost by example. I'm
9 reviewing the comments. We had a 120-day
10 period, but there was a 90-day period that
11 the Commission was referring to.

12 So I guess I don't perform
13 feasibility studies, so I don't know
14 everything that goes into those. But
15 generally I would expect we would really want
16 to have a more targeted or defined set of
17 goals and objectives that we would want to
18 evaluate. And I almost feel that one way to
19 approach it would be to give a solid example
20 of what we might -- you know, try to
21 basically set up a configuration and say,
22 well, this is the kind of approach we might
23 want to take. I certainly think we could
24 come back with some comments and better

1 suggestions. I could consult, you know,
2 after this hearing, probably give you a more
3 articulate and better-defined suggestion, set
4 of suggestions that might be helpful in your
5 evaluation in trying to address this
6 question.

7 CHAIRWOMAN MARTIN: Okay. I think
8 that would be useful and certainly helpful to
9 hear from anyone else, not at the moment but
10 when you're presenting on this issue.

11 So it's not the 90 days or the
12 actual time frame that's the issue for
13 Eversource. It's overall what are you
14 actually doing as part of this study.

15 MR. DAVIS: I think that's part of
16 it. And I think the 90 days is kind of once
17 you know what you want to accomplish, you set
18 up the time frame, whether it's 90 days or a
19 different period. But it's really more what
20 are we trying to assess. And there seems to
21 be so many questions that we're still
22 wrestling with here. Where are we trying to
23 go with this? So we have recommendations for
24 I think sort of specific sort of blocks or

1 types of rate designs or applications, but I
2 think there's still a generally high-level
3 form of feasibility study. We definitely
4 need much more definition around that. And
5 then, depending on what we're trying to
6 tackle, what we need to evaluate, that would
7 help us inform the amount of time needed to
8 do that and who all is involved. I mean, it
9 could be quite resource-intensive.

10 CHAIRWOMAN MARTIN: Okay. Thank
11 you.

12 If there are no other questions
13 from the Commissioners, I think we'll move on
14 to Unitil.

15 MS. CHIAVARA: I'm sorry. Madam
16 Chair, may I ask one question?

17 CHAIRWOMAN MARTIN: Yes.

18 MS. CHIAVARA: I just wanted to
19 clarify. There's some items now that have
20 come up throughout Mr. Davis's comments. And
21 the questions that -- the items that you want
22 us to follow up on and provide additional
23 information, what form should those take, and
24 how should we follow up? Or are you going to

1 issue another secretarial letter at a future
2 time? I was just wondering if there were any
3 action items that I should take note of.

4 CHAIRWOMAN MARTIN: Why don't we
5 leave the record open to receive written
6 public comment on those items until -- is
7 next Monday long enough? That would be
8 the -- (connectivity issue)

9 MS. CHIAVARA: Ed, is next Monday
10 okay?

11 MR. DAVIS: Yes.

12 CHAIRWOMAN MARTIN: Okay. Mr.
13 Kreis.

14 MR. KREIS: I request the
15 opportunity to respond to those comments.
16 I'm guessing that I and perhaps other parties
17 won't necessarily agree, based on what I've
18 already heard from Mr. Davis this morning,
19 with the positions that Eversource is going
20 to take.

21 CHAIRWOMAN MARTIN: That's a fair
22 question. At this point I'll get my calendar
23 so we can all be on the same page on the
24 schedule. So the 20th, Monday the 20th, for

1 the written comments that are in addition to
2 comments made today, and responses by Friday,
3 July 24th. Okay? All right. So let's --
4 (connectivity issue)

5 MR. SIMPSON: Chairwoman Martin,
6 this is --

7 (Court Reporter interrupts.)

8 MR. SIMPSON: Chairwoman Martin,
9 this is Carleton Simpson from Unitil.
10 Monday, the 21st, may present a challenge,
11 given the vacation season. I would
12 respectfully request until perhaps the 24th,
13 which is the Friday, for written comments.

14 CHAIRWOMAN MARTIN: Mr. Buckley, do
15 you have any reason why that's not a
16 reasonable time frame for this?

17 MR. BUCKLEY: I think that is
18 probably reasonable. I think it's also
19 important to keep in mind that there needs to
20 be an order on the rate design standards
21 specifically by August 18th, according to
22 SB 575. So I think that is also important to
23 keep in mind as we're thinking about this.

24 CHAIRWOMAN MARTIN: Okay. Thank

1 you.

2 All right. We'll go with 7/24 for
3 the additional written comments and 7/31,
4 which is a Friday, for the responses.

5 Okay. Mr. Simpson, I think we're
6 back to you now.

7 MR. SIMPSON: Thank you. Well,
8 good morning, Chairman Martin, Commissioner
9 Bailey, Commissioner Giaimo. Again, for the
10 record, my name is Carleton Simpson. I'm an
11 attorney representing Unitil Energy Systems,
12 Incorporated. I appreciate the opportunity
13 to speak with you today regarding the Public
14 Utilities Commission Staff recommendation
15 that was issued on April 3rd in IR 20-004.
16 And again, we appreciate the opportunity to
17 provide written reply comments subsequent to
18 today's hearing and to respond to questions
19 and other parties' comments.

20 As directed by the May 28th
21 secretarial letter scheduling this hearing,
22 I'll focus my initial comments on the subject
23 matters where Unitil's perspective may differ
24 from the Staff recommendation, but I will

1 also offer areas of support and alignment.

2 I'll start with cost of service.
3 The Staff recommendation provided that, to
4 the maximum extent practicable, EV charging
5 rate designs shall reflect the marginal costs
6 of providing EV charging services. A
7 marginal cost of service study is a useful
8 analysis in helping to establish the proper
9 price signals through rates and to inform
10 customer behaviors. However, utility
11 ratemaking is primarily an exercise in
12 recovering the utility's embedded cost of
13 service through the rates charged to its
14 customers. Therefore, marginal
15 cost-of-service-based revenues should be
16 adjusted by rate class specifically to
17 recover the utility's full cost of service
18 while minimizing cross-rate class
19 subsidization. Some flexibility regarding
20 the timing of EV TOU rate proposals could
21 help to align these efforts with rate cases
22 to ensure is that the full cost of service is
23 studied and determined.

24 Jumping to the appropriateness of

1 time-of-use rates. Similar to Staff, Unitil
2 strongly supports the availability of
3 time-of-use rates for electric vehicle
4 charging. EV-specific options should include
5 rates for electricity imports and exports,
6 however, as vehicle-to-grid technology
7 evolves and becomes commercially available.
8 The ability for EV customers to export energy
9 out of vehicle batteries necessitates further
10 investigation, and that's something that I
11 think we should keep in mind as we move
12 forward.

13 With regards to alternative
14 metering, Public Utilities Commission Staff
15 recommended that all electric distribution
16 companies perform a feasibility assessment to
17 determine opportunities for the utilization
18 of interval metering from devices other than
19 the utility meter. Unitil wants to emphasize
20 the necessity for utilities to rely on
21 tested, validated and certified metering.
22 All utilities have rigorous requirements for
23 the procurement of meters certified to known
24 standards along with testing programs to

1 ensure accuracy over the useful life of the
2 meter.

3 With regards to the energy,
4 transmission and distribution components,
5 Staff recommendation called for issuing
6 guidance that any separately metered EV
7 charging rates include a time-varying
8 component for energy, transmission and
9 distribution. Unitil would like to better
10 understand the Staff's justification for
11 time-varying distribution charges from a cost
12 causation perspective. Utility
13 distribution-related costs are fixed in
14 nature and are incurred to meet customers'
15 non-coincident peak demands and do not
16 necessarily have time-varying cost
17 characteristics which can be captured. In
18 most cases, demand charges better reflect the
19 manner in which a utility's transmission and
20 distribution costs are incurred for larger
21 customer classes. At a minimum, Unitil would
22 encourage the Commission to avoid making a
23 determination to time-varied distribution
24 charges until a sufficient level of load

1 research data is available to evaluate the
2 load characteristics for EV customers as a
3 stand-alone rate class.

4 In addition to the areas that I've
5 addressed, the Staff recommendation spoke to
6 rate consistency amongst utilities and
7 provided that separately metered EV rates
8 should have three periods, have an average
9 price differential between off-peak and peak
10 of no less than three to one, and have a peak
11 period no longer than four hours in duration.
12 Time periods should be reflective of costs,
13 and customers should be able to choose
14 between options that meet their needs for the
15 relative differential size. The notion of
16 predetermining a price differential may be
17 contrary to cost-based rates. And Unitil
18 would ask how these recommendations coincide
19 with the only currently approved electric
20 vehicle time-of-use rate in New Hampshire,
21 which is offered by Liberty Utilities.

22 Jumping to demand charges. For
23 applicable customer classes and high usage
24 applications, such as clustered charging or

1 DC fast EV charging, the use of demand
2 charges is appropriate to reflect the cost
3 causative characteristics of a utility's
4 fixed costs. Demand charges also would
5 encourage the adoption of energy storage,
6 smart charging and vehicle-to-grid
7 functionality. Critical peak pricing may
8 represent a worthwhile addition to demand
9 charges and the identified time-of-use
10 ratemaking concepts. Staff also recommended
11 issuing guidance for all utilities to file
12 feasibility assessment of incorporating
13 peak-coincident demand charges into rate
14 designs. Unutil would note that demand
15 charges based on customers' coincident peak
16 demands do not necessarily align with
17 distribution-related cost causation
18 principles as non-coincident peak demands can
19 cause distribution-related capital costs and
20 O&M costs to be incurred by the utility.

21 With those areas being identified,
22 I'd like to speak to areas of agreement
23 briefly. On declining block rates, Unutil
24 agrees that declining block rates would add

1 unnecessary complexity to the ratemaking
2 process and make it more difficult for
3 customers to react to time-of-use rates.

4 Looking at whole facility versus
5 separately metered installations, Unutil also
6 wants to provide customers with a suite of
7 rate options tailored to meet their needs.
8 Given the dynamic nature of the
9 transportation market and variety of travel
10 and parking needs, no one option will be
11 suitable for all customers alike.

12 Looking at load management, load
13 management techniques represent an important
14 consideration for electric vehicle rate
15 design. Unutil believes that utilities are
16 best positioned to perform load management
17 activities, and such offerings would align
18 with current programs.

19 And a final area of note that was
20 absent from the Staff recommendation that we
21 included in our initial comments relates to
22 make-ready infrastructure. I just want to
23 note that EV make-ready programs would
24 facilitate the development of the EV charging

1 market by increasing the availability of
2 publicly available charging stations. These
3 programs would align with the state's policy
4 objectives and have been supported by
5 stakeholders as outlined in the July 2019 New
6 Hampshire Department of Business and Economic
7 Affairs report, *Evaluating Electric Vehicle*
8 *Infrastructure in New Hampshire*. The most
9 common policy recommendation identified in
10 the report was approval of reasonable utility
11 make-ready investments as necessary
12 investments in the distribution system. And
13 Unital would encourage the Commission to
14 consider make-ready programs as an integral
15 component in the statewide electric vehicle
16 strategy.

17 With that, I have no further
18 comments and would be glad to answer any
19 questions. Thank you.

20 CHAIRWOMAN MARTIN: All right.
21 Thank you.

22 Commissioner Bailey, do you have
23 any questions?

24 COMMISSIONER BAILEY: I do have

1 questions. But should I ask them after we
2 take a break, or are we good?

3 CHAIRWOMAN MARTIN: Sorry. I
4 didn't realize it was 10:30. Let's stop and
5 take a ten-minute break until 10:42.

6 (Brief recess was taken at 10:32, and
7 the hearing resumed at 10:46 a.m.)

8 CHAIRWOMAN MARTIN: Okay, Ms.
9 Robidas, let's go back on the record. And we
10 were with Commissioner Bailey.

11 COMMISSIONER BAILEY: Thank you.

12 Mr. Simpson, I guess I'll go in the
13 order in which you spoke of things.

14 About the marginal cost of service,
15 your position is that we should use a
16 marginal cost of service for EV charging
17 metering or rates?

18 MR. SIMPSON: Our position would be
19 that in order to properly develop an EV rate
20 design, that it should be conducted within
21 the full cost of service study done within a
22 rate case. So our preference would be to
23 develop these rates within a fully litigated
24 rate case.

1 COMMISSIONER BAILEY: In a fully
2 litigated rate case that allocates all the
3 costs above marginal costs to different
4 services.

5 MR. SIMPSON: Yes. Correct.

6 COMMISSIONER BAILEY: That's a
7 little different than an embedded cost of
8 service study; right?

9 MR. SIMPSON: That's my
10 understanding, yes.

11 COMMISSIONER BAILEY: I'm sorry. I
12 may have misspoke. Did you say that you
13 thought we should use an embedded cost of
14 service study or...

15 MR. SIMPSON: No. Looking back at
16 my notes here. No, I was speaking to recover
17 the embedded costs within our rates, you have
18 to conduct a full cost of service study.

19 COMMISSIONER BAILEY: And the full
20 cost of service study includes sunk costs;
21 right?

22 MR. SIMPSON: Yes.

23 COMMISSIONER BAILEY: And would you
24 include -- what kind of sunk costs do you

1 anticipate as being necessary to a charging
2 rate?

3 MR. SIMPSON: I'd like to take the
4 opportunity to provide more detail from some
5 of our internal folks in our written
6 comments, and I can speak to that question in
7 our written comments provided on the 24th.

8 COMMISSIONER BAILEY: Okay. Thank
9 you.

10 About the third-party metering, if
11 we required that -- and I'm not suggesting
12 that I've decided personally that we should
13 do this or not. But if we decided that we
14 thought third-party metering was the way to
15 go, and we required that those third-party
16 meters be tested, validated and certified
17 according to your standards, would that help
18 your concern?

19 MR. SIMPSON: That would address
20 some of the concerns. But we would still
21 have concerns regarding cyber security, you
22 know, ongoing maintenance, availability of
23 the equipment. You know, our programs are,
24 of course, regulated by the Commission, and

1 we feel that the appropriate venue for
2 metering would be through the utility. And,
3 you know, regarding the assessment that's
4 requested within the Staff recommendation, we
5 don't have much in terms of previous data or
6 programs to speak to, so we'd like to learn a
7 bit more about what would be helpful from the
8 Commission's perspective to learn about with
9 regards to alternative metering, as we just
10 have a lack of information in this area.

11 COMMISSIONER BAILEY: Do you have
12 any concern about a separate service meter
13 for EV charging --

14 MR. SIMPSON: No. I think that
15 that's certainly a valid and strong option
16 for customers, as some customers, you know,
17 will have the ability to have a separate
18 service, other customers may not. And Unitil
19 wants to try to provide multiple options for
20 customers to adopt electric vehicles, whether
21 it's a whole house or a whole facility or a
22 separately metered separate service
23 installation. There are benefits and
24 possibly drawbacks to both. But with a

1 separate service and a separate meter, that's
2 a known structure, and we believe that we
3 would be able to serve that service.

4 COMMISSIONER BAILEY: And if you
5 had a separate service with a separate meter,
6 do you anticipate that the charge that's
7 associated with the customer charge that's
8 associated basically with the distribution
9 system, the flat rate, a flat monthly fee,
10 would that be the same, or would it be a
11 different rate?

12 MR. SIMPSON: I think that would be
13 something that we'd have to determine in the
14 ratemaking of that class.

15 COMMISSIONER BAILEY: Based on cost
16 of service?

17 MR. SIMPSON: Yes.

18 COMMISSIONER BAILEY: Okay. You
19 said that the demand charges better reflect
20 costs than time-of-use rates for large C&I
21 customers; is that right?

22 MR. SIMPSON: I was saying that
23 demand charges are appropriate for large
24 installations to reflect the fixed costs

1 required to serve those customer types.

2 COMMISSIONER BAILEY: How large do
3 you mean when you say that?

4 MR. SIMPSON: That's a question I'd
5 want to follow up on with our operations and
6 our regulatory folks.

7 COMMISSIONER BAILEY: Okay. Thank
8 you.

9 MR. SIMPSON: And I will in our
10 comments.

11 COMMISSIONER BAILEY: Okay. Will
12 you also ask them -- or maybe you know this.
13 What's your position about demand charges for
14 residential customers? Are those necessary?

15 (Court Reporter interrupts.)

16 MR. SIMPSON: Unitil's not
17 advocating for demand charges for residential
18 customers at this time.

19 COMMISSIONER BAILEY: Okay. Can
20 you go over what you said about -- it was
21 shortly after you talked about clustered
22 charge -- demand charges for clustered
23 charging stations and DC fast charging
24 stations. And you said something about

1 coincident peak demand.

2 MR. SIMPSON: So demand charges --
3 there was some notes in the Staff
4 recommendation regarding demand charges based
5 on customers' coincident peak demands, and I
6 just wanted to note that those coincident
7 peak demands might not necessarily align with
8 the distribution-related costs because
9 serving those customers can cause
10 capital-related costs and O&M costs over time
11 that are not time-specific. So at this time,
12 time-varying the demand charges is something
13 we think would require further investigation.

14 COMMISSIONER BAILEY: Did you say
15 time-varying demand charges or --

16 MR. SIMPSON: Is that what your
17 question -- I thought that was what your
18 question was regarding? No?

19 COMMISSIONER BAILEY: Well, I mean,
20 you're saying that a demand charge shouldn't
21 be based on a coincident peak because there
22 are costs that are not associated with the
23 coincident peak; is that right? But there
24 are some costs that are associated with the

1 coincident peak that could be reduced if you
2 didn't expand the coincident peak or you
3 reduced it; correct?

4 MR. SIMPSON: I will have to follow
5 up on that question as well. I apologize.

6 COMMISSIONER BAILEY: Okay. All
7 right. Thank you. That's all the questions
8 I have.

9 CHAIRWOMAN MARTIN: Commissioner
10 Giaimo, do you have questions?

11 COMMISSIONER GIAIMO: I have what I
12 think are two relatively quick questions.

13 Mr. Simpson, thank you for your
14 comments, and thanks for participating today.

15 You were discussing with
16 Commissioner Bailey about third-party meters.
17 And I thought I heard you say that one of
18 your concerns, or you have at least two
19 concerns with respect to maintenance and
20 cyber security. If a third party actually
21 agreed to satisfy the requirements of Unitil,
22 would that allay your concerns?

23 MR. SIMPSON: I think we would want
24 to see that. The level of testing and cyber

1 security and validation and procurement that
2 the utility metering provides is what we
3 would want to provide for customers.

4 COMMISSIONER GIAIMO: Okay. So it
5 sounds like that is the sort of thing that
6 may be able to be worked out.

7 And my next one is my next and my
8 final thing. I guess it's more of a comment.
9 I want to make sure I understand it right.

10 Reading from your testimony -- or
11 I'm sorry. Reading from your prefiled
12 comments, which I think you referenced
13 earlier in your actual testimony, you said --
14 or your statement was, "The Company believes
15 that a suite of rate offerings tailored for
16 different customer types and uses may be
17 appropriate." So I just want to make sure
18 I'm understanding that.

19 You're suggesting something more
20 than what Eversource was discussing earlier
21 and what they're offering in Connecticut and
22 Massachusetts. It's more than just the
23 two-part product. It would be a three-part
24 product, or something even greater than that;

1 is that correct?

2 MR. SIMPSON: That there would
3 be -- there could be options for customers to
4 choose from, in terms of how that customer
5 gets service, whether it's a whole facility
6 time-of-use rate that includes their EV load
7 and all of the rest of their load; could be a
8 separate meter specific to electric vehicle
9 usage rate, again, with a three-part or
10 two-part rate. Essentially each customer's
11 behavior and travel needs will be different
12 and the ability for that customer to take
13 service will be different as well. So we
14 want to try to provide a suite of options for
15 customers that meet their lifestyles, help
16 them minimize cost, help us to mitigate peak
17 demands, and encourage electrified
18 transportation in the state.

19 COMMISSIONER GIAIMO: Thank you for
20 that clarification and expanding on your
21 comments. That's all the questions I have.
22 Thank you.

23 CHAIRWOMAN MARTIN: Okay. Thank
24 you.

1 Mr. Simpson, at the beginning of
2 your comments you mentioned a concern about
3 the ability to export energy from the EV
4 battery. Is that a concern that there's data
5 to support, and can you give me a little more
6 information about that?

7 MR. SIMPSON: So this is a very
8 nascent part of the market. But certainly in
9 the long run, vehicle-to-grid technology is a
10 very key area, as we're making significant
11 investments, customers are making significant
12 investments in electric vehicles, that could
13 offer not only transportation but grid
14 services. And I wanted to note that as we
15 consider dedicated rate designs for electric
16 vehicles, that we look to the future of
17 possibilities for vehicle-to-grid technology
18 and that the rate design for imports of
19 energy to charge electric vehicle batteries
20 may not be identical to the rates for
21 exporting energy from those EV batteries.

22 CHAIRWOMAN MARTIN: Okay. Thank
23 you for that. I don't have any other
24 questions.

1 We'll move on to the Office of the
2 Consumer Advocate.

3 MR. KREIS: Sorry. It took me a
4 moment to unmute myself.

5 The Office of the Consumer Advocate
6 enthusiastically supports the recommendations
7 made by Staff back on April 3rd. As we said
8 in our written comments in response to that
9 recommendation, time-of-use rates are
10 critical to the success of transportation
11 electrification, and we are very gratified to
12 see that Staff understands this. It's really
13 the only right answer, based on the
14 principles of rate design as laid down by
15 Alexander Hamilton in the Federalist Papers.
16 Or maybe I'm confusing that with the
17 forthcoming Lin-Manuel Miranda musical about
18 the life of another great New Yorker,
19 Professor James Bonbright. He, by the way,
20 lived to age 93, presumably because he never
21 challenged a rival on the Columbia University
22 faculty to a duel. But I digress.

23 Here is my favorite thing about the
24 Staff recommendation: It quietly, but

1 forthrightly, acknowledges this reality:
2 Metering is no longer a natural monopoly.
3 Just as PURPA broke the back of the utility
4 monopoly on generation when Jimmy Carter
5 signed that federal statute into law 42 years
6 ago, so, too, will it be a watershed moment
7 when we allow, to quote Staff, facilities
8 that utilize interval metering capability of
9 devices other than a utility-owned meter to
10 enable electric vehicle time-of-use rates.
11 Staff says let's get the utilities to file a
12 feasibility assessment within 90 days on that
13 subject. Staff allows that it's possible the
14 utilities will say it's not feasible, in
15 which case the utilities should provide a
16 road map for overcoming the barriers to such
17 an initiative. It's hardly surprising that
18 Eversource would call Staff's approach
19 premature and untenable in its written
20 comments. Mr. Davis of Eversource and Mr.
21 Simpson of Unitil capably rolled out all of
22 the usual excuses, including, by the way,
23 excuses that are likely to go away when the
24 Commission approves a suitably designed

1 statewide data platform in Docket DE 19-197.
2 Meanwhile, Staff's recommended approach to
3 non-utility meters in this docket would put
4 Eversource, Unitil, and any other skeptics
5 out there to their proof rather than just
6 relying on the delay tactics Eversource
7 deployed in its comments this morning.

8 The Commission should stick with
9 the Staff's approach. I can't think of a
10 better way to address this issue that doesn't
11 involve me and Joe Purrington rowing across
12 the river to Weehawken and pulling out our
13 pistols. And if I had to do that, by the
14 way, I would pick Melissa Birchard, in her
15 capacity as Chargepoint's attorney, as my
16 second.

17 Here is my second favorite thing about
18 the Staff recommendation: The embrace of
19 time-varying rates for energy, transmission
20 and distribution, as well as a pathway for
21 utilities to, quote, solicit a separate
22 tranche for full requirements load following
23 service for EVs within their default service
24 solicitations. That's another perfect

1 revolution-driving moment because, gosh, it
2 sure is time to take another look at how our
3 utilities procure default service generally.

4 The OCA supports the contours
5 recommended by Staff. It should be common to
6 the EV-related time-of-use rates for all
7 utilities, including use of three distinct
8 periods and a peak period of no longer than
9 four hours a day. On reflection, we've come
10 to agree with the idea of seasonal
11 differentiation based on cost causation.
12 Motorists, after all, are already used to
13 that as they watch gas prices jump every year
14 on or about Memorial Day for decades. And
15 we, of course, endorse the Staff's skepticism
16 about demand charges, buttressed by a
17 willingness to be convinced they may be
18 appropriate for commercial and industrial
19 rates, as well as fast-charging stations.
20 The availability of such stations is critical
21 to the future of transportation
22 electrification, so we have to get their rate
23 design right.

24 As Staff noted, in our comments we

1 raised the question of whole premises TOU
2 rates several months ago for EV customers
3 versus separately metered TOU rates
4 specifically for power and electric vehicles.
5 Staff came down squarely in favor of
6 separately metering EV usage. We're
7 comfortable with that, based on the
8 thoughtful analysis in Staff's memorandum.

9 We know from experience how difficult
10 the actual task of designing time-of-use
11 rates can be. Back before Lon Huber went
12 over to the dark side -- he now works for
13 Duke Energy, as most people know -- he
14 belabored on our behalf, along with Heather
15 Tebbetts of Liberty, and the irrepressible
16 deputy mayor of Lebanon, to get the TOU rates
17 in the battery storage pilot right. We agree
18 with Staff that it's time for all three
19 electric IEUs to get to work and file
20 something that's effective in 120 days. And,
21 yes, to anticipate a question, I do think
22 that in this one instance, single-issue
23 ratemaking is appropriate.

24 One final point as we consider the

1 future of transportation electrification in
2 New Hampshire: We should think now about
3 what this means for how we pay for the
4 state's roadways. Drastically less gasoline
5 use means drastically less gasoline tax
6 revenue. In the future, the electricity tax
7 will grow and become earmarked for roadway
8 costs. During that -- doing that right
9 becomes a question for the PUC. And this
10 rate should be designed so that the classic
11 rate design principle applies, cost
12 causation. And I should say, by "grow," I
13 mean the electricity consumption tax is
14 likely to come back. If you're driving an
15 electric-type Humvee for 20,000 thousand
16 miles a year, you should pay more to use the
17 roadway than if you're driving a plug-in
18 Prius for 5,000 miles a year.

19 This Prius owner thanks the Commission
20 for the opportunity to address you today. We
21 look forward to a successful conclusion of
22 this important docket. And I think that's
23 all I have to say by way of prepared remarks.
24 I, of course, would be happy to answer any

1 questions from the Commissioners.

2 CHAIRWOMAN MARTIN: Okay.

3 Commissioner Bailey.

4 COMMISSIONER BAILEY: Thank you.

5 Mr. Kreis, from your experience, do
6 you know of any other states that allow
7 third-party metering for any service?

8 MR. KREIS: I believe that
9 Eversource is actually using third-party
10 metering in one of its own jurisdictions.
11 Let me just look at my notes here. I
12 think... I just have to get to the right
13 place in my... yeah, Eversource uses
14 third-party meters for their active
15 demand-reduction programs, and they use
16 third-party data and metering and charges for
17 the EV component of their active
18 demand-reduction programs in Massachusetts.
19 I guess Mr. Davis forgot to mention that.

20 COMMISSIONER BAILEY: Well, I think
21 he said something to the effect of they had
22 used them for, I don't think he said active
23 demand reduction. But it wasn't for
24 measuring specific usage that they're

1 selling. It was for reducing usage, I
2 thought.

3 MR. KREIS: Right. Well, to answer
4 your question more generally, Commissioner
5 Bailey, I have not looked around the country
6 to determine who else is doing this. I
7 certainly would be willing to do that
8 research if it would be helpful to the
9 Commission because I really do think it's
10 time.

11 COMMISSIONER BAILEY: Yes. I mean,
12 you said it's no longer a natural monopoly.
13 But until we see some more examples of it, it
14 may not necessarily be a natural monopoly.
15 But it would be helpful if you could show us
16 some examples of where it's been utilized and
17 where it's working.

18 On the whole premises time-of-use
19 rates, you said that you're now agreeing with
20 Staff that that's not necessary. Or would it
21 be best to have that as an option?

22 MR. KREIS: You will recall that in
23 my initial comments I introduced that
24 particular choice into the discourse about

1 of here, and I will testify when somebody
2 else proposes bringing back the electricity
3 consumption tax, to do that appropriately
4 with attention to the kind of rate design
5 principles that we are familiar with here
6 from Professor Bonbright and everybody who's
7 come after him. So that's the point I was
8 trying to make. I'm not here advocating new
9 taxes, by any means. I'm just saying that
10 when that inevitably happens, we, meaning
11 everybody here participating in this hearing,
12 have insight and expertise to contribute.
13 And I will be -- I guess I'll be hoping,
14 Commissioner Giaimo, that you're down there
15 testifying with me as well.

16 COMMISSIONER GIAIMO: Yeah, I know.
17 Thank you, Mr. Kreis.

18 CHAIRWOMAN MARTIN: Okay. Mr.
19 Kreis, I have one question. You made a
20 statement about thinking that in this full
21 instance, single-issue ratemaking is okay.
22 Can you explain why?

23 MR. KREIS: I guess for the same
24 reason that we supported single-issue

1 ratemaking in the Liberty battery storage
2 pilot. This is a discrete initiative that I
3 think the Commission should act on
4 expeditiously, you know, not hastily by any
5 means. But it has its own sort of cost
6 causation issues and rate design issues that
7 really need to be focused on. It really took
8 us -- and, you know, Ms. Tebbetts can talk
9 about this if you're interested in hearing
10 about it from her because she was directly
11 involved. It took a long, long time and tons
12 of hard work to get the rate design right in
13 that battery storage pilot. And so I think
14 that doing that work now is important.

15 A question you might be about to
16 ask me is why don't we do that in the context
17 of the pending Eversource rate case. And I
18 guess my answer to that is, yeah, we could do
19 that. Eversource hasn't proposed an EV
20 time-of-use rate in that docket. But it
21 could certainly be embedded in the rate case
22 or maybe considered as a kind of extra
23 innings feature of the rate case, something
24 like that.

1 CHAIRWOMAN MARTIN: Okay. Thank
2 you.

3 It looks like we're moving on to
4 the Department of Environmental Services.

5 MS. OHLER: Good morning,
6 Commissioners. My name is Rebecca Ohler, and
7 I am the bureau administrator for the
8 Technical Services bureau at the Department
9 of Environmental Services, in the Air
10 Resources Division. My bureau is responsible
11 for policy issues related to emissions from
12 the transportation sector, as well as
13 policies related to reduction of greenhouse
14 gas emissions across all sectors, including
15 electric generation. As such, we appear
16 regularly before the legislature and the PUC
17 to talk about these issues.

18 The transportation sector accounts
19 for 42 percent of total end-use energy
20 consumption in New Hampshire. Corresponding
21 emissions from this sector account for more
22 than half of the oxides of nitrogen emissions
23 that contribute to ground-level ozone, a
24 respiratory irritant and a primary ingredient

1 of smog, and over 45 percent of the
2 greenhouse gas emissions that contribute to
3 climate change.

4 Primary strategies to reduce
5 emissions from transportation sector include
6 reducing the number of miles driven,
7 improving the efficiency of the vehicles and
8 utilizing cleaner fuels. Vehicle
9 electrification addresses these two latter
10 strategies. Electric vehicles use
11 approximately 25 percent of the energy of a
12 conventional gas or diesel vehicle to travel
13 the same distance. And even when factoring
14 in emissions from manufacturing the vehicles
15 and batteries and the emissions from the
16 grid, EVs reduce overall emissions as
17 compared to a convention vehicle.

18 Electric vehicles present economic,
19 energy, and environmental opportunities for
20 the state and the region by reducing overall
21 energy consumption, reliance on energy
22 imports from out of the region --

23 (Court Reporter interrupts.)

24 MS. OHLER: Electric vehicles

1 present economic, energy, and environmental
2 opportunities for the state and the region by
3 reducing overall energy consumption, reliance
4 on energy imports from out of the region, and
5 the emission of air pollutants. Enabling and
6 encouraging a transition to electric vehicles
7 is one of the most cost-effective and
8 achievable strategies to reduce
9 transportation-related emissions.

10 As detailed in previous written
11 comments, New Hampshire still has a
12 relatively small electric vehicle population,
13 approximately 4200 electric vehicles, based
14 on December 2019 registration data. But
15 we've seen an adoption rate of over
16 215 percent from 2016 to 2019. With more EV
17 models available today, including electric
18 SUVs and pickup trucks, and EV prices
19 falling, we anticipate this growth rate will
20 continue and perhaps accelerate, provided
21 appropriate regulations and policies are in
22 place.

23 New Hampshire [DES] agrees with
24 Staff recommendations and appreciates their

1 thorough and thoughtful consideration of the
2 unique issues associated with enabling and
3 supporting the growing electric vehicle
4 market. And I will offer some brief comments
5 today that focus on time-of-use rates and
6 demand charges, the two areas we feel are of
7 particular importance in advancing EV
8 charging availability.

9 At the residential level, EVs can
10 represent a relatively large percentage of
11 electric load. While EVs reduce overall
12 energy consumption in comparison to
13 gasoline-powered vehicles, residential EV
14 charging can draw nearly 50 percent more
15 power than even the energy-intensive
16 residential appliances. Absent price
17 signals, a typical EV owner is likely to plug
18 their vehicle into their home charger when
19 they arrive home from work. This typically
20 coincides with the evening peak demand.
21 Currently, EV drivers do more than 80 percent
22 of their charging at home. Much of this
23 charging could be done during off-peak hours,
24 but EV owners must have a reason to delay

1 non-essential charging. Rates can have a
2 significant influence on charging behavior,
3 and therefore can be used to encourage EV
4 charging during off-peak demand periods.

5 By offering time-of-use rates with
6 strong price signals, utilities increase the
7 likelihood that EV owners will hold off on
8 charging until the daily peak has passed,
9 which will minimize impact on overall
10 seasonal peak, as well as New Hampshire's
11 share of the load. The implementation of EV
12 time-of-use rates now, before EV numbers
13 increase to a significant percentage of the
14 on-road fleet and begin to register a
15 negative impact on the grid, can better
16 establish off-peak charging as the norm for
17 EV owners from the very beginning.

18 So with respect to the Staff
19 recommendations, DES supports the
20 recommendations that the Commission issue
21 guidance supporting time-of-use rates as an
22 appropriate rate design component of EV
23 charging; that such rates contain
24 time-differentiated generation, transmission

1 and distribution components; that each
2 utility be required to offer off-peak,
3 mid-peak and critical-peak rates, and that
4 the time-of-use rates be seasonally
5 differentiated.

6 DES further recommends that, in
7 addition to the option of separately metered
8 EV charging, that customers have the option
9 to take electric service for the home and EV
10 charging from a single drop and apply the
11 time-of-use rate across all electric use.

12 Not all EV charging occurs at home.
13 Just as drivers of conventional vehicles need
14 to stop to fill up when the tank is empty, so
15 must EV drivers stop and fill up when their
16 batteries get depleted. EV charging stations
17 include both direct current fast charging
18 stations that can deliver 50 to 350
19 kilowatts, as well as Level 2 chargers that
20 range from about 3 to 30 kilowatts.

21 Currently, the business case for
22 installing public access EV charging, and in
23 particular, the high-speed DC fast chargers,
24 is minimal at best, and negative in many

1 cases. The fast chargers can draw a lot of
2 power in a short period of time, and banks of
3 Level 2 chargers can do the same if multiple
4 vehicles are charging at the same time.

5 These charging stations may, particularly in
6 the early years, be used only by a handful of
7 vehicles per day, or even per week, and
8 demand charges can be responsible for over
9 90 percent of the electricity costs. This
10 cost spread out over relatively few charging
11 sessions can make the cost to charge
12 prohibitively high.

13 For businesses subject to a demand
14 charge in their tariff, installing vehicle
15 charging can greatly increase their overall
16 monthly utility bills, discouraging them from
17 providing charging to their employees or
18 patrons.

19 For potential owners or operators
20 of the electric transportation technologies,
21 the vehicles themselves, including fleet
22 operators, trucking companies, delivery
23 services, demand charges can lead to fuel
24 costs that are actually greater than the cost

1 of gasoline or diesel, which eliminates the
2 potential economic benefit of electrifying
3 their fleet.

4 Alternatives to traditional demand
5 charges are necessary for sites with
6 separately metered chargers in order to give
7 owners of public access or workplace charging
8 stations much greater potential to recover
9 costs and make a business case for their
10 stations.

11 DES recommends that the Commission
12 explore the issue of demand charges in
13 greater detail in order to develop an
14 alternative to demand charges, that addresses
15 cost causation and does not negatively impact
16 other ratepayers.

17 The Commission should also consider
18 how to incentivize battery storage and smart
19 charging at public charging sites to address
20 the demand issues as site use increases.

21 Smart charging refers to a charging system
22 whereby electric vehicles, charging stations
23 and charging operators share data
24 connections. Through smart charging, the

1 charging stations can monitor, manage and
2 restrict the use of charging devices to
3 optimize energy consumption.

4 DES supports Staff recommendations
5 that the utilities should explore
6 alternatives to customer peak-based demand
7 charges. And I agree that demand charges are
8 likely not justified in residential charging
9 applications.

10 And I will just add one additional
11 comment, that we completely agree with Mr.
12 Kreis's comments regarding the need to
13 address the, quote, unquote, fuel taxes that
14 will probably be addressed by the legislature
15 in the not too distant future. We've already
16 had several instances -- I think we've had
17 the same bill every year for the last five
18 years trying to -- that would assess a
19 different registration fee for vehicles,
20 depending on their fuel economy. And the
21 purpose of that was to get to the electric
22 vehicles and the highly efficient vehicles,
23 to ensure they're paying their fair share of
24 the usage of the roadways. So this is

1 something that will be addressed and probably
2 best looked at right from the very beginning.

3 And with that, I say thank you.

4 CHAIRWOMAN MARTIN: All right.

5 Thank you.

6 Commissioner Bailey, do you have
7 questions?

8 COMMISSIONER BAILEY: Just a few.

9 Thank you.

10 Ms. Ohler, are you suggesting that
11 the PUC take up the issue of electric
12 consumption taxes?

13 MS. OHLER: Not necessarily that,
14 no. But I think that in the developing of
15 metering and rates for this, I think that
16 it's something that the Commission should
17 consider, that at some point the legislature
18 is likely to want to use that data to assess
19 some sort of highway use tax for the electric
20 vehicles. And it's just -- we hadn't
21 included that as part of our comments until I
22 heard Mr. Kreis mention that. But we do
23 spend a fair amount of time at the
24 legislature talking about EV taxes and how do

1 we get them to pay their share. So I don't
2 have a fleshed-out concept of what we need to
3 do. But I think as we continue the
4 conversation, that's probably something we
5 should be keeping in mind.

6 COMMISSIONER BAILEY: So just keep
7 in mind that there's going to be an
8 additional cost to customers, EV customers,
9 because the legislature is likely to impose a
10 tax? Or keep in mind we need to keep track
11 of data? I'm not really sure what you're
12 suggesting that the PUC do.

13 MS. OHLER: Well, I think
14 keeping -- and it's I guess what the
15 utilities would be doing, is if there's a way
16 to maintain data concerning the electricity
17 used for EV charging separately, then that
18 would probably make a more clear-cut avenue.

19 So perhaps I'd have to revisit our
20 recommendation that you allow for a whole
21 house time-of-use rate with a single meter,
22 because I think that at some point the
23 legislature will be looking for that sort of
24 data. The vehicles themselves do keep track

1 of a lot of that data. And theoretically in
2 the future, there could be, like when you get
3 your annual emissions inspection, they plug
4 into the vehicle and pull data from the
5 vehicle. It would be possible that a road
6 usage fee could be done in that sort of form.
7 But I think it's just something that should
8 not necessarily be forefront in our minds
9 since we're looking at how to design
10 appropriate rates, but just something to keep
11 in the back of our minds at least.

12 COMMISSIONER BAILEY: Okay. That's
13 helpful.

14 I had one other question that I
15 wanted to ask you about, and I think you got
16 to it with the smart chargers. But are you
17 aware of chargers where customers can come
18 home and plug in when they come home from
19 work, which is usually during the peak, but
20 that charger won't charge until the lowest
21 point off-peak?

22 MS. OHLER: Yes, absolutely. And
23 I'm sure ChargePoint and Greenlots can speak
24 to that more. But not only can -- probably

1 many, if not most, chargers do that. But
2 most vehicles can do that as well. You can
3 tell your vehicle not to start charging. So
4 it's -- yeah, you can definitely come home,
5 plug in and not have it start charging
6 immediately.

7 COMMISSIONER BAILEY: Okay. Thank
8 you. That's all I have.

9 MS. OHLER: Thank you.

10 CHAIRWOMAN MARTIN: Commissioner
11 Giaimo.

12 COMMISSIONER GIAIMO: No questions,
13 other than to say thank you, Ms. Ohler, for
14 coming.

15 MS. OHLER: Thank you.

16 CHAIRWOMAN MARTIN: Thank you. And
17 I have no questions either.

18 So it looks like we're moving on to
19 ChargePoint.

20 MR. MILLER: I beg your pardon.
21 That was not a great time for me to refill a
22 water bottle.

23 CHAIRWOMAN MARTIN: Ms. Birchard.

24 MS. BIRCHARD: I can introduce

1 Kevin Miller. My name is Melissa Birchard.
2 I'm an attorney at Keys & Fox. And Kevin
3 Miller is director of Public Policy at
4 ChargePoint. So Kevin will be delivering our
5 comments today and also taking your questions
6 and answers. So thank you very much,
7 Commissioners, for having us here today to
8 participate.

9 MR. MILLER: Great. Well, thank
10 you, Melissa, and thank you, Chair Martin,
11 Commissioner Bailey and Commissioner Giaimo,
12 for the opportunity to comment today on
13 behalf of ChargePoint.

14 This proceeding really considers
15 some of the most fundamentally important
16 regulatory issues with respect to electric
17 vehicles. And by comprehensively addressing
18 these issues, the Commission is going to put
19 New Hampshire in a position to make sure that
20 the new load associated with EVs is net
21 beneficial.

22 ChargePoint really appreciates
23 Staff's meticulous process and its thoughtful
24 recommendations, of which we are generally

1 supportive. So in my comments I'll just
2 briefly provide some context for who
3 ChargePoint is and the types of products and
4 services we provide, and then make a limited
5 number of suggestions that would strengthen
6 Staff's recommendations.

7 So ChargePoint is the world's
8 leading electric vehicle charging network,
9 with charging solutions everywhere drivers
10 plug in -- at home, at work, around town or
11 on the road -- with over 113,000
12 independently-owned charging spots, including
13 more than 200 in New Hampshire. Drivers have
14 plugged into ChargePoint chargers more than
15 79 million times. Last year in New
16 Hampshire, there were over 34,000 charging
17 sessions that took place on the ChargePoint
18 network. So we design, develop and deploy
19 residential and commercial alternating
20 current Level 2 and direct current, or DC,
21 fast charging stations, or DCFC, as well as
22 providing cloud-based software applications,
23 data analytics, and a range of customer and
24 driver services.

1 So the issues that I'd like to
2 focus on today relate to Staff's
3 recommendations about demand charges, as well
4 as time-of-use rates. And in addition, I'll
5 point to a recommendation that the Commission
6 consider appropriate roles for electric
7 utilities in the deployment of the EV
8 chargers themselves through make-ready
9 investments.

10 So with respect to demand charges,
11 ChargePoint is generally supportive of the
12 direction that's -- (connectivity issue)

13 (Court Reporter interrupts.)

14 MR. MILLER: So we're generally
15 supportive of the direction that Staff takes
16 in its recommendation about demand charges.
17 However, we have some reservations about how
18 that recommendation may not sufficiently be
19 specific and implementable. So I'll provide
20 a little context on the issue, though Becky
21 just already did so. So I'll try to avoid
22 duplicating explanations, and then I'll
23 identify the recommendation.

24 So most EV charging needs can be

1 met with longer-term charging at Level 2 EV
2 chargers. Higher-powered DCFC also play an
3 important role. Demand charges really do
4 remain the largest operating cost barrier to
5 public DCFC. While demand charges that apply
6 in every hour of the day may be appropriate
7 for traditional customers with high load
8 factors, they inhibit the ability of
9 operators and owners of charging stations to
10 provide EV drivers with incentives to charge
11 off-peak or to plug in at appropriate rates
12 and fees.

13 So unlike a traditional commercial
14 customer on a demand-based rate, DCFC site
15 hosts have limited ability to manage or
16 mitigate the impact of demand charges without
17 negatively impacting the EV driver
18 experience. If a deployment of EV charging
19 stations experiences just one instance where
20 multiple drivers are charging at the same
21 time, that single event can result in charges
22 of several thousand dollars, and station
23 operators would pay significantly more for
24 electricity than the average commercial

1 electricity customer. Fortunately, there are
2 many sustainable -- I'm just going to close
3 the door, beg your pardon. There are many
4 sustainable and cost-based ways for utilities
5 to offer tariffs that alleviate the burden of
6 demand charges for DC fast charging or other
7 customers that similarly have low load
8 factors.

9 Commercial EV rates that address
10 this demand charge barrier have been
11 introduced or approved in numerous states,
12 including Arizona, Colorado, Connecticut --
13 which Eversource is familiar with --
14 Minnesota, Nevada, Hawaii, Wisconsin,
15 California, a number of other states.

16 So in order to ensure that the
17 recommendation that Staff made can be
18 meaningfully and readily implemented,
19 ChargePoint recommended that the direction on
20 the demand charges recommendation be amended
21 to require that utilities develop and file
22 alternatives to traditional demand-based
23 commercial and industrial rates with the
24 Commission within 120 days. So we believe

1 that this approach, identifying the problem,
2 the barrier, but leaving the specific design
3 of the solution, will afford utilities
4 significant flexibility to design
5 alternatives to traditional demand-based
6 rates.

7 The next point that I'd like to
8 make relates to time-of-use rates. We are
9 generally supportive of Staff's
10 recommendation, though we would recommend
11 that the Commission, if it were to open
12 proceedings, do so simultaneously for
13 separately metered EV chargers, as with
14 time-of-use rate options and alternatives for
15 demand-based rates, to consider those in a
16 comprehensive fashion. We think that this
17 approach would be administratively efficient
18 and allow for a more complete consideration
19 of related issues.

20 Based on some of the prior
21 discussion, I thought it might be helpful to
22 talk a little bit about our technology and
23 how alternatives to secondary meters work.

24 Network charging stations can

1 feature embedded energy metering capabilities
2 using two-way communication to transmit the
3 data to a central service hosted by an EV
4 networking service company. So many
5 currently available EV charging solutions on
6 the market have substantially the same
7 metering capabilities as traditional utility
8 meters, but they're doing a different job.
9 An EV charging station is an end-use metering
10 device. It's not grid-facing. So there are
11 different ways of making sure that you still
12 have that level of accuracy and reliability.
13 But you can still measure those.

14 I just want to note that it's a
15 different series of standards and that
16 utility-grade metering doesn't necessarily
17 apply as a term to EV charging stations. But
18 our single-family residential charger meets
19 or exceeds the requirements set forth in the
20 Electricity As A Motor Fuel section of NIST
21 Handbook 44, as well as the accuracy
22 requirements of ANSI C12.1-2008, at a
23 1 percent level.

24 So this data can be accessed and

1 merged with utility meter data management
2 systems to associate that smart charging load
3 with utility meters and specific customers
4 for tracking or billing purposes. At the
5 same time, rate and passive load management
6 programs aren't the only ways to ensure that
7 load is net beneficial from EV charging.
8 There can also be active load management
9 programs, demand response programs, or
10 subscription programs that have been proposed
11 and are currently available in a variety of
12 jurisdictions and utilities. And I'd be
13 happy to follow up and provide the Commission
14 with a list of those.

15 And I'll close by noting that
16 ChargePoint really appreciates the focus on
17 rate issues. At the same time, we would
18 recommend that the Commission consider
19 appropriate roles for utilities in the
20 deployment of the EV charging infrastructure
21 itself, such as the make-ready investments
22 that Carleton spoke to previously; so that
23 make-ready, again, the line extension on the
24 distribution side of the meter, as well as

1 the wiring, conduit and subpanels that are
2 often needed to provide power to EV chargers
3 on a site host premises. So although these
4 make-ready programs do require an upfront
5 investment, the electrification can bring
6 substantial cost savings both to the customer
7 and to the grid. And this type of program
8 leverages a significant amount of private
9 capital.

10 So I will close out there by
11 thanking the Commission again for the
12 opportunity to participate in the proceeding
13 thus far and to provide comments today.

14 CHAIRWOMAN MARTIN: All right.
15 Thank you.

16 Commissioner Bailey, do you have
17 questions?

18 COMMISSIONER BAILEY: Yes, just a
19 few.

20 Thank you, Mr. Miller. Could you
21 tell me about the network charging stations
22 that you mentioned that include metering and
23 whether the utilities are able to verify the
24 data that is fed through those.

1 MR. MILLER: Yup, and that's a
2 great question. All of our charging stations
3 are networked; so the ones that are
4 commercially available for Level 2 charging
5 that might be provided in a town square or
6 single-family residential charging that might
7 be found in someone's garage. So across the
8 range of infrastructure that we develop and
9 provide, they are all smart and networked.

10 The metering capabilities of our
11 chargers, we've worked with numerous
12 utilities to ensure that we are meeting
13 accuracy requirements, that the data are
14 collected and maintained in secure fashions,
15 and that they're reliable equipment. And so
16 that's something that can be verified over
17 time.

18 The specifics of these requirements
19 are different sometimes from utility to
20 utility. But when it comes to a commission,
21 oftentimes when we have seen, for example, in
22 Minnesota, and recently in Wisconsin, both
23 proposed to implement a subtractive EV-only
24 time-of-use rate leveraging data from

1 technologies that were not traditional
2 utility meters. They qualified different
3 types of equipment based on their ability to
4 be accurate, reliable and secure. But in so
5 doing, the commission had to suspend certain
6 rules for what types of metering devices
7 should be used. So again, a different set of
8 standards. But all of these issues can and
9 should be verified.

10 Not all technologies are capable of
11 having that level of accuracy necessary to do
12 a rate-specific or an on-bill design. Some
13 utilities have avoided that approach by
14 creating off-bill incentive programs, such as
15 in Vermont or in New York, where ConEdison
16 has a program where, if you verify through a
17 couple of different means that your charging
18 didn't take place typically in the peak
19 periods, you get a gift card. So there's a
20 whole spectrum of ways to address the
21 problem. But when it comes to the
22 rate-specific issues, when you need that
23 level of accuracy, we're able to provide it.

24 CHAIRWOMAN MARTIN: I'm asking if

1 the utilities are able to verify some way
2 that the usage -- that data that is measured
3 by the meter is accurate. Can the utilities
4 verify it?

5 MR. MILLER: Yes. And I would be
6 happy to expand and comment on processes that
7 we've undertaken with utilities to do so.

8 COMMISSIONER BAILEY: Okay. That
9 would be helpful. Could you also -- are
10 there any utilities in New England that are
11 using -- well, they're not using these
12 meters -- but that these meters are in use in
13 the utility territory in New England, or is
14 ConEd the closest?

15 MR. MILLER: So, for subtractive
16 billing purposes, I believe the answer is no.
17 So for an on-bill subtractive EV time-of-use
18 rate, that would -- my understanding is no.
19 The smart chargers themselves are being used
20 by Green Mountain Power in Vermont. But I'd
21 be happy to provide a region-specific list
22 and then also kind of a benchmark across the
23 country of where we're working with utilities
24 to implement active and passive load

1 management programs with our technology.

2 COMMISSIONER BAILEY: Okay. But as
3 far as third, actual third-party metering
4 that's used to measure the usage on the
5 charging stations and be incorporated into
6 the utility's bill, those are really not out
7 there yet?

8 MR. MILLER: In Minnesota, in
9 Wisconsin, in California, there are examples
10 of using the data on bill to implement a
11 subtractive time-of-use rate just with the
12 data from an EV charger, but not to my
13 knowledge in New England.

14 COMMISSIONER BAILEY: Okay. And
15 can you -- do you know what Minnesota,
16 Wisconsin and California have done to verify
17 that those meters are cyber secure?

18 MR. MILLER: I think in order to
19 avoid vamping or shooting from the hip, I'd
20 love to be able to provide in follow-up
21 comments documentation, or at least a
22 description of what types of processes those
23 utilities have undertaken to do so. But
24 there have been such processes, and we'll

1 provide more detail and comment.

2 COMMISSIONER BAILEY: Okay. Do you
3 have any examples of alternative rates to
4 demand charges?

5 MR. MILLER: Yes, there are a
6 variety of examples for alternatives to
7 traditional demand-based rate structures.
8 There's one sort of family of approaches
9 which utilize a rate limiter, where if a
10 customer does not exceed a certain threshold
11 of utilization, the full demand charge is not
12 passed along. But when that customer exceeds
13 that threshold percentage utilization, it
14 does, which better takes into account the
15 load factor of the customer. There are
16 approaches that are currently being
17 implemented in West Coast states where there
18 are higher volumetric charges at the onset of
19 the rate that decrease over time, and a lower
20 demand charge at the onset which increases
21 either over time or as utilization changes.
22 We included a series of examples of
23 alternative rates that don't merely ignore
24 the demand charge, but that have some

1 alternative approach which makes the costs of
2 operating the stations more predictable than
3 is currently the case under traditional
4 demand-based rates.

5 COMMISSIONER BAILEY: Okay. Can
6 you tell me why you believe that a high
7 demand draw electric vehicle load should be
8 treated differently than a high demand draw
9 load on any other C&I customer?

10 MR. MILLER: I think there's a few
11 arguments that one could make in support of
12 that position. The first is just that EVs
13 are a unique technology from a utility system
14 and cost-recovery perspective, in that EVs
15 have the capability of consuming electricity
16 across multiple customer classes. So a
17 driver may charge at home one day on a
18 residential rate -- Becky mentioned that
19 80 percent of the time EV charging takes
20 place at home -- but another day that driver
21 may charge at a public DC fast charger in a
22 commercial customer class. So as a result of
23 that, it can and should be valuable to
24 consider the potential incremental revenues

1 in other classes that can be induced from
2 greater DC fast charging access, because DC
3 fast charging at most represents 20 percent
4 of customer charging requirements, but likely
5 far less than that, because another key place
6 where drivers typically plug in is at
7 workplaces, where they charge over longer
8 periods of time. So you're talking about a
9 significantly lower amount of the total EV
10 charging pie. So that's one perspective.

11 COMMISSIONER BAILEY: I'm not
12 really sure I understand your explanation.
13 If you have a DC fast charger and there's two
14 or three cars charging at the same time,
15 they're creating more demand on the system
16 than if those three EVs charged at home. And
17 so why shouldn't there be a demand charge at
18 that location to cover the cost of that
19 location?

20 MR. MILLER: So I'm not -- I
21 appreciate that question. I'm not advocating
22 for ignoring demand charges entirely. It's a
23 question of at what point should the current
24 traditional demand charge rate structure make

1 sense, and that would be in a situation where
2 almost all charging everywhere took place on
3 DC fast chargers and there was a more
4 reasonable expectation for certain load
5 factors to be higher than they currently are.

6 But what I do want to pivot and
7 point to is this isn't a call necessarily for
8 a technology-specific rate, because there are
9 other load profiles that similarly have a low
10 load factor from, you know, not only EV
11 chargers but also arc welders. So I think
12 these type of spikey loads can be addressed
13 through optional rates that still reflect the
14 cost to serve and don't pass costs along, but
15 also don't effectively penalize DC fast
16 charging operators for having lower
17 utilization rates at earlier stages of the EV
18 charging market.

19 COMMISSIONER BAILEY: Okay. Thank
20 you very much.

21 MR. MILLER: Thank you,
22 Commissioner.

23 CHAIRWOMAN MARTIN: Okay.
24 Commissioner Giaimo.

1 COMMISSIONER GIAIMO: Mr. Miller,
2 thank you. Quick question. Where are you
3 located?

4 MR. MILLER: I'm located in my
5 son's bedroom, under his loft bed and next to
6 his wall rack of Nerf guns.

7 COMMISSIONER GIAIMO: I guess I
8 should have more specific. What town or city
9 are you in?

10 MR. MILLER: So I live in Brooklyn,
11 New York. ChargePoint is located in
12 Campbell, California. And I worked for 15
13 years in Massachusetts at the Executive
14 Office of Energy and Environmental Affairs.
15 So I've run the gamut.

16 COMMISSIONER GIAIMO: Thank you. I
17 was going to thank you for rising early if
18 you were in California. Thank you for rising
19 early from Brooklyn, but not nearly as
20 impressive I guess.

21 I really appreciate, and I think
22 you were being sensitive to timing, and you
23 gave a passing reference to make-ready. I
24 wanted to give you the opportunity to expand

1 on that if you wanted to and what the
2 company's position would be with respect to
3 make-ready. And is it simply the company
4 believes in allowing the utility to receive
5 traditional cost recovery as if it was a
6 distribution investment, or would you
7 actually encourage something greater than the
8 traditional investment associated with
9 distribution?

10 MR. MILLER: So that's a great
11 question. And I appreciate the opportunity
12 and the prompt to expand on that issue more
13 broadly. I think that in order to fully dig
14 into the weeds on the issue, it would be
15 valuable to dedicate even further
16 consideration outside of this hearing on the
17 issue of what is the spectrum of appropriate
18 roles for utilities in the deployment of EV
19 charging stations. The response that I spoke
20 to was specific to make-ready programs, where
21 the utility can recover costs for investments
22 on the utility side of meter, as well as for
23 installation costs on the customer side of
24 the meter, up to, but not including, the

1 charging station. This type of an investment
2 has the utility retain its core competency of
3 investing in long-term assets, leveraging
4 significant private investment, and
5 decreasing a barrier to the deployment of
6 charging stations. And when paired with load
7 management programs where you're shifting EV
8 charging away from peak, it's a really
9 valuable, comprehensive solution. When
10 jurisdictions around the country have
11 considered whether there are appropriate
12 roles beyond make-ready, where a utility may
13 own and operate the equipment or the
14 infrastructure itself, that's where it's not
15 just a question of whether the utility is
16 involved, but how. And there are great
17 examples around the country where, in fact,
18 utilities have participated in roles outside
19 of make-ready, where they may provide, you
20 know, incentives to encourage the deployment
21 of chargers in harder-to-reach market
22 segments where that can be appropriate.
23 There are some examples around the country
24 even where utility ownership of EV charging

1 stations themselves has been put on the table
2 for consideration.

3 The position that ChargePoint has
4 taken has not been either yes or no, this or
5 that. But throughout all of these different
6 options, what's important is to make sure
7 that the participating customer, be they a
8 customer participating in a make-ready
9 program or in a program that is based on
10 rebates, or a program in which a utility
11 might own or operate chargers, that the
12 customer on whose premises the infrastructure
13 is deployed, they should have a role in
14 determining the most appropriate solution, so
15 in determining the hardware and the software
16 needs for that location, because no two
17 charging deployments are alike. And the
18 customer of record in that case will always
19 have a closer relationship with the drivers
20 who visit their location necessarily than the
21 utility will. So they're in the best
22 position to optimize utilization and set
23 appropriate rates. To that effect, the
24 charge that gets set for accessing at a

1 publicly-sited charging station, that role is
2 also one that can and should be in the hands
3 of the site host, which is consistent with
4 determinations and discussions that have
5 taken place previously at the New Hampshire
6 Commission, identifying that EV charging is a
7 competitive service and not a regulated sale
8 or resale of electricity.

9 So at the same time, even if New
10 Hampshire were to consider broader or
11 additional investments outside of make-ready,
12 there should still be consideration for how
13 across the board is a program design
14 minimizing costs to the ratepayers and
15 maximizing benefits. So can you leverage
16 private investment wherever possible? That's
17 always going to be optimal in terms of
18 getting charging infrastructure located in
19 the right places where it needs to go, as
20 well as increasing the size of the total pot
21 of investment and again relieving costs from
22 hitting ratepayers unnecessarily.

23 COMMISSIONER GIAIMO: Thank you
24 very much, Mr. Miller.

1 Chairwoman Martin, that's all the
2 questions I have.

3 MR. MILLER: Thank you,
4 Commissioner.

5 CHAIRWOMAN MARTIN: Okay. Thank
6 you. And I have no questions.

7 So I think we're on to Clean Energy
8 New Hampshire.

9 MS. MINEAU: Good morning,
10 Commissioners, and thank you for the
11 opportunity to elaborate on our comments on
12 some of the important issues in this docket.
13 As directed, I'll focus on a few areas of
14 agreement and disagreement with Staff's
15 recommendations.

16 Clean Energy New Hampshire
17 enthusiastically supports the recommendation
18 from Staff that utilities be required to each
19 file within 120 days a proposal for
20 time-of-use EV charging rates. We also
21 support the guidelines that were recommended
22 under the Consistency Among Utilities for
23 those time-of-use rates. That includes
24 having energy, transmission and distribution

1 all being time-varying, as well as the
2 characteristics for the number of periods and
3 duration of -- maximum duration of the peak
4 period. We do recognize the residential
5 electric vehicle time-of-use charging rate
6 was just approved in the Liberty rate case,
7 and we were supportive of that under that
8 settlement. So we would agree that that
9 should satisfy their requirement, at least
10 for residential customer class.

11 We also made some specific
12 recommendations in our comments, as well as
13 during a previous tech session, about some
14 specific recommendations related to education
15 and outreach that we think would be
16 appropriate and really effective if those
17 time-of-use rates were implemented. And that
18 includes partnering with car dealerships,
19 charger manufacturers and installers, as well
20 as organizations like Drive Electric New
21 Hampshire, to educate customers, and
22 specifically the customers that are
23 purchasing electric vehicles, about the
24 opportunity to enroll in a time-of-use rate.

1 We also support the recommendation
2 that the utilities file feasibility
3 assessments for using devices other than
4 utility-owned meters. We think that that has
5 a lot of potential to reduce costs for
6 customers and utilities. We are aware of at
7 least one pilot with the California utilities
8 in 2017 that enrolled 500 submeters. And so
9 I think that we could look at those results,
10 as well as the utilities that have experience
11 doing this that Mr. Miller mentioned.

12 We do, however, believe that
13 Staff's recommendations regarding demand
14 charges fell short. We agree with what Mr.
15 Miller said, that we think the utilities
16 should be required as part of the same
17 adjudicative proceeding where the EV
18 time-of-use rates would be considered, that
19 the utilities would also file proposals to
20 alternatives to demand charges for public
21 charging. We think that if we maintain the
22 status quo of the current demand charges for
23 C&I classes applied to public charging, that
24 would be an impediment to the substantial

1 load growth potential that electric vehicles
2 could offer.

3 I would like next to highlight an
4 important topic that is not discussed in
5 Staff's recommendation, and that is that
6 Clean Energy New Hampshire strongly
7 encourages the Commission to consider the
8 interaction of time-of-use rates developed
9 for electric vehicle charging and net
10 metering for customers that have both on-site
11 renewable generation as well as an electric
12 vehicle. We think there's likely a lot of
13 overlap between early adopters of distributed
14 energy resources and electric vehicles, and
15 so we think those customers should not be
16 made to choose whether they net meter or have
17 the option to adopt an electric vehicle rate,
18 an electric vehicle time-of-use rate. We
19 think, actually, there could be a lot of
20 benefits, as was explored and approved in the
21 Liberty battery pilot, DE 17-189, to allow
22 net metered customers to opt into a
23 time-of-use rate and to then effectively have
24 time-of-use net metering as was recommended

1 in the net metering docket, Order 26,029,
2 where the utilities were required to do net
3 metering time-of-use pilots. And other than
4 Liberty doing so within their battery pilot,
5 those pilots have not come to light.

6 I agree with Mr. Simpson, that
7 looking at the bi-directional potential for
8 time-of-use rates also has potential relevant
9 applications to vehicle-to-grid exports.

10 And with that, I'll take any
11 questions.

12 CHAIRWOMAN MARTIN: Commissioner
13 Bailey, do you have any questions?

14 COMMISSIONER BAILEY: Yes, thank
15 you.

16 Ms. Mineau, could you give me
17 your -- why you think it is okay to charge
18 other similar customers with high demand a
19 demand charge and not EV charging stations,
20 public charging stations?

21 MS. MINEAU: So I don't think that
22 necessarily the alternative to demand charges
23 for public charging would need to be
24 permanent. We think they're especially

1 necessary now where EV adoption is still low.
2 There is still significant range anxiety, and
3 there's a big barrier of having those demand
4 charges apply to public charging rate classes
5 to be able to effectively deploy a necessary
6 backbone of public charging. I think that
7 there are some states that have adopted
8 demand charge holidays with certain
9 triggers -- for example; where as EV charging
10 and EV ownership becomes more common, the
11 need for the demand charge holiday goes away,
12 because as the public chargers become used on
13 a more regular basis, the proportion of the
14 demand charges relative to the whole cost of
15 service for -- not cost of service -- the
16 whole cost for that bill becomes more in line
17 with a regular C&I customer.

18 COMMISSIONER BAILEY: Okay. Thank
19 you very much. That's all I have.

20 CHAIRWOMAN MARTIN: Commissioner
21 Giaimo, do you have questions?

22 COMMISSIONER GIAIMO: I have one
23 quick one.

24 Ms. Mineau, you mentioned that

1 time-of-use net metering hasn't been brought
2 to fruition absent Liberty. I was going to
3 hope to give you the opportunity to expand on
4 why you think that is.

5 MS. MINEAU: I am not sure,
6 honestly. I know that there are several
7 pilots in the net metering order that have
8 been delayed or decided to not actually
9 require them in the end, and some of these
10 time-of-use pilot net metering have been part
11 of it. I think it would actually be very
12 important and valuable to send the price
13 signals of time-of-use rates to customers
14 that also have on-site generation. It would
15 significantly encourage those system owners,
16 for example, to add energy storage to their
17 system to be able to charge their battery and
18 then not use energy from the grid during the
19 peak when the sun may have set and, you know
20 -- yeah, so I think there's a tremendous
21 amount of value, and our organization has
22 continued to advocate for the implementation
23 of that. But that has not come to light. I
24 understand that it adds a significant amount

1 of complexity. Just adding a time-of-use
2 rate, as we heard from Eversource, adds
3 complexity, and then you add
4 bi-directionality on top of that. And we
5 respect that it's not necessarily
6 straightforward, but we think the potential
7 value is quite significant and very
8 important.

9 COMMISSIONER GIAIMO: My question
10 was actually stepping around whether or not
11 you felt the complexity was one of the
12 obstacles as well. So thank you for the
13 answer. I appreciate it.

14 Chairwoman Martin, back to you.

15 CHAIRWOMAN MARTIN: Okay. Thank
16 you. Thank you, Ms. Mineau.

17 Next up is Conservation Law
18 Foundation.

19 MS. GREEN: Good afternoon. Can
20 everyone hear me okay?

21 CHAIRWOMAN MARTIN: Yes.

22 MS. GREEN: Commission, Staff,
23 thank you for this opportunity to make oral
24 comments today. My name is Emily Green, and

1 I'm an attorney with Conservation Law
2 Foundation. I don't intend to add much
3 beyond the written comments that I submitted
4 on May 11th, but I'm just going to emphasize
5 a few areas where I would urge the Commission
6 to go further than Staff's recommendation, or
7 to deviate from it. And of course I'm
8 available to take questions if there are any.

9 First thing I wanted to address was
10 the cost of service rate design for EV
11 charging stations. Staff's April 3rd, 2020
12 recommendation is that the Commission issue
13 guidance that, to the maximum extent
14 practicable, EV charging rate designs shall
15 reflect the marginal cost of providing EV
16 charging services. I would submit that there
17 are reasons to consider deviating from this
18 foundational rate design standard in this
19 context. Strict adherence to marginal cost
20 of service rate design risks potentially
21 failing to capture some of the quantifiable
22 value offered by beneficial electrification
23 of the transportation sector. And of course
24 investment in EV infrastructure advances that

1 outcome.

2 It's CLF's position that it should
3 be the Commission's objective to plan for
4 capturing and maximizing those potential
5 benefits because it's in the public interest.
6 These include societal benefits such as
7 carbon pollution reductions and health cost
8 savings, yes. But further benefits include
9 flexible, manageable new loads, enhanced grid
10 efficiencies down the road, increasing
11 potential for two-way power flow and for EVs
12 to serve as distributed energy resources and
13 electricity storage, all with potential for
14 ratepayer savings. It's already been
15 demonstrated in at least one study of two
16 utility service territories in California
17 that EV customers consume electricity
18 off-peak in response to price signals, and as
19 a result, EVs increased utility revenues
20 throughout the seven-year period studied more
21 than they increased utility costs, which led
22 to downward pressure on -- and which could
23 lead to downward pressure on electricity
24 rate. And I think these concepts explain why

1 it's become increasingly common to see
2 commission approval of utility investment in
3 make-ready EV infrastructure.

4 So, given all those benefits, I
5 would just encourage the Commission to
6 consider that strict adherence to marginal
7 cost of service rate design may undervalue
8 investment in EV charging infrastructure as
9 it advances the public interest and
10 beneficial transportation electrification.

11 We've heard a lot today about
12 demand charges, but I wanted to add to what
13 you've heard. So as many commenters have
14 noted, and as Staff acknowledged in their
15 recommendation, demand charges limit the
16 economic feasibility of certain charging
17 stations, particularly DC fast chargers and
18 Level 2 clusters.

19 CLF recognizes, as I said in our
20 written comments, that demand charges serve a
21 cost-recovery purpose. But again, as we've
22 heard today, an array of alternatives exist,
23 and these alternatives balance utility needs
24 with the public interest that I have just

1 talked about, the public interest in
2 beneficial transportation electrification.
3 These alternatives are -- they've already
4 surfaced in this docket, both in written
5 comments and orally today, and they're being
6 tested and utilized throughout the country.

7 Now, Staff recommends that the
8 Commission issue guidance that utilities
9 should explore alternatives to non-coincident
10 peak demand charges. And I certainly agree
11 that non-coincident peak demand charges
12 should be avoided in this context. However,
13 I disagree with Staff's suggestion that
14 demand charges based on peak coincidence are
15 an adequate alternative. Again, the problem
16 with demand charges in this context is the
17 high power rating of DCFC, coupled with low
18 utilization rates, which can lead to very
19 high electricity bills for the charging
20 stations and undermine the business case for
21 investment.

22 Now, moving away from
23 non-coincident peak demand charges to
24 coincident peak demand charges isn't really a

1 solution to this problem unless site hosts
2 have the sophistication to assess peaks and
3 the ability to shift or manage load. And
4 even assuming that a highway charging station
5 has -- a highway charging station owner has
6 the capacity to anticipate a peak period, the
7 nature of DCFC, and when and where and how
8 customers tend to use them, doesn't really
9 lend itself to load management or shifting
10 load as a realistic objective, at least
11 without additional significant investment in
12 battery storage by the site host. And while
13 I agree that that may well be an appropriate
14 long-term objective, I'm concerned that
15 relying exclusively on battery storage as a
16 solution here just serves to again undermine
17 the business case for investment in charging
18 stations by making it that much more
19 expensive.

20 So, again, while I very much agree
21 that the Commission should issue guidance
22 that utilities should explore alternatives to
23 demand charges, I would suggest that they
24 should explore alternatives to all demand

1 charges, not just non-coincident peak demand
2 charges.

3 And that brings me to my final
4 point, which is CLF urges the Commission to
5 go a bit further than Staff's recommendations
6 when it comes to next steps in several
7 regards. We very much support the
8 recommendation that the Commission open an
9 adjudicative proceeding and direct each
10 electric utility to file EV time-of-use rate
11 proposals. I would join both ChargePoint and
12 Clean Energy New Hampshire in urging further
13 that, with respect to demand charges, the
14 Commission direct utilities to explore,
15 develop and submit proposals for demand
16 charge relief for approval in that same or a
17 related adjudicatory proceeding.

18 Similarly with regard to load
19 management techniques, Staff recommended that
20 the Commission issue guidance that load
21 management techniques may be an appropriate
22 strategy for EV rate design. And I would
23 urge the Commission, again, to require
24 utilities to submit proposed load management

1 offerings in connection with the time-of-use
2 rate proposals.

3 So thanks again for this
4 opportunity to supplement my written
5 comments. And I'm happy to take any
6 questions.

7 CHAIRWOMAN MARTIN: Okay. Thank
8 you.

9 Commissioner Bailey.

10 COMMISSIONER BAILEY: Thank you,
11 Ms. Green. I don't have any questions for
12 you.

13 MS. GREEN: Thanks.

14 CHAIRWOMAN MARTIN: Commissioner
15 Giaimo.

16 COMMISSIONER GIAIMO: One question.
17 Is there a time and place for demand charges
18 anywhere?

19 MS. GREEN: In the EV context?

20 COMMISSIONER GIAIMO: Sure. Well,
21 you suggested opening up a proceeding that
22 was even greater. So I'll give you the
23 opportunity to respond in both situations.

24 MS. GREEN: Sure. I mean, my

1 comments are reserved to the EV context
2 certainly.

3 COMMISSIONER GIAIMO: Okay.
4 Thanks.

5 MS. GREEN: Does that answer your
6 question?

7 COMMISSIONER GIAIMO: That does
8 answer my question. Thank you.

9 MS. GREEN: Okay.

10 CHAIRWOMAN MARTIN: Okay. Thank
11 you. I don't have any questions either.
12 Thank you, Ms. Green.

13 (Off the record for a moment.)

14 (Brief recess was taken at 12:10 p.m.,
15 and the hearing resumed at 12:18 p.m.)

16 CHAIRWOMAN MARTIN: Okay. Ms.
17 Robidas. All set? Back on the record then.
18 We were about to begin with
19 Greenlots.

20 MS. GILLEO: Great. Thank you for
21 the opportunity to speak with you today. My
22 name is Annie Gilleo. I lead policy and
23 market development for Greenlots in the
24 Eastern U.S. and Canada.

1 Greenlots is a technology company
2 that makes a software platform for managing
3 electric vehicle charging. We also provide
4 all of the turnkey services associated with
5 infrastructure deployment, everything from
6 site assessment to hardware procurement to
7 maintenance. We're a wholly-owned subsidiary
8 of Shell New Energies. Our customers are
9 typically enterprise-level customers,
10 utilities, fleets and cities, for example.
11 We support a large portion of the DC fast
12 charging infrastructure in North America and
13 a growing number of Level 2 chargers.

14 We submitted comments in this
15 docket on February 20th and also presented at
16 the staff-led stakeholder meeting in
17 February. My comments today will echo the
18 themes included in our initial comments.

19 And in particular, I want to focus
20 on two areas. First the need for encouraging
21 technology-based managed charging strategies
22 either as an alternative to or complement to
23 rate design rather than tethering these
24 strategies strictly to a time-of-use rate;

1 and second, the role that utilities can and
2 should play in charging infrastructure
3 deployment.

4 In the Staff's April
5 recommendation, they suggested that the
6 Commission issue guidance that load
7 management techniques may be an appropriate
8 strategy for EV rate design, but expressed a
9 clear preference for delivery of such
10 offerings in conjunction with TOU rate
11 offerings, to the extent reasonably
12 practicable. Technology can be a useful and
13 effective complement to rate design, but I
14 want to be very clear that it should also be
15 viewed as a separate tool in the load
16 management toolbox. As Eversource noted in
17 their comments, flat rates with smart load
18 control technologies serve the same purpose
19 as a time-of-day rate and enables utilities
20 to move forward with load management even
21 absent the large data set needed to make new
22 permanent rates.

23 In my presentation at the
24 stakeholder workshop, I gave an example of

1 technology as a complement to rate design
2 used to smooth load around time-of-use rates
3 and eliminate spikiness. I wanted to also
4 offer some further examples today of the way
5 that technology can be used to manage load as
6 an alternative to rate design.

7 One example would be in Washington,
8 Avista's Electric Vehicle Supply Equipment
9 pilot, which launched in 2016. That pilot
10 included direct load management
11 functionalities in residential and workplace
12 locations without an accompanying time-of-day
13 rate. Avista also did not offer incentives
14 to customers in this program; rather, they
15 provided charging stations wholly owned and
16 operated by Avista. They found that
17 customers accepted 75 percent peak load
18 reduction via remote utility control without
19 negative effects on driving habits or
20 satisfaction ratings.

21 Importantly, leveraging a
22 technology-driven strategy for this pilot
23 enabled Avista to gain insight to the
24 specific charging load profiles in its

1 service territory as adoption grew over the
2 course of the pilot.

3 In Vermont, Green Mountain Power's
4 make-ready pilot for public DC Fast Charge
5 does require participants to engage with the
6 utility on load management strategies, with
7 the goal of developing tools to address
8 demand charges that don't require fundamental
9 changes to rate design, an issue we've talked
10 about today.

11 Stations will remain available
12 during peak events, and Green Mountain Power
13 will work with station operators to determine
14 an acceptable level of charging that achieves
15 peak-related savings without materially
16 impacting the duration of a charging session
17 for drivers.

18 Importantly, the Staff report does
19 not address the utilities' role in
20 infrastructure deployment, although we have
21 heard from several parties here today on the
22 subject. I also wanted to spend a moment
23 talking about that. While strategies to
24 manage costs using rates and load management

1 are important for delivering great benefits,
2 they're not the most effective tool for
3 driving EV adoption across all rate classes
4 and use cases. Instead, research and
5 customer surveys have shown that highly
6 visible charging infrastructure is one of the
7 most effective tools for developing driver
8 awareness of and comfort with electric
9 vehicles.

10 NARUC has pointed out in a report
11 released in October that utilities and
12 regulators are well suited to actively pursue
13 EV infrastructure deployment for many
14 reasons, including being responsive to
15 customers, enhancing asset utilization
16 through well-timed electricity demands,
17 spurring economic development and more. To
18 date, commissions in 26 states have approved
19 utility transportation electrification
20 filings totaling almost \$1.5 billion, and
21 another \$1.5 billion is pending.

22 In New Hampshire, utilities have
23 already proposed limited infrastructure
24 programs to support the deployment of the

1 state's Volkswagen funding. I want to
2 re-emphasize the importance of aligning
3 utility programs with other state programs
4 like these. In New Hampshire, a recent
5 effort to leverage VW funding to develop
6 public fast charging along corridors didn't
7 receive viable responses to the state's RFP,
8 in large part due to the wide funding gap
9 that remained and that utilities proposed to
10 solve through make-ready programs.

11 I'll point to Rhode Island as the
12 flipside of this coin. There, National Grid
13 saw very limited uptake of its DC fast charge
14 make-ready program until the state rolled out
15 an additional Volkswagen-funded program
16 targeting the cost of the charger itself and
17 closing the funding gap. Economics of owning
18 public fast-charging infrastructure, as we've
19 heard, remains tenuous. And so it's
20 necessary for state and utility programs to
21 be aligned to achieve the desired outcome.

22 I also want to emphasize that
23 utility-led charging infrastructure programs
24 don't only serve to develop momentum. These

1 investments also serve to mitigate risk,
2 ensuring that charging station deployment is
3 equitable, serving those areas where
4 economics of charging station ownership may
5 be especially poor, but charging is still
6 needed, for example, along rural corridors,
7 and that the additional load is visible and
8 understood by utilities so that they can
9 leverage its flexible qualities. The Brattle
10 Group predicts that regional electrification
11 could double monthly electricity usage by
12 2050. Transportation electrification
13 represents likely the single greatest
14 opportunity to increase the utilization and
15 efficiency of the electric grid to the
16 benefit of all ratepayers if that load is
17 well managed. These benefits won't accrue
18 automatically. And as we know, the
19 consequences could be negative if electrified
20 transportation load comes onto the grid in an
21 unmanaged fashion and utilities do not engage
22 in efforts to incentivize EV charging in
23 places and times where it is most
24 advantageous to the grid.

1 As we noted in our initial comments
2 to the Commission, in Greenlots' view,
3 utilities are central to the transformation
4 of the transportation sector, with a key role
5 to play in maximizing the system-wide
6 benefits of growing electric vehicle load,
7 ensuring that electric vehicle infrastructure
8 is deployed sufficiently and equitably and
9 ultimately cultivating a sustainable market
10 for eventual private sector investment in
11 vehicle infrastructure. Indeed, achieving
12 all of the outcomes is likely to require
13 utilities to play a variety of roles,
14 developing a portfolio of programs that
15 target different geographies and customer
16 types, with flexibility to invest in both
17 turnkey utility-owned options and cover
18 make-ready costs as appropriate that can help
19 maximize grid benefits while ensuring
20 equitable and sufficient infrastructure
21 deployment.

22 So I want to encourage the
23 Commission to consider the path for utility
24 investment in charging infrastructure in the

1 future. That could include opening an
2 adjudicated docket to examine charging
3 infrastructure deployment program proposals
4 further. It could include convening a more
5 focused stakeholder workshop, or setting
6 broad guidance that enables utilities to
7 bring forward new program proposals that
8 ensure they're addressing customer needs,
9 meeting their obligation to serve this new
10 source of load, and maximizing ratepayer
11 benefits by minimizing impacts to existing
12 grid infrastructure.

13 Thank you for the opportunity to
14 talk with you today, and I welcome your
15 questions.

16 CHAIRWOMAN MARTIN: All right.
17 Thank you.

18 Commissioners, do you have
19 questions?

20 COMMISSIONER BAILEY: Thank you,
21 Ms. Gilleo. I have no questions.

22 COMMISSIONER GIAIMO: Nor do I.
23 Thank you very much. Appreciate it.

24 CHAIRWOMAN MARTIN: Okay. Thank

1 you.

2 Moving on to New England
3 Convenience Store and Energy Marketers
4 Association.

5 MR. MORAN: Thank you. Thank you,
6 Madam Chair, Commission Staff --
7 Commissioners and Staff for allowing New
8 England Convenience Store and Energy
9 Marketers Association to comment in this
10 proceeding.

11 For those of you unfamiliar with
12 NECSEMA, we represent single-site convenience
13 store and gasoline retailers, as well as
14 chain convenience store and gasoline
15 retailers, independent transportation fuel
16 distributors and businesses which supply
17 them. According to the National Association
18 of Convenience Stores, there are almost 900
19 convenience stores in New Hampshire, 655 of
20 which sell motor fuels, employing over 14,000
21 people, and account for almost \$3.8 billion
22 in sales per year.

23 NECSEMA members do not oppose
24 reducing greenhouse gas emissions; rather,

1 our business model is to provide the products
2 and services our customers want, often when
3 they need them the most. As customer demand
4 for fuel choice evolves, we will adapt
5 alongside them, ensuring we meet their needs.
6 It's incredibly important for NECSEMA to
7 continue being part of current and future
8 discussions on the transportation fuels for
9 the future. We offer a unique and valuable
10 perspective forged by our experience owning
11 and operating the best street corners in the
12 state and across the country, deep knowledge
13 of transportation fueling logistics and
14 customer behavior in a hyper-competitive
15 market.

16 NECSEMA is not here to comment on
17 the specific recommendations made by the
18 Commission Staff regarding rate structures
19 employed by utilities that will support the
20 electrification of transportation service
21 industry serving New Hampshire. We are
22 confident that the Commission will approve
23 rate structures that are consistent,
24 transparent and predictable for successful

1 EVSE investments that may be made by NECSEMA
2 member companies and other business
3 developers, and rate structures that are fair
4 to other classes of ratepayers, including
5 those operated by our members.

6 NECSEMA notes that the Staff
7 recommendations of April 3rd, 2020 do not
8 address the utilities' role in the ownership
9 of and payment for the equipment associated
10 with electric charging stations. As stated,
11 NECSEMA's filed testimony in this docket on
12 February 20th. NECSEMA continues to
13 recommend that any direct infrastructure
14 investment by electric utilities does not
15 negatively impact any market-based incentives
16 or private investments in the same EV market.
17 This includes, but is not limited to,
18 downstream of the meter investments in the
19 electric charging stations.

20 As stated in NECSEMA's written
21 comments in this proceeding, allowing
22 utilities to use ratepayer funds to own and
23 operate charging infrastructure or EVSE
24 downstream of the meter would negatively

1 impact, at ratepayer expense, what is
2 currently a very competitive industry; two,
3 impact the customer experience and
4 adaptation; and potentially undercut
5 technological innovation that is generally
6 funded and expanded through private, not
7 utility investment; and four, undermine the
8 cumulative hundreds of years of experience of
9 NECSEMA member companies and their employees
10 in serving the fueling needs of New
11 Hampshire's customers.

12 NECSEMA understands that certain
13 transparent conditions could support the
14 so-called make-ready model for utility
15 investment in the EV infrastructure, allowing
16 private investment access to the electric
17 grid for transportation fueling, meaning the
18 electric grid infrastructure upgrades and
19 enhancements are funded by the utility while
20 enabling privately funded EVSE installations
21 at host sites.

22 NECSEMA was not party to another
23 related Commission docket, Docket IR 15-296,
24 investigation into grid modernization.

1 NECSEMA just recently became aware of the
2 requirement in that docket's order to create
3 the grid modernization stakeholder group.
4 NECSEMA proposes that it participate in the
5 group, particularly with regard to three of
6 the group's responsibilities: Hosting
7 capacity, interconnection and locational
8 value. At the public stakeholder technical
9 session held on February 28th, NECSEMA
10 representatives expressed interest in these
11 critical electric transportation market
12 development issues; specifically, that
13 utilities provide information about their
14 ability to host charging stations on certain
15 circuits. Conceptually, this transparency
16 would be helpful for the purposes of
17 determining which locations might be better
18 than others for DCFC without directly
19 triggering costly distribution system
20 investments, which would promote private
21 investment, thereby expanding the overall
22 public availability of EV charging equipment.
23 NECSEMA would respectfully request that the
24 group include NECSEMA in these stakeholder

1 meetings.

2 Thank you again for the opportunity
3 to speak today. NECSEMA members believe they
4 can make a significant contribution to the
5 development of the merging electric
6 transportation markets.

7 CHAIRWOMAN MARTIN: All right.

8 Thank you, Mr. Moran.

9 Commissioners, do you have
10 questions?

11 Commissioner Bailey.

12 COMMISSIONER BAILEY: Yes, I have
13 one question.

14 Do you or does NECSEMA believe that it's
15 possible to be economic -- to have a positive
16 business case to install EV charging stations
17 at its locations?

18 MR. MORAN: I think that's where I
19 think we would like to get to. I think that,
20 you know, the rate structures will certainly
21 have an opportunity to influence that. And,
22 you know, as I mentioned in the testimony, I
23 believe that, you know, we have the great
24 locations. We do understand that technology

1 is still evolving. And I think that's a
2 variable that we're going to have to address
3 as it evolves. But I think that's the
4 direction we'd like to head towards is the
5 opportunity to be able to invest in these
6 charging systems and be able to have the
7 business benefit associated with that.

8 COMMISSIONER BAILEY: Okay. Thank
9 you.

10 CHAIRWOMAN MARTIN: Commissioner
11 Giaimo, do you have any questions?

12 COMMISSIONER GIAIMO: Quick one.

13 Mr. Moran, based on your comment,
14 it sounds like your organization is
15 interested in participating in the grid
16 modernization stakeholder group; is that
17 correct?

18 MR. MORAN: Correct.

19 COMMISSIONER GIAIMO: Okay. And
20 when you read the order, nothing in the order
21 led you to believe that you would be
22 precluded from participating; correct?

23 MR. MORAN: Correct.

24 CHAIRWOMAN MARTIN: Okay. Thank

1 you, Mr. Moran.

2 We're going to hear from the City
3 of Lebanon next.

4 MR. BELOW: Good morning, or
5 afternoon now, Commissioners. Thank you for
6 this opportunity.

7 I want to start saying that there
8 -- with the preface that I think there's some
9 urgency to moving ahead with rate design for
10 particularly large charging facilities.
11 Early this year, the City of Lebanon entered
12 into a contract with Electrify America to
13 develop a DC fast charging station in Lebanon
14 at a city-owned site, and sometime in the
15 next six to nine months they're going to
16 finalize their design for that. Recently our
17 energy and facilities manager asked Electrify
18 America if they were planning to put in
19 battery storage to shape their, you know,
20 potential contribution to peak demand. And
21 they said they have done that on a number of
22 sites across the country, and they'd like to
23 do that, but only if it makes economic sense
24 in terms of the utility tariff. And right

1 interrupting, and I didn't want to interrupt
2 your initial thought, but can you identify
3 yourself for the record, please.

4 MR. BELOW: Oh, sure. Sorry. I am
5 the Assistant Mayor of the City of Lebanon
6 and speaking on behalf of the City.

7 CHAIRWOMAN MARTIN: Thank you.

8 MR. BELOW: Generally we're in
9 strong support of the Staff recommendations.
10 The one exception was with regard to the last
11 two specific points with regard to the
12 recommendation that, although this was
13 specific to residential electric vehicle
14 charging, they should be based on cost
15 causation, incorporate time-varying energy,
16 transmission and distribution components and
17 be three-part. We agree with all those
18 points. The concern was the average price
19 differential between off-peak and peak of no
20 less than three to one -- and have a peak --

21 (Court Reporter interrupts.)

22 MR. BELOW: Have an average price
23 differential between off-peak and peak of no
24 less than three to one and have a peak period

1 no longer than four hours in duration.

2 Though we tried -- I was very much
3 involved in helping design Liberty's
4 time-of-use rates and, as noted in the
5 comments dated May 11th that I filed, we
6 ended up with a five-hour period, which was
7 really a compromise between what would be
8 ideal for summer and winter. A lot of
9 parties felt that we needed to have the same
10 blocks of time seasonally. And within that
11 constraint, the concern was trying to lop an
12 hour off either side of that five-hour period
13 would result in a significant probability --
14 a significant chance that the system peak in
15 the summertime, or transmission coincident
16 peaks in both summer or winter would fall
17 outside of that peak period. It was called
18 critical peak in their rate design. So I
19 just think those are nice goals, but
20 underlying cost causation should be the
21 primary driver.

22 I also want to mention that I don't
23 think there's any real need for cost of
24 service study to do this. Distribution

1 rates, like transmission rates, are largely
2 embedded sunk costs. And you could say they
3 don't actually vary based on time. But in
4 fact, what we know about both systems is they
5 have to be designed to manage the coincident
6 peak demand of the system or the particular
7 transformer or circuit or whatever. And it
8 is that need to design the whole system for
9 coincident peak demands that drives the
10 overall cost.

11 So in transmission we have a strong
12 marginal cost price signal where all of those
13 embedded costs are recovered by allocating
14 share of coincident peak based on a single
15 hour of coincident peak. I think Lon Huber
16 came up with a very innovative and
17 theoretically sound approach, which I would
18 suggest would be easy to repeat within a
19 reasonable amount of time, both for
20 residential classes and for the larger
21 classes, and that was simply saying take the
22 entire revenue requirement -- in Liberty's
23 case, we took the entire small customer class
24 as a group -- and allocate those entire

1 revenue costs to each hour of the year based
2 on how much that hour contributes to the
3 overall peak. So, for instance, if the
4 minimum demand on the system was 30 percent
5 of the peak demand, then all 8,760 hours of
6 the year would get a share of 30 percent, an
7 equal share of the 30 percent of the revenue
8 requirement. And if the single hour peak
9 demand accounted for 1 percent of demand,
10 then 1 percent of the total cost revenue
11 requirement could be allocated to that hour.
12 Then you can take all those -- that's a
13 fairly simple thing to do mathematically. I
14 think the challenge was trying to sort of
15 optimize that with when transmission peaks
16 occur and the cost shape of real-time
17 pricing, which is what pretty much everyone
18 pays on the margin for load settlement. And
19 it didn't require Liberty trying to procure
20 the default service, but rather to send price
21 signals that would contribute to a better
22 load shape, which ultimately would produce
23 lower costs for the default service
24 procurement just by improving the load shape

1 of the default service customer group. So I
2 think there is a path forward that could get
3 us fairly quickly to some good rates that
4 would be able to be used, particularly for
5 Level 2 and Level 3. In Liberty's case, you
6 know, we already have a very good rate design
7 I think for the residential customers that
8 was just recently approved by the Commission.

9 I do want to just say a couple more
10 things. Part of the problem with cost of
11 service study is they're typically based on
12 historic load shape, and we just don't have
13 much load shape data, particularly for Level
14 2 or Level 3 charging. And probably charging
15 as a group at whatever level it occurs is
16 more similar to other charging than it is to
17 any particular rate class. But we don't
18 really know that. And if we give them the
19 appropriate price signals, a lot of that load
20 shape will change either when people choose
21 to charge, because it is discretionary. Even
22 at a workplace, a Level 2 charging doesn't
23 have to run the full eight hours. Most
24 employees could charge up in just a few of

1 those hours. And for the DC fast charging,
2 you know, some built-in battery storage on
3 site is a way to deal with that.

4 Finally, I'll just say two things.
5 One is I don't think load Management with
6 flat rates under the New Hampshire
7 constitutional or statutory policy scheme is
8 an acceptable option. And of course, Staff
9 did not recommend that. New Hampshire law
10 and constitution creates a clear preference
11 for market-based solutions over
12 monopoly-driven solutions, and specifically
13 calls for appropriate price signals to enable
14 those market-based solutions. So,
15 appropriate price signals have to go ahead
16 of, at the very least in conjunction with,
17 any utility load management efforts.

18 And finally, I just note that we do
19 actually have considerable experience in New
20 Hampshire and New England with customer or
21 third-party ownership and reading of
22 revenue-grade metering, which is for REC
23 production. And sometimes those RECs are
24 actually more valuable than the cost of the

1 energy that customers use, you know, just
2 sort of the bare wholesale cost. And yet we
3 find that third-party ownership and reading
4 of those revenue-grade meters is acceptable
5 for very significant costs that go into rates
6 in the form of renewable energy credit
7 production.

8 So thank you again for this
9 opportunity. I can answer any questions that
10 you may have.

11 CHAIRWOMAN MARTIN: All right.
12 Thank you, Mr. Below.

13 Any questions from the
14 Commissioners?

15 [No verbal response]

16 CHAIRWOMAN MARTIN: Okay. Looks
17 like we have no questions. Thank you.

18 MR. BELOW: All right.

19 CHAIRWOMAN MARTIN: All right.
20 Liberty Utilities, Mr. Sheehan.

21 MR. SHEEHAN: Good afternoon. Mike
22 Sheehan for Liberty Utilities (Granite State
23 Electric Corp.). We did not prepare any
24 remarks for today. As most of the people on

1 this call are aware, we've taken two steps,
2 tariff steps, a few years ago allowing us to
3 send electricity to EV charging for resale
4 which is otherwise prohibited. And the
5 second, and more substantively, Mr. Below
6 just referenced the approval of our EV tariff
7 in the rate case just a few weeks ago.

8 Heather Tebbetts is on this call as
9 well. And we've been e-mailing as these
10 comments go along, and she is prepared to
11 answer many of the questions that have been
12 raised by the other utilities and the other
13 parties. So I guess what I would prefer to
14 do is simply turn to those questions and have
15 Heather address them as best she can.

16 CHAIRWOMAN MARTIN: Okay. Thank
17 you, Mr. Sheehan.

18 Any questions for Liberty from the
19 Commissioners? Commissioner Bailey.

20 COMMISSIONER BAILEY: Yes. Ms.
21 Tebbetts, can you talk a little bit about the
22 Company's position on third-party meters for
23 EV charging?

24 MS. TEBBETTS: Sure. Yeah. Sure.

1 Absolutely. So with third-party meters in
2 general, actually, I want to comment on that
3 because the conversation I've heard all --
4 well, it's almost one o'clock now, not quite
5 all morning -- was about cyber security and
6 other issues like that. And it jogged my
7 memory from the hearing we had where,
8 Commissioner Bailey, you asked me a bunch of
9 questions about what we were going to do
10 about our cyber security issues with regards
11 to metering. So I went back in and looked at
12 the transcript. Because I think it's
13 important to note that this was a hearing
14 back in 2018, and at the time we did have
15 questions about, you know, how metering was
16 going to work and how the battery was going
17 to talk to things such as our own systems --

18 CHAIRWOMAN MARTIN: Ms. Tebbetts,
19 can you pause for a moment?

20 Ms. Robidas.

21 (Pause)

22 MS. TEBBETTS: So one of the items
23 you did ask me about was, you know, has our
24 cyber security group looked at the meters.

1 And one of the things we had talked about
2 was, you know, at the time they were meters
3 we were already using. But one of the things
4 you brought up that I thought was really
5 important was the fact that they had
6 different levels of programming available to
7 them, simply because they're cellularly read
8 and also because they do gather a lot of
9 interval data and other data that can be
10 programmed.

11 One of the items you had mentioned
12 was -- your question to me was, "which makes
13 it more attractive to possibly cyber
14 terrorists." And, you know, at the time I
15 said I didn't know, but maybe. And you noted
16 that's something we should look at as a
17 company. Since then it is some of the things
18 we have looked at, certainly through our
19 cyber security review for the battery storage
20 pilot.

21 So when it comes to third-party
22 metering, whether it be for billing and
23 payment purposes through EV charging, I don't
24 know if there's an answer I can give you at

1 the moment on whether I agree or disagree
2 with it. I think the important piece of it
3 is whatever technology is presented to us
4 through a third-party, it needs to go through
5 the cyber security vetting before we say yes
6 we'll use it. That to me is the most
7 important thing because I do think there are
8 concerns of cyber security. That's one
9 reason why our batteries are not talking to
10 our systems, because, you know, there could
11 be a chance that something happens with the
12 systems. I mean, we see it all the time on
13 the news about cyber security hacks.

14 So I don't know the answer. I
15 think it needs to be vetted. I would assume
16 that there's meters out there that will do
17 the job. But at the same time, we are doing
18 the billing and payment, and so there has to
19 be something that allows the utility to feel
20 extremely comfortable that the data being
21 used to bill customers is accurate and as
22 precise as it can be with regards to how
23 we're doing it today in the world. It's
24 really to important to us and it's important

1 to our customers I think as well. Through
2 our battery program, we have been asked, you
3 know, how did you come up with the rates?
4 How do I know your meters are working right?
5 And we've explained to them what our process
6 has been, and they've been very comfortable
7 with it. I don't know if I'd be comfortable
8 saying to a customer, if they asked us about
9 the meter, saying, "Well, the third party is
10 actually the one who's administering this, so
11 you're going to have to call them." You
12 know, I don't know -- I don't think we'd be
13 very comfortable saying that.

14 So, again, I think it's going to be
15 an issue that we're going to have to deal
16 with very specifically when that third party
17 presents something potentially to be used.

18 COMMISSIONER BAILEY: Have you
19 begun billing customers under your
20 time-of-use rates yet for the battery storage
21 pilot, and/or do you have any electric
22 vehicle charging customers that use those
23 rates?

24 MS. TEBBETTS: So we don't have any

1 vehicle charging customers yet. The rate was
2 just approved on the 1st of July. But we do
3 have, I want to say we have nine customers
4 who have batteries right now at this moment.
5 And we do -- I think this week they're
6 getting put on the time-of-use rate on their
7 next billing cycle. So I think this week a
8 majority of those customers are going on the
9 time-of-use rate. But no one's gotten a bill
10 yet for it, I'll say, just because those
11 batteries have just been installed.

12 COMMISSIONER BAILEY: Okay. Thank
13 you. That's all the questions I had.

14 CHAIRWOMAN MARTIN: Any questions,
15 Commissioner Giaimo?

16 COMMISSIONER GIAIMO: Only because
17 it was just brought up. Can you just remind
18 us of the spread between the various rates,
19 being peak, not peak and off-peak?

20 MS. TEBBETTS: Sure. If you give
21 me one second, I can actually tell you
22 because we're making a filing today for our
23 energy service compliance tariff and I can
24 tell you what the rates are.

1 COMMISSIONER GIAIMO: The top
2 number I think was 36 cents.

3 MS. TEBBETTS: Yes. So let me see
4 here. I have the newest rates effective
5 August 1. It's pretty close. It's about
6 30 -- so the critical peak hours, which is
7 Monday through Friday, 3 p.m. to 8 p.m., it's
8 about 30 cents per kilowatt hour. For the
9 mid-peak -- and this is total, all in --
10 which is going to be from 8 a.m. to 3 p.m.,
11 Monday through Friday, and also Saturday
12 8 a.m. to 8 p.m., is about 14 cents. And
13 then our off-peak, which is Monday through
14 Friday, 8 p.m. to 8 a.m., and also Saturday
15 and Sunday and holidays, 8 p.m. to 8 a.m., is
16 8-1/2 cents. And that's all in with all rate
17 components.

18 COMMISSIONER GIAIMO: Thank you.
19 Thank you. And you said nine customers have
20 installed batteries. So that's 18 batteries
21 total?

22 MS. TEBBETTS: That's correct.

23 COMMISSIONER GIAIMO: Okay. Thank
24 you, Ms. Tebbetts.

1 MS. TEBBETTS: I just wanted to
2 speak -- I don't know if I have an
3 opportunity to mention it, but when I was
4 listening to all of you discuss the services
5 for the charging stations and all that, I
6 just want to be really clear. At least for
7 Liberty, we actually -- the way we design
8 services, there's one service to a home or a
9 building. There's one service. There's no
10 multiple services. Within that one service
11 we provide potentially multiple meters, all
12 right. So for all our customers who are
13 going to be using electric charging stations,
14 they're going to have one service come into
15 the home, whatever voltage is necessary to
16 serve all of the load, and then we'll have
17 two meters. One meter will serve the home
18 circuit, we'll call it, and then one meter
19 will be installed to serve only that charger
20 circuit. So our standards don't provide you
21 have actually two services going into a
22 location, it would just be one. I just want
23 to make sure on the record for Liberty that
24 that's the case. I know that other utilities

1 maybe have different standards and they have
2 multiple services going to a home. But our
3 standards provide one service, and then the
4 load is determined based on what they're
5 going to be having in their home.

6 COMMISSIONER GIAIMO: Thanks.

7 CHAIRWOMAN MARTIN: Okay. All
8 right. Thank you, Ms. Tebbetts.

9 Is there anyone else who is present
10 that wants to speak and hasn't?

11 [No verbal response]

12 CHAIRWOMAN MARTIN: Okay. Seeing
13 none, I want to thank everyone for your
14 comments today. We definitely appreciate the
15 time that you've taken to be here this
16 morning and afternoon. And we are adjourned.

17 (Hearing adjourned at 12:56 p.m.)

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C E R T I F I C A T E

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