

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

November 29, 2018 - 9:09 a.m.
Concord, New Hampshire

NHPLC 7DEC18AM9:53

RE: DE 17-189
LIBERTY UTILITIES (GRANITE STATE
ELECTRIC) CORP. d/b/a LIBERTY
UTILITIES: Petition to Approve
Battery Storage Pilot Program.

PRESENT: Chairman Martin P. Honigberg, Presiding
Commissioner Kathryn M. Bailey
Commissioner Michael S. Giaimo

Sandy Deno, Clerk

APPEARANCES: Reptg. Liberty Utilities (Granite
State Electric) Corp. d/b/a
Liberty Utilities:
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Reptg. the City of Lebanon:
Clifton Below, City Councilor
Greg Ames

Reptg. Conservation Law Foundation:
Melissa E. Birchard, Esq.

Reptg. Acadia Center:
Ellen Hawes

Reptg. Sunrun, Inc.:
Chris Rauscher

COURT REPORTER: Steven E. Patnaude, LCR No. 52

**CERTIFIED
ORIGINAL TRANSCRIPT**

APPEARANCES: (C o n t i n u e d)

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**Reptg. New Hampshire Sustainable
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Madeleine Mineau

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Reptg. PUC Staff:

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Thomas Frantz, Director/Electric Div.

Elizabeth Nixon, Electric Division

OTHER APPEARANCES NOTED:

Rep. Lee Oxenham

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**WITNESS PANEL: HEATHER M. TEBBETTS
 CLIFTON C. BELOW
 LON HUBER
 ELIZABETH R. NIXON**

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P R O C E E D I N G

CHAIRMAN HONIGBERG: We are here this morning in Docket DE 17-189, which is Liberty Utilities (Granite State Electric) Corp.'s Battery Storage Proposal. We have a Settlement Agreement on file. Not everyone has signed onto the Agreement, but as I understand it there's no one who's here to oppose it.

Before we do anything else, let's take appearances.

MR. SHEEHAN: Good morning, Commissioners. Mike Sheehan, for Liberty Utilities (Granite State Electric) Corp.

MR. RAUSCHER: Chris Rauscher, with Sunrun.

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

MR. BELOW: Good morning, Commissioners. Clifton Below, City Councilor for the City of Lebanon. And with me today is Greg Ames from our Energy Committee. Thank you.

CHAIRMAN HONIGBERG: Anybody else?

[No verbal response.]

1 CHAIRMAN HONIGBERG: Back here.

2 MS. MINEAU: Madeleine Mineau, with
3 NHSEA.

4 MR. EMERSON: Eli Emerson, from
5 Primmer, Piper, Eggleston & Cramer, on behalf
6 of NHSEA.

7 MS. HAWES: Ellen Hawes, with Acadia
8 Center.

9 REP. OXENHAM: Lee Oxenham,
10 ratepayer.

11 MR. KREIS: Good morning. I'm D.
12 Maurice Kreis, the Consumer Advocate, also a
13 ratepayer, here on behalf of residential
14 utility customers. The distinguished gentleman
15 to my left is Lon Huber of Navigant, who is our
16 consultant in this proceeding. And seated or
17 standing next to him -- or, seated next to him
18 is Brian Buckley, who is the OCA's Staff
19 Attorney.

20 MR. WIESNER: Commissioners, I'm Dave
21 Wiesner, representing Commission Staff. With
22 me are the Director of the Electric Division,
23 Tom Frantz, and Electric Division Analyst Liz
24 Nixon, our witness in this case.

1 CHAIRMAN HONIGBERG: All right. How
2 are proceeding this morning -- Yes, Mr.
3 Emerson.

4 MR. EMERSON: This is Jack Ruderman,
5 is in this sit here, but had to step out for a
6 second.

7 CHAIRMAN HONIGBERG: He looks a
8 little pale.

9 *[Laughter.]*

10 MR. EMERSON: Jack Ruderman, from
11 ReVision Energy.

12 CHAIRMAN HONIGBERG: Mr. Sheehan, how
13 are we proceeding this morning? Or,
14 Mr. Wiesner? Either one.

15 MR. WIESNER: I'll handle that. We
16 will have a panel of four witnesses addressing
17 the Settlement. And they can take the stand
18 either now, or after some other preliminary
19 matters are addressed.

20 Madeleine Mineau, who introduced
21 herself a moment ago on behalf of NHSEA, which
22 I thought had changed its name, but they're
23 still going by that and that's fine, would like
24 to take the stand and adopt the testimony

1 previously filed by her predecessor, Kate
2 Epsen. And we have no problem with that. That
3 should be a very brief matter.

4 We could either do that first or we
5 could do that later. I'll leave it up to the
6 Chair.

7 CHAIRMAN HONIGBERG: Why don't we
8 just get that out of the way as part of the
9 preliminaries. And she doesn't need to do that
10 up here. She can do that from her seat, if
11 she'd be more comfortable.

12 MR. WIESNER: Okay.

13 CHAIRMAN HONIGBERG: So, that's one
14 preliminary. What else you got?

15 MR. WIESNER: All right. So, we'll
16 do that before we get the panel up on the
17 stand.

18 There is a general agreement among
19 the parties that we will minimize, if not
20 eliminate, friendly cross-examination. So, I
21 don't expect a lot of questions for the panel
22 from the parties. I expect that most of the
23 questions will be from the Bench.

24 We had a motion filed, filed on paper

1 yesterday, by Sunrun and ReVision. Their
2 witness, Justin Barnes, is not able to join us
3 today. So, they would like his testimony to be
4 entered by affidavit, rather than by in-person
5 sworn testimony.

6 And they are also asking for an
7 opportunity to file a written closing
8 statement. And I believe that that request
9 stands, even though Mr. Rauscher is here
10 representing the company this morning.

11 I don't believe there's any objection
12 to that motion.

13 CHAIRMAN HONIGBERG: Well, all right.
14 Let's take those two one at a time. The
15 representation in the motion is that there was
16 no objection to having the testimony come in by
17 affidavit. I think that's fine. It's a
18 practice we've followed in the past. So,
19 that's approved.

20 With respect to written closings, do
21 people want to do written closings generally or
22 is it just the one entity that wants to do
23 that?

24 Mr. Sheehan?

1 MR. SHEEHAN: We have no intention to
2 do so.

3 CHAIRMAN HONIGBERG: Anyone else? Or
4 everyone else wants to do it orally?

5 MR. WIESNER: I don't think any -- I
6 don't think there's any need for anyone else to
7 file a written closing statement.

8 CHAIRMAN HONIGBERG: It's an odd
9 request, particularly when there's
10 representatives of those entities here.

11 As long as no one objects to it, if
12 you want to get it in 24 hours later, that's
13 fine. What's today, Thursday? If it can be
14 filed by close of business tomorrow, that's
15 fine. So, that's how we'll deal with that
16 request.

17 What else you got, Mr. Wiesner?

18 MR. WIESNER: Just this morning
19 Liberty has a new Motion for Protective
20 Treatment, which covers some discovery
21 responses that involve information claimed to
22 be confidential. I don't know if you have that
23 yet?

24 CHAIRMAN HONIGBERG: Haven't seen it.

1 MR. WIESNER: Attorney Sheehan has
2 paper copies, I believe.

3 CHAIRMAN HONIGBERG: Well, it --

4 MR. WIESNER: And we don't
5 necessarily need to have that resolved at this
6 time.

7 CHAIRMAN HONIGBERG: It won't be. As
8 people who are here regularly know, if there's
9 a request for confidential treatment that
10 hasn't been ruled on, the items are treated as
11 confidential throughout. So, if there's a need
12 to refer to that information during the course
13 of the hearing, we'll have to work it out with
14 the stenographer as to how to have the record
15 marked. And if there's people in the room who
16 shouldn't hear or see the confidential
17 information, we'll have to deal with that as
18 well. But I think we'll take that up as we
19 need to.

20 Anything else in the way of
21 preliminaries?

22 MR. WIESNER: I'm not certain whether
23 there are any members of the public who would
24 offer -- like to offer comment, but --

1 CHAIRMAN HONIGBERG: I don't see
2 anyone.

3 REP. OXENHAM: Could I reserve the
4 right to do so?

5 CHAIRMAN HONIGBERG: Well, you're --
6 you intervened as a ratepayer, did you not,
7 Representative Oxenham?

8 REP. OXENHAM: Yes.

9 CHAIRMAN HONIGBERG: That sort of
10 takes you out of the "members of the public"
11 realm. You actually have standing.

12 REP. OXENHAM: I don't think I
13 intervened.

14 CHAIRMAN HONIGBERG: Oh, you didn't
15 intervene?

16 REP. OXENHAM: No. No.

17 MR. WIESNER: No. Representative
18 Oxenham is not an intervenor, not a party in
19 this case.

20 CHAIRMAN HONIGBERG: Oh, okay. So,
21 that's fine. If you want to offer up something
22 in the nature of public comment, if you want to
23 do it now, you can do it now, you can wait till
24 the end and sit through the entire

1 presentation, if you'd like. It's up to you.

2 REP. OXENHAM: I'd like to wait till
3 the end, if I could.

4 CHAIRMAN HONIGBERG: Fair enough.

5 REP. OXENHAM: Thank you very much.

6 CHAIRMAN HONIGBERG: And if other
7 members of the public show up. I think
8 everyone else in the room identified him or
9 herself in one way or another. But if others
10 come in, we'll make that opportunity available
11 at the end.

12 Anything else, Mr. Wiesner?

13 MR. WIESNER: That's all I have for
14 preliminaries. And so, I think maybe Ms.
15 Mineau should be questioned on it.

16 CHAIRMAN HONIGBERG: All right. Why
17 don't we deal with Ms. Mineau's testimony. Mr.
18 Emerson, are you going to walk her through
19 this?

20 MR. EMERSON: Yes.

21 CHAIRMAN HONIGBERG: All right.

22 MR. EMERSON: Does she need to be
23 sworn in first?

24 CHAIRMAN HONIGBERG: Yes, please.

[WITNESS: Mineau]

1 Mr. Patnaude.

2 (Whereupon **Madeleine Mineau** was
3 duly sworn by the Court
4 Reporter.)

5 CHAIRMAN HONIGBERG: Mr. Emerson.

6 **MADELEINE MINEAU, SWORN**

7 **DIRECT EXAMINATION**

8 BY MR. EMERSON:

9 Q Could you state your name for the record
10 please.

11 A My name is Madeleine Mineau.

12 Q And do you have before you the prefiled Direct
13 Testimony of Kate Bashford Epsen, filed on May
14 2nd, 2018?

15 A Yes, I do.

16 Q And are you here to adopt that testimony today,
17 the testimony, except for the personal
18 information about Ms. Epsen?

19 A Yes, I am.

20 Q And is it true and accurate to the best of your
21 knowledge?

22 A Yes, it is.

23 Q And this is the testimony that you'd give
24 today, except for the personal testimony of

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[WITNESS: Mineau]

1 Ms. Epsen?

2 A Yes.

3 *[Court reporter interruption.]*

4 CHAIRMAN HONIGBERG: Use the
5 microphone, Eli.

6 MR. EMERSON: I would move the
7 admission of the testimony of Kate Bashford
8 Epsen, as adopted by Madeleine Mineau.

9 CHAIRMAN HONIGBERG: We don't usually
10 do it that way, but I understand what you've
11 done, and that's fine.

12 Does anyone have questions for
13 Ms. Mineau?

14 *[No verbal response.]*

15 CHAIRMAN HONIGBERG: Seeing none. I
16 think we're done with that aspect of things.
17 And we'll strike ID on that exhibit.

18 And so, is the next order of business
19 to have the panel take the witness stand?

20 MR. WIESNER: Yes.

21 CHAIRMAN HONIGBERG: Why don't the
22 witnesses do that then. Mr. Patnaude.

23 (Whereupon **Heather M. Tebbetts,**
24 **Clifton C. Below, Lon Huber,** and

[WITNESS: Mineau]

1 **Elizabeth R. Nixon** were duly
2 sworn by the Court Reporter.)

3 CHAIRMAN HONIGBERG: Who's going to
4 be doing the questioning?

5 MR. SHEEHAN: I was going to
6 introduce Ms. Tebbetts and have her walk
7 through the Settlement Agreement, with the
8 understanding each would introduce their own
9 witness.

10 MR. WIESNER: I think each attorney
11 should do preliminary questioning of their
12 witness, and that we might consider doing that
13 first, and then having the witnesses make their
14 statements.

15 MR. SHEEHAN: Doing what first?

16 MR. WIESNER: Doing the preliminary
17 questions about adopting their testimony.

18 MR. SHEEHAN: Okay.

19 CHAIRMAN HONIGBERG: Yes. Let's get
20 each witness identified and introduced. And
21 then we'll circle back to you, Mr. Sheehan, to
22 have you ask some questions of Ms. Tebbetts.

23 MR. SHEEHAN: Thank you.

24 **HEATHER M. TEBBETTS, SWORN**

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1 **CLIFTON C. BELOW, SWORN**

2 **LON HUBER, SWORN**

3 **ELIZABETH R. NIXON, SWORN**

4 **DIRECT EXAMINATION**

5 BY MR. SHEEHAN:

6 Q Ms. Tebbetts, please introduce yourself and
7 your position with Liberty Utilities.

8 A (Tebbetts) My name is Heather Tebbetts. And I
9 am the Manager of Rates and Regulatory Affairs
10 for Liberty Utilities Service Company. And in
11 that capacity, I'm responsible for policy and
12 strategy for regulatory issues for Granite
13 State Electric.

14 Q Ms. Tebbetts, you filed testimony at the outset
15 of the docket and various forms of supplemental
16 testimony and technical statements. Is that
17 correct?

18 A (Tebbetts) Yes.

19 Q Thanks to Staff, we have a list of exhibits
20 with numbers, and I'm going to walk through
21 those that apply to you and ask you to adopt
22 them.

23 Exhibit 1 and 2 is the confidential and
24 redacted versions of your original testimony in

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 this docket. Exhibit 4 and 5 is supplemental
2 testimony by you. Exhibit 6 is Supplemental
3 Testimony of Vikram Singh, we will circle back
4 to that. Exhibits 8 and 9 is a revised
5 appendix. It's really not testimony, but I
6 think there was some testimony supporting it.
7 Exhibit 10 is a technical statement and revised
8 attachment. And Exhibit 19 is the technical
9 statement that you filed in support of the
10 Settlement Agreement.

11 Do you recall those various filings that
12 you've made through the course of this docket?

13 A (Tebbetts) Yes.

14 Q And for both the testimonies and the technical
15 statements, are the substance of the questions,
16 answers, and statements still true?

17 A (Tebbetts) Yes.

18 Q And do you adopt them today as your testimony?

19 A (Tebbetts) Yes.

20 Q Circling back to Mr. Vikram's -- Mr. Singh's
21 testimony, which is Exhibit 6, Mr. Singh is an
22 employee of the consultant the Company used at
23 the outset of this docket, is that correct?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q And his testimony is sort of high-level
2 benefits and policies behind utility ownership
3 of batteries, is that correct?

4 A (Tebbetts) Yes.

5 Q And it wasn't very particular -- factual
6 testimony particular to this project, is that
7 fair?

8 A (Tebbetts) Yes.

9 Q Nonetheless, are you willing to adopt the
10 policy statements that Mr. Singh gave in this
11 case?

12 A (Tebbetts) Yes.

13 Q And that would be Exhibit 6, correct?

14 A (Tebbetts) Yes.

15 Q Oh, last, Exhibit 20 was a technical statement
16 that you authored with Mr. Huber and Mr. Below.
17 To the extent you played a role in that
18 document -- or, to the extent you played a role
19 in that document, do you adopt that as your
20 testimony today as well?

21 A (Tebbetts) Yes.

22 MR. SHEEHAN: Thank you.

23 CHAIRMAN HONIGBERG: Mr. Sheehan, is
24 Ms. Tebbetts also responsible for 3 and 7? Or

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 is that someone else? Those -- it looks like
2 they're revised pages.

3 MR. SHEEHAN: You're correct.

4 BY MR. SHEEHAN:

5 Q Exhibit 3 was revised pages to your testimony
6 and Exhibit 7 is a piece of supplemental
7 testimony. I didn't pick up your name on the
8 list, so I missed it. I apologize. And do you
9 adopt those as well as your testimony here this
10 morning?

11 A (Tebbetts) Yes.

12 CHAIRMAN HONIGBERG: Mr. Kreis.

13 MR. KREIS: Thank you, Mr. Chairman.

14 BY MR. KREIS:

15 Q Good morning, Mr. Huber. Would you please
16 identify yourself for the record.

17 A (Huber) Lon Huber, with Navigant Consulting.

18 Q And your relationship to this proceeding is
19 what precisely?

20 A (Huber) I represent the Office of the Consumer
21 Advocate in this matter.

22 Q And way back on May 1st of this year, did you
23 prepare the prefilled written testimony that has
24 been marked here for identification as "Exhibit

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Number 11"?

2 A (Huber) Yes, I did.

3 Q And would it be fair to say that the subject of
4 that testimony is the initial Petition as filed
5 by Liberty Utilities in this docket?

6 A (Huber) Correct.

7 Q And contains your analysis of that original
8 Petition?

9 A (Huber) Yes, it does.

10 Q And with respect to that original Petition, if
11 I asked you all of the questions reflected in
12 your prefiled written direct testimony today,
13 would the answers that you give here be the
14 same as the ones in Exhibit 11?

15 A (Huber) Yes, they would.

16 Q And so, therefore, do you adopt the questions
17 and answers in Exhibit 11 as your sworn
18 testimony in this proceeding?

19 A (Huber) I do.

20 MR. KREIS: That's all I need to do.

21 CHAIRMAN HONIGBERG: With respect to
22 Exhibit 20, Mr. Huber had a role in that as
23 well, did he not?

24 MR. KREIS: Yes. Thank you. Thank

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 you, Mr. Chairman.

2 BY MR. KREIS:

3 Q Drawing your attention to Exhibit Number 20,

4 which is the Technical Statement of Ms.

5 Tebbetts, you and Mr. Below, did you play a

6 role in preparing that technical statement?

7 A (Huber) Yes, I did.

8 Q And do you adopt the substance of that

9 technical statement as your sworn testimony in

10 this proceeding as well?

11 A (Huber) I do.

12 MR. KREIS: I think that's all I need

13 to do.

14 CHAIRMAN HONIGBERG: Mr. Wiesner, are

15 you going to -- are you going to be able to

16 cover Mr. Below as well or going to have Mr.

17 Below do it on his own?

18 Mr. Sheehan.

19 MR. SHEEHAN: I had volunteered to do

20 that prior to the hearing.

21 CHAIRMAN HONIGBERG: No one tells me

22 anything.

23 MR. SHEEHAN: And I already forgot.

24 BY MR. SHEEHAN:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Mr. Below, could you please introduce yourself
2 and the capacity that brings you into the
3 hearing room this morning.

4 A (Below) Yes. I'm City Councilor Clifton Below.
5 And the City of Lebanon has authorized me to
6 represent the City in this matter.

7 Q And, Mr. Below, you were a party in this docket
8 and participated throughout in the
9 conversations and filed testimony and technical
10 statements yourself, is that correct?

11 A (Below) Yes, I did.

12 Q And marked as "Exhibit 12" is the Direct
13 Testimony of Clifton Below, I think the other
14 one was the technical statement in support of
15 the settlement agreement, Exhibit 20. Are
16 those the two pieces of testimony or technical
17 statements that you filed?

18 A (Below) Yes. Correct.

19 Q And do you have any substantive changes to
20 either of those this morning?

21 A (Below) No, I do not.

22 Q And do you adopt those, this testimony and the
23 technical statement, and again, the technical
24 statement you authored with others, do you

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 adopt those as your sworn testimony here this
2 morning?

3 A (Below) I do.

4 CHAIRMAN HONIGBERG: Now,
5 Mr. Wiesner.

6 BY MR. WIESNER:

7 Q Ms. Nixon, for the record would you please
8 state your name and your position with the
9 Commission.

10 A (Nixon) Elizabeth Nixon, Utility Analyst of the
11 Electric Division at the Public Utilities
12 Commission.

13 Q And in that role, did you analyze and evaluate
14 the proposed Battery Storage Pilot Program,
15 both in its initial form and as negotiated and
16 reflected in the Settlement Agreement, with a
17 particular focus on the costs and benefits of
18 that Program?

19 A (Nixon) Yes, I did.

20 Q And did you submit prefiled direct testimony,
21 which has been marked for identification as
22 "Exhibit 13"?

23 A (Nixon) Yes.

24 Q And was that testimony prepared by you or under

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 your direction and supervision?

2 A (Nixon) Yes.

3 Q Are there any corrections or substantive
4 changes to that testimony?

5 A (Nixon) No, there aren't.

6 Q And if I were to ask you those same questions
7 today again, with that testimony focused on the
8 initial proposal as filed by the Company, would
9 you provide the same answers?

10 A (Nixon) Yes, I would.

11 Q And do you adopt that prefiled testimony as
12 your testimony for purposes of this hearing?

13 A (Nixon) Yes, I do.

14 MR. WIESNER: Thank you.

15 CHAIRMAN HONIGBERG: You forgot 14,
16 Mr. Wiesner. Are you going to deal with Mr.
17 Demmer's testimony?

18 MR. WIESNER: He is not available.
19 And it's not really appropriate, in our view,
20 for Ms. Nixon to adopt his testimony.

21 CHAIRMAN HONIGBERG: Okay. Fair
22 enough.

23 So, are we ready then, Mr. Sheehan,
24 to have Ms. Tebbetts walk through the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Settlement?

2 MR. SHEEHAN: Sure.

3 BY MR. SHEEHAN:

4 Q Ms. Tebbetts, if you could put Exhibit 18, the
5 Settlement Agreement, in front of you.

6 A (Tebbetts) I am there.

7 Q At a high level, is it accurate to say that
8 this Settlement Agreement is the product of
9 many conversations involving all the people in
10 the courtroom here this morning?

11 A (Tebbetts) Yes.

12 Q And although Sunrun and ReVision Energy did not
13 sign, they were full participants throughout
14 all those proceedings, is that correct?

15 A (Tebbetts) Yes.

16 Q And they will speak to why they didn't sign.
17 But today the Settlement Agreement is the
18 agreement that all the other parties have
19 reached and filed in this document?

20 A (Tebbetts) Yes.

21 Q And at a very high level, can you tell us what
22 the Settlement Agreement provides for, and
23 maybe reference how it has changed from the
24 initial proposal the Company made, number of

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 batteries, the basic flow of the Settlement
2 Agreement? And then we can walk through the
3 document itself.

4 A (Tebbetts) Absolutely. So, the initial
5 proposal 364 days ago, wanted to note that,
6 because it's been a whole year and I can't
7 believe it. But I'm excited, at least we're
8 here today.

9 So, the initial proposal had the Company
10 installing 1,000 PowerWall -- Tesla PowerWalls
11 in customer homes behind the meter. And the
12 purpose of that was two-fold: To reduce peak
13 and also to provide an opportunity for a
14 non-wires alternative on one of our circuits up
15 in West Lebanon. And, of course, we went
16 through the process of vetting that proposal.
17 And as you have in front of you today is the
18 Settlement that these parties decided was most
19 appropriate to move this pilot forward with.

20 Q And again, at a very high level -- at a high
21 level, this Settlement provides for what, as
22 compared to what you just described as the
23 "initial proposal"?

24 A (Tebbetts) This Settlement provides for 500

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 batteries, in two phases, Time-of-Use rates as
2 well. But the non-wires alternative piece has
3 been taken out, and it will be looked at as
4 part of our next least cost plan.

5 Q Turning to the Settlement Agreement, the first
6 couple pages are a recitation of the history of
7 this case.

8 Section II is the legal authority. I'm
9 not asking you to give legal testimony, but is
10 that the section where the Agreement goes
11 through the requirements of RSA 374-G, and
12 explains why the Settling Parties believe it
13 satisfies the criteria of that statute?

14 A (Tebbetts) Yes.

15 Q Section B, this is Bates Page 005, is the
16 "Program Description, Size and Phasing". Could
17 you give us an overview of what that is
18 referring to?

19 A (Tebbetts) Yes. All right. So, with regards
20 to Program, Size and Phasing, as I mentioned,
21 there will be 500 batteries provided to Liberty
22 customers, and that will be done in two phases.
23 So, the first phase will be implemented
24 near-term, with Phase 2 deferred and

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1 conditional on the result of Phase 1.

2 Phase 1 will incorporate up to 200 of the
3 batteries. And the customers will get two
4 batteries and one gateway, as required by
5 Tesla. And Phase 2 will incorporate an
6 additional 300 of those batteries, if the
7 conditions noted in the Settlement Agreement
8 and my technical statement are met.

9 Q And those first 200 batteries, how would they
10 be installed and used?

11 A (Tebbetts) So, the first 200 batteries will be
12 installed either by Tesla or by an authorized
13 Tesla PowerWall installer. And as part of the
14 discussions in the Agreement, the Company is
15 going to go out for an RFP to find hopefully a
16 lower price installation cost. If we're unable
17 to do that, then we will just utilize Tesla to
18 install them. And --

19 Q And the use of the batteries, give us an
20 overview of how a customer will be using or the
21 Company will be using the batteries once
22 they're installed?

23 A (Tebbetts) Absolutely. So, once the batteries
24 are installed, there's two uses of the

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 batteries. The first use will be the
2 customer's use. And the customer will have the
3 batteries offset their load during the critical
4 peak hours as provided in the Settlement
5 Agreement, and the batteries are programmed to
6 automatically do that.

7 So, during the hours of the 3:00 p.m. to
8 8:00 p.m., Monday through Friday, any load
9 behind that meter that the battery sees will be
10 offset. So, the customer, if their load is low
11 enough, will not see any import from the grid
12 for energy during those hours. That we expect
13 would happen every single day Monday through
14 Friday.

15 If a customer is utilizing energy that's
16 more than what's in the batteries, then there's
17 a potential there to import kilowatt-hours, if
18 they, you know, turn on something in their home
19 that's just utilizing a lot of energy.

20 The second piece of this is going to be
21 when Liberty takes control of the batteries.
22 So, as I mentioned earlier, the purpose of this
23 pilot so to provide a peak reduction
24 opportunity for the Company, which then we

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 would flow all those savings back to customers.
2 And by doing that, we will have to take control
3 of the battery.

4 So, in the analysis, and I believe my tech
5 statement noticed this, we will take control
6 about four times a month, maybe more, maybe
7 less on average, four times a month is what
8 we're expecting over the course of a year. And
9 that means that the battery will be told to
10 charge overnight, so that we can dispatch that
11 battery at the peak hour that ISO-New England
12 is projecting will be that monthly peak.

13 And so, for customers who don't have
14 net-metered distributed generation, the battery
15 will actually do this anyway. They will always
16 charge overnight during off-peak hours, it will
17 be programmed that way, since they don't have
18 any type of DG to charge it, and automatically
19 dispatch, as I mentioned, except when we take
20 control.

21 We will notify customers at least 24 hours
22 in advance from when we're going to take
23 control. And the way we're going to know what
24 those peak predictions are is utilizing ISO-New

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 England's 3-day peak prediction information
2 that they provide to us. And every day we'll
3 be looking at that. And as we get closer,
4 we'll have to make a determination of "do we
5 export that battery on this day or not?" So,
6 it's possible that a customer could get
7 multiple notifications a month, or maybe only a
8 couple of notifications a month, depending on
9 the month of the year.

10 During that period, the Company will
11 actually, our Control Center, our Electric
12 Control Center will take control of the
13 battery, and it will send a signal to the
14 batteries to dispatch any excess power in those
15 batteries during a certain hour or two hours.
16 That was one of the reasons why we chose the
17 Tesla battery. It's a 5 kW battery, with a 13
18 and a half kilowatt-hour energy.

19 And our concern was two issues. One, we
20 wanted to have enough energy in there to get
21 two hours out of that for that capacity. And
22 with the 13 and a half kilowatt-hour battery,
23 we can do that. But we also, as required by
24 Tesla, need to leave at least 20 percent energy

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 in the battery for the customer if there were
2 to be a power outage. And so, that battery has
3 the energy and capacity to do exactly what we
4 were looking for. So, that's why we chose the
5 Tesla battery. It had all of the pieces we
6 needed to run this Program.

7 So, once we've taken control of the
8 battery during those peak -- those hours, we
9 will then give it back to the customer with
10 whatever energy is left in it, and they will be
11 back to controlling the battery -- or, they
12 will be back to utilizing the energy in the
13 battery every day during the week, as was
14 noted, before we took control. And we'll do
15 that periodically through the year.

16 Q And so, the basic concept is the battery
17 charges every night, whether it's on the
18 customer's side or whether the Company is
19 taking control, and either the customer uses
20 the energy during the day or, on those
21 occasions you just described, the Company uses
22 the energy during the day --

23 A (Tebbetts) Yes.

24 Q -- during that one hour. And you referred to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the peak period. Another part of the
2 Settlement that's described later but is a
3 Time-of-Use rate mechanism, is that correct?

4 A (Tebbetts) Yes.

5 Q Briefly describe the elements of that.

6 A (Tebbetts) Absolutely. So, in our original
7 proposal, we only had proposed to do
8 Time-of-Use rates for transmission and
9 distribution. We shied away from the energy
10 service piece of it, only because we go out to
11 bid for energy service. But, in working with
12 Mr. Below and Mr. Huber, we were able to come
13 up with what I'll call a "fully used
14 Time-of-Use rate", because certainly we
15 wouldn't provide a Time-of-Use piece for the
16 SBC part of the rate.

17 So, the Time-of-Use rate actually provides
18 for time-of-use for energy service,
19 transmission, and distribution. And to really
20 capture the costs associated with providing
21 Time-of-Use service, the testimony of Mr.
22 Below, myself, and Mr. Huber really digs into
23 the weeds on how we got there in the model.
24 But it really provides a cost causation for

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 customers when looking at how it was designed,
2 in the sense that we have summer/winter
3 periods. We have, during the weekdays,
4 off-peak, mid-peak, and critical peak. And
5 then we also have, on the weekends, mid-peak
6 and off-peak.

7 So, this is one of those Time-of-Use
8 rates, from my experience in New Hampshire, we
9 don't have any rates like this in any of the
10 utilities. This is a first for Liberty. But
11 I'll tell you that I'm excited to be able to
12 offer something like this, because I think
13 customers are going to like it. And I think
14 they're going to really be able to understand
15 how they use energy, and allow them to better
16 understand how they can cut back on energy as
17 well.

18 So, we think the Time-of-Use rate as
19 designed is most appropriate for a pilot like
20 this, based on the fact that we utilize actual
21 cost data to get there.

22 Q Going back to the Settlement Agreement, at
23 Bates 007 and 008 is where Phase 1 is
24 described, and that's what you've just gone

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1 through, and Page 9 begins a description of
2 Phase 2.

3 Tell us what happens in Phase 2. Let me
4 first ask, you mentioned earlier that Phase 2
5 happens only if certain conditions are met.
6 Can you tell us what conditions need to be met
7 during Phase 1 in order for us to get to Phase
8 2?

9 A (Tebbetts) Absolutely. Okay. So, the
10 following conditions will need to be met:
11 Liberty has to install a minimum of 100
12 batteries, which have operational and
13 controlled for dispatch for at least 18 months;
14 we've achieved an average monthly coincident
15 peak forecasting accuracy of at least
16 75 percent; and that we've realized RNS, LNS,
17 and Forward Capacity Market cost savings during
18 Phase 1. With those two items, we need to be
19 taking into account that we'll be adjusting for
20 changes in actual rates and clearing prices,
21 but that the cost savings are no less than the
22 projected cost savings in what we've submitted
23 here for the cost/benefit analysis. So, we'll
24 need to review it and make sure that we've

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 achieved those items -- those savings in the
2 analysis.

3 Also, we need to demonstrate to the
4 Commission that the investments were necessary
5 to implement Phase 2, and they have a
6 forecasted net present value that is positive,
7 after incorporating our historical peak
8 forecasting accuracy, and again updating for
9 applicable LNS and RNS transmission rates and
10 other updated assumptions.

11 And also, that there's been no material
12 adverse change in any relevant circumstances or
13 criteria in the program.

14 If Phase 2 is not approved, such that we
15 maybe don't meet these criteria, the Commission
16 has the authority to then examine whether it's
17 prudent to continue with Phase 1, based on a
18 revised and updated benefit -- cost/benefit
19 analysis with alternatives regarding the
20 batteries from Phase 1.

21 Q So, at a high level, Phase 2 is conditioned on
22 Phase 1 working well?

23 A (Tebbetts) Correct.

24 Q And the discussions that we've had over the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 months, one of the big issues we -- Liberty has
2 to do is predict the peaks and dispatch the
3 batteries when the peaks happen?

4 A (Tebbetts) Correct.

5 Q And that's the 18 months where we have to be at
6 least 75 percent accuracy of those predictions.
7 Is that correct?

8 A (Tebbetts) Yes.

9 Q And, of course, if we don't predict the peak,
10 then we don't get the savings that we're
11 projecting for lowering the peak usage,
12 correct?

13 A (Tebbetts) That's correct.

14 Q If we do meet those conditions, and this is
15 described on Bates 009, what does Phase 2 look
16 like?

17 A (Tebbetts) All right. So, Phase 2, I'm just
18 going to grab my paper. So, Phase 2 looks just
19 like Phase 1, except that we have the
20 opportunity to install another 300 batteries,
21 and participate another 150 customers. That
22 would be the absolute benefit there, which then
23 would increase savings for all customers.

24 Q The mechanics between the customer and the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Company are the same in Phase 2?

2 A (Tebbetts) Yes. Nothing changes. In fact,
3 Phase 1 is really going to be setting pace for
4 Phase 2. Once we've figured everything out in
5 Phase 1, we're just going to add more batteries
6 in Phase 2.

7 Q Page 11 of the Settlement Agreement, Section E,
8 has a section titled "Risk-Sharing". Can you
9 explain what that is about?

10 A (Tebbetts) Yes. So, in connection with the
11 evaluation of Phase 2, Liberty has the
12 opportunity to propose a risk-sharing mechanism
13 for Phase 2, which will -- what would happen
14 is, we would share with our customers financial
15 risks associated with the need to predict the
16 monthly coincident peak. The opportunity may
17 consist of upward and downward adjustments to
18 our approved ROE, whenever that happens. And
19 it will be associated with the investment only.
20 It will not be associated with any other
21 investments.

22 But the opportunity there we thought was,
23 looking at other paradigms in other states,
24 there's performance-based incentives when

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 looking at things like non-wires alternatives
2 and peak reduction programs, and we thought
3 this would be an opportunity for us to test the
4 waters on looking at performance-based
5 incentives through ROE and this kind of
6 investment opportunity.

7 Q And the benefit or harm to the Company flows
8 from how well we predict the peaks?

9 A (Tebbetts) Absolutely. The better we do, the
10 more opportunity we have on our ROE. And if we
11 don't make it, then we lose on our ROE. Yes.

12 Q And again, as you said, this is the ROE only on
13 the investments in this program?

14 A (Tebbetts) That is correct.

15 Q Exhibit -- I mean, Section F is titled "TOU
16 Rate Design", and you've already described it
17 at a high level. And on Page 12 has the actual
18 rates that the Settlement Agreement proposes to
19 go in effect now, is that correct?

20 A (Tebbetts) Yes.

21 Q And it obviously provides for a higher rate
22 during the critical peak and lower rates during
23 the other two periods. How would those rates
24 change over time as our default service filings

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 and other adjustments happen?

2 A (Tebbetts) So, what will happen is we will
3 adjust these rates based on any new filing we
4 have. So, for example, we have usually a
5 transmission rate that changes for May 1st.
6 And so, what will happen is, we will, as part
7 of that filing, we will include the subsection
8 of "Hey, this is going to affect our
9 Time-of-Use rates for our Battery Pilot", and
10 provide an updated overall -- transmission and
11 overall rate. And to do that, we'll utilize
12 the model that's been created for this program
13 to calculate what that rate should be. So that
14 will be utilized in every rate change that we
15 have, whether it will be for distribution,
16 energy service or transmission.

17 Q So, all the complicated math that supports the
18 rates on Page 12 will be applied, just with
19 different inputs, as the default service or
20 transmission rates change?

21 A (Tebbetts) That's correct.

22 Q Can you explain how customers with net-metered
23 solar, for example, will participate in the
24 program, and how it would differ from a

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 non-net-metered customer?

2 A (Tebbetts) Yes. So, existing customers --
3 customers with existing net-metered distributed
4 generation, they're grandfathered right now
5 from the Alternative Net Metering Tariff. So,
6 we certainly went through Docket 16-576, where
7 the utilities have created a new net metering
8 tariff called the "Alternative Net Metering
9 Tariff". And through that tariff, customers
10 are no longer banking kilowatt-hours every
11 month, they're getting paid a monetary credit
12 or kilowatt-hours that they have exported.

13 So, customers may want to participate who
14 have net-metered DG that are on the
15 grandfathered rate, which they were not forced
16 to move into the new tariff. And if they want
17 to participate, they're going to have to move
18 to the Alternative Net Metering Tariff, because
19 we have restrictions within our billing system.
20 And so, they won't be able to use the banking.

21 But they are allowed to go back to the
22 grandfathered net metering tariff if they
23 terminate the program or leave the program, or
24 once this pilot maybe ends, they're welcome to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 go back to it if they so choose. There's no
2 restriction on those customers.

3 Q Starting on Page 14 of the Settlement, Section
4 G refers to a "BYOD", "Bring your Own Device",
5 "Program Design and Approval". And can you
6 explain what that provides for?

7 A (Tebbetts) Absolutely. So, as part of the
8 settlement discussions and moving through the
9 docket, Sunrun brought to everyone's attention
10 the opportunity for a "bring your own device"
11 Program. And so, as part of the Settlement
12 Agreement, the parties have agreed that the
13 Commission will convene a working group to
14 design a "bring your own battery" component of
15 the Pilot Program. And as part of that, the
16 working group will finalize recommendations for
17 submission to the Commission within four months
18 of the order.

19 As part of the "bring your own battery"
20 Program, there will be one or many aggregators
21 who will have the opportunity to have the same
22 capacity as Liberty in the program. So, for
23 example, we have 500 batteries. It happens to
24 be 2.5 megawatts, because we've chosen the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Tesla PowerWalls. Depending on the battery
2 that they use, there are certainly other
3 batteries out there, they will be allocated the
4 2.5 megawatts as well. It may be 500, it may
5 be more batteries or less, depends on the size
6 of the battery, but they will allocated the
7 same amount. And the purpose of the "bring
8 your own device" Program is the competitive
9 alternative to utilizing the Company's Battery
10 Program.

11 So, aggregators will be able to
12 participate through this process that we're
13 going to initiate after we get an order in this
14 docket. Which will provide for an RFI, where
15 hopefully we'll get information back from
16 aggregators, letting us know what kind of
17 program they would like to see designed. And
18 then we will -- the group will issue an RFP to
19 receive bids from aggregators. And as part of
20 the Settlement, there is a whole section that
21 kind of describes, you know, what the RFP will
22 be looking for, and bidders -- and how they'll
23 be scored. And then, once that's determined, a
24 bidder will be selected, and maybe more than

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 one, I don't think we've decided that yet, and
2 that's part of the process, where they will
3 have the opportunity to come in for Phase 1,
4 and Phase 2, of course, to provide batteries to
5 their -- to our customers, but through their
6 platforms.

7 And two of the pieces that are really
8 important here for Phase 1 is that Liberty will
9 participate in marketing to all of our
10 customers for the batteries that the chosen
11 aggregator wants to install in their home. And
12 the other piece of this is also, for Phase 1,
13 an aggregator will actually have to do its own
14 predicting of the peak. Liberty will not
15 provide a dispatch signal to them. And the
16 purpose really for that is, you know, we're new
17 at this. And so, we're not comfortable, we're
18 not ready to be also telling another entity
19 what to do. We really want to -- that's why
20 we're doing a Phase 1 only first. We need to
21 get to our 70 [sic] percent success rate, and
22 then be able to provide that information down
23 the road.

24 So, if an aggregator comes in on Phase 1,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 they will predict their own peak. And as Phase
2 2 comes about, Liberty will then predict the
3 peak for those aggregators. So, if we don't
4 get any aggregators in Phase 1, and they only
5 come in Phase 2, then they have the opportunity
6 of Liberty providing them that peak hour that
7 they would then dispatch to.

8 Q And is it the purpose of the aggregator to, in
9 effect, make a certain amount of megawatts
10 available to the Company for peak reduction
11 when we call on them?

12 A (Tebbetts) Yes. That would be the purpose of
13 this -- complete purpose of this. So,
14 essentially, if Sunrun, for example, provided
15 two and a half megawatts of battery storage to
16 the Company, then we would expect that we would
17 have two and a half megawatts to call upon when
18 there's a peak event. So, a total of
19 5 megawatts out there to be able to reduce our
20 peak. And then, we would have an agreement
21 with Sunrun, in our example, to pay them a
22 certain amount in order to provide the
23 additional savings to customers that we can see
24 that the batteries are providing.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q And the reason such an arrangement would be
2 beneficial to customers is because the
3 transmission rate, for example, would decrease
4 more than the amount the Company would be
5 paying to Sunrun?

6 A (Tebbetts) Yes.

7 Q Page 17 of the Settlement Agreement, Section H,
8 titled "Non-Wires Alternative Component", could
9 you describe what that provides?

10 A (Tebbetts) Yes. So, originally, as I mentioned
11 earlier, the Company had filed for two -- for
12 this pilot for two reasons. The first reason
13 was for capacity peak reduction, and also for a
14 non-wires alternative. So, the non-wires
15 alternative provided that we would install a
16 certain amount of batteries, we figured about
17 one and a half megawatts of capacity on our
18 11L1 circuit up in West Lebanon that has
19 recently had some violations.

20 And so, as part of the filing, we thought
21 this may be an opportunity to look at non-wires
22 alternatives, we've talked about it in our
23 previous least cost plans, we've talked about
24 it in net metering and other dockets.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 But the parties felt it was most
2 appropriate to actually deal with non-wires
3 alternatives in the least cost plan. And so,
4 we've removed that piece of the Program from
5 the pilot. And the idea is that, in our next
6 least cost plan, which is due next summer, the
7 Company will provide a detailed grid need
8 assessment on non-wires alternatives. And it
9 will provide for information over a five-year
10 planning capital -- or, capital planning
11 horizon, I'm sorry. And it's going to include
12 things like circuit, substation or facility
13 IDs, identified locations --

14 *[Court reporter interruption.]*

15 **CONTINUED BY THE WITNESS:**

16 A (Tebbetts) It will provide substation, circuit
17 and facility ID information, to identify
18 location and system granularity of grid needs.
19 It will provide distribution service that's
20 required, such as capacity, reliability, and
21 resilience. It will have an anticipated season
22 or date by which distribution upgrades must be
23 installed. And it will also have any existing
24 facility and equipment ratings that will

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 provide for megawatts or kVA. And forecasted
2 deficiency above the existing facility
3 equipment rating over five years.

4 So, rather than look at it in the context
5 of this docket, we will look at it in the
6 context of our least cost planning docket.

7 BY MR. SHEEHAN:

8 Q And this section you just read is providing
9 some parameters around how we will look at it
10 in the LCIRP docket?

11 A (Tebbetts) Yes.

12 CHAIRMAN HONIGBERG: Mr. Sheehan,
13 excuse me, just before you leave that topic.

14 BY CHAIRMAN HONIGBERG:

15 Q Ms. Tebbetts, you used the word "violation" --

16 A (Tebbetts) Oh.

17 Q -- in describing what was going on in that
18 circuit. What did you mean by that?

19 A (Tebbetts) Yes. Sure. So, I'm not an
20 engineer, but I'm going to give you what I
21 understand. We have criteria violations with
22 amperage on the system when the usage and load
23 is high. And so, we have N minus 1 and N minus
24 zero criteria violations. And there is one of

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 those on this circuit. And so, our engineer --
2 our planning engineers said that this would be
3 a good opportunity to utilize batteries to
4 defer building another feeder on that circuit.
5 Does that make sense?

6 BY MR. SHEEHAN:

7 Q Ms. Tebbetts, this --

8 MR. SHEEHAN: I can circle back to
9 this a little to try to clarify?

10 CHAIRMAN HONIGBERG: Sure.

11 BY MR. SHEEHAN:

12 Q These violations are not rule violations or
13 safety violations, is that correct?

14 A (Tebbetts) No, they're not any of that. It's
15 actually violations by which the amperage on
16 the circuit is higher than our planning
17 criteria with regards to how we plan for system
18 needs. So, it's just that the amperage is
19 higher.

20 Q And when we start having these kinds of
21 violations on a circuit is a signal to the
22 Engineering Department that we need, in the
23 next few years, depending on the numbers, we
24 need to address it either, as you suggested,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 NWA, or perhaps upgrade the circuit?

2 A (Tebbetts) Yes.

3 Q And that's something that is routine in the
4 electric industry that we have these criteria
5 violations, and that's where you focus your
6 attention for additional work?

7 A (Tebbetts) Yes.

8 Q At the bottom of Page 17 is "Customer Marketing
9 and Disclosure". What does that cover?

10 A (Tebbetts) Okay. So, Section I talks about the
11 customer marketing and disclosure. And
12 essentially, what we've agreed to is that
13 Liberty, and any aggregators that are
14 participating, will develop detailed marketing
15 and disclosure information. And the idea is
16 that we want customers to understand benefits,
17 costs, and any risks that may be associated
18 with the Program, such as, you know, when
19 Liberty takes control of the battery, if we
20 dispatch, you know, 80 percent of that battery
21 in hour ending 4:00 p.m. and 5:00 p.m., then
22 you still have critical peak hours ending 6:00
23 p.m. and 7:00 p.m. and 8:00 p.m. So, you may
24 end up importing kilowatt-hours, and you may

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 end up, you know, with the critical peak hour
2 charges. So, it's a risk to customers. But
3 what we need to do is provide detailed
4 information to explain to customers the
5 benefits of the Program, along with there may
6 be some risks.

7 So, part of that is going to be education
8 materials, and also working with the customers
9 during installation. And we are actually going
10 to have one our engineers dedicated to the
11 Program. So that, if the customer has
12 questions or concerns or anything about the
13 batteries themselves, they will have someone to
14 call to discuss.

15 We'll also be able to provide, during
16 Phase 2, an analysis using actual average
17 participating customer bill impacts. So,
18 customers will be able to actually see in Phase
19 2 what happened with Phase 1, "did customers
20 save money?" And "did they like the program?"

21 Q Section J, titled "Program Evaluation and Data
22 Analysis", describes what information we will
23 collect from the pilot, is that correct?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q And is it fair to say that data collection is
2 an important part of this pilot?

3 A (Tebbetts) Yes.

4 Q And it itemizes 1 through 6 the particular
5 types of information that we will collect
6 through the course of the pilot, is that
7 correct?

8 A (Tebbetts) Yes.

9 Q Section K, titled "Benefit-Cost Analysis", can
10 you describe, again at a high level, what that
11 analysis was and what it was intended to do?

12 A (Tebbetts) Absolutely. So, the benefit-cost
13 analysis is Attachments 1 and 2 in the
14 Exhibit 19?

15 Q Eighteen (18) is the Settlement Agreement.

16 A (Tebbetts) Eighteen. Yes, Exhibit 18. I'm
17 sorry. And the purpose of the benefit-cost
18 analysis really was to show qualitative,
19 quantitative costs and benefits of the Program.
20 So, we have here, showing the 200 battery
21 installation, or a 15-year timeframe, and the
22 reason for that is there's a 15-year life to
23 the batteries. And then, the expectation is
24 that two years later we will install another

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 300 batteries. So, we have another 15 years of
2 life on those batteries. So, really, a 17-year
3 period by which this pilot will be in effect.

4 The analysis assumes a 75 percent success
5 rate for battery dispatch, which I've
6 mentioned. And it also includes customer
7 attrition and declining success rate. So,
8 there is degradation of the batteries. And so,
9 we've included that within the analysis to try
10 to capture what we think in, you know, not just
11 in theory, but what we think in real-life what
12 will happen.

13 The analyses also include the costs of the
14 full transmission component and the Forward
15 Capacity Market portion of the energy service
16 component, when you're looking at the monetary
17 credit provided to customers when we export the
18 batteries for the net metering tariff.

19 Q Ms. Tebbetts, is it fair to say that the
20 benefit-cost analysis was a major focus of the
21 discussions that led to the Settlement
22 Agreement?

23 A (Tebbetts) It was a major focus. And I think
24 that the parties were looking to really provide

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 a net present value that was positive. And so,
2 the benefit of that shows that this is a viable
3 program. But it also requires customers to pay
4 more up front or contribute more every month,
5 which, you know, we felt is appropriate, since
6 they were going to get the benefits. Those
7 participating customers actually get the
8 benefits of offsetting their load at home by
9 utilizing the batteries.

10 Q And during the course of our conversations
11 leading to the Settlement, there were many
12 suggestions and discussions of how to
13 accurately portray this variable, adjust that
14 variable, how it would impact the overall
15 cost/benefit, and the net result is what we
16 have attached to the Settlement Agreement
17 today, is that correct?

18 A (Tebbetts) Yes.

19 Q The last section, before the more standard
20 legal language, kicks in on Page 21, and is
21 titled "Meter Compatibility". What does that
22 cover?

23 A (Tebbetts) So, in docket DE 16-576, the
24 Alternative Net Metering docket, Liberty and

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the City of Lebanon were ordered to work
2 together to come up with a pilot for real-time
3 pricing for the City of Lebanon through their
4 Municipal Aggregation Program. And that
5 actually seems to be happening kind of
6 coincidentally at the same time that we're
7 going to be doing this pilot. And so, we're
8 going to be needing special meters for this.
9 We're going to have to be using cellular-based
10 meters, because our AMR meters are not capable
11 of doing what we need here.

12 Q Heather, you mean special meters for the
13 Lebanon project, not for the Battery Storage
14 Program?

15 A (Tebbetts) Yes, actually for both. We're going
16 to need them -- we're going to need special
17 meters for both projects. So, for the Battery
18 Storage Pilot, we're going to need the cellular
19 meters, and for the City of Lebanon's pilot,
20 we'll also need special meters, because their
21 real-time pricing needs to have capabilities
22 of, you know, at minimum 15-minute intervals,
23 ideally, shorter intervals than that.

24 And so, during discussions of the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Settlement Agreement, you know, Liberty is
2 working with the City to come up with a
3 metering solution that allows the Company and
4 the City to utilize the same meters for both
5 programs. We haven't gotten there quite yet,
6 we're still in the process, but we're getting
7 close.

8 Q And this section of the Agreement is simply to
9 document that we have reached agreement in good
10 faith to pursue that and try to work out the
11 issues involved with those meters, is that
12 correct?

13 A (Tebbetts) Yes.

14 Q That brings us to the end of the Settlement
15 Agreement itself. And as you mentioned, the
16 attachments include your technical statement,
17 which you have delved into several times as you
18 went through this review, and the technical
19 statement of yourself and Mr. Huber and Mr.
20 Below that describes the details behind the
21 Time-of-Use rate calculation, and then the
22 cost-benefit analyses, 1 and 2. Is that
23 correct?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q What's the difference between the two
2 cost-benefit analyses that are attached?

3 A (Tebbetts) Yes. So, Attachment 1 is only Phase
4 1. And Attachment 2 provides the cost-benefit
5 analysis for Phases 1 and 2 combined.

6 Q And I think you testified that the combined
7 cost-benefit analysis for Phases 1 and 1 is a
8 net positive over the 17 years?

9 A (Tebbetts) Yes. And for Phase 1, you'll see
10 it's not net positive. And the reason for that
11 is there's some programming costs that are
12 involved. And so, certainly that will get
13 absorbed into Phase 1. And when looking at the
14 total program as a total, though, yes, it is a
15 net positive.

16 Q That's all I had, Ms. Tebbetts. Is there
17 anything else that you think we've missed at
18 this -- I mean, there's a million details, but
19 if there's something at a high level we've
20 missed that you'd like to address before I turn
21 the mike off?

22 A (Tebbetts) No.

23 MR. SHEEHAN: Okay. Thank you.

24 CHAIRMAN HONIGBERG: Who's going to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 go next?

2 MR. KREIS: You looking at me?

3 CHAIRMAN HONIGBERG: Sure, Mr. Kreis.
4 We're all looking at you now.

5 MR. KREIS: All right. Thank you. I
6 just have a few questions for Mr. Huber.

7 And I think, Mr. Huber, that the
8 focus of my questions will be comparing the
9 recommendations that you made in your initial
10 testimony that you filed back in May, that is
11 marked for identification as "Exhibit 11", and
12 the Program as described in the Settlement
13 Agreement that Ms. Tebbetts just testified
14 about.

15 BY MR. KREIS:

16 Q First of all, Mr. Huber, in your testimony, you
17 drew a favorable comparison between what
18 Liberty was proposing here and a similar
19 program being offered by another utility in a
20 neighboring state, whose name I won't mention,
21 but whose initials are "Vermont".

22 Do you still believe that the Program that
23 Liberty is proposing here in this Settlement
24 Agreement compares favorably to the program

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 being offered by our friends at Green Mountain
2 Power?

3 A (Huber) Absolutely. And, you know, I would say
4 that this, you know, if approved in accordance
5 with the Settlement, would put New Hampshire in
6 the leading edge of residential battery
7 deployment. And the reason why I say that is
8 because there's a few elements in this pilot
9 that that other state doesn't really have. And
10 one of those is the ability for the customers
11 to use the batteries for TOU arbitrage. And
12 so, as more renewable energy gets on line in
13 the system, it's actually quite beneficial for
14 the grid to soak up excess renewables, usually,
15 you know, at night, if it's wind, and then
16 deploy it during peak times. And so, this
17 pilot sends out a price signal so you have that
18 daily dispatch during the weekdays.

19 In addition, you know, the customers can
20 save some money from that, but the customer can
21 also see those price signals and change their
22 behavior in accordance with those price
23 signals.

24 So, I think, you know, the other thing I'd

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 like to mention, too, is that this TOU rate
2 design that we've formed is really a
3 leading-edge rate design. It has all the best
4 practices from across the country. It can
5 handle electric vehicles. It can handle
6 storage. It can handle solar and so forth.
7 And so, that's, you know, a key piece to this
8 whole thing that that other state does not
9 have.

10 Q In your prefiled testimony, you mentioned the
11 importance of customer education. Why is that
12 important?

13 A (Huber) A few reasons. You know, one, this is
14 new technology. And it's a new rate design,
15 with different price signals. In the past,
16 customers really only had the opportunity to
17 reduce their usage to save on their bill. With
18 TOU rates, you can reduce and shift. So,
19 you're adding to ways that a customer can save.
20 And if you design the TOU rate correctly, which
21 I believe we have, when a customer responds to
22 those price signals, everybody wins, the
23 customer and nonparticipants. And so,
24 education is key in order for that customer to

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1 really understand, one, the technology that
2 they're getting, but, two, how to respond to
3 those price signals in a way that's beneficial
4 to them.

5 Q And are you satisfied that the Settlement
6 Agreement adequately addresses the need for
7 Liberty's participating customers to be fully
8 educated into the -- educated about the
9 dimensions of the program that they will be
10 participating in?

11 A (Huber) Yes. I am satisfied with how the
12 Settlement came out with that regard.

13 Q And would it be fair to say that one of the
14 reasons that the Pilot Program is phased is
15 that in Phase 1 we'll be testing the extent to
16 which Liberty is actually successful in
17 adequately educating its customers?

18 A (Huber) Absolutely. And in the Settlement,
19 you'll see a provision for a measurement and
20 evaluation -- evaluation consultant. And so
21 that consultant's role is going to be data
22 collection, and to analyze, you know, the
23 Program, and actually collect data and see
24 "Hey, are customers changing their behavior to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 this price signal?", and, you know, a variety
2 of other different questions. So, that goes a
3 long way to making sure that everything will be
4 on track for Phase 2.

5 Q Another issue that you raised in your original
6 prefiled testimony was the question of peak
7 load forecasting accuracy. I guess my
8 preliminary question is, what happens if
9 Liberty doesn't do a good job of forecasting
10 the peak loads?

11 A (Huber) Well, you know, that's why we have a
12 phased approach. And, you know, to be honest,
13 I think, in the first few months, they probably
14 won't do a great job, and that's sort of the
15 experience that I've seen. But it usually
16 takes a little bit of practice, and then
17 you're, you know, you're actually having high
18 accuracy rates. And that's what we saw in that
19 other state as well.

20 And so, you know, in this Settlement, we
21 say, "okay, how" -- you know, "how are you
22 doing?" We give a little bit of allowance so
23 that they can learn, and then we judge it and
24 say "how close did you get to that 75 percent

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 target?" And if they just totally missed it,
2 then we say "you know what, you know, maybe
3 revise things, let's come back another time."
4 But, if they hit it, then great. We can
5 validate those savings to ratepayers. And then
6 we can move forward with the Phase 2.

7 Q And an incorrect forecast basically means that
8 the Company is taking control of the batteries
9 and deploying their capacity at a time when it
10 doesn't really reduce the Company's coincident
11 peak hourly load during the month, and that's
12 bad, right?

13 A (Huber) Correct.

14 Q So, are you satisfied that your concerns about
15 the need for a high degree of accuracy with
16 respect to peak load forecasting have been
17 addressed in the Settlement Agreement?

18 A (Huber) I am satisfied. And, you know, the
19 risk that I identified has been greatly,
20 greatly mitigated in the structure of the
21 Settlement. So, that's why I have a lot of
22 confidence in moving forward.

23 Q And you did mention that you -- I think I heard
24 you mention that the folks in Vermont have done

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1 a really good job of forecasting peak load over
2 in that state. Do you know any details about
3 that?

4 A (Huber) So, I was just speaking at a panel at
5 NARUC on energy storage. And my co-panelist
6 was a representative from a utility in Vermont
7 that is engaging in a very similar project.
8 And he couldn't state the exact -- the exact
9 number, but he said it was above 75 percent in
10 accuracy.

11 Q Boy, when I hear an answer like that, it makes
12 me really happy that the rules of evidence
13 don't apply at the PUC.

14 A (Huber) Yes. That's all I got.

15 CHAIRMAN HONIGBERG: Numbers like
16 that may have been in the paper, too,
17 Mr. Kreis, also. The rules of evidence do not
18 apply.

19 MR. KREIS: Oh, I probably could come
20 up with a few elaborate hearsay exceptions that
21 would get that in. But, happily, we don't have
22 to do that.

23 BY MR. KREIS:

24 Q One of the things that you suggested in your

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 original testimony was increasing the payment
2 that participating customers have to make,
3 either as a upfront payment or as a monthly
4 payment. And that, in fact, happened in the
5 Settlement Agreement, did it not?

6 A (Huber) Correct. It did.

7 Q And it would be fair to say that your
8 testimony, reflective, I guess, of the policy
9 agenda of the Office of the Consumer Advocate,
10 made a fervent and compelling case for
11 incorporating a non-wires alternative component
12 into the Pilot Program, and that angle, I
13 guess, has been deferred and sort of kicked
14 over to the least cost integrated resource
15 planning process. Are you okay with that?

16 A (Huber) With settlements, there's always
17 give-and-takes. And, you know, I just -- I
18 hope that it won't be forgotten and it will be
19 picked up in an expedited manner, because I do
20 feel that there can be some opportunities out
21 there to save ratepayers some money through NWA
22 alternatives.

23 But, in this particular case, it did make
24 sense to push it out to that forum.

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1 Q In your original testimony, you expressed a
2 concern that there was no "bring your own
3 device" component to the Liberty pilot
4 proposal. And your testimony proposed that the
5 Commission open a generic proceeding of some
6 kind to look at deploying BYOD options, I
7 guess, everywhere in the state.

8 Are you satisfied with the way the
9 question of "bring your own device" opportunity
10 is addressed in the Settlement?

11 A (Huber) I am. And I think I called it "bring
12 your own battery", "BYOB". And so, it's
13 evolved a little bit. And, you know, really,
14 it's -- I think that the way that it's set up
15 in the Settlement will be a really good first
16 stab at getting this right. There's a lot of
17 complexity around it.

18 But, at the end of the day, you know, and
19 in my opinion, it's positive for the state to
20 start to send more accurate price signals out
21 there, and to give an option for customers or
22 aggregators to respond to advanced price
23 signals that are directly linked to cost
24 causation. And in this pilot, we are getting

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 there. Right? We're sending better price
2 signals through the TOU rate to the customer,
3 and then the utility is responding to pretty
4 advanced system price signals, the 12, you
5 know, that are the top hour of the month and
6 top hour of the year.

7 And so, third parties can bring additional
8 advantages. But it has to be carefully
9 constructed to make sure there's no cost
10 shifts, there's adequate consumer protection,
11 and there's no double-counting in the rates.
12 And so, it's going to take, you know, it's
13 going to take some time to get it right, but
14 this is a first step to getting there.

15 Q In your original testimony, you stated that it
16 wasn't important, from the perspective of
17 residential ratepayers, that the project have a
18 positive net present value. Could you remind
19 the Commission why you took that position?

20 A (Huber) You know, with pilots, especially with
21 brand-new technology, and, you know, you're
22 starting to look at algorithms for predicting
23 the peak, this is pretty new territory. It has
24 a lot of promise. So, taking a step back, it's

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 just incredible to think that technology now,
2 in its beginning phases of it, can completely
3 wipe away a customer's load between like four
4 to six hours of the day. So, in this case,
5 most -- you know, and most of the customers in
6 this pilot will be invisible to the system
7 operator, in terms of their impact to the grid
8 during peak, from 3:00 to 8:00 p.m. That's
9 incredible. This customer is completely gone
10 from peak demand. That's amazing.

11 And so, you know, again, the technology is
12 still in the beginning stages. The economics
13 are still evolving and improving. And so,
14 getting ahead of this curve, getting some
15 actual learning-by-doing, will set up, I think,
16 the utilities, the state to really leverage
17 this new technology as it comes down in price,
18 as we refine price signals, to really create a
19 beneficial program for the ratepayers in New
20 Hampshire.

21 And that's a lot of promise. And so, you
22 know, a pilot to try to prove that out, get
23 that learning-by-doing, in my opinion, doesn't
24 have to, you know, fly with -- or, you know,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 pass with a high degree of a net positive. I
2 don't think it should be a huge money loser by
3 any means. But that one criteria I think could
4 be loosened up a little bit in the spirit of
5 discovery and learning-by-doing.

6 Q And by the way, the benefit-cost analysis that
7 is contained in the Settlement Agreement
8 doesn't assign any value to the value that
9 consumers would attribute to having backup
10 power during a power failure or an outage,
11 true?

12 A (Huber) There's a few values that aren't
13 included there. And, you know, some of the
14 values are sort of tough to quantify. The
15 backup value is, you know, very much sort of, I
16 would say, internalized to that particular
17 customer. So, it's not necessarily widespread.
18 Although, you can say that there could be some
19 reliability upgrades by having a fleet of
20 batteries that operating on-peak reliably.

21 But, yes, it's correct. There was no
22 additional value for that, for that backup
23 service that the battery is providing.

24 Q So, overall, you are comfortable with the fact

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 that Phase 1 actually is not projected to have
2 a positive net present value, and overall,
3 Phase 1 and 2 have a net present value that is,
4 to use the term used on Page 20 of the
5 Settlement Agreement "minimally positive"?

6 A (Huber) Correct. I am comfortable with how the
7 cost-benefit shake out here.

8 Q You alluded to this briefly, but it would be
9 fair to say that, in your opinion, this pilot,
10 should it be approved by the Commission, would
11 be, to paraphrase Joe Biden, a "big deal"
12 nationally?

13 A (Huber) That was a good paraphrase. I think
14 it -- honestly, this would be a big deal. And,
15 you know, it's -- this pilot has so many really
16 promising elements from that risk-sharing, you
17 know, that potential that is in there, to this
18 three-period TOU rate, which is, again, pretty
19 cutting-edge in the country, and paves the way
20 for other technologies as well, and then using
21 batteries and advanced algorithms to predict
22 peak. I mean, what's not to love with that
23 list?

24 Q Indeed. And obviously, you've testified why it

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 will be good for program participants. Why is
2 this program good for all of Liberty's
3 residential customers?

4 A (Huber) Right. And, you know, so, in my
5 opinion, you know, you prove out this concept.
6 You can see that adoption from the participants
7 by making it, you know, in their economic
8 interest, because, again, we don't exactly know
9 the adoption rates. This is new territory.
10 And as was just mentioned, we did increase the
11 upfront cost and the monthly payment to, you
12 know, to make sure that this pilot is a net,
13 you know, neutral or net positive impact to
14 nonparticipants.

15 But, in the long run, the thinking is that
16 you're able to deploy this technology and these
17 techniques more and more cost-effectively to
18 reduce peak and the allocation of costs from
19 the wholesale market, to reduce certain types
20 of capital expenses within the state. And
21 there will be some shared savings in that,
22 depending on the construct.

23 And so, really, it's the promise of, you
24 know, this, you know, learning-by-doing, taking

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 advantage of new technology, then deploying it
2 in ways where all customers benefit through,
3 again, avoiding cost allocation from the
4 wholesale market and investment, you know,
5 traditional investments in the grid.

6 And so, I think it really can get there.
7 Still, you know, the economics of some of these
8 technologies still have to evolve a bit. And I
9 would, you know, encourage in the future to
10 continue to look at combining different
11 technologies. So, smart thermostats, with the
12 batteries storage, with controllable water
13 heaters, things of that nature. You start to
14 build a control platform, so that the utility
15 or a third party aggregator can send signals to
16 a variety of different devices to then reduce
17 peak in a cost-effective manner. And that can
18 provide, again, benefits to the participants,
19 but, most importantly, widespread benefits to
20 all customers.

21 Q Thank you, Mr. Huber. Have I forgotten
22 anything that you would like to highlight with
23 respect to why the Office of the Consumer
24 Advocate is enthusiastic of this proposal as

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 reflected in the Settlement Agreement?

2 A (Huber) I could talk about this all day. But
3 I'm going to pause there and take, you know,
4 any questions, and happy to discuss it more.
5 But that should do it for now.

6 Q Well, I'm sure the Commissioners are itching to
7 ask you questions, because they remember that
8 you didn't come and testify because you were on
9 your honeymoon when the net metering docket was
10 alive. And so, they have been looking forward
11 to this opportunity since then, I'm sure.

12 A (Huber) It was the biggest regret of my life.

13 *[Laughter.]*

14 CHAIRMAN HONIGBERG: Well, Mr. Huber,
15 you do know that everything you say is written
16 down here. Do you want to clarify that last
17 statement you made?

18 WITNESS HUBER: The date of the
19 honeymoon.

20 CHAIRMAN HONIGBERG: Whoa.
21 Mr. Wiesner, on that note, we're going to turn
22 the microphone over to you. Can you top that?

23 MR. WIESNER: Well, probably not. I
24 was going to suggest that Mr. Below go next. I

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 don't know whether there's anyone to ask him
2 questions or whether he can just respond to the
3 questions only he can hear?

4 [Laughter.]

5 MR. WIESNER: Did that top it?

6 CHAIRMAN HONIGBERG: We're going off
7 the rails.

8 Mr. Sheehan, are you going to ask
9 questions of Mr. Below? It looked like you
10 were grabbing the microphone.

11 MR. SHEEHAN: I can certainly provide
12 the outline. And I will follow, in essence,
13 what Mr. Kreis did.

14 BY MR. SHEEHAN:

15 Q Mr. Below, in your testimony, can you sort of
16 explain what issues and concerns you flagged
17 with the Program, and then -- at a high level,
18 and then explain why you think the Settlement
19 Agreement -- why you can support the Settlement
20 Agreement, what changes or what elements of the
21 Settlement Agreement cause you to be sitting up
22 there today in support of it?

23 A (Below) Well, I think my prefiled testimony
24 pointed to some concerns about how this would

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 relate to the City's proposed Municipal
2 Aggregation Pilot with real-time pricing. But
3 also some other issues that have been
4 incorporated into the Settlement, such as the
5 ability of customers to switch over from the
6 old net metering tariff to the new net metering
7 tariff for purposes of participating in the
8 Program, if they drop out, or at the end of the
9 Program, they can return to that, what they
10 were previously grandfathered for, so that
11 people -- that would not become an obstacle for
12 people participating in the Program. Well, I
13 state actually that maybe net meter customers
14 would be better off with the battery and the
15 new net metering tariff, so they might well
16 stay and find that that is as good or better
17 than the old net metering tariff.

18 I think one of the key things, even going
19 back to my testimony in the net metering
20 proceeding, as well as the work in the Grid
21 Modernization investigation, was the desire to
22 see Time-of-Use rates for all rate components
23 that reflect cost -- underlying cost causation.

24 And as has been otherwise referenced, for

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 instance, transmission, at the regional level,
2 at the wholesale level, it has a very strong
3 marginal cost pricing signal, much as capacity
4 for generation capacity does, because they're
5 both based on coincident peak demand. So, if
6 you have load that doesn't contribute to that
7 coincident peak demand, it's not contributing
8 to what drives costs on the margin, which is
9 the capacity in the system.

10 And so, you know, New England has a whole,
11 New Hampshire specifically, has seen a steady
12 decline over recent decades in what's called
13 the "load factor", or I think of the term
14 "asset utilization", I think is perhaps a
15 better one, which is the ratio of the energy
16 kilowatt-hours to the kW of capacity in the
17 system.

18 And that Mr. Huber's cost duration method
19 for designing distribution rates I think is a
20 very sound method, an innovative method for
21 looking at how you could take distribution
22 rates and actually reflect cost causation when
23 load contributes to different levels of
24 capacity on the system.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 And, of course, that peak capacity is only
2 a few hours a year. And if that keeps growing,
3 and energy doesn't, which has been the case,
4 all of that capacity for distribution,
5 transmission, and generation ends of being
6 spread over a few -- relatively fewer
7 kilowatt-hours, so it's more expensive per
8 kilowatt-hour. If we could begin to shave that
9 peak demand, and when new loads come on, such
10 as from electric vehicles, if they charge
11 during off-peak periods, rather than at the
12 very high peak periods, then it will mean we
13 actually have more kilowatt-hours for the same
14 amount of capacity in the system, which can
15 actually end up lowering the rate, the cost per
16 kilowatt-hour for everyone ultimately, if we
17 don't keep growing that peak demand.

18 Q And can you explain how the Settlement here
19 feeds into that progress, if you will, towards
20 lowering the peak demand and having -- lowering
21 the costs for all our Liberty customers?

22 A (Below) Well, the combination of the
23 Time-of-Use rates for all three rate
24 components, as well as, you know, the enabling

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 technology that even allows one to go further
2 than just the flexible demand that might
3 respond to the Time-of-Use rates.

4 And one other concern that I expressed in
5 the original testimony, you know, in general,
6 about how this would work with our proposed
7 pilot, there's sort of a verbal understanding
8 that we'll work with Liberty to perhaps propose
9 some of those issues in our pilot, and that can
10 be -- could come forward separately, hopefully
11 in the fairly near future, for the Commission
12 review. And we might be able to, for instance,
13 have these Time-of-Use rates available for
14 non-battery customers through our pilot as
15 well. So, that's -- but that's sort of for
16 future presentation to the Commission.

17 Q And for reference, the last Granite State rate
18 case, a piece of that was for the Company to
19 work with the City of Lebanon for what's become
20 the pilot you're speaking about now?

21 A (Below) Yes.

22 Q Okay. You spent a lot of time in this docket
23 working on the rate component of this. Are you
24 comfortable that the method that we've

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 calculated, the Time-of-Use rates and the
2 actual rates that we're starting with, are
3 sound?

4 A (Below) Very much so. Yes. A lot of months
5 were spent sort of working with this model and
6 improving it, and looking at what really was
7 sort of the best practice. And I think we've
8 gotten there and have something that is
9 durable. It can be updated regularly, on an
10 annual basis, or even twice annually with
11 default service rates. And in a sense, that
12 the Time-of-Use rates will be a bit dynamic as
13 well, reflecting how the system is evolving
14 when coincident peaks occur.

15 But the structure is consistent with what
16 has been found to work well for other -- in
17 other pilots, in terms of a pretty significant
18 differential between this critical peak period
19 and the off-peak period, enough to incentivize
20 people to pay attention and try to shift
21 flexible loads and respond to those price
22 signals.

23 Q And since you're not my client, I can ask you
24 the question. Is there anything else you would

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 like to say as you sit there in support of this
2 Settlement Agreement?

3 A (Below) That's probably enough for today.
4 Thank you.

5 CHAIRMAN HONIGBERG: Mr. Wiesner.

6 BY MR. WIESNER:

7 Q Ms. Nixon, I only have one question for you,
8 but it's a big open-ended one. Would you
9 please summarize Staff's position on the
10 Settlement and the reasons why Staff has chosen
11 to support it, with particular focus on the
12 differences between the initial proposal and
13 what's now before the Commission.

14 A (Nixon) Yes. Staff does support this proposed
15 project as outlined in the Settlement
16 Agreement. We believe that this revised
17 approach reduces the risk, while allowing for
18 the examination of all the benefits that could
19 be achieved. This pilot, in the two phases,
20 will allow for the review of the battery usage,
21 as well as the Time-of-Use rates, and the
22 interaction of those batteries and Time-of-Use
23 rates for distributed generation customers, as
24 well as non-distributed generation customers.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 We see that the batteries and the
2 Time-of-Use could play an integral part of the
3 grid for New Hampshire. So, this pilot will
4 let us see how that will work. This pilot, as
5 revised, significantly reduced some of the
6 risks. In reducing the number of customers to
7 100 customers, or 200 batteries, in Phase 1,
8 that will ultimately reduce the costs that will
9 be incurred.

10 But, in addition, the pilot will also
11 allow us to look at the benefits to see how
12 they will reduce the RNS and LNS transmission
13 costs, see how customers will shift their
14 energy usage to the lower demand periods, in
15 the off-peak or mid-peak, by the use of
16 possibly the batteries or curbing their
17 behavior. It will also see how they will be
18 able to use those batteries to maximize their
19 energy consumption in these least cost periods.
20 And again, it will be interesting to see the
21 difference between the DG and the non-DG
22 customers.

23 By using the two phases, it will allow us
24 to actually see what the true costs and

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 benefits are from that before a much larger,
2 what I consider more of a demonstration project
3 at that point would be evolved, where we could
4 see up to 500 batteries rolled out for 250
5 customers.

6 And also, it allows for an off-ramp, if
7 the benefits aren't what we expect them to be.
8 And the project could either be curtailed or
9 scaled back at that point.

10 As mentioned by others, it also allows for
11 the "bring your own device". And so, we can
12 see how third parties can achieve these
13 benefits, and compare it to how the utility is
14 doing as well.

15 MR. WIESNER: Thank you.

16 WITNESS NIXON: You're welcome.

17 CHAIRMAN HONIGBERG: Do any of the
18 other intervenors have questions for the panel?

19 *[No verbal response.]*

20 CHAIRMAN HONIGBERG: I see no takers.
21 You are who, sir? You were not here when we
22 started this morning.

23 MR. HERNDON: I was not. I was late.
24 I apologize.

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1 *[Court reporter interruption.]*

2 MR. HERNDON: I apologize for my
3 tardiness. My name is Henry Herndon, with
4 Clean Energy New Hampshire. I actually have
5 one question for the panel, the witnesses.

6 CHAIRMAN HONIGBERG: Hang on one
7 second.

8 MR. HERNDON: Excuse me. New
9 Hampshire Sustainable Energy Association.

10 CHAIRMAN HONIGBERG: The Sustainable
11 Energy Association, in whatever name it
12 currently has, is here represented by counsel.
13 Do you want to confer with Mr. Emerson?

14 MR. HERNDON: Yes, please.

15 CHAIRMAN HONIGBERG: Let's go off the
16 record.

17 *(Mr. Herndon conferring with*
18 *Atty. Emerson.)*

19 MR. HERNDON: In consulting with
20 counsel, I'm revoking the question.

21 CHAIRMAN HONIGBERG: Thank you,
22 Mr. Emerson. Thank you, Mr. Herndon.

23 All right. If none of the other
24 intervenors have questions for the panel, what

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 we're going to do is take a ten minute break
2 before the Commissioners start asking their
3 questions.

4 (Recess taken at 10:36 a.m. and
5 the hearing resumed at 10:58
6 a.m.)

7 CHAIRMAN HONIGBERG: All right.

8 Before we start asking questions, we would like
9 to get a memo of law from the Company, and
10 anyone else who wants to file, regarding how
11 this proposal meets the statutory requirements.
12 They're alluded to in the Settlement. They're
13 even itemized somewhat, and the statute is
14 cited and quoted. But we'd like a more
15 comprehensive tie-back of the evidence in the
16 record to the statute.

17 I think that Ms. Tebbetts' original
18 testimony, and I think Commissioner Bailey has
19 some questions about that, has a sort of
20 item-by-item statement about each of them. But
21 that's a statute that we're obligated to
22 follow, that gives us the standard for approval
23 of this Agreement. So, we'd like the Company,
24 and anyone else who would like to, to file a

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1 post-hearing memorandum on that.

2 Does anybody have any questions about
3 that before we continue?

4 Mr. Kreis.

5 MR. KREIS: How long do we have to do
6 that?

7 MR. SHEEHAN: You beat me to it.

8 CHAIRMAN HONIGBERG: How long would
9 you like?

10 MR. SHEEHAN: Two weeks. I'll try to
11 get it in next week, but a second week would be
12 great.

13 CHAIRMAN HONIGBERG: Will you need a
14 transcript for this?

15 MR. SHEEHAN: I would use a
16 transcript, if I had it, yes. What I would
17 start with is what Ms. Tebbetts filed, and I
18 think she had a supplemental filing that
19 addressed some of that, too.

20 CHAIRMAN HONIGBERG: I agree with
21 that. You're right.

22 MR. SHEEHAN: And beef it up with
23 references, and if we have the transcript
24 available, I'd do my best to include those.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 CHAIRMAN HONIGBERG: Off the record.

2 [Brief off-the-record discussion
3 ensued with the court reporter.]

4 CHAIRMAN HONIGBERG: So, I think
5 we'll be able to get a transcript by middle to
6 end of next week. So, two weeks from today to
7 file a memo should give you a week with the
8 transcript. Does that work?

9 MR. SHEEHAN: That will be fine.
10 Thank you.

11 CHAIRMAN HONIGBERG: All right.
12 Thank you. Commissioner Bailey.

13 CMSR. BAILEY: Good morning. Before
14 I get into my questions, because there are a
15 million details that haven't been covered, I
16 want to acknowledge that we had asked you to
17 come up some ideas on how you could decrease
18 the transmission costs. And I think that this
19 is a proposal that attempts to do that. So, I
20 appreciate that. But I still have a lot of
21 questions about it. So, let's get started.

22 BY CMSR. BAILEY:

23 Q Ms. Tebbetts, in your original testimony,
24 Exhibit 4 is the confidential version, but I'm

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 not going to cover confidential information, on
2 Pages 15, 16, and 17 -- actually starting on
3 Page 14, you go through the statutory criteria
4 and the effects of the original proposal. Do
5 you have that in front of you?

6 A (Tebbetts) Are you on Bates Page --

7 Q Yes.

8 A (Tebbetts) Oh. Sorry. Oh. Is it
9 supplemental? I'm sorry.

10 Q No. Well, maybe -- oh, yes, maybe it is.
11 February 9th.

12 A (Tebbetts) Okay. Yes. I am there.

13 Q Okay. So, you go through the statutory
14 criteria and discuss how the original proposal
15 would satisfy the criteria. Are there any
16 changes that you know of that are based on the
17 difference between the original proposal and
18 the Settlement Agreement?

19 A (Tebbetts) There are no -- the only change I
20 would note, it's not a bad change, but a good
21 change, is that we've added the "bring your own
22 device" piece to that for the competition
23 section in here, in my testimony.

24 Q Okay.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Other than that, no.

2 Q Okay. And maybe that will answer my next
3 question. I didn't understand the explanation
4 at the -- in the carryover sentence on the
5 bottom of Page 16 to the top of Page 17, that
6 is addressing the requirement that "the effect
7 on competition within the region's electricity
8 markets and the state's energy service market"
9 would "benefit competitive suppliers as
10 5 megawatts", or maybe two and a half megawatts
11 now, "of power will be displaced during the
12 most expensive periods."

13 Can you explain how that benefits
14 competitive suppliers?

15 A (Tebbetts) Let me just read through that real
16 quickly please.

17 Q Okay.

18 A (Tebbetts) Okay. So, the Company's thinking at
19 the time was that we contract for supply. And
20 so, we have a fixed price every month. So, if
21 we can reduce our load, and the supplier maybe
22 is paying a really high price that month, but
23 they contracted us at a lower price, now they
24 don't have to -- they lose at this time five

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 megawatts that they don't have to actually
2 contract for in the market for, let's say, the
3 month of February, because they're going to
4 lose money on the simple fact that they bid us
5 too low for what they actually paid out to
6 their generator, we'll say. So, that was where
7 we were looking at the benefit on the supplier
8 side.

9 Q Okay. Thank you.

10 A (Below) May I? May I add something?

11 Q Oh, sure. Yes.

12 A (Below) Another potentially valuable effect, to
13 the extent load gets shifted from on-peak
14 periods to off-peak, such as in the middle of
15 the night, is it would tend to alleviate prices
16 that go negative, which is very problematic for
17 generators to have to pay to keep running, like
18 nuclear power plants and wind generation
19 sometimes, too. So, by moving load to when
20 there's an excess of capacity on the system,
21 that's a positive thing for generators in the
22 competitive market.

23 Q Thank you. And in the next three provisions
24 that are sort of all lumped together, the first

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 factor you say -- well, you point out that
2 there has to be a "demonstration that the
3 Company has exercised competitive processes to
4 reasonably minimize costs". It doesn't seem
5 like you did that in selecting the Tesla
6 battery, because you sought the Tesla battery
7 for very specific technology reasons.

8 How do you -- how does your proposal meet
9 that criteria?

10 A (Tebbetts) So, we actually put in my direct
11 testimony, we didn't know what the Tesla
12 capabilities were until we went and consulted
13 with Alectra, and they put out the RFI for
14 information about the technology. So, one of
15 the things that we found was that other battery
16 makers just don't have the capacity or the
17 energy. So, that's why we chose Tesla.
18 Because there's other battery companies, like
19 LG Chem, we looked into LG Chem. But their
20 batteries are 9.8 kilowatt-hours, or 5 kW. So,
21 like, well, hey, 9.8 kilowatt-hours is not
22 enough for us now. So, now let's look at a
23 different battery maker. So, Mercedes is
24 coming out with some, and others, Sonnen.

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1 Again, there are two -- the capacity is
2 maybe 5 kW, but the kilowatt-hours behind that
3 is not the same. So, we did look at other ones
4 through that RFI, I'll call it an "RFI process"
5 that we had Alectra go out and find information
6 for.

7 Q Do you think that the BYOD Program would
8 satisfy this component of the statute?

9 A (Tebbetts) I don't know. I don't know,
10 actually, because I'm not --

11 Q Anybody --

12 A (Tebbetts) Oh, go ahead. I'm sorry.

13 Q Anybody else have any thoughts on this
14 component of the statute and how the Settlement
15 addresses it, or the proposal?

16 A (Below) The City did have to enter into an NDA
17 and had a chance to review the different
18 evaluations of batteries. And although that's
19 not really a competitive procurement, *per se*,
20 it was looking competitively at the different
21 features and capabilities relative to price.
22 And once we, ourselves, reviewed it, agreed
23 that they were selecting the best value in that
24 sense. So that it didn't just pre-pick one, it

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 looked at best value.

2 But they have also indicated that they
3 want to put out to bid the installation. So
4 that will hopefully produce a market-based, a
5 lower price in that respect.

6 And certainly, the BYOD Program we feel is
7 a valuable aspect that does potentially help
8 use competitive forces, processes, to
9 potentially minimize costs for, by comparison,
10 that could be compared with what Liberty does
11 with its share of the Program.

12 Q Okay. I'll have some more specific questions
13 about costs in a little bit. Are there any
14 other things that anyone wants to say with
15 respect to satisfying the elements of the
16 statute, 374-G:5 specifically?

17 I mean, that's what the briefs are going
18 to do, or the legal memo will do. But I just
19 was wondering if there were any points that you
20 thought should be added to the record?

21 A (Below) I would just note that, generally, New
22 Hampshire law and policy recognizes that
23 renewables can have environmental benefits in
24 their low or no emission rates. And generally,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the development of the Time-of-Use rates
2 aspect, as well as the battery, are key
3 enabling structures and technologies that
4 enable a higher level and more efficient
5 integration of renewables into the system.
6 Both because the batteries can help respond
7 potentially to intermittencies, and help, where
8 it's coupled with solar, help move essentially
9 that solar production to the hours where it's
10 most valuable.

11 And the peak generators, the generators
12 that tend to run on the margin only a few hours
13 a year tend to be some of the dirtier
14 polluters. So, that's another potential
15 benefit of this.

16 The pilot is not very large. But the
17 pilot is intended to lay the groundwork for
18 going at larger scale, which would further that
19 benefit.

20 BY CMSR. GIAIMO:

21 Q In looking at the -- I'm sorry.

22 A (Tebbetts) Well, go ahead, if you're going
23 to -- I just wanted to add something. On the
24 BYOD, when you asked that question, I think,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 you know, from the Settlement's perspective,
2 the opportunity to provide that competitive
3 piece of it is going to be worked out through
4 the working group. And so, we haven't actually
5 developed what the RFI or RFP is going to look
6 like as part of the working group, so that we
7 can bring that competitive piece into here.

8 So, for now, I think there's the
9 opportunity for 374-G:5 competitive piece to be
10 incorporated. But, again, it's going to --
11 whatever we get back for responses will
12 determine whether or not it's viable. Because,
13 certainly, we would hope that we'll get a lot
14 of responses, so we can find an aggregator
15 who's willing to work with us.

16 A (Nixon) I was just going to add one other item,
17 and maybe it's already been said. But, on the
18 costs to benefits, that I believe this revised
19 approach shows a better illustration of what
20 the actual costs and benefits as we can
21 estimate them at this point will be, and shows
22 a net benefit over the life of both phases.

23 Q So, I think one of the tenets of deregulation
24 was to give consumers choice. So, I'm

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 wondering if anyone on the panel knows whether
2 or not suppliers are offering Time-of-Use
3 rates? And would this proposal actually
4 provide something, a choice, that is otherwise
5 vacant in the market?

6 A (Tebbetts) So, I can tell you from our
7 experience at Liberty, we don't have any
8 suppliers who are looking to provide
9 Time-of-Use rates to our customers. I don't
10 know why, but we haven't -- as part of our
11 default service solicitation, I've been in
12 talks with Mr. Warshaw, who deals with our
13 default service suppliers. And from what we've
14 heard, they're just not super interested. So,
15 maybe that's because we're small, I don't know.
16 But that's one reason why we thought, on our
17 end, we should be at least offering it to
18 customers, doing it through the cost model,
19 versus trying to get a supplier out there to
20 offer it, with the chance that either we get
21 less bidders or -- which is also a concern, or
22 we don't get someone who offers it.

23 CMSR. GIAIMO: Thank you.

24 BY CMSR. BAILEY:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q I think I wrote this down, but I can't
2 remember. What is the size of each battery?

3 A (Tebbetts) So, each PowerWall is 5 kilowatts,
4 and has an energy amount of 13.5
5 kilowatt-hours.

6 Q So, each home would have 27 kilowatt-hours
7 energy?

8 A (Tebbetts) Yes.

9 Q How long does it take to charge the battery?

10 A (Tebbetts) It could be anywhere from -- I guess
11 it depends on what's going on in the load in
12 the house. But I know -- I don't know how it
13 is with solar. So, I'm just giving it to you
14 from charging it from the grid. But it could
15 be anywhere from three to six hours.

16 Q And again, you don't really know what's going
17 on in the house. But, when you take control of
18 the battery, how long do you think it will take
19 to discharge?

20 A (Tebbetts) Oh, it will discharge at whatever
21 rate we tell it to. So, we could discharge it
22 all within an hour, or we could discharge it
23 all in two hours, three hours, four hours.
24 We're able to tell the battery to do whatever

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 we want it to do.

2 Q Is there a range?

3 A (Tebbetts) We'd probably want it -- if it's
4 going to be that peak hour, we would probably
5 tell the battery to discharge at the 5 kW for
6 two hours, just so that we get the full amount
7 for those two hours.

8 Q Do you have any idea how long the two batteries
9 would provide generator service in a power
10 outage for an average residential customer?

11 A (Tebbetts) Yes. About 12 hours per battery, so
12 about 24 hours.

13 Q Hmm. And is that based on their average demand
14 or what kind of assumptions --

15 A (Tebbetts) Yes. That's based on our average
16 customer load.

17 Q Okay.

18 BY CMSR. GIAIMO:

19 Q So, they would be able to turn circuits on and
20 off within their home and make it last beyond
21 two days, so almost four days, if they were to
22 cut the demand in the house in half?

23 A (Tebbetts) Yes.

24 Q While we're talking about backup generators,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 what would a typical backup generator cost to
2 install, just as a comparison point?

3 A (Tebbetts) Are you talking -- I'm sorry. Would
4 you clarify, do you mean a portable or a
5 standby?

6 Q No. I would say something that is electrically
7 connected to the house and is there, not
8 portable, but permanent.

9 A (Tebbetts) Sure. So, a standby would be in the
10 range of 10 to \$12,000 for just like your
11 typical size of maybe like 10 or 15, maybe 15
12 to 20 kW, which could do your whole home and
13 all the time.

14 BY CMSR. BAILEY:

15 Q I think I know the answer to this based on your
16 technical statement, Ms. Tebbetts, but I think
17 that the Settlement is a little bit vague on
18 Page 7 about the customer monthly payment. The
19 second full sentence in the first full
20 paragraph, sort of in the middle of the page.

21 A (Tebbetts) Okay. Go ahead. I'm there.

22 Q It says "The Company shall offer batteries to
23 customers in Phase 1 in exchange for either an
24 upfront customer contribution for each battery

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 of 2,433 or the payment of \$25 per month on the
2 customer's monthly electric bill for ten years.
3 Is the payment \$25 a month or is it \$50 a
4 month? Do they pay per battery \$25 a month?

5 A (Tebbetts) Yes. It's per battery, \$25 a month.

6 Q Okay.

7 A (Tebbetts) And it's per battery -- oh, well,
8 yes. "Contribution for each battery of 2,433
9 or the payment of \$25".

10 Q Yes.

11 CHAIRMAN HONIGBERG: It's an
12 ambiguous statement.

13 WITNESS TEBBETTS: Yes. You're
14 right, it is.

15 CHAIRMAN HONIGBERG: You've clarified
16 it now. And I think your technical statement
17 is consistent with what you just testified to.
18 We just wanted to make sure that that ambiguity
19 got nailed down.

20 WITNESS TEBBETTS: Yes.

21 BY CMSR. BAILEY:

22 Q I want to talk about the penalty to customers
23 who choose to opt out before the ten-year
24 period. Is it \$450 no matter when they choose

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 to opt out?

2 A (Tebbetts) So, the \$450 is actually the cost
3 for us to remove the battery. That's not the
4 penalty. If customers, which is part of the
5 customer agreement we're working through right
6 now, if they choose to opt out early, I
7 honestly can't remember off the top of my head,
8 I don't have it in front of me, but they have
9 to pay at least the \$450 to get rid of the
10 battery, because they have chosen to leave it
11 early.

12 BY CMSR. GIAIMO:

13 Q To avoid the ambiguity which was in the prior
14 sentence, again, that's 450 per battery. So, a
15 typical house that needs two batteries is \$900
16 just for the removal?

17 A (Tebbetts) Yes.

18 Q Okay. Can I ask why, why is the requirement
19 for two batteries?

20 A (Tebbetts) Absolutely. So, Tesla originally
21 required only one battery when we started this
22 process. But what they found is that one
23 battery only provides partial home backup for a
24 lot of customers. And the reason is, they have

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 well pumps, AC, things like that. And so,
2 customers were coming back to them saying "hey,
3 we should have got another battery", and they
4 already configured the system. So, it's very
5 difficult, I guess, for them to now reconfigure
6 with an existing battery, because a lot of them
7 are in customer houses on the wall, in the
8 basement and things like that.

9 So, what they decided was, they were going
10 to install a new policy and have a requirement
11 of two batteries.

12 BY CMSR. BAILEY:

13 Q So, it's Tesla's policy?

14 A (Tebbetts) It's Tesla's policy, yes.

15 BY CMSR. GIAIMO:

16 Q Would anything preclude a customer from getting
17 three or four?

18 A (Tebbetts) No. Actually, they can put up to
19 ten in series.

20 BY CMSR. BAILEY:

21 Q Under the pilot?

22 A (Tebbetts) Not under the pilot. We were only
23 providing two, because we wanted to get more
24 customers than more batteries.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay. So, there's a \$900 removal fee. If a
2 customer signs up for this contract with the
3 batteries, and the batteries get installed, and
4 they're paying the \$50 a month charge. And two
5 years into it they decide they're going to
6 move, and the people who are buying their house
7 don't want it. What happens? So, that's what
8 happens to the battery? What happens to the
9 cost of the battery?

10 A (Tebbetts) So, we would remove the battery.
11 And depending on, if it was like you mentioned,
12 two years, we may want to install it in another
13 customer's home. Or we would send it back to
14 Tesla, and hopefully be able to get some
15 reimbursement from what's left in the battery.

16 Q And is the customer responsible for any of the
17 difference?

18 A (Tebbetts) The difference on what?

19 Q I'm sorry. If Tesla charges you, I don't know,
20 \$8,000 a battery, and the customer has paid for
21 two years at \$25 for one battery. So, what's
22 that, \$600 or something like that?

23 A (Tebbetts) Yes.

24 Q You have an \$8,000 investment. And you send it

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 back to Tesla, and you get \$2,000 back for it.

2 What happens to the remaining \$6,000?

3 A (Tebbetts) So, as part of the customer
4 agreement, which we haven't finalized yet, I do
5 believe there is something in there that
6 provides some protection to the Company and to
7 Tesla. But we haven't finalized the customer
8 agreement at this time. So, right now, it's
9 just the \$450 and whatever we get back from
10 Tesla.

11 But I think, to be perfectly honest, we
12 have so many customers that want this program
13 that I would want to put it in another
14 customer's home and utilize it. Because after
15 two years, the battery is still really good.
16 There would be no reason to give it back to
17 Tesla, only if it was defective.

18 Q Okay. And then would that new customer have a
19 ten-year contract?

20 A (Tebbetts) No. We wouldn't do a ten-year
21 contract. We would do like an eight-year
22 contract. We would have to make up for that
23 difference, of course.

24 Q Okay.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 BY CHAIRMAN HONIGBERG:

2 Q On your agreement with Tesla, is there
3 currently a written agreement with Tesla to
4 provide the batteries necessary for this
5 Program?

6 A (Tebbetts) We have an agreement. It is not
7 signed, because we do not have an order. And
8 so -- but we do have a preliminary agreement
9 with them to deliver these batteries, yes.

10 Q At a fixed price for the units?

11 A (Tebbetts) Yes. It's the retail price,
12 actually, for these units. We originally had a
13 discounted price. But, considering the changes
14 to the Program, that is no longer valid.

15 BY CMSR. BAILEY:

16 Q They're not giving you a volume discount for
17 250 batteries or --

18 A (Tebbetts) They don't consider 200 batteries to
19 be volume. The 1,000 batteries they considered
20 volume.

21 Q Okay.

22 BY CMSR. GIAIMO:

23 Q We were talking a little bit about the 450 for
24 removal of the battery pre-termination, for ten

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 year -- prior to the tenth anniversary. After
2 the tenth anniversary, there's a termination of
3 the contract. Who pays for the removal then?
4 Is that the Company? You've done your ten
5 years, ten year and one month happens. Is the
6 customer still responsible for the 450 per
7 battery removal?

8 A (Tebbetts) You know, to be honest, I can't
9 remember what we put in the customer contract.
10 But I do believe that we accommodate -- we
11 accommodate the customer. So, after the tenth
12 year, they don't have to pay the monthly fee,
13 and I don't believe they have to pay the
14 removal fee. I think that the issue on the
15 removal fee was to try to, yes, avoid them
16 wanting to remove it. So, again, I don't
17 remember what's in the contract in front of me,
18 but, yes.

19 Q While we're talking of removal, are there
20 disposal fees associated with -- is there a
21 plan in place to adequately and appropriately
22 dispose of these things? And what does that
23 entail and whose liability is that? Who's
24 responsible for that?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Sure. So, we're going to give them
2 back to Tesla, and there's no charge to the
3 Company to give them back to Tesla.

4 BY CMSR. BAILEY:

5 Q My next question was going to be what will the
6 customer contract entail, but you don't have it
7 with you. Do you think that maybe we could see
8 a copy of it?

9 A (Tebbetts) Yes. I believe we're going to have
10 to be filing that, I think, and the lawyers can
11 remind me, but I can't remember.

12 CHAIRMAN HONIGBERG: Mr. Sheehan.

13 MR. SHEEHAN: We started circulating
14 a draft contract recently. And we couldn't
15 finalize it, because things were moving
16 constantly all summer. And the decision was
17 made we probably couldn't finalize one before
18 today.

19 So, the expectation was we would file
20 one, assuming approval, for approval in a
21 couple weeks, whenever we get it done. So, the
22 timing is not perfect, but that was the
23 conversation Mr. Wiesner and I had over the
24 last week.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 CHAIRMAN HONIGBERG: So, your
2 contemplation is that an order arriving out of
3 this hearing will direct you to file for
4 approval of the contract? Or, Mr. Wiesner,
5 what do you have on this?

6 MR. WIESNER: I was just going to
7 point out, there's a provision on Page 8 of the
8 Settlement Agreement, in the top carryover
9 paragraph. The last sentence says "The form of
10 contract to be used by Liberty with
11 participating customers for Phase 1 shall be
12 submitted for Commission approval prior to
13 implementation of the Program."

14 CHAIRMAN HONIGBERG: Thank you,
15 Mr. Wiesner.

16 CMSR. BAILEY: I think Ms. Nixon had
17 that answer for us. She was grabbing the
18 microphone, but the lawyers took over.

19 WITNESS TEBBETTS: I can give you a
20 high-level information about what's in the
21 contract --

22 *[Court reporter interruption.]*

23 WITNESS TEBBETTS: -- high level in
24 the contract, the information provided to

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 customers is going to be their use of the
2 battery, such as the program that we described,
3 where the Company -- they have use of it all
4 the time, the Company will take use of it when
5 needed for peak events; the cost associated
6 with, you know, are they going to pay up front
7 or a monthly payment; the warranty on the
8 battery is included also in the customer
9 agreement; and then, you know, other legal
10 things that are in there that I don't
11 understand. But the high-level information
12 that is really important to the customer is
13 utilization of the battery on their end and our
14 end, and the cost.

15 BY CMSR. BAILEY:

16 Q And early termination penalties, if there are
17 any?

18 A (Tebbetts) Correct.

19 Q Okay. Shifting gears a little bit. How is
20 Liberty going to determine peak demand
21 conditions?

22 A (Tebbetts) The hours that we want to dispatch
23 the battery, is that what you mean?

24 Q Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) So, I've been working with our
2 Electric Control and our Planning Engineering
3 group. And the idea is to utilize -- we have a
4 lot of data, of course, because we have to look
5 at planning criteria for our system. And so,
6 we're going to utilize our internal data that
7 we have. And we're also going to utilize the
8 ISO-New England peak information that's
9 provided. They give a three-day forecast and,
10 you know, a day-ahead forecast. So, we're
11 going to utilize that as well. And we know
12 thresholds for, you know, for today, for
13 example, maybe, if today was going to be a peak
14 day, we would know in the month of November
15 that, you know, our average peak is X. So,
16 looking at, you know, the ISO-New England 3-day
17 ahead, are we close to that? "Yes, we
18 are"/"No, we aren't". Okay, that's how the
19 decision will be made.

20 It's really just looking at the data and
21 making that determination, and also weather
22 forecasting as well is a big piece of it,
23 especially for summer.

24 BY CHAIRMAN HONIGBERG:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Have you been doing dry runs of that testing to
2 see "based on what we are seeing now would be
3 the time we would do it"? And then looking
4 back to see how you did?

5 A (Tebbetts) So, we haven't gotten that far, in
6 the sense that our planning engineer has been
7 looking at our data from our system and
8 National Grid, because we're tied into their
9 transmission system. And so, he's been working
10 with their engineers to look at what the peaks
11 are for the RNS and the LNS, and trying to look
12 at what our peaks are on different circuits, as
13 well as our system as a whole.

14 But we haven't gone as far as saying "this
15 is the hour we would have chosen, and would we
16 have been correct?" So, he's just diving into
17 all the data right now to start that process of
18 determining at what level would we be concerned
19 to have to dispatch.

20 Q That would seem to be something you should be
21 doing as soon as you can.

22 A (Tebbetts) Uh-huh.

23 Q Because you've got a run-up period following
24 approval to get the necessary minimum

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 installations, I think it's nine months. It
2 would seem wise to be doing that. And the
3 hardest -- for the hardest months it would seem
4 to predict would be the shoulder months, would
5 it -- wouldn't it? You don't know whether, in
6 October, whether you've got a cold snap on
7 October 3rd, whether that's going to be the
8 peak demand or whether it's going to happen on
9 October 31st?

10 A (Tebbetts) Absolutely, yes. And that's why
11 we're -- gathering the data was the number one
12 piece to start with, and working with National
13 Grid on that. So, that's just been the focus
14 of making sure we have the correct data first
15 to make -- before we just start picking the
16 hours.

17 BY CMSR. BAILEY:

18 Q Who, in Liberty, is responsible for this?

19 A (Tebbetts) Me.

20 Q Are you going to make a program that automates
21 it or are you just going to look at data every
22 day and hope you get it?

23 A (Tebbetts) Oh, yeah. Right? No. So, our
24 Planning Engineer group is developing this,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 what I'll call a "model of data", so that we
2 have information to compare the ISO-New England
3 forecast against. That's what they're doing
4 right now.

5 So, yes. It's going to be a model to take
6 a look at.

7 Q Is it a manual process though? Are you going
8 to have to look at the information every day?

9 A (Tebbetts) It will be a manual process for
10 right now, yes.

11 BY CMSR. GIAIMO:

12 Q Correct me if I'm wrong, but I think the ISO
13 forecast, which they even do seven-day
14 forecasts, so you'll have even more time to get
15 an idea. But it's not as granular as
16 predicting the hour each day when they think
17 it's going to peak. Is that right? Well, I'll
18 start with, is that right?

19 A (Tebbetts) "As granular as picking the hour"?

20 Q They don't pick the hour.

21 A (Tebbetts) Oh.

22 Q The ISO forecast doesn't tell you the hour. It
23 tells you what the peak for the day is.

24 A (Tebbetts) Correct. Exactly. Yes. So that we

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 would be looking days ahead to determine do we
2 believe that, based on the levels of load, do
3 we believe it's going to be a peak day? Then,
4 we would have to determine, based on the day
5 before, looking at -- I'm sorry, I'm not the
6 microphone -- the day before, and then that
7 day, determining at what hour do we see the
8 load shift that's being predicted. So, it's
9 two pieces really. It's picking the day and
10 then picking the hour.

11 Q And --

12 CMSR. BAILEY: Go ahead.

13 BY CMSR. GIAIMO:

14 Q And do you know how New Hampshire or how your
15 system generally compares to the regional peak?
16 Does your system generally peak two hours after
17 the system peak, based on whatever topography
18 or customer use or whatever makes your
19 customers specific, whatever makes your system
20 specific to you?

21 A (Tebbetts) Yes. So, actually, we tend to peak
22 either at the hour or the hour ending after.
23 So, that's why we -- another reason why we
24 needed the two-hour capacity on -- energy for

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 these batteries.

2 BY CMSR. BAILEY:

3 Q Mr. Huber, are you aware of anyplace else in
4 the country that has this system, this peak
5 prediction automated?

6 A (Huber) That's a great question. I think, you
7 know, EnerNOC might have -- might have this for
8 their demand response programs. And that's, I
9 think, revolving around the FCM, the top hour
10 of the year, not the monthly peaks for RNS.

11 I know, you know, other utilities and
12 suppliers I would assume have them in other
13 markets. You know, I think, like Texas, where
14 they have a transmission docket on a 4 CP
15 basis, instead of the 12 here in New England.
16 So, I would, you know, very much assume that a
17 lot of these sophisticated companies have them.
18 But I can't, you know, state for sure, you
19 know, this company are X.

20 But it's becoming more and more important,
21 and people are working on it in the competitive
22 sector, you know, for sure to develop better
23 and better forecasts.

24 I want to say there has also been a --

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 there's a co-op in Minnesota I believe that's
2 developed one, but I'm not sure they have
3 automated it yet. But they have got a very
4 similar type of process, you know, type of
5 allocation on the top hours.

6 Q Okay. Thanks. Ms. Tebbetts, in the Settlement
7 Agreement, I may have misunderstood this, but
8 it sounded like, when Liberty takes control of
9 the battery, it determines the amount to be
10 exported beyond the premise loads. Is that --
11 did I misunderstand that?

12 So, what I thought I read was that, when
13 you take control of the battery, you only can
14 export the excess energy that the home isn't
15 using at the time of the export?

16 A (Tebbetts) Correct. So, the battery will
17 automatically offset the load at the home, and
18 then we can export the rest of it. So then,
19 you would see the total 5 kW off the grid.

20 Q Okay.

21 A (Tebbetts) It's just maybe 1 kW from the house
22 and 4 kW into the grid.

23 Q Okay. So, in your earlier testimony, you were
24 describing customer risk, and the fact that

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 maybe, during the peak period, they wouldn't
2 have enough energy left in the battery and they
3 would have to pay the 36 cents high critical
4 peak period rate. Is that because the battery
5 would be discharged in two hours, not because
6 the -- the amount that's exported happens in
7 those two hours, and so the battery is
8 completely discharged, or effectively
9 discharged at that point, and so, for the
10 remainder of the critical peak, --

11 A (Tebbetts) Yes.

12 Q -- if they need more energy? Sorry.

13 A (Tebbetts) I'm sorry. Yes, that's correct.
14 But the customer will actually receive the
15 prevailing net metering credit when we do
16 export.

17 Q Oh.

18 A (Tebbetts) So, it may end up, you know, I don't
19 know, I won't say it's a wash, but it's going
20 to even out somewhere just because they're
21 getting that 36 cent credit every kilowatt-hour
22 that we export as well.

23 Q Okay. Thank you.

24 BY CMSR. GIAIMO:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Seizing on the discussion of Liberty taking
2 control of the battery, what's the logic
3 behind -- I think you take control at midnight,
4 is that correct?

5 A (Tebbetts) Yes.

6 Q Yes. So, my first reaction would be, why not
7 allow the customer to keep control until they
8 leave the house in the morning, at 9:00 a.m.?
9 But I'm thinking the answer might be, you want
10 to take control at midnight, so you can
11 recharge it, the battery is not completely
12 full. Is that right?

13 A (Tebbetts) So, this is the way the battery is
14 actually going to work. The battery -- the
15 battery is always going to charge, for
16 customers without solar, it's always going to
17 charge at midnight. Because the customer every
18 day, at 3:00, is going to offset their load
19 with the battery. So, they wouldn't offset in
20 the morning anyways, because that's a mid-peak
21 rate, which actually seems to be approximately
22 what our rates are now for a fixed cost. So,
23 we wouldn't want the customer taking control in
24 the morning anyways. The battery will charge

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 every night at midnight.

2 The idea primarily really is that, when we
3 take control, it's on the discharge side, where
4 we're going to tell it when to discharge for
5 that critical peak hour -- not "critical peak",
6 I'm sorry -- peak event.

7 BY CMSR. BAILEY:

8 Q Will the public notice that you give when
9 you're predicting a peak demand include energy
10 conservation appeals, since you're doing public
11 notice anyway, so that maybe customers, who
12 aren't part of the Battery Pilot, would be
13 aware and use less energy during that period?

14 A (Tebbetts) So, the way we're going to notify
15 our customers is the customers in the Program
16 we'll notify them, like directly by email, and
17 then put something on our website that says
18 "Here is, you know, a critical peak event
19 that's happening. So, you know, if you're part
20 of the Program, this is going to happen. And
21 if you're not part of the Program, you're
22 welcome to curtail your energy usage as well."

23 BY CHAIRMAN HONIGBERG:

24 Q But that's just going to be a notice on the

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 website. So, someone would need to think to
2 look?

3 A (Tebbetts) Not for the participating customers.

4 Q No, no, no. I'm talking about the -- I mean,
5 Commissioner Bailey is asking you
6 specifically --

7 A (Tebbetts) Yes.

8 Q -- about nonparticipating customers. The large
9 C&I users, for example, wouldn't you want them
10 to be curtailing? This is a separate
11 discussion from what we're doing here today.
12 But it seems like, if you are going to get in
13 the business of predicting when these peaks
14 are, you would want your larger users to cut
15 back for the peaks, would you not?

16 A (Tebbetts) We would.

17 Q And so, you, I expect, will be developing
18 specific notifications to those users, not just
19 putting it on your website, you'd be reaching
20 out to your contracts there, wouldn't you?

21 A (Tebbetts) We had not thought to do that. This
22 was just focused on the Battery Pilot.

23 Q And it's not part of the docket we're here to
24 talk about today. But the subject matter

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 touches on something we've spoken with you, and
2 Unitil, and Eversource about repeatedly. And
3 this is an opportunity for you to take
4 advantage of the work that you're going to be
5 doing here, and apply it somewhere else for,
6 actually, a very similar benefit, and one of
7 the benefits of this program, right?

8 A (Tebbetts) Yes.

9 CHAIRMAN HONIGBERG: Okay.

10 BY CMSR. BAILEY:

11 Q I'm not really sure how to ask this question.
12 I guess I don't know if it's a dumb question or
13 not, but I'm going to give it a shot.

14 When you reduce a peak on a particular
15 day, is it possible that that doesn't become
16 the peak anymore because of your reduction? I
17 mean, probably not at this level, but,
18 eventually, could that happen?

19 A (Tebbetts) Yes. So, actually, let's give an
20 example of July, where we had it really hot
21 beginning of the month, and we said "Oh, boy,
22 we may hit our peak on the 2nd. So, we're
23 going to dispatch the batteries."

24 And then, on the 3rd, it was even hotter,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 and as result, "we've got to dispatch the
2 batteries again." And then, on the 4th, I
3 think it was even hotter. I think we actually
4 hit our peak for the summer I've heard
5 somewhere maybe like the 5th or something,
6 super early in the year.

7 And so, yes. It's possible that we
8 thought on the 2nd we would, and we dispatched
9 the batteries four days in a row, because every
10 day has gotten worse. Very possible.

11 And we could have -- or, we thought maybe
12 we had hit the peak in the beginning, and then
13 July 28th comes, and it's even hotter, and we
14 have higher loads, then we hit our peak. Yes.

15 BY CHAIRMAN HONIGBERG:

16 Q Commissioner Bailey is actually asking you the
17 next-level question associated with this topic.
18 That, if this program got large enough, would
19 your dispatching of the batteries change what
20 would have been the peak day, and move that
21 peak to some other day?

22 A (Tebbetts) You mean as a system --

23 Q Or hour. Or hour, yes.

24 A (Tebbetts) You mean as a system whole or for

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Liberty's peak?

2 BY CMSR. BAILEY:

3 Q For Liberty's.

4 A (Tebbetts) For Liberty's peak? Oh, yes.

5 Absolutely, it could. If we had enough
6 dispatchable storage, I don't see why it
7 couldn't. Because if -- so, we have 170 -- our
8 load is about 170 megawatts. This is a two and
9 a half megawatt program. I mean, if we had 30
10 megawatts, that's a significant amount of
11 dispatchable renewable generation to then
12 change something. I mean, we're talking really
13 large, but it's possible if we have that much.

14 Q Okay. So, you don't have to worry about always
15 chasing the peak because of what you're doing
16 to yourself yet?

17 A (Tebbetts) No. Not at two and a half
18 megawatts, no.

19 CHAIRMAN HONIGBERG: Commissioner
20 Below -- former Commissioner Below.

21 **BY THE WITNESS:**

22 A (Below) Thank you. The City of Lebanon for a
23 number of months has been on a real-time
24 pricing product through a competitive supplier.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 And when we were trying to curtail to avoid the
2 annual peak for the FCM charges, because we do
3 have a couple T1 rates where we get capacity
4 take-back based on actual load share, they
5 observe that, as more and more entities are
6 trying to respond to these, the peak could
7 shift often maybe an hour later. And this
8 summer, in fact, its coincident peak, I think
9 all of them, were the hours ending 6:00 p.m.,
10 which is a little later than they have
11 historically been. There's probably a number
12 of reasons for that, mainly the large amount of
13 solar that's going in.

14 But our competitive supplier noted that
15 they think the peak is going to be the hour
16 ending 4:00, but it could be the hour ending
17 5:00. And if everybody is curtailing at 4:00
18 and 5:00, it could be the hour ending 6:00 or
19 7:00.

20 And I think we tried to design the
21 Time-of-Use rates, that critical peak period,
22 so it would likely capture that movement
23 somewhat into the early evening.

24 BY CMSR. GIAIMO:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q So, that's the justification of the 8:00 hour,
2 when the sun will be gone?

3 A (Below) Yes. And just both loads and real-time
4 prices looked like they're more headed towards
5 8:00 being a higher hour than the hour ending
6 3:00 p.m., when we started with the hour
7 ending -- starting the critical peak at
8 2:00 p.m., and it ended up moving to 3:00 p.m.,
9 because, if you look back over a long history,
10 it is earlier in the afternoon. But with the
11 amount of solar coming on, it is shifting later
12 in the day. So that the 3:00 to 8:00 p.m.
13 window is a little bit forward-looking in terms
14 of where we -- more recent data has shown us
15 going.

16 BY CMSR. BAILEY:

17 Q Tell me about cell-based metering systems.

18 A (Tebbetts) Sure. So, we've looked at different
19 kinds of meters to utilize for this Program.
20 And we found that the Itron Centron is the most
21 appropriate meter. And the reason for that is
22 it has -- it's cellular-based.

23 Q What does that mean?

24 A (Tebbetts) Yes. We can read it through our

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Verizon Wireless network. We have customers
2 now who have cell meters, purposefully because
3 we can't get to them or we read them every day.
4 So, we have a few very large customers where we
5 read their data every day, and that is how we
6 read it, because we don't have AMI metering.
7 So, this is the cheapest way to be able to get
8 interval data every day. And so, that's why we
9 also chose this, is because we'll be able to
10 download interval data from the system, and we
11 need to be able to have -- accommodate the
12 Time-of-Use rates, and there's three -- there's
13 actually five periods for the Time-of-Use
14 rates. So, we need to be able to accommodate
15 that.

16 Our AMR meters can only accommodate
17 three periods. But we actually need ten -- let
18 me say that again. For customers without
19 solar, we need five, and customers -- ten, I
20 apologize -- no, customers with solar, we need
21 ten, because they may export. So, we need an
22 import channel and an export channel. So, we
23 need ten registers. And for customers without
24 solar and just a battery, we won't export on

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the weekends. So, we'll need six, seven, I
2 think eight export periods, something like
3 that, eight registers.

4 So, it's very complicated in the metering
5 in order to accommodate the five periods of
6 time-of-use, and the fact that customers will
7 be able to export with them. So, that's why we
8 chose these meters.

9 Q How much does one of these meters cost?

10 A (Tebbetts) They're \$290, plus installation.
11 And they are \$426 installed.

12 Q And how much does it cost to install an AMI
13 meter?

14 A (Tebbetts) So, the way we look at AMI, at least
15 from Liberty's perspective, is AMI isn't the
16 meter. This could become an AMI meter. It's
17 the backup and the infrastructure associated
18 with talking two ways to the meter that makes
19 it AMI. This meter has capability to do
20 two-way talking. We are just not accompanying
21 the back office setup to do any of that, which
22 is what we would consider "AMI".

23 Q Okay. So, if over the next ten years there was
24 some big grid modernization initiative, and

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 these customers, who are, obviously, early
2 adopters of new technology, wanted to use some
3 of the grid mods, the grid modernization
4 functions, they wouldn't have -- you wouldn't
5 have to replace these meters?

6 A (Tebbetts) Well, we may replace them. And the
7 only way we're going to do it is it depends on
8 what meters we would actually be installing for
9 an AMI system. But the benefit is we actually
10 still are going to need these meters no matter
11 what.

12 So, the benefit is that we actually will
13 still need these meters no matter what. And
14 the reason is, I mentioned to you we have
15 cell-based meters now. We actually have a lot
16 of places we could utilize cell-based meters,
17 but they're expensive, so we don't. And we
18 would actually just redeploy all these meters
19 to places that we can use them. And if there
20 was a benefit of just using AMI, we would. But
21 you can't just turn on the AMI on these meters,
22 they actually need some kind of programming or
23 chip or something like that to make it. So, it
24 wouldn't really be feasible, my understanding,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 from our Metering group to utilize them as AMI
2 meters.

3 Q Okay. Let's talk a little bit about what you
4 expect for the length of time for Phase 1. Say
5 we get an order issued by the end of the year
6 and we approve the Settlement Agreement. When
7 do you think that the first 100 batteries would
8 be installed and operational?

9 A (Tebbetts) I believe the Settlement Agreement
10 tells us it's within nine months, or 50 -- I
11 think it's 100 -- yes, 100 batteries, 50
12 customers, I'm sorry.

13 Q Yes.

14 A (Tebbetts) So, we would certainly meet that
15 deadline. And we would work with Tesla to get
16 them in as soon as possible. What we want to
17 do, though, I will mention, is get the meters
18 in as soon as possible. And the reason for
19 that is, although the customers won't be on the
20 Time-of-Use rate, we want to monitor their
21 usage, which will help us after the battery is
22 installed to look at data before and after for
23 these customers, and determine, you know, "what
24 was their load before they started using the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 battery?" And "did it change?" And "how did
2 it change?"

3 So, the timeframe I think is as soon as we
4 can get the meters after the order in, that's
5 like the start of it for us. And then, you
6 know, getting the batteries in within nine
7 months. And as soon as we hit that 100-battery
8 mark, and I don't know how many months beyond
9 when -- or zero, that will be done within the
10 nine months, of course. It's 18 months after
11 that that we then can go look at Phase 2,
12 because we need 18 months of data in order to
13 get to Phase -- to apply for Phase 2, I'll say.

14 Q And you need 75 percent accuracy over at least
15 12 months?

16 A (Tebbetts) Yes.

17 Q But you think you'd get to that within the 18
18 months?

19 A (Tebbetts) Yes.

20 BY CMSR. GIAIMO:

21 Q I'm sorry, it sounded like there was a
22 suggestion earlier in the morning that the BYOD
23 Program could participate in Phase 1?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q So, but it also sounds like you said that
2 there's a waiting list, or it's not a "waiting
3 list", that was my word, that there was a long
4 line of people that want to participate?

5 A (Tebbetts) In the Liberty Program, I haven't --
6 you know, the Settlement, I mean, I haven't
7 broadcasted the Settlement out, we just signed
8 it. And so, the idea would be that we'll -- on
9 the Liberty side, we'll call those customers
10 and see if they're still interested, based on
11 the cost. And then, the working group will
12 work together to get out the Phase 1 piece of
13 the BYOD.

14 Q Within four months?

15 A (Tebbetts) Yes, within four months. And then,
16 you know, we'll go from there. And if we get
17 an aggregator, then Liberty will start to
18 market whatever program is designed for BYOD.

19 Q So, in the time it takes to do all that, it's
20 very possible that the 50 customers and 100
21 battery threshold has been hit?

22 A (Tebbetts) They have their own threshold
23 actually for BYOD.

24 Q Regardless of the 100?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Yes.

2 Q So, Phase 1 could actually see a situation
3 where there will be another 200 -- that there
4 will be 250, as well as the first 100?

5 CHAIRMAN HONIGBERG: In Phase 1?

6 BY CMSR. GIAIMO:

7 Q In Phase 1?

8 A (Tebbetts) Yes.

9 BY CMSR. BAILEY:

10 Q With BYOD?

11 A (Tebbetts) Correct. Yes. That's my
12 understanding.

13 CHAIRMAN HONIGBERG: Ms. Nixon.

14 **BY THE WITNESS:**

15 A (Nixon) I just want to clarify --

16 *[Court reporter interruption.]*

17 CHAIRMAN HONIGBERG: Ms. Nixon wants
18 to say something.

19 **BY THE WITNESS:**

20 A (Nixon) I just wanted to clarify that, if the
21 BYOD comes in in Phase 1, they're predicting
22 their own peaks. They're not using Liberty's
23 peaks.

24 BY CMSR. GIAIMO:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay. That's helpful. But it is possible
2 within the first year to see 350 batteries
3 installed?

4 A (Tebbetts) Yes.

5 Q Two fifty (250) through a third party and 100
6 through Liberty?

7 CMSR. BAILEY: Or 200.

8 **BY THE WITNESS:**

9 A (Tebbetts) So, Phase 1, there's no -- we
10 haven't -- so, here's the thing on Phase 1 with
11 the BYOD. We don't have a design how many
12 batteries or how much load is going to go into
13 Phase 1, right? So, I think that's to be
14 determined. Whereas for us, like we have 200
15 batteries, so it's one megawatt. We haven't
16 designed -- is it going to be one megawatt
17 again for Phase 1 for the BYOD? I don't know
18 that answer. It could be all two -- two and a
19 half megawatts for BYOD in Phase 1? I don't
20 know. We didn't even get that far in the
21 design of it.

22 So, there -- it could be 500 batteries in
23 Phase 1, plus our 200. So, 700, if that's how
24 the program design ends up.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 CMSR. GIAIMO: Thank you. You
2 answered my question. Appreciate it.

3 CMSR. BAILEY: I'm going to have more
4 questions about BYOD in a little while. I have
5 to keep in my order.

6 BY CMSR. BAILEY:

7 Q Why was the installation of the batteries for
8 Phase 1 limited to just one year?

9 A (Tebbetts) You mean the timeframe by which we
10 have to hurry up and install them? I don't --

11 Q Yes. I think the Settlement requires that you
12 have to install all the batteries for Phase 1
13 within a year, doesn't it?

14 A (Tebbetts) Yes. So, I think that the purpose
15 really was that they didn't want the Phase 1 to
16 linger, and, you know, a battery installed
17 here, a battery installed there. If we're
18 really serious about doing the pilot, we're
19 going to work with Tesla as best as we can to
20 get all of them installed in Phase 1 in a
21 timely manner. And that's the reason.
22 Because, otherwise, we'll never get to Phase 2.

23 Q And what happens if you don't get them
24 installed in a year? You only have to get 100

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 installed, but you can get up to 200?

2 A (Tebbetts) Yes.

3 Q In one year?

4 A (Tebbetts) Yes.

5 Q So, if you get to 100 in twelve months, you're
6 not permitted to do the second hundred until
7 Phase 2 starts?

8 A (Tebbetts) No. I don't believe that's the
9 case. I believe that, in order to start the
10 clock for the requirements of getting to Phase
11 2, we need the 100 batteries installed. So, as
12 soon as we get that, that's when the clock
13 starts. It's got to be within twelve months,
14 that's when the clock starts. We would still
15 continue to install batteries after that, up to
16 the 200. But it may just not be within that
17 first twelve months, it may be within thirteen
18 or fourteen months.

19 CHAIRMAN HONIGBERG: Let me direct
20 your attention to Page 7 of the Settlement.
21 Six lines down there's a sentence that says:
22 "No batteries shall be installed in Phase 1 of
23 the program later than 12 months following
24 Commission approval of this settlement."

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1 **BY THE WITNESS:**

2 A (Tebbetts) Yes. I apologize. The first nine
3 months is what I meant. The first nine months
4 we have to get the 100 batteries installed. My
5 apologies, yes. And then we have another three
6 months to get the rest of the batteries
7 installed.

8 BY CMSR. BAILEY:

9 Q Okay.

10 A (Tebbetts) And if, for some reason, we could
11 not meet that deadline, we probably would
12 come -- there would have to be a really good
13 reason why we didn't meet it. We would come
14 back and speak with Staff about it, and
15 hopefully understand why we couldn't meet that
16 deadline and go from there. But that was the
17 three-month period, I apologize, that I was
18 thinking.

19 Q How did you decide that 50 or 100 customers was
20 the right number for Phase 1?

21 A (Nixon) We were trying to balance the -- trying
22 to see a significant way to get to benefits,
23 but also reduce the risks of the costs, so had
24 to balance what was the best number. We wanted

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 to significantly reduce it from the 1,000.

2 BY CHAIRMAN HONIGBERG:

3 Q Ms. Nixon, maybe this is for you, and maybe for
4 some of the others. I have sort of thought of
5 it, and somebody used the phrase earlier, as a
6 proof of concept. That the first phase of a
7 pilot is a "proof of concept" phase, and the
8 second phase of the pilot is to refine and ramp
9 up into what they hope will be a larger
10 program. Is that a fair way to look at it?

11 A (Nixon) I agree with that. I mean, I was using
12 it as a pilot and as a demonstration. So, a
13 "demonstration" in my eyes is more of a bigger
14 quantity of batteries out there.

15 BY CMSR. BAILEY:

16 Q In the Settlement Agreement, there's a sentence
17 that says "Phase 1 is subject to an initial
18 test period of 18 months." Does that just mean
19 Phase 1 has to last at least 18 months?

20 A (Tebbetts) Yes. We're going to look at the 18
21 months and say "okay, did we meet these
22 criteria to move to Phase 2?"

23 Q Okay.

24 BY CMSR. GIAIMO:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q So, it's possible that in that 18-month period
2 you would have only one regional system peak
3 day?

4 A (Tebbetts) That is possible. Yes.

5 Q So, do you think that's a large enough sample
6 to rely on? You're looking at 75 percent, 79
7 percent accuracy, but yet you're only using one
8 sample from the regional system peak.

9 A (Tebbetts) Well, we will be looking at the
10 monthly peaks. And I think that's what the
11 idea behind this was to look at 18 monthly
12 peaks and determine "are we hitting those
13 monthly peaks as well?"

14 But, yes, you're right. There's only --
15 maybe only one system peak in that period.

16 CMSR. GIAIMO: Well, as Commissioner
17 Bailey said earlier, the Commission has been,
18 at least in the year, year or so that I've been
19 here, every time there's a default service
20 proceeding, we've echoed the need for
21 mitigating the capacity tags in each utility
22 system, for transmission purposes, but also
23 capacity purposes. So, one may not be enough.

24 BY CHAIRMAN HONIGBERG:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Ms. Tebbetts, maybe I'm misunderstanding. The
2 annual peak, it's just the peak of the peaks,
3 isn't it? So, if you're getting the peak
4 mostly right, your chance of getting the peak
5 of the peaks right is about the same as you're
6 getting it in any other month, with the
7 possible exception of shoulder months, which
8 are likely to be higher, aren't they?

9 A (Tebbetts) Agreed. That's why we were looking
10 at it as a monthly peak, and not just the
11 annual peak, so that you're looking at
12 75 percent success over 18 months, 18 peaks.

13 Q And so that peak of the peaks is just the
14 most -- the one with the highest stakes, but
15 it's really no different from predicting the
16 peak in any other month?

17 A (Tebbetts) Agreed.

18 BY CMSR. BAILEY:

19 Q On Page 19 of the Settlement Agreement, it says
20 that EM&V final report will be "due three years
21 from the initial 100 batteries becoming
22 operational". Why is that three years, if
23 Phase 1 is only supposed to last -- you expect
24 Phase 1 to only last 18 months?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) So, we actually just wanted to get
2 Phase 2 in their as well, data for the other
3 300 batteries.

4 Q Oh. Okay. What do you need to learn from
5 Phase 1?

6 A (Tebbetts) What do we need to learn from Phase
7 1? Well, other than, I mean, what's laid out
8 here what we're going to look for, I think, you
9 know, from the Company's perspective, we want
10 to learn about customer behavior. There's two
11 ways to look at, like, storage. We looked at
12 utility storage, we looked at behind-the-meter
13 storage. And when looking at behind-the-meter
14 storage, there's the opportunity for customer
15 engagement.

16 So, we really want to learn about what our
17 customers want. We want to learn about with
18 regards to energy services, this will be
19 considered a service that we're providing to
20 the customer with their batter, and also the
21 Time-of-Use rates. So, we really want to learn
22 about customer engagement and -- on the
23 customer side.

24 From the battery side, there's a lot that

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the battery can tell us. They have a meter in
2 them. And so, they can tell us a lot of
3 information that we don't have actually
4 capabilities of seeing today, because we don't
5 have the devices on our system. And so, we're
6 hoping to be able to utilize that kind of data
7 through the EM&V consultant, to really take a
8 look at different areas of our circuits, and
9 say, you know, "Yes, the SCADA is giving us
10 this information. But, you know, right down
11 the street, at these points, we're getting that
12 information." That's the kind of data we're
13 look at on the system side.

14 Q Ms. Nixon, what would you say needs to be
15 learned from Phase 1?

16 A (Nixon) Sorry, I didn't hear everything that
17 she said --

18 *[Court reporter interruption.]*

19 **BY THE WITNESS:**

20 A (Nixon) Let me say some of the key things that
21 I think should be learned is the customer
22 behavior, how they shift from -- with the
23 batteries, as well as the time-of-use. I
24 really want to see the difference between the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 DG customers and the non-DG customers. And
2 then just to see the actual costs as well. I
3 mean, a lot -- we've had a lot of estimates in
4 here, and we did the best estimates we could.
5 But just to see actual benefits and costs that
6 are realized with it.

7 A (Huber) And so, I agree with everything that
8 was stated before, but would add maybe a few
9 more points. One would be customer
10 satisfaction. Are customers actually happy in
11 this Program on those rates? What do they
12 think of it? Are they saving? If so, how
13 much, from, you know, the battery in relation
14 to their load? Did we get the pricing right,
15 in terms of the customer uptake? You know, is
16 that the right price? Could we have gone a
17 little bit higher? And so, I think, you know
18 those are going to be important. And then,
19 outage, what happens when there is an outage?
20 You know, how did the customers and their
21 batteries, you know, do?

22 So, those are -- those are a few of the
23 things that OCA is looking for.

24 Q Was any thought given to how many customers

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 should be or could be DG customers versus
2 non-DG customers?

3 A (Tebbetts) No, we didn't. Because we felt it
4 would be -- we're not picking and choosing
5 customers. So, I have a list of, I don't know
6 how many customers, like 75 or 80 customers.
7 And to be honest, only one is DG. And all the
8 customers I've spoken with, I've actually
9 personally called every single customer back.
10 If they get a call at the Call Center, they let
11 me know and I call them back. They want it for
12 backup power. Their biggest issue is
13 reliability. And they just want backup power,
14 they don't want to have -- it's not the four or
15 five days outages for them, it's the "I lost
16 power for two hours and I've got to reset my
17 clocks." Like, it's annoying to them.

18 So, I mean, they want it for long term,
19 too. But it was more or less like there was a
20 blip and things like that, and like "okay,
21 well, this will fix that."

22 So, we haven't had anybody really -- and
23 again, we haven't marketed it, mind you. This
24 has been maybe something like the Valley News

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 caught wind of it last fall or last spring, so
2 they put something out there. So, just gotten
3 calls from customers seeing things in the news
4 or whatever.

5 But I think, when we market it, that may
6 change, and we'll get more DG customers who are
7 interested. And certainly, I'd like to be able
8 to know, you know, get them on the list of
9 getting a battery.

10 BY CHAIRMAN HONIGBERG:

11 Q Do you have interest from both of your service
12 territories in the state?

13 A (Tebbetts) Yes.

14 Q Would you say it's mostly --

15 A (Tebbetts) Lebanon. Mostly Lebanon.

16 BY CMSR. BAILEY:

17 Q What happens if you have 200 customers or 300
18 customers more than you're allowed to have in
19 Phase 1 interested, how do you decide who gets
20 to be part of Phase 1? Is it "first come,
21 first serve"?

22 A (Tebbetts) It's going to be "first come, first
23 serve". And so, the other thing is like there
24 will need to be site visits to make sure they

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 can get a battery. So, let's say, you know,
2 that the three of you are on my list, and one
3 of you is not qualified to get a battery, maybe
4 your panel needs to be updated in your home or
5 you don't have the space. Then, you know, you
6 would fall off, and the next person in line
7 would then -- we'd do a site visit and
8 determine can they have it. So, we actually
9 need a waiting list that's greater than the 100
10 customers.

11 Q And Ms. Nixon said that it was important to
12 learn from Phase 1 the experience difference
13 between DG customers and non-DG customers.
14 What are you going to do to attract more than
15 one DG customer?

16 A (Tebbetts) Well, again, we didn't really want
17 to -- we're going to market it to all
18 customers, like I said, for residential
19 customers, I should say. But I think,
20 hopefully, in our marketing materials, we can,
21 you know, include information like "you can
22 pair this with your solar system" and things
23 like that, so hopefully they will be interested
24 to participate.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 We didn't intend to contact our DG
2 customers individually. We didn't feel that
3 that would be appropriate to pick and choose
4 who should be participating. So, hoping that
5 marketing will do that for us.

6 CMSR. GIAIMO: I feel like
7 Commissioner Bailey is going to be moving to
8 Phase 2 in a second? So, I have these
9 questions about Phase 1, if that's okay, before
10 you move on?

11 CMSR. BAILEY: No, I'm not going to
12 Phase 2 yet.

13 CMSR. GIAIMO: Okay.

14 CMSR. BAILEY: But, no. Go ahead.

15 BY CMSR. GIAIMO:

16 Q I was just wondering why was there any thought
17 to not just limiting it to residential
18 customers?

19 A (Tebbetts) There was a lot of thought,
20 actually. We had originally designed -- we
21 originally thought about giving it to our G-3
22 customers, which are small commercial customers
23 that are on the same kind of rate as our Rate D
24 customers.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 But, when the Program was reduced to the
2 batteries, when the battery number was reduced,
3 we felt that it would hinder getting that data
4 we've been talking about with businesses, as
5 they may have different load profiles than a
6 residential customer. So then, we're kind of
7 like "what kind of data are we going to get
8 that's really going to give us a picture?" It
9 may be messy. So, we just decided at that
10 point it would be appropriate for residential
11 only.

12 Q But G-3 is able to participate in Phase 2? I'm
13 pretty sure that's right, isn't it?

14 A (Tebbetts) I think so. I don't recall the --

15 A (Nixon) In Phase 2, yes.

16 A (Tebbetts) Yes. Okay.

17 CMSR. BAILEY: All right. You were
18 correct, I am switching topics. I'm not going
19 to Phase 2, though.

20 BY CMSR. BAILEY:

21 Q Cybersecurity.

22 A (Tebbetts) Uh-huh.

23 Q What has Liberty done to ensure control and
24 dispatch of batteries behind the meter will be

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 secure?

2 A (Tebbetts) Absolutely. So, we've been working
3 with Tesla and our cybersecurity folks
4 internally to go through all of the
5 cybersecurity stuff. So, what I'll tell you
6 is, Tesla's system, called "GridLogic", does
7 not talk to our SCADA or any systems at all.
8 It is cloud-based, and we have to log in and
9 tell the batteries what to do. So, with
10 regards to cybersecurity on our system, it
11 doesn't -- it does not touch any of our systems
12 at all.

13 Q Does Liberty have a cybersecurity officer?

14 A (Tebbetts) We have a gentleman who is in charge
15 of all our cybersecurity. I don't know what
16 his title is.

17 Q Is he in New Hampshire or is he a corporate
18 guy?

19 A (Tebbetts) He's actually in Joplin, Missouri.
20 We own Empire Electric out in Joplin. So,
21 we've kind of got people all over the place.

22 Q Has that individual reviewed the plans?

23 A (Tebbetts) Yes, he has. And we've had multiple
24 meetings with Tesla to go over all of the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 pieces, to ensure that everything meets our
2 cybersecurity standards.

3 Q With him?

4 A (Tebbetts) Yes. And with their cybersecurity
5 group as well.

6 Q Where or by whom has the software been
7 developed, do you know? The gateway software?

8 A (Tebbetts) It's been developed by Tesla, is my
9 understanding.

10 Q Do you know if the supply chain for equipment
11 has been vetted with your security officer,
12 your cybersecurity officer?

13 A (Tebbetts) What do you mean by "supply chain"?

14 Q Well, from things that I've heard in training
15 about cybersecurity, you have to look at where
16 the equipment that you're purchasing is coming
17 from, including the meters, and who's
18 manufactured them, and who's had control of
19 them, to make sure that bad things haven't been
20 embedded.

21 A (Tebbetts) Sure. So, for the Itron meters, we
22 use them now, just not that type, the Centron.
23 So, we're going to get them from our Itron
24 meter representative. That's not going to

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1 change.

2 And as far as the batteries and the
3 gateways, those are Tesla, my understanding is
4 Tesla makes them and they're going to provide
5 them to us, so -- directly. I don't know --
6 or, and if they install them, then they're just
7 going to take them themselves and bring them to
8 the homes to have them installed.

9 So, I don't know of another supplier
10 that's involved. My understanding is those are
11 the only two players, including the Company.

12 Q Are Itron meters used throughout the country in
13 your --

14 A (Tebbetts) Oh, yes.

15 Q -- in your parent company's or your affiliates?

16 A (Tebbetts) I don't know what we have in
17 California. And I don't know what we have in
18 Missouri. I don't know that answer. But we --
19 that's the only thing, that's one of the meters
20 that we use in New Hampshire is the Itron
21 meter.

22 Q Do you know if the cybersecurity officer has
23 looked at that?

24 A (Tebbetts) I don't. I mean, we've been using

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the meters for years. So, I don't know.

2 Again, it's the same brand of meter, it's just
3 a different level of programming available to
4 the meter.

5 Q Which makes it more attractive possibly to
6 cyberterrorists?

7 A (Tebbetts) I don't know. Maybe.

8 Q It's really something that the Company needs to
9 consider very carefully.

10 CHAIRMAN HONIGBERG: Again, separate
11 and apart from the specifics of what we're
12 considering today. But it's a large issue
13 nationwide.

14 WITNESS TEBBETTS: Uh-huh.

15 CHAIRMAN HONIGBERG: And the vetting
16 of supply chains, the vetting of all of the
17 smart-connected devices needs to be considered.
18 And your gentleman in Joplin, you know, should
19 be doing that at some level, and directing it
20 for you, and for all of the Liberty affiliates
21 in the country, about how to go through the
22 process of acquiring smart-connected devices.

23 And if your Itron meters, you know,
24 you've been using them for years and they're

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 ubiquitous, as Commissioner Bailey said, that
2 makes them an attractive target. So, you might
3 want to raise that with the Joplin person, have
4 a discussion with him about that, and about
5 other devices that are in your system or
6 considering for implementation here or in other
7 applications.

8 WITNESS TEBBETTS: Okay.

9 BY CMSR. BAILEY:

10 Q Is the control and dispatch software used by
11 Liberty separate from the software used by
12 customers to export their energy?

13 A (Tebbetts) No, it's the same system. But the
14 customer won't be able to export it, because
15 the battery is going to be programmed
16 automatically. So, the algorithm is built into
17 the battery. It's going to -- we're going to
18 tell it, when we set it up, charge at this
19 hour, export at this hour all of the time, and
20 then we'll override that when we take control
21 for peaks.

22 The only time that will be different is if
23 a customer has solar, and they're going to be
24 able to charge it with their solar. Then, the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 customer will be able to tell the battery when
2 to charge, so it can charge with solar, and
3 when to dispatch. But Liberty can also
4 override that, if necessary.

5 Q Is there any interface, any possible interface
6 between the customer use of that control for DG
7 and Liberty's dispatchability?

8 A (Tebbetts) I don't think I understand your
9 question.

10 Q Well, is it possible that somebody who's
11 clever, who has a battery and solar, can figure
12 out a way to get into Liberty's system to
13 control dispatch, of other batteries possibly?

14 A (Tebbetts) Well, I guess it's certainly
15 possible that hacking happens. But that would
16 be the way, if that's what you're suggesting, I
17 guess that's possible. Hacking happens.

18 But we have our own system log-in, we have
19 all of our own information to do that. So, the
20 customer -- I mean, every customer has a log-in
21 that use GridLogic. Anyone who has a Tesla
22 battery has GridLogic. That's how they talk to
23 the battery. So, they have their own log-in
24 for the battery. So, and certainly hacking is

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 possible, but they're separate with regards to
2 Liberty's access versus the customer's access.
3 They're not in the same -- they're not the
4 same.

5 Q Can you explain the difference between the
6 gateway and the meter?

7 A (Tebbetts) When you refer to "the meter", you
8 mean the meter that we're installing?

9 Q Yes.

10 A (Tebbetts) Okay. Yes. Sure. So, the gateway
11 is a -- it's a device, it almost looks like an
12 electrical panel, it's a box. And it's what --
13 it's like, you know, it's essentially like a
14 little electrical panel that will talk to the
15 battery. And that's also where you would
16 connect the internet for the customer, so that
17 the battery can talk through Wi-Fi to us. And
18 if for some reason the Wi-Fi is not working,
19 then it won't talk at all. The batteries still
20 work, but we will not be able to see it.

21 And our meter is completely separate,
22 that's on the outside of the house, in the same
23 spot that the meter is today. We're not
24 changing meter locations, we're just putting a

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 different meter on.

2 Q So, what is the function of the gateway?

3 A (Tebbetts) It's like the brain of the battery,
4 essentially. That's how the battery -- you
5 know, it's going to connect to the internet.
6 It's going to -- it's the brain.

7 Q So, if the customer's Wi-Fi in their house is
8 out, you can't talk to that battery?

9 A (Tebbetts) We cannot talk to that battery, but
10 we know that the Wi-Fi is out, and so we would
11 contact the customer to figure out what's going
12 on. And that's also another thing that's part
13 of the customer contract is, you know, if they
14 are to shut their Wi-Fi off, then we have a big
15 problem.

16 A (Below) If I might add? As I understand it,
17 the gateway is also an automatic transfer
18 switch. So, if the grid power goes out, it
19 automatically switches over to the battery, for
20 instance.

21 A (Tebbetts) Yes.

22 A (Below) And I might also add, as we looked at
23 this fairly carefully, Tesla limits the sort of
24 API access where you directly control the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 battery to specified whitelists. So, if
2 somebody tried to log in from other than
3 Liberty Utilities-specific log-in source, it
4 wouldn't get through, plus there's a complex
5 key as well.

6 But the Tesla -- the Tesla would have a
7 mobile phone-based app. And for those with
8 solar, they can sort of -- they can only set
9 time-of-use periods in which the battery
10 charges, and the battery -- the Tesla battery
11 or the "bring your own device" batteries tend
12 to, you know, have built-in ability to restrict
13 the charging to only be from the DG system and
14 not charge from the grid.

15 Q You probably don't know the answer to this, but
16 I'm going to ask it anyway. Do you know if the
17 gentleman in Joplin -- is it Joplin?

18 CHAIRMAN HONIGBERG: Joplin.

19 WITNESS TEBBETTS: Joplin.

20 CONTINUED BY CMSR. BAILEY:

21 Q -- has supplied the NERC Critical
22 Infrastructure --

23 *[Court reporter interruption.]*

24 CMSR. BAILEY: Sorry.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 BY CMSR. BAILEY:

2 Q -- NERC Critical Infrastructure Protection
3 Standards to this equipment?

4 A (Tebbetts) I don't know. No, I don't know.

5 CMSR. BAILEY: Can we ask a record
6 request about that?

7 CHAIRMAN HONIGBERG: What is it you
8 want to know?

9 CMSR. BAILEY: I want to know if the
10 cybersecurity officer at Liberty has applied
11 the NERC CIP Standards --

12 CHAIRMAN HONIGBERG: Spell "CIP" for
13 the stenographer.

14 CMSR. BAILEY: -- Critical
15 Infrastructure Protection Standards to the
16 equipment that is going to be installed in this
17 pilot.

18 CHAIRMAN HONIGBERG: Mr. Sheehan, you
19 understand the question?

20 MR. SHEEHAN: I do. Thank you.

21 CHAIRMAN HONIGBERG: So that will be
22 "21".

23 CMSR. BAILEY: Twenty?

24 CHAIRMAN HONIGBERG: Twenty-one.

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1 (Exhibit 21 reserved)

2 BY CMSR. BAILEY:

3 Q All right. Switching to "Cost-Benefit" or
4 "Benefit-Cost". Can we look at the
5 spreadsheets, and we can start with the Phase 1
6 Benefit/Cost Analysis. And can you just walk
7 me through the "benefit" category and what they
8 include?

9 A (Tebbetts) My apologies. My paper copy cut off
10 the side. Yes. Okay. So, we are looking at
11 the "benefit categories" you said?

12 Q Yes.

13 A (Tebbetts) Okay. Sure. So, in looking at the
14 benefits associated with this Program, we
15 looked at the Regional Network System rates,
16 the Local System Network [sic] rates, and the
17 Avoided Capacity Cost rate. And so, those are
18 the three benefits to this Program, as we have
19 taken out the non-wires alternatives piece of
20 it.

21 Q But tell me -- I mean, I can read the "Regional
22 Network System rate".

23 A (Tebbetts) Yes.

24 Q But tell me what the "\$117.00 per

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 kilowatt-year" rate refers to. Is that the
2 rate that you expect RNS to be? Or, is that
3 the savings? Or, --

4 A (Tebbetts) Yes. Sure.

5 Q -- explain how it works.

6 A (Tebbetts) Sure. So, the rates that you see in
7 Lines 3 through 5 is the per kW-year rate, so
8 divided by 12 that's the monthly rate, that we
9 would pay to, for example, in Line 3, the RNS,
10 we would pay to ISO-New England, for every kW
11 of load we have on the system at the system
12 peak hour. So, we pay 100 -- these, for rates
13 of 2019, 2020, and 2021, those are actual
14 forecasted rates from ISO-New England's
15 forecast from this past summer for the future
16 years, they provide like a three-year period.
17 And so, we've predicated that on saving two and
18 a half -- or, really, in Phase 1, it's 1
19 megawatt, utilizing 1 megawatt against those
20 rates of battery storage during that peak hour.
21 Q So, these are the rates. And you would expect,
22 if your load you said was "170 megawatts"
23 generally, you'd pay these rates times
24 169 megawatts, and that's what the savings

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 would be?

2 A (Tebbetts) Yes.

3 Q Where does it show that? How would I know
4 that? Where's the quantity?

5 A (Tebbetts) Well, I guess, when you look at
6 Line 6, that's where the math goes, 117, and
7 it's not perfect, because we've included --
8 hold on, I've got to get my chart, the
9 spreadsheet. That is at a 75 percent success
10 rate. So, you can't multiply one megawatt
11 times \$117 per kW, because that's 100 percent
12 success rate. And the 87,000 --

13 *[Court reporter interruption.]*

14 **CONTINUED BY THE WITNESS:**

15 A (Tebbetts) Yes. \$87,750 savings is predicated
16 on a 75 percent success rate. So, 750 kW was
17 dispatched at that time, not 1,000 kW.

18 BY CMSR. BAILEY:

19 Q So, take me through the math.

20 A (Tebbetts) Uh-huh.

21 Q Is it the sum of 117, 23.57, and 100?

22 A (Tebbetts) No. So, you have Line 3, \$117 in
23 2019. And if you multiply that times -- I got
24 to look at my backup, excuse me for a moment.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q 750.

2 A (Tebbetts) Yes. But I'm looking at it, and I
3 think it's done times 12.

4 Q Well, 117 times 750 --

5 A (Tebbetts) Is the 87?

6 Q -- is the 87,750.

7 A (Tebbetts) Okay. Then, that is. I have this
8 really big spreadsheet with all kinds of backup
9 on it. So, I'm trying to see how -- I don't
10 have the formula in front of me. But, yes.
11 Okay. So that would be how we calculated the
12 87,750.

13 Q And so, the 87,750 is the actual savings --

14 A (Tebbetts) Yes.

15 Q -- from the Program that you expect for RNS,
16 for one month or one year?

17 A (Tebbetts) For the year.

18 Q Okay. All right. And then LNS is the same
19 thing, only times 23.57?

20 A (Tebbetts) Yes.

21 Q Oh, I see. Okay. So, Lines 6, 7, and 8 are
22 the expected savings?

23 A (Tebbetts) Yes.

24 BY CHAIRMAN HONIGBERG:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q So, the note below that describes Line 9 says
2 "Sum of lines 3 through 8", it actually is the
3 sum of Lines 6, 7, and 8, is it not?

4 A (Tebbetts) Yes. That is correct.

5 CHAIRMAN HONIGBERG: Yes. Okay.

6 CMSR. BAILEY: Yes. All right. I'm
7 going to highlight that.

8 CHAIRMAN HONIGBERG: Let's go off the
9 record for just a minute, talk schedule.

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

12 CHAIRMAN HONIGBERG: All right.
13 We're back on the record.

14 BY CMSR. BAILEY:

15 Q So, oh, "Avoided Capacity Costs", that's the
16 difference in the capacity tags from the
17 Forward Capacity Market, in Line 8?

18 A (Tebbetts) Yes. That came from the 2018 study
19 that we use for our energy efficiency programs.
20 That's where these numbers came from.

21 BY CMSR. GIAIMO:

22 Q So, what was the forecasted amount after, I
23 don't know, 2022, 2023, after the 13th auction,
24 where you don't know any more?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Yes. So, we used an escalating
2 percentage of 4.66 percent over the rest of the
3 years.

4 Q Utilizing the last auction, and then putting
5 that factor on top of it?

6 A (Tebbetts) Yes.

7 CMSR. GIAIMO: Thanks.

8 BY CMSR. BAILEY:

9 Q Are you aware that some transmission operators
10 adjust the peak by adding behind-the-meter
11 generation back into the Regional Network
12 loads?

13 A (Tebbetts) Yes.

14 Q Do you know if National Grid does that?

15 A (Tebbetts) I don't.

16 Q If they do, isn't that going to take away your
17 savings?

18 A (Tebbetts) I guess it could.

19 Q Yes, I think it would.

20 A (Huber) So, my understanding, it's not the
21 transmission company. It's the -- the
22 load-serving entity is the one that has to
23 report. And it's up to them how they include
24 and reconstitute their load.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay.

2 A (Huber) So, it's up to Liberty to decide how to
3 manage behind-the-meter assets.

4 Q Okay. So, you're not going to add that back
5 in?

6 A (Tebbetts) We don't reconstitute load now and
7 we will not.

8 Q Okay.

9 A (Nixon) Can I clarify one thing?

10 Q Yes.

11 A (Nixon) Commissioner, to your question about
12 the "Avoided Capacity" line, that is actually
13 the rate that the consultant for the energy
14 efficiency, those are the rates that they
15 estimated. When she mentioned the "4.66", that
16 was the inflation rate for the RNS.

17 A (Tebbetts) Right.

18 A (Nixon) If that makes sense?

19 Q How much do the batteries themselves cost,
20 without installation?

21 A (Tebbetts) I have to -- hold on. I have it
22 right here. About 14, about \$14,000, for two.
23 So, about 7,000 a piece, without installation
24 and without the gateway. So, it's \$6,900 a

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 piece, without the gateway and without
2 installation. That's the retail price.

3 Q 6,900 a piece, okay.

4 A (Tebbetts) Yes.

5 Q And then the amount in the revenue requirement
6 is "8,150", is that right, per battery?

7 A (Tebbetts) Per battery, yes. We kind of did --
8 we looked at the total cost for Phase 1 and
9 Phase 2 and came up with an average per
10 battery.

11 Q So, you expect installation to be about 1,250
12 per battery?

13 A (Tebbetts) About 2,000 per battery.

14 Q All right. So, how do we get from 6,900, which
15 is 7,000, to 8,150? Do we have enough included
16 in here?

17 A (Tebbetts) Yes. So, let me take a look at
18 this.

19 Okay. So, we have approximately, when we
20 look at the total cost, we're looking at about,
21 I think -- I don't have it broken down in front
22 of me, but I think installation is about maybe
23 \$1,000 per battery, because then they have the
24 gateway also. So, between the gateway and

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 installation, it's about \$2,500, because we
2 looked at --

3 Q For two batteries or one battery?

4 A (Tebbetts) Two batteries.

5 Q So, the installation number that you gave me,
6 at \$2,000, was for both, for two batteries?

7 A (Tebbetts) Yes.

8 Q Oh. That makes more sense.

9 A (Tebbetts) Oh, yes, yes, yes. For two
10 batteries, correct.

11 Q Okay.

12 A (Tebbetts) Exactly.

13 Q All right. So that then the numbers work.

14 A (Tebbetts) Yes. Yes. So, that's what we
15 looked at, the 8,150, we said, "well, there's
16 actually two batteries, so we're saving on
17 installation costs", versus one battery where
18 we have to pay the installation costs for both.

19 Q Okay. Has the Tesla retail price changed since
20 you've been looking into this?

21 A (Tebbetts) Yes.

22 Q And what is the cost here based on?

23 A (Tebbetts) Retail price, that is the most
24 up-to-date from Tesla.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay. Do you know when Tesla -- how often they
2 change their pricing?

3 A (Tebbetts) I don't. It's only changed once
4 since we started this Program. And we're going
5 to lock in this pricing anyways, as soon as we
6 get out of here, basically. We didn't have the
7 contract ready to go to sign, so --

8 Q Okay. And the installation, you're going to
9 issue an RFP to get that done, right?

10 A (Tebbetts) Yes. And an authorized Tesla
11 installer would be the ones that we'd be
12 looking to install batteries, so hopefully we
13 can get a better price.

14 Q Is it possible that you could get a higher
15 price?

16 A (Tebbetts) It is, and then we'll use Tesla.

17 Q Oh. So, Tesla is \$2,000 for installation?

18 A (Tebbetts) Yes.

19 Q And you may get a better price, which would
20 increase the benefit?

21 A (Tebbetts) Yes.

22 Q Do you know --

23 CMSR. BAILEY: Go ahead.

24 BY CMSR. GIAIMO:

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q I'm imagining there's a limited number of
2 installers or certified installers?

3 A (Tebbetts) I would think so.

4 Q So, is the -- again, getting back to the
5 9-month and 12-month thresholds in the Phase 2,
6 is that a realistic timeline still?

7 A (Tebbetts) Yes. Because what we can do is
8 we'll issue an RFP as soon as -- we'll have it
9 ready to go when we get an order and, you know,
10 get everything back. And if the pricing is
11 better than Tesla, then we'll -- then all we're
12 going to do then is have Tesla deliver to the
13 authorized installer, and that's all that would
14 happen. So, the timeline on the batteries
15 shouldn't change.

16 Q Is the only moving part with respect to price
17 the installation?

18 A (Tebbetts) Yes.

19 CHAIRMAN HONIGBERG: All right.

20 We're going to take our lunch break.

21 WITNESS NIXON: May I add something?

22 CHAIRMAN HONIGBERG: Oh, Ms. Nixon.

23 **BY THE WITNESS:**

24 A (Nixon) So, my understanding, and it's not a

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 big difference, but that each battery --

2 [Court reporter interruption.]

3 **BY THE WITNESS:**

4 A (Nixon) My understanding, sorry, is that each
5 battery costs 6,700, and that the gateway is
6 1,100 and that the installation rate that we
7 used was 1,800. Again, it's not much
8 difference. But, while she was doing that, I
9 was trying to do the math out. And that's what
10 I believe, even if you go with Tesla's website,
11 that's what they would say, is the battery
12 today costs 6,700, the gateway is 1,100.

13 BY CMSR. BAILEY:

14 Q And is the installation 1,800 for installation
15 of two batteries? So, if I'm adding up the --

16 A (Tebbetts) Yes.

17 Q So, if I'm adding up the cost of one battery, I
18 would use 900 for installation, split in half?

19 A (Nixon) I'd defer to Heather on that. But
20 again, I don't think that installation is a
21 firm rate, is that right? That it depends.

22 A (Tebbetts) Yes. So, the installation from
23 Tesla is in some kind of tier and, basically,
24 it's a range. So, if the customer, you know,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 depending on where the battery is installed in
2 their house, things like that, will depend on
3 the total cost. But what we use is 1,800. And
4 when I spoke with Tesla, they said "most people
5 who are taking a battery have the necessary
6 equipment already there". They probably have
7 an electric car or things like that already
8 there. So, there's not a necessity for
9 these -- what they called "extra electrical
10 requirements" for these installations. So,
11 they said that \$1,800 install for two batteries
12 is appropriate.

13 So, that's how we came up with the 8,150
14 per battery, which is an installed
15 battery/gateway.

16 Q Half of install, half of gateway, plus one
17 battery?

18 A (Tebbetts) Correct.

19 Q Is the 8,150?

20 A (Tebbetts) Yes.

21 BY CHAIRMAN HONIGBERG:

22 Q Each battery needs its own gateway?

23 A (Tebbetts) No. One battery --

24 Q One gateway serves both batteries?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Yes.

2 CHAIRMAN HONIGBERG: Okay.

3 **BY THE WITNESS:**

4 A (Nixon) And the other thing to note is that
5 there may be additional installations the
6 participant has to pay. Like, if they have to
7 change their electrical panel, that is not
8 included here.

9 CMSR. BAILEY: Right.

10 WITNESS TEBBETTS: Correct.

11 CHAIRMAN HONIGBERG: All right.

12 CMSR. BAILEY: Thank you.

13 CHAIRMAN HONIGBERG: Now we'll take
14 our break and come back at 1:30.

15 *(Lunch recess taken at 12:32*
16 *p.m. and the hearing resumed at*
17 *1:36 p.m.)*

18 CHAIRMAN HONIGBERG: Commissioner
19 Bailey will be resuming.

20 CMSR. BAILEY: Thank you.

21 BY CMSR. BAILEY:

22 Q Can we go back to the Cost/Benefits spreadsheet
23 or the Benefit/Cost spreadsheet?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q And, Ms. Nixon, I think I'd like you to answer
2 this question first, and then anybody else can
3 add to it. But, of the costs in Lines 10
4 through 15, can you identify which of those
5 might be variable costs? Like which could
6 change?

7 A (Nixon) My understanding is, it's actually
8 easier to say which are not.

9 Q Okay.

10 A (Nixon) The NEM -- well, never mind. Yes. The
11 Monthly Cellular Reading Cost is probably the
12 only one that potentially won't change. The
13 Revenue Requirement, if the battery price
14 changes, that could change. The meters, I
15 think that's fairly constant, but Heather could
16 answer to that better. The Cogsdale
17 Programming, I believe that potentially could
18 change. The NEM Credit, that really depends on
19 how many times the batteries are discharged.
20 So, the rates are fixed, but it depends on
21 that. And again, the Programming, again, I
22 think that's a consultant charge, so that could
23 change, is my understanding.

24 Q Thank you.

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1 BY CHAIRMAN HONIGBERG:

2 Q So, with respect to the Net Energy Metering
3 Credit, that would change if the Company
4 discharges more often than it should?

5 A (Nixon) Correct.

6 A (Tebbetts) And if I could just add to that,
7 that will change based on rate changes as well.
8 So, if the rates go down, then that number will
9 go down; if the rates go up, that number will
10 go up.

11 BY CMSR. BAILEY:

12 Q So, when we're comparing what we predicted to
13 what actually happens, that will be accounted
14 for, the rate changes?

15 A (Tebbetts) Yes, it will.

16 Q So, on the revenue requirement for the
17 batteries, you said that you're going to lock
18 the Tesla price in as soon as you have an
19 order?

20 A (Tebbetts) Yes.

21 Q All right.

22 A (Tebbetts) Well, --

23 Q Or maybe sooner?

24 A (Tebbetts) Hopefully sooner.

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Oh. All right. When was the last time Tesla
2 changed their price?

3 A (Tebbetts) They changed their price in October.
4 But it had not changed prior to that, my
5 understanding is, ever.

6 Q So, just this past October, a month ago?

7 A (Tebbetts) Yes.

8 Q Okay. So, you don't expect it to change again
9 before January?

10 A (Tebbetts) No.

11 BY CMSR. GIAIMO:

12 Q Did it go up or down?

13 A (Tebbetts) It went up.

14 Q How much, do you know?

15 A (Tebbetts) From the price that we were
16 originally quoted, and it's confidential.

17 Q Okay.

18 A (Tebbetts) But it's significant.

19 CMSR. GIAIMO: Thank you.

20 BY CMSR. GIAIMO:

21 Q Would that significant increase be reflected in
22 the fact GMP's number -- that GMP, the GMP
23 number that was reported in the Utility Dive
24 article yesterday said it was \$1,300? I'm not

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 drawing a connection. I'm just saying, is that
2 why they didn't get a significantly lower
3 number then?

4 A (Tebbetts) I don't know about that article.
5 So, maybe you could explain more.

6 Q Okay.

7 A (Tebbetts) Sorry.

8 A (Huber) Well, I don't think it's necessarily
9 connected to the GMP Program at all, which is
10 just a participant number that they came up
11 with. But I think it's related to probably,
12 you know, you have the volume issue, you know,
13 partly on things.

14 But the other fact is that, you know,
15 Tesla has had some production, you know, delays
16 and things of that nature. And the Company was
17 trying to have, and they succeeded, having a
18 positive quarter of cash coming in. So, I
19 think there's probably a few, you know,
20 external factors that led to that price
21 increase.

22 BY CHAIRMAN HONIGBERG:

23 Q I'm not sure anyone on the panel is qualified
24 to answer this question, or maybe anybody is

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 qualified to answer this question anywhere, but
2 should we be worried about Tesla? Is that an
3 independent source of risk?

4 A (Tebbetts) I have to -- I'll just tell you real
5 quickly, I spoke with Mr. Mullen yesterday
6 about this, figuring we would get this
7 question.

8 And, you know, from our perspective, we've
9 been in talks with Tesla almost weekly about
10 what's going on at their production and when
11 they can deliver batteries. And they have
12 reassured us that this Program is wonderful for
13 them. They are very enthusiastic about the
14 Green Mountain Power Program and they are
15 excited we're preparing Time-of-Use rates. And
16 they have been confident all the way along that
17 they're going to deliver batteries to us when
18 we need them.

19 Q Do you know what they sold the batteries for to
20 Green Mountain Power?

21 A (Tebbetts) No.

22 Q Do you know if there are enough Tesla certified
23 installers in the area to get 100 batteries
24 installed in nine months?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) I don't. The only Tesla installer I
2 know of at the moment is actually ReVision
3 Energy, in New Hampshire. But there's -- in
4 Vermont, there are some. So, if we had
5 customers in Vermont -- I'm sorry, customers in
6 the Lebanon area, then certainly we may be able
7 to utilize those. But Tesla will install them
8 as well.

9 So, if ReVision, for example, was the
10 winner, and they could only install 30 or 40,
11 then we'd ask maybe Tesla to do the rest, so we
12 can meet the timeline associated with what's in
13 the Settlement Agreement.

14 Q So, you're confident you can meet the timeline?

15 A (Tebbetts) Yes.

16 Q Did you include in the benefit-cost analysis
17 any cost for bad debt for customers who may not
18 pay you?

19 A (Tebbetts) No. Because, as part of the
20 customer contract, if they're not paying, then
21 we're going to remove the battery.

22 Q And recycle it and get your money back?

23 A (Tebbetts) Yes.

24 Q How did you determine that you, on average,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 would probably dispatch the batteries four
2 times a month?

3 A (Tebbetts) How did we come up with that? I
4 think we kind of just looked at -- well, I had
5 conversations with Green Mountain Power, that's
6 one thing, to kind of understand how they were
7 looking at things. And my understanding from
8 just our conversations was I'll say four times
9 was appropriate. And certainly, there are
10 going to be times when there's much more. Like
11 I made the mention of July this summer, and
12 there might be, you know, it's two times a
13 month, because we ended up doing it on the
14 right day, and never -- there was never another
15 peak during the month.

16 So, we looked at it. We had some
17 conversations during the group as well, and I
18 think that was just a reasonable number.

19 Q Can you explain a little bit about what you
20 mean by "battery degradation" and the impact
21 that that will have?

22 A (Tebbetts) Sure. So, the battery itself will
23 never be at 100 percent, will never have
24 100 percent energy in it after, you know, so

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 much time. And the Tesla, in its warranty,
2 guarantees 70 percent of energy of that 13.5
3 kilowatt-hours. So, 70 percent of that will
4 always be -- by the end of ten years will be
5 available. And for the purposes of this
6 analysis, my discussions with Tesla said, we
7 talked, and 3 percent degradation a year in
8 that energy was fair. And so, we utilized that
9 number to account for degradation here.

10 Q Okay. You testified earlier that the meters
11 cost \$426 each, correct?

12 A (Tebbetts) Yes.

13 Q Installed cost?

14 A (Tebbetts) Yes.

15 Q And times 100 would be \$42,600?

16 A (Tebbetts) Yes.

17 Q Okay. Now, let's look at Page 28, Bates Page
18 028, of the Settlement, Exhibit 18.

19 A (Tebbetts) I apologize. Which document are you
20 looking at?

21 Q The Settlement Agreement, the attachments to
22 the Settlement Agreement.

23 A (Tebbetts) I'm there.

24 Q Okay. This is the page where you're showing

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 what the revenue requirement for meters is,
2 right?

3 A (Tebbetts) Yes.

4 Q And in the first row, it says you're going to
5 install 200 meters in 2019 and 300 in 2021, but
6 the cost is 42,600 for every year, and that's
7 100 meters. I don't understand what this is
8 showing me.

9 A (Tebbetts) You know what, I think it's just a
10 typo. That's my apologies. It's a typo. It
11 should look -- I think what happened was I used
12 this for Phase 1 and Phase 2 and didn't clean
13 that up. So, my apologies. There are 100
14 meters at the 42,600 for the revenue
15 requirement. And if you --

16 Q But aren't you going to put 200 in --

17 A (Tebbetts) No. Well, 100 meters/200 batteries,
18 because we have 100 customers, one meter per
19 customer.

20 Q Oh, right. Okay. So, the number of installed
21 meters is incorrect?

22 A (Tebbetts) Yes.

23 Q That should say "100"?

24 A (Tebbetts) That should say "100", and actually

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 there would be no 2021 meter install at all.
2 But the dollar amount, the 42,6 [sic], is
3 correct.

4 Q Why wouldn't there be 2021 meter install for
5 Phase 2?

6 A (Tebbetts) There is. But you're looking at
7 just Phase 1 on Attachment 1. Yes, on this
8 page. Yes.

9 Q Yes. So, after 2019, shouldn't the rest of
10 those be zeros, not "42,600"?

11 A (Tebbetts) So, it's just what we're showing is
12 the -- is the cost is there for those years,
13 because that flows through the rest of the
14 revenue requirement model. It's not an
15 additional cost each year. It's just labeled
16 incorrectly.

17 Q Because the rate base calculation shows the net
18 installed price, and then takes the accumulated
19 booked depreciation off, and that the year-
20 rate base is the number that you use every
21 year, is that right?

22 A (Tebbetts) Line 32 is our annual revenue
23 requirement based on that \$42,600. Yes.

24 Q Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Yes. It's just labeled incorrectly.
2 I apologize.

3 Q All right.

4 CMSR. GIAIMO: While we're on that
5 page?

6 CMSR. BAILEY: Yes.

7 BY CMSR. GIAIMO:

8 Q I'm just going to switch gears briefly, because
9 I see it says "Pre-Tax ROR", and it prompted
10 and ROE question.

11 How high and high low could the ROE go
12 with respect to hitting the number? You
13 mentioned that it would be "performance-based".
14 So, what are the upper and lower limits with
15 respect to what the thinking is on that?

16 A (Tebbetts) So, it really, I'll say, hasn't
17 really been designed, because that would be a
18 Phase 2 program. There was some discussion
19 that it could be I think it was ten basis
20 points for every percent over 75 percent or
21 below 75 percent.

22 Q So, that's two and a half percent, up to two
23 and a half percent, if you hit it perfect?

24 A (Tebbetts) Yes.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 CMSR. GIAIMO: Okay. Thank you.

2 WITNESS TEBBETTS: Uh-huh.

3 BY CMSR. BAILEY:

4 Q Can you say that again? Ten basis points for
5 every --

6 A (Tebbetts) One percent. So, if we hit 76
7 percent, and our ROE is 9.4, then we would be
8 able to get ten basis points, it would be 9.5
9 for that year.

10 Q Okay. On Page 30, it shows "100 meters" for --
11 this is the Depreciation Calculation, shows
12 "100 meters". So, this is for Phase 1?

13 A (Tebbetts) Yes.

14 Q Right? And then, on Page 36, it also shows
15 "100 meters", and is that still Phase 1? And
16 so -- well, what's the difference between 36
17 and 30?

18 A (Tebbetts) I think that when we were looking at
19 it, we included both, it would be -- I don't
20 know why we included both in the filing. That
21 may be just a simple mistake that it was
22 included. No, no, I apologize. Hold on. I'm
23 looking at this. So, I think what we did was
24 we showed this is a Phase -- this is Phase 1

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 and Phase 2, because when we looked at Phases 1
2 and 2, it has all of the data, versus just
3 Phase 1. So, you have two extra pages in
4 there. You have this -- let me see here.

5 CHAIRMAN HONIGBERG: Let me try, Ms.
6 Tebbetts. Is it that the pages that start on
7 31 and run through 37, I think, are the Phase
8 1/Phase 2 combination, and you have all of the
9 backup pages necessary to feed into the summary
10 page that is Page 31, so it includes Phase 1
11 information, even if it's just duplicated what
12 was in the Phase 1 analysis, which is the
13 previous five pages or so?

14 WITNESS TEBBETTS: Yes. That's
15 correct.

16 CHAIRMAN HONIGBERG: Okay. Thanks.

17 BY CMSR. BAILEY:

18 Q Okay. And then, on the next page, Page 37,
19 that's Phase 2, and you're going to have 300
20 batteries, so 150 meters?

21 A (Tebbetts) Yes.

22 Q Okay. Can you tell me a little bit about the
23 Monthly Cellular Reading Cost? What is that?

24 A (Tebbetts) Yes. Sure. I just need to get to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 that page.

2 Q That's on the summary page of the cost-benefit.

3 A (Tebbetts) Yes. Okay. Yes. So that, when I
4 mentioned earlier we're going to have
5 cellular-based meters to read the customers'
6 meters, there's a charge for that, and it's
7 \$5.00 a month per meter, because we're
8 downloading the data. So, we have to pay
9 Verizon 5 bucks a month for each meter to get
10 the data. And so, we've included that as a
11 cost here as part of the Program.

12 Q So, you're paying -- what are you paying
13 Verizon for? What's the \$5.00 a month for?

14 A (Tebbetts) Usage of the cellular network to
15 download the data. Because we need to -- we're
16 not going to drive by and read the meter, we're
17 going to download the data from the network.
18 We do that now with our other customers.

19 Q Okay.

20 A (Tebbetts) So, we pay a data package, a dollar
21 value for that, too.

22 Q Okay. How was the Cogsdale programming cost
23 determined?

24 A (Tebbetts) I had to work with our partners up

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 in Canada. And we put together the programming
2 that's necessary to be able to bill this. And
3 this is the number they came back with.

4 Q This is a billing cost?

5 A (Tebbetts) This is for billing, yes. We need
6 to do the modifications to the system to
7 accommodate the Time-of-Use.

8 Q And I mean, we just had some experience with
9 this with EnergyNorth and the new weather
10 normalization billing. And the billing that
11 was originally predicted was much lower than I
12 think the cost actually came out.

13 A (Tebbetts) Right.

14 Q How do we deal with that?

15 A (Tebbetts) Okay. So, when we go in for Phase
16 2, this is just the cost-benefit analysis.
17 When we go in for Phase 2, all of this will be
18 updated. So, whatever real costs were
19 associated with these, we will include in the
20 Phase 2 calculation for the net present value
21 and go from there.

22 Q Yes. But that's going to -- I mean, if it's
23 twice the cost, that's going to probably
24 eliminate your positive net present value.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) Absolutely. So, that's why we need
2 to keep the costs around what number is in
3 here.

4 Q But how do you do that with Cogsdale?

5 A (Tebbetts) Well, I mean, they gave me a quote,
6 and nothing in the Program has changed. So, if
7 we got an order that made significant changes
8 to what I submitted to them, then the price
9 will change. But they're aware of what we're
10 trying to do, because I submitted it to them.
11 And so, that would be how I would suggest it
12 would go up, if things changed significantly.

13 Q And if things don't change significantly, could
14 the Commission order that the cost be limited
15 to that number?

16 A (Tebbetts) I guess the Commission can order
17 whatever it is they see fit. I would hope that
18 they would have confidence that I can keep it
19 around this price. And I would hope that, you
20 know, that nothing changes in this programming
21 that would increase that cost.

22 Q Okay.

23 CMSR. GIAIMO: Can I?

24 CMSR. BAILEY: Yes. Go ahead.

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1 BY CMSR. GIAIMO:

2 Q So, this improvement, is this something that
3 would trickle through or be transferable to
4 other territory -- other utilities in the
5 Liberty family?

6 A (Tebbetts) I don't know. I don't know, because
7 I don't know what kind of metering they use in
8 California. Definitely not in Missouri, our
9 other electric company, because they don't use
10 our same billing system, because we just
11 acquired them a year or two ago. And in
12 Missouri, they already have time-of-use rates,
13 and so they have different -- it's a completely
14 different structure, and they've already done
15 some of these upgrades that deal with that,
16 because I believe they do use Cogsdale. But
17 our structure is different in New Hampshire
18 with our rates and everything. So, I don't
19 think it could go through.

20 Q But you appreciate what I'm saying, I'm trying
21 to avoid a free-rider situation, when one of
22 your other utilities can actually get the
23 benefit of improvements made to Cogsdale, paid
24 for on the backs of New Hampshire -- of your

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Liberty ratepayers?

2 A (Tebbetts) I do. And, in fact, on the "MV-90"
3 line, that \$107,000, we are going to piggyback
4 back off of CalPeco and get some benefits out
5 of that, because they need to make an upgrade
6 in January. It's required that, I guess, all
7 residential customers at minimum, I think, have
8 to have time-of-use rates, so they need to do
9 some upgrading to their MV-90 system. And so,
10 we are going to piggyback on them to get this
11 price. That's why I have such a lower price to
12 utilize it, because they have to do it, we're
13 going to add on.

14 BY CMSR. BAILEY:

15 Q What do you mean by a "lower price"? A lower
16 price than what you would have?

17 A (Tebbetts) Yes. Because they're going to share
18 in the cost 50 percent, because they were going
19 to have to do it, and so we said "we have to do
20 it, too." So, instead -- if for some reason
21 they said they weren't going to do it, we have
22 to do it, we'd have to pay 100 percent. So,
23 now we're going to share the costs with them
24 instead.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q So, that's 50 percent of the total cost of the
2 Meter Programming costs?

3 A (Tebbetts) The MV-90 piece?

4 Q Yes.

5 A (Tebbetts) Yes.

6 BY CMSR. GIAIMO:

7 Q So, what I heard you identify as another risk
8 is if something were to change with respect to
9 your sister utility in California?

10 A (Tebbetts) I guess, but it's mandated by the
11 state that they do this. So, I'm not sure they
12 have a choice. It's certainly a choice for us
13 to do this.

14 BY CMSR. BAILEY:

15 Q Do you think that there's any benefit to the
16 price of the Cogsdale system from the fact that
17 this is not the first time-of-use programming
18 in the Company?

19 A (Tebbetts) Yes. So, I think that the issue
20 becomes is our design of rates in New Hampshire
21 is really different than in California. And I
22 can't even begin to explain how they design
23 rates in California because it's nothing like
24 I've seen here. And we can't just utilize

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 their platform to do what we need here. It's
2 just way too complicated.

3 Q So, they're starting from scratch, the Cogsdale
4 programming?

5 A (Tebbetts) No, they're not starting from
6 scratch, because we have time-of-use in New
7 Hampshire now for our rates. We have a Rate
8 D-10, which is time-of-use. So, we're just
9 piggybacking on our current Rate D-10 and
10 enhancing it. That's all we're doing. And
11 that's what that's for.

12 Q Okay. The term in the Agreement about
13 prudence, I think I understand. But my
14 question about that is, if there are costs that
15 exceed what you have given us here, would you
16 expect the Commission to review that in terms
17 of whether it was still prudent to make these
18 investments?

19 A (Tebbetts) Yes. I think that's going to be
20 part of two pieces. I think the first piece of
21 that is probably going to end up in a rate case
22 of some sort, certainly. And the second piece
23 will need to be in Phase 2, because I have to
24 create a whole new cost-benefit analysis that

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 includes all those costs for Phase 2, to get
2 there. And we want to recover the cost of the
3 batteries anyways in rates. So, I would fully
4 expect that it will be reviewed for prudence no
5 matter what.

6 Q So, the term in the Settlement Agreement is
7 just to say "we all agree that it's prudent to
8 buy the batteries at this price"?

9 A (Tebbetts) Can you point to me where it says
10 that, just I want to read it?

11 Q Yes. It's on Page 5, I think. Yes, Page 5.

12 A (Tebbetts) Yes. So, the way I read this is
13 that the decision to do this pilot, assuming it
14 is approved, should not be -- go under prudence
15 review as maybe other investments may, to say
16 "oh, you shouldn't have built this or built
17 that", and then say "we're going to disallow
18 it, you shouldn't have done it." It's, yes, we
19 agree that this is a prudent investment
20 program -- program to invest in, but that
21 certainly the cost associated with those
22 investments in this pilot will be out for
23 prudence review.

24 Q Okay. Thank you.

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1 CMSR. GIAIMO: If I may?

2 BY CMSR. GIAIMO:

3 Q While we're on that. So, the number you get
4 back from Tesla is -- turns out to be
5 20 percent higher than this. Is that something
6 you go forward with? How tenuous is the -- or,
7 how tenuous is the situation?

8 A (Tebbetts) So, I mean, if I can't lock in the
9 price that we've provided here, then I run into
10 the issue of not meeting the terms of the
11 Settlement Agreement, which says we need to
12 have a net present value that's positive. And
13 so, if I no longer have a net present value
14 that's positive, I think then I'd have to go
15 back to Staff and parties and say "This is
16 what's happened. What can we do to continue
17 the Program?" But make modifications, I don't
18 know.

19 I think that's what I have to do, only
20 because that's in here.

21 CMSR. GIAIMO: Thank you for that
22 clarification.

23 BY CMSR. BAILEY:

24 Q Can you explain to me why it's appropriate to

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 use the required rate of return before you
2 gross it up for taxes as the discount factor in
3 the net present value calculation?

4 A (Tebbetts) Let me get there. Okay. So, would
5 you point me exactly to what you're referring
6 to?

7 Q Sure. In the Benefit/Cost Analysis
8 spreadsheet.

9 A (Tebbetts) Uh-huh.

10 Q Line 19.

11 A (Tebbetts) Okay.

12 Q No, sorry. Line 18.

13 A (Tebbetts) Yes.

14 Q "7.69 percent" was used instead of the
15 Company's actual cost of capital grossed up for
16 taxes.

17 A (Tebbetts) Uh-huh. And you're asking why we
18 used the after-tax rate?

19 Q Yes.

20 A (Nixon) It's my recollection it's in an order
21 from Docket DE 09-137, which was a Unitil
22 investment case.

23 Q Required that --

24 A (Nixon) That that discount rate be used.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay. Thank you. Are the -- no, never mind, I
2 don't need to ask that question.

3 Okay. I'm going to shift gears to
4 time-of-use now, okay. Will Time-of-Use rates
5 be available to all customers or just those in
6 the pilot?

7 A (Tebbetts) Just those in the pilot.

8 Q Any reason for that?

9 A (Tebbetts) Well, in New Hampshire, this is the
10 first kind of rate structure being provided to
11 customers, so it's very new. We have a simple
12 Time-of-Use rate right now, and we don't have
13 many customers on it. And we want to ensure
14 that customer education around Time-of-Use
15 rates -- the education is going to be -- it's
16 going to be a learning curve for customers to
17 understand really the time-of-use. We don't
18 want to just offer this to any customer.

19 Customers, from my experience, let's begin
20 with the customers at least on my list, they
21 are pretty forward-thinking, and they're open
22 to having the batteries in their homes, and,
23 you know, they like the idea of a renewable
24 generation source. They're okay with the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Time-of-Use rates. So, they seem a little more
2 forward and willing to educate themselves on
3 this Program.

4 To provide Time-of-Use rates in this
5 manner to all 37,000 of our residential
6 customers I think would take an enormous amount
7 of customer education. And to be quite honest,
8 I'm not sure that the customers in New
9 Hampshire are certainly ready for this kind of
10 rate structure. This is a great way for us to
11 test that customer behavior and see where it
12 gets us.

13 Q Okay.

14 CHAIRMAN HONIGBERG: Mr. Huber.

15 **BY THE WITNESS:**

16 A (Huber) Yes. I would just add, I mean, I
17 think, and not to necessarily disagree, but I
18 think the customers are probably ready for it.
19 There's -- you know, a lot of surveys show
20 that. It's a natural inclination for a
21 customer to understand when there's peak times,
22 just like rush hour and things like that.

23 But, you know, to add this point, it does
24 take a lot of education when you make something

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 a default or an opt-out rate. You really want
2 to make sure that rollout is, you know, really
3 successful, and there's a lot of communication
4 to the customer to explain to them, you know,
5 how to work with the rate.

6 But, in general, I would say, just from my
7 experience across the country with TOU rates,
8 that customers are, for the most part, ready
9 for them. But there's a huge undertaking that
10 has to happen behind the scenes to get it, you
11 know, to get to a successful launch point for
12 those customers.

13 BY CMSR. BAILEY:

14 Q And will part of the EM&V consultant's work be
15 to analyze how well customers were educated and
16 how improvements could be made to the customer
17 education? Is that part of that or --

18 A (Tebbetts) Yes. It's all-encompassing, really.
19 The EM&V consultant is going to look at -- or,
20 actually maybe even -- we're going to utilize
21 our folks in California as well, because
22 they've already been rolling this out. So,
23 that's a benefit on our side here.

24 But, and definitely the EM&V consultant is

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 going to look at every aspect of the Program,
2 including customers' thoughts, did they like
3 it, did it work, could it have been better,
4 how?

5 Q Did they understand it?

6 A (Tebbetts) And they understand it, absolutely.

7 A (Huber) I would just add to not get your hopes
8 up for a large amount of statistically
9 significant data coming in, because of the
10 small sample size. So, you know, you'll see, I
11 think from the consultant, probably a focus
12 group level type of feedback coming in. But,
13 in terms of a lot of good statistically
14 significant results, it's probably too small.
15 But you never know.

16 Q Okay. Yes.

17 A (Below) And I would add that I invested a lot
18 of time working on these Time-of-Use rates, in
19 the hopes that we might be able to pilot these
20 through our municipal aggregation as well. But
21 that will come to you at a later date.

22 Q Okay. Speaking of that rate model, I'm not
23 going to get into it, because it's way too
24 complicated for me. But it recommends that --

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 or, the Settlement recommends -- your technical
2 statement recommends that the rate model be
3 updated twice a year with the default energy
4 service filings. And I think, Ms. Tebbetts,
5 you testified earlier that it may be three
6 times a year, because once for the transmission
7 rate filing and then the other two times for
8 the default service rate filing?

9 A (Tebbetts) Yes. So, there are different
10 components of the rates. So, the model
11 provides the calculation of the rates for
12 different components, for distribution,
13 transmission, and energy service. So, we'll
14 utilize the model when we have energy service
15 changes to change those rates, and then when we
16 have our transmission change, and then when we
17 have our distribution change.

18 So, the breakdown of the rates will only
19 change when that rate component changes. But
20 the model will be used for all of them.

21 BY CHAIRMAN HONIGBERG:

22 Q And what you just said I want to pick up on.
23 Earlier there was some discussion about this
24 proceeding "approving" those rates. That's not

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 really what we're going to be approving here.
2 We're going to be approving this methodology,
3 that with these inputs that exist today and
4 these assumptions generate the rates that are
5 in the Settlement Agreement, right?

6 A (Tebbetts) Yes. That's correct.

7 Q So, the odds that the first time this model is
8 applied, the odds of it generating exactly
9 these rates, virtually nonexistent.

10 A *(Witness Below nodding in the affirmative).*

11 Q Some other rates will be the first rates that
12 are applied to this Program almost certainly,
13 right?

14 A (Tebbetts) Correct.

15 Q But this methodology will generate the kinds of
16 differentials that we see here when the inputs,
17 almost any set of inputs, are put in, correct?

18 A (Tebbetts) Yes.

19 BY CMSR. BAILEY:

20 Q And is this model something that you developed,
21 Mr. Huber, or, Mr. Below, or together? Where
22 did this model come from?

23 A (Huber) Sure. So, the heart of the model
24 around the distribution rates is a model I

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 developed. And then we had -- we modified it
2 for New Hampshire and New England ISO-specific
3 cost structures for generation, energy,
4 transmission. And so, those were custom to it.

5 But I'm offering my model royalty-free for
6 this and for the betterment of New Hampshire
7 ratepayers.

8 Q Oh, that's very kind of you. I was going to
9 ask you about that. Yes, Mr. Below.

10 A (Below) As I am, as I am as well, for my
11 contribution.

12 I just wanted to point out that there's
13 several elements, even for the distribution
14 rate, the load, annual load shape data would be
15 updated annually. And the historic
16 transmission coincidents, as well as the FCM
17 coincident peaks, those are being updated once
18 a year as well. So, it's sort of a rolling
19 average that keeps moving forward.

20 And there may come a time when the, you
21 know, precise windows that we have here might
22 shift a bit. But, having played with several
23 different sets of data, the model is fairly
24 robust, in terms of producing similar results,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 whether we use just a residential class of load
2 shape or the Small Customer Group load shape,
3 or 2016 versus 2017. It was producing
4 consistent results with those different kinds
5 of datasets.

6 Q Who's going to run the model?

7 A (Tebbetts) I am.

8 Q Mr. Huber, is she qualified to run the model?

9 A (Huber) I mean, she's spent enough hours in it,
10 I think she's probably pretty good. But I will
11 offer, you know, her my cellphone information
12 so she call me for tech support. And I'm sure
13 Cliff will do the same.

14 CHAIRMAN HONIGBERG: Is Ms. Tebbetts
15 making herself indispensable now to Liberty?

16 WITNESS TEBBETTS: No. I doubt it.

17 **BY THE WITNESS:**

18 A (Tebbetts) I will say, I have spent a lot of
19 time playing with the model and going over it
20 with these guys, and kind of just putting funky
21 things in to make sure I'm getting a funky
22 answer out of it and saying "yes, that didn't
23 work, and it shouldn't work", purposefully,
24 because I don't want to walk away and not be

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 able to utilize the model, that wouldn't help
2 anybody.

3 So, I think I'm qualified to use the
4 model, but, you know, --

5 A (Huber) I don't have an official accreditation
6 process set up yet. But I'm happy to set up
7 one for this opinion.

8 BY CMSR. BAILEY:

9 Q I mean, would it make sense, the first time
10 that Ms. Tebbetts runs the model that you guys
11 review it?

12 A (Tebbetts) Oh, absolutely. I'm more than happy
13 to send it off, especially to Mr. Below. I
14 probably will anyways, because we'll still be
15 working on the Lebanon stuff, just to have him,
16 and I'm happy to send it to Mr. Huber, too, if
17 he wants to read it and check it out. And I
18 think, primarily, because we're trying to work
19 on the Lebanon real-time pricing, Mr. Below and
20 I will be utilizing that a lot, just to figure
21 out what that kind of pricing is going to look
22 like as well.

23 Q Okay. On Page 7, I think it was of the
24 technical statement on the Time-of-Use rates,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 there was a mention of "four rates per
2 year...constant for three seasonal periods".
3 And I didn't understand what that was about.

4 A (Below) As you know, default service is split
5 into two 6-month periods, from August 1st
6 through January and then February 1st through
7 July. That fortuitously fit well with where
8 seasonal breaks kind of occur in the data, if
9 you will. So, we took those 6-month periods
10 and took the second half of the current period
11 we're in and put it in the winter period, and
12 then the first three months of the next
13 procurement will also be in the winter period.
14 And then, the procurement that happens in
15 December, the last three months of that will be
16 in the summer period. And then, the first
17 three months of the procurement that happens
18 next June will be the first -- also in the
19 summer period.

20 Q I'm not getting it.

21 A (Below) Well, okay. The current period we're
22 in is July -- I mean, I'm sorry, August through
23 January.

24 Q That's the period that the default service rate

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 is set for?

2 A (Below) Right.

3 Q I understand that.

4 A (Below) Right. So, the winter period under
5 this time-of-use model is from November 1st, so
6 it's November, December, and January, in the
7 current default service period, and then also
8 February, March, and April in the next
9 procurement.

10 Q Oh. Okay.

11 A (Below) So, because the rates are reflecting
12 those default service procurements, they're
13 getting apportioned, and actually I believe
14 that they were apportioned based on the charges
15 that occur in those months -- hold on that, I'm
16 not quite positive of that. But the point is
17 we don't -- if this model was in use today, you
18 wouldn't know until the next default service
19 filing in December what the Time-of-Use rate
20 for the energy component would be until that
21 filing. So, the point is, at each default
22 service filing, there will be an update. And
23 for the Time-of-Use, it's not just one rate for
24 the whole six months, it's going to be split

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 between the winter and the spring period, based
2 on the different characteristics of those
3 periods in the model.

4 Q So, the Time-of-Use rates will be different
5 four times a year?

6 A (Below) Yes, for the default service component.

7 Q The energy --

8 A (Below) The other two components should be
9 constant for a year at a time.

10 Q Yes.

11 A (Below) The transmission and distribution
12 components would change -- would be updated
13 once a year, but they would be constant for a
14 full twelve months. The default service,
15 instead of people getting two rates a year,
16 they would be getting four rates per year.

17 Q Okay.

18 BY CHAIRMAN HONIGBERG:

19 Q But it will just be these customers. Though,
20 for everyone else, their default service rates
21 will change twice a year, as they currently do?

22 A (Tebbetts) Correct.

23 CHAIRMAN HONIGBERG: Okay.

24 CMSR. BAILEY: Thank you.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 BY CMSR. BAILEY:

2 Q Okay. Moving onto Phase 2. What might cause
3 the Commission not to approve Phase 2?

4 A (Tebbetts) Well, anything, I guess, under the
5 conditions. I think the biggest thing that's
6 going to be is us meeting our 75 percent
7 threshold.

8 Q You can't even apply for Phase 2 until you've
9 met that?

10 A (Tebbetts) Yes. So, I think that will be the
11 biggest issue, really.

12 Q That will be what takes you the longest amount
13 of time to get to asking for approval of Phase
14 2?

15 A (Tebbetts) Yes.

16 Q Okay. And then, I mean, if the battery prices
17 double between Phase 1 and Phase 2?

18 A (Tebbetts) Well, actually, our contract will be
19 for 500 batteries.

20 Q Okay.

21 A (Tebbetts) So that should not be an issue.

22 Q Okay. Ms. Nixon, what do you think? What
23 might cause the Commission not to approve Phase
24 2?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Nixon) I think that, I would agree with what
2 Ms. Tebbetts said, but also any costs or
3 benefits that might be different. I mean, the
4 benefits, obviously, are dependent upon their
5 forecasting ability. But also the rates, the
6 rates I don't think will change significantly
7 from what we estimated, but they're just a
8 forecast. But the costs all the way around
9 could potentially. And how many times they
10 have to discharge the batteries.

11 Q If the Commission didn't approve Phase 2, and a
12 determination was made to terminate Phase 1,
13 what would happen to the Phase 1 investments?

14 A (Tebbetts) Well, I don't know, I guess. I
15 mean, if I think about it, it really -- there's
16 a couple of things that could happen. One,
17 that we could see if Tesla would take the
18 batteries back to get some money back for them.
19 If we can't, or there's a difference in between
20 of what we can give them back for and what
21 we've paid, and I guess we'd have to ask the
22 Commission to let us recover those costs,
23 considering that the Settlement says this was a
24 prudent investment, although the costs may be

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 reviewed. But, for whatever reason, we
2 couldn't get to Phase 2, for the reasons laid
3 out here that we need to meet. We would still
4 ask for cost recovery on those batteries, if
5 they had to be terminated and removed from
6 customer homes.

7 Q I think you covered this a little bit with
8 Commissioner Giaimo, but can you go over the
9 risk-sharing in Phase 2 again? That's you
10 get -- if you get the -- for every percent
11 above the 75 percent accuracy, you get a ten
12 basis point adder on your return on equity?

13 A (Tebbetts) And that was an example. That's not
14 necessarily what -- it doesn't say that in
15 here. It's just an example that there would be
16 an upward or downward adjustment, whatever that
17 would be determined to be, in Phase 2 for our
18 return on equity. So, in that example, I said
19 ten basis points for every percent up or down
20 that we were at the 75 percent threshold.

21 Q Okay. And would there be any limit on that, in
22 your mind, in your thinking now?

23 A (Tebbetts) Well, if it's 10 percent, you only
24 can, obviously, go to 100 percent. So, it

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 would be two and a half percent increase on the
2 9.4. So, we could get up to 11.9 percent on
3 the Program alone, but we also could go down to
4 7.9 -- 6.9 percent on the Program.

5 BY CHAIRMAN HONIGBERG:

6 Q But, as you said, that's not in the Settlement
7 Agreement. What's in the Settlement Agreement
8 is the discussion -- there will be discussions
9 about proposing a risk-sharing mechanism for
10 our consideration at the time that we're
11 considering approving Phase 2?

12 A (Tebbetts) Yes. That is just an example, to
13 give you a kind of concept of what we're
14 thinking of.

15 BY CMSR. BAILEY:

16 Q Okay. Thank you. How long do you anticipate
17 Phase 2 would last?

18 A (Tebbetts) The life of the batteries. So, it
19 will be the same, the customers will have a
20 contract for ten years, which would put us at
21 year 12 or so, and then an option to keep the
22 battery for another five in their home without
23 having to pay that monthly fee or, if they paid
24 up front, then that's not an issue. So,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 essentially, it would be 17 years.

2 Q And if the Program were wildly successful, is
3 there anything that would prohibit you from
4 increasing the number of batteries that you
5 could install in customer homes?

6 A (Tebbetts) I mean, outside of the fact the
7 Settlement says only 500 batteries, that -- but
8 nothing prohibits us from coming back and
9 asking for more batteries, except the fact that
10 374-G has a restriction of six percent. Other
11 than that, no.

12 Q So, six percent of 170 megawatts?

13 A (Tebbetts) Yes.

14 Q What's that, do you know?

15 A (Tebbetts) Ten, 10.8 maybe.

16 Q Okay. So, just to give myself a, you know, a
17 ballpark of what 2.5 megawatts. And it could
18 be up to 5 megawatts with the third party?

19 A (Tebbetts) I mean, yes, but not for -- I
20 wouldn't consider that under 374-G, the two and
21 a half megawatts, that's not -- I'll say, not a
22 "Liberty Utilities" program. But, yes, we
23 could get up to 5 megawatts for peak demand
24 reduction, absolutely.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Okay.

2 BY CMSR. GIAIMO:

3 Q I just want to go back to the adder. I thought
4 you said that the floor, the ROE floor is
5 "6.9", did you say that?

6 A (Tebbetts) Well, it was just in my example.

7 Q In your example.

8 A (Tebbetts) Yes.

9 Q Being that, at that situation, you would have
10 50 percent accuracy?

11 A (Tebbetts) Yes. Exactly. That's all.

12 CMSR. GIAIMO: Okay. Thank you.

13 BY CHAIRMAN HONIGBERG:

14 Q Ms. Tebbetts, circling back to Commissioner
15 Bailey's question about the program ending
16 after Phase 1. Is there any thought to or
17 would there be any thought at that time to
18 allowing customers to purchase the batteries
19 from you?

20 A (Tebbetts) Oh, absolutely. I did not consider
21 that. But I would be more than happy to offer
22 the customer to purchase the battery at
23 whatever value is left on there. Sure.

24 Q The other, and then the topic we were talking

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 about just a moment ago, with respect to
2 limits, those limits are statutory, right?

3 A (Tebbetts) Correct.

4 Q The Legislature could change them if this
5 Program were wildly successful, and became so
6 hot the other utilities wanted to get involved,
7 and then -- but it's just -- it's just a law,
8 right? It can be changed by the Legislature
9 and the Governor, correct?

10 A (Tebbetts) That's correct.

11 A (Below) And I would add that that law refers to
12 "generation", only "generation". And there is
13 an open question whether battery storage is
14 really generation, because it's storing
15 something that was already generated.

16 CHAIRMAN HONIGBERG: Yes. We're not
17 going to get into the metaphysical questions
18 right now. Thank you.

19 *[Laughter.]*

20 BY CMSR. BAILEY:

21 Q Okay. I'm going to move onto "Bring your own
22 device".

23 A (Tebbetts) Okay.

24 Q How does that fit into the pilot? I mean, I

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 understand that, as part of the Settlement
2 Agreement, you agree to have a working group
3 figure out a way for competitors to provide
4 batteries to customers. But, if they did that,
5 and they reduced peak demand by another two and
6 a half megawatts, how is that factored into the
7 pilot?

8 A (Huber) So, I can take a first stab at it. To
9 the OCA at least, this pilot is about sending
10 better price signals out there, and that can
11 enable new technology. And so, that's why you
12 see the TOU rate for the customer, and then
13 Liberty responding to the advanced peak price
14 signals. And so, we saw the same general
15 intellectual thrust here on the "bring your own
16 device" side of things, whereas, hey, if we can
17 send accurate price signals directly linked to,
18 say, wholesale allocation methods, there is no
19 cost shift to anybody else, and customers can
20 save a lot of money potentially, or other
21 ratepayers, even nonparticipants, if there's
22 cost-sharing, could save.

23 And so, that's sort of how we saw the
24 linkage there of continuing to pilot getting

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 more advanced price signals out there, to
2 enable technology, and then also, with the
3 forecasting, you know, the forecasting
4 knowledge that Liberty would gain, too, could
5 help inform, you know, programs, such as the
6 BYOD, or just as was talked about earlier
7 today, a commercial, you know, DR program, for
8 instance. So, there's linkages there with the
9 forecasting as well.

10 Q Could a third party "bring your own device"
11 program skew the peak demand analysis?

12 A (Tebbetts) Yes. Again, I don't think -- it's
13 capped at the two and a half megawatts. So,
14 are you -- I think you're referring to just
15 kind of moving that peak hour?

16 Q Well, yes. Forget how many megawatts they're
17 going to provide. But, if there are other
18 batteries in your franchise area, that you are
19 not controlling, but you expect the third party
20 aggregators to reduce peak demand from using
21 those batteries? Are you going to ask them for
22 a certain amount or are you going to know what
23 their impact on the peak is? And how is that
24 going to affect your ability to predict when

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 the peak will happen?

2 A (Tebbetts) So, the idea behind the "bring your
3 own device" Program would be that we would have
4 a contract with the aggregator, and they would
5 tell us we can allocate X amount, I'll say in
6 this example 2.5 megawatts to your peak
7 reduction program. And when you call upon us,
8 we will make sure that we can get 2.5 megawatts
9 out to your system. And in lieu of that, they
10 would, you know, they would end up getting a
11 payment of some sort for that, and that would
12 benefit -- there would be some kind of payment
13 structure to say "you get paid X, if you reduce
14 the peak at the hour we told you to by the
15 amount we told you to." So, if they make it,
16 great. And if they don't, then the payment
17 structure deals with that. That's the purpose
18 behind it.

19 So, what happens is, Liberty is giving
20 them a dispatch signal in Phase 2. And if they
21 want to get paid, they have to dispatch what
22 they said they would in the contract.

23 Q What happens in Phase 1, when Liberty is not
24 giving them the dispatch signal?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) They need to dispatch on their own
2 and figure out the peak on their own, that
3 hour.

4 Q And how does that -- I mean, how does that
5 impact what you're doing?

6 A (Tebbetts) Well, I guess, if they come in and
7 they end up dispatching on their own and
8 meeting that peak hour, then our system will
9 see that much less load. So, it's a benefit to
10 customers. Because when we go to ISO-New
11 England and get these charges, those charges
12 will be less by that many megawatts. So, it's
13 a benefit to all customers at that point.

14 A (Huber) I mean, I would just say that at this
15 stage of the game, I don't see, you know, a big
16 impact in either direction.

17 And I also want to just get out the fact
18 that, you know, Heather explained one possible
19 model of BYOD. The OCA has its own thoughts on
20 how you would structure an aggregator program
21 as well. So -- and that's to all be worked
22 out.

23 Q Okay. Who's going to issue the competitive
24 solicitation for the BYOD Program?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) I thought it was in there. I
2 believe that it's in the Settlement. And I
3 think Liberty technically is going to issue it.

4 Q It wasn't really clear. It was kind of like
5 the working group was going to work that out,
6 but --

7 A (Tebbetts) I'll say this. The aggregators will
8 be contracted with Liberty. So, we would be
9 the ones to officially issue the RFP and
10 receive responses. But it is a working group
11 that would create the RFP, and also go through
12 the responses to the RFP, to ensure that it's
13 meeting the goals of the pilot.

14 Q Okay. So that was my next question, who would
15 evaluate the responses? And that would be the
16 working group?

17 A (Tebbetts) Yes. I believe it's every -- the
18 working group will consist of all parties to
19 the docket, except any aggregator that
20 participated, I think that's what the
21 Settlement says, which -- yes. "The RFP shall
22 include a list of preferred qualifications" --
23 oh, wait, I missed it. It's in here somewhere,
24 I believe. Ah, yes. "And non-aggregator

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 parties to the docket" that will participate in
2 the RFP process.

3 CHAIRMAN HONIGBERG: Where did you
4 find that language?

5 WITNESS TEBBETTS: Oh, gosh. Now
6 that you asked me.

7 WITNESS BELOW: It's on the bottom of
8 Page 14 of the Settlement Agreement.

9 WITNESS TEBBETTS: Yes. The last
10 paragraph, Page 14.

11 CHAIRMAN HONIGBERG: Thank you.

12 BY CMSR. BAILEY:

13 Q Who's going to be responsible for the metering?

14 A (Tebbetts) For the "bring your own battery"?
15 The aggregator will be responsible for any
16 metering or anything else that's needed for the
17 customers, or maybe the customer will be. I
18 don't know. The aggregator is going be
19 responsible for costs associated with that.
20 Whether or not they have the customer pay for
21 that, I don't know.

22 Q Yes.

23 A (Tebbetts) But, at the end of the day, the
24 aggregator is responsible.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Would they have to install your meters?

2 A (Tebbetts) Yes. They will need to use the same
3 meters we're using for our Program, because we
4 still need to bill them in the same manner.

5 Q Right.

6 A (Tebbetts) If they take the Time-of-Use rates,
7 I will add that.

8 Q Okay. And again, back to cybersecurity, can
9 you give me some assurance that, if you have
10 aggregators responsible for installing metering
11 that's connected to your system that it will be
12 secure?

13 A (Tebbetts) Oh. We will not have aggregators
14 installing our meters. We will install our
15 meters. We do that today.

16 Q Oh. So, for the BYOD customers, you would
17 install the meters and charge the
18 aggregators --

19 A (Tebbetts) Yes.

20 Q -- the costs?

21 A (Tebbetts) Yes.

22 Q Okay.

23 A (Tebbetts) Yes, we would.

24 Q Okay.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 A (Tebbetts) It would be no different than a
2 customer utilizing a third party to install
3 solar on their home and needing a net meter.
4 We still install that meter.

5 Q If there's a BYOD Program during Phase 1, how
6 will you know whether the peak demand has been
7 reduced because of Liberty's efforts or the
8 BYOD efforts?

9 A (Tebbetts) So, the only difference between
10 Phase 1 and Phase 2 for the "bring your own
11 device" piece is the Liberty dispatch.
12 Everything else will be the same, such that the
13 data collection from the "bring your own
14 device" piece will still be required. And so,
15 we will be notified, and as well I believe the
16 other parties in this docket, the Staff and the
17 OCA will be provided all the data, I'm not sure
18 how frequent, showing that they have actually
19 been doing this, and how and how much.

20 A (Huber) Yes. And just to add color to that.
21 In the Agreement that the aggregator, you know,
22 would sign up to be a part of this Program,
23 they are obligated to share, you know,
24 statistics and data with the consultant, the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 EM&V consultant.

2 Q Okay. And why did you require a minimum of
3 25 percent of the BYOD customers to have
4 Liberty Time-of-Use rates?

5 A (Tebbetts) Well, I think that the parties
6 believe that there should be a minimum number
7 of customers taking Time-of-Use rates on that,
8 considering all of the Liberty customers in the
9 Liberty piece of it will take time-of-use. So,
10 we felt that there needs to be a minimum for
11 them.

12 Q Oh. So, it's 25 percent of the customers have
13 to be on Time-of-Use rates. So, the BYOD
14 customers don't necessarily have to be on
15 Time-of-Use rates?

16 A (Tebbetts) That's correct.

17 Q Could they be on -- I'm sorry, I just lost my
18 question there.

19 A (Below) That's partially so there would be data
20 for the EM&V to be able to look at the BYOD
21 people who are on Time-of-Use, you need to have
22 some on Time-of-Use. Although, you might be
23 comparing them to some who stop at the regular
24 rate.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 Q Could they be on Liberty's default service
2 rates?

3 A (Tebbetts) Yes. They just take our regular
4 Rate D, which is the regular residential
5 customer rate that's a fixed rate, and doesn't
6 change by, you know, the time-of-use periods,
7 which is what we have today.

8 Q Okay. I see. On Page 17 of the Settlement,
9 this is the "Customer Marketing and Disclosure"
10 provisions. It seemed to me, since it's
11 only -- well, is this customer marketing and
12 disclosure requirement only applicable to the
13 BYOD Program or is this applicable to the
14 entire pilot?

15 A (Tebbetts) The entire pilot. And I think it's
16 just vague in the first sentence.

17 Q Yes.

18 A (Tebbetts) But, yes. You could say "Liberty
19 and aggregators shall develop".

20 Q Could you say "Liberty shall develop detailed
21 customer marketing and disclosure information"?

22 A (Tebbetts) Yes.

23 Q And obviously, you will have to do that before
24 you begin the pilot, before there's any such

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 thing as a BYOD. Well, no, because you're
2 going to finish the BYOD proposal in four
3 months, which is going to be before Phase 1
4 starts?

5 A (Tebbetts) Yes. So, actually, the customer
6 marketing and disclosure is two-fold. So, the
7 first piece is Liberty has to do these things,
8 never mind the BYOD. We're going to develop
9 our own detailed customer marketing and
10 disclosure, and potential benefits and costs,
11 etcetera. And then, once we get an aggregator,
12 we'll -- I'm assuming the aggregators -- a lot
13 of the aggregators I think already have this
14 kind of information, and we will help provide
15 that kind of information to customers as well.

16 So, I think that the sentence probably
17 wasn't clear. But, essentially, Liberty has to
18 develop all of these things to send out to
19 customers before we start the Program.

20 Q And there's nothing in here that requires
21 Liberty to get the Commission's approval of
22 that information, is there?

23 A (Tebbetts) No.

24 Q Is there -- is there any requirement to work

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 with Staff and the OCA to make sure that the
2 customer education and marketing materials are
3 sufficient?

4 A (Tebbetts) There was no requirement. But I
5 will tell you, my plan was to do so, to work
6 with Staff and OCA specifically, because Mr.
7 Huber has a lot of experience with this, and I
8 was going to lean on him to make sure that we
9 provide the kind of information that's being
10 provided in other jurisdictions.

11 Q Okay. Is that okay with you, Mr. Huber?

12 A (Huber) Yes. It sounds good to me.

13 A (Tebbetts) No, I did not ask first, but --

14 MR. KREIS: Mr. Chairman, just by way
15 of full disclosure. Mr. Huber's contract with
16 the OCA is going to expire one of these days.
17 And so, his ongoing availability to us, and
18 therefore to all of you, is probably limited.
19 So, if that truly is important, you should
20 probably take that into account.

21 CHAIRMAN HONIGBERG: It might be
22 desirable for you to work with the Company and
23 Staff on exactly what that means. I don't
24 think we need to know it right now.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 But, as I was sitting here, I was
2 thinking, you know, "is Mr. Huber working here
3 by the hour?" And there may be an issue that's
4 necessary for you to work out with your
5 counterparts out there.

6 CMSR. BAILEY: All right. I thank
7 you very much. I am finished with my questions
8 for now.

9 CHAIRMAN HONIGBERG: Commissioner
10 Giaimo.

11 CMSR. GIAIMO: For now?

12 CMSR. BAILEY: You know I always
13 think of something else to ask.

14 CMSR. GIAIMO: Fair enough. Good
15 afternoon, everyone.

16 WITNESS BELOW: Good afternoon.

17 WITNESS TEBBETTS: Good afternoon.

18 BY CMSR. GIAIMO:

19 Q Was there consideration given to and is there a
20 concern that the Program will only be utilized
21 by more affluent people, those who have, you
22 know, \$4,500 worth of -- \$4,500 and/or are
23 willing to spend \$50 a month for the Program?
24 And is that something that will be considered,

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 that would be contemplated as part of Phase 2?

2 A (Tebbetts) I mean, I guess there will be an
3 additional cost to customers who participate.
4 And so, you know, it's going to depend. Can
5 you afford to have \$50 a month payment for two
6 batteries? Maybe you can, maybe you can't. I
7 don't know.

8 And the only requirement that we're going
9 to have for customers to participate in here is
10 that they haven't had any, you know, disconnect
11 notices in a certain amount of period over the
12 past few months or something like that. We're
13 not going to -- and they're current on their
14 bill. So, we don't get into the pieces of, you
15 know, as long as they have good standing with
16 us, we're going to let me participate.

17 A (Huber) And just to add. It really won't be
18 \$50 a month. It will be some net figure,
19 because there will be savings from the
20 time-of-use arbitrage from the battery. And
21 so, you know, you could have a customer that
22 could actually save more than \$50, if they had
23 enough load to handle a revenue shift -- or,
24 you know, their arbitrage with two batteries.

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 But, you know, the question is, you know,
2 are there, you know, low or moderate income
3 individuals with enough load to handle, you
4 know, the complete arbitrage of those two
5 batteries? And that's something to -- that,
6 you know, I'm sure the OCA is going to be
7 keeping an eye on of that demographic sign-up
8 to this.

9 Q And would that sort of educational piece, could
10 that be incorporated into Liberty's marketing
11 that makes it at least noticeable that it's not
12 something that's only limited to people of a
13 certain income?

14 A (Tebbetts) Oh, absolutely. And as part of our
15 marketing materials, you know, it will be clear
16 that there's potential savings here as well. I
17 spoke with a customer yesterday explaining
18 that, because he had some questions on it.
19 That he hadn't heard back yet, and he called in
20 the spring, and I said "We're getting there, we
21 have a hearing tomorrow." But I did explain it
22 to him, and I said "There may be some savings,
23 there may not. It's going to depend on your
24 load and when you're using it." He said

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 "That's fine. I'm willing to take a look and
2 try to, like, get those savings."

3 So, you know, customers are out there
4 willing to do that, and that's part of our
5 education, then I think there's great
6 opportunity to do so.

7 A (Huber) And I also think, though, it really
8 depends on the household. Because if you say
9 you have a low to moderate income households,
10 and they really need backup power, and the
11 alternative is more expensive, or say they're
12 elderly and they, you know, they just can't run
13 it and change the oil, or, you know, whatever
14 it is with a traditional backup unit, this
15 might actually be lower cost and way more
16 convenient for them, this type of program, even
17 if they don't have a lot of savings on the
18 bill. That \$50 a month might actually be
19 better than the alternative that they have.

20 Q Okay. Thank you for that answer. In the
21 Settlement, I just want to make sure I
22 understand this, I'm on Page 11, Bates 011 of
23 the Settlement. And the paragraph just prior
24 to the subparagraph E states "Liberty's ability

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 to proceed with" --

2 CHAIRMAN HONIGBERG: Slow down.

3 CONTINUED BY CMSR. GIAIMO:

4 Q -- "Phase 2 shall require the approval of the
5 Commission after an expedited adjudicative
6 process." I guess my question is two-fold.
7 Why is that necessarily -- why does that
8 necessarily need to be an "adjudicative
9 process"? And then to an "expedited process"?

10 A (Tebbetts) Okay.

11 Q Take that first, take that one first.

12 A (Tebbetts) Sure. We want it to be expedited so
13 we can start with Phase 2 right away. To be
14 perfectly honest, as I mentioned earlier, this
15 has taken a year. And so, that's fine. But
16 what I don't -- what we didn't want is to get
17 to Phase 2, and then have to go through a whole
18 nother docket like this in a year, and then now
19 you're like years beyond when we started,
20 especially if we've met all of the conditions.

21 Now, certainly, if we made -- we meet all
22 the conditions but one, and the Company says,
23 you know, "we're going to move forward anyways,
24 and we're going to make this filing, and we're

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 going to work with parties", it may not end up
2 being expedite, and that's okay.

3 But so long as we meet those requirements,
4 we would expect it's expedited.

5 Q And what is your thinking with respect to the
6 duration for an expedited? Is it 30 days? 60
7 days from the filing?

8 A (Tebbetts) Well, Staff -- it says here, "Staff
9 shall file its recommendation regarding
10 approval within 60 days" of our request, and
11 then we're looking to get an order *nisi* from
12 the Commission. So, I would hope that would be
13 within 30 days of their recommendation.

14 Q Okay. So, a 90-day turnaround?

15 A (Tebbetts) That would be very nice.

16 Q I just want to know, just understanding
17 expectations. Thanks.

18 So, I had come up with this analogy. And
19 the analogy was a parent gives the child the
20 family car. And then the car has a full tank
21 of gas, the parent comes back the next day and
22 the tank is empty. So, I'm wondering, if
23 Liberty takes control of a full battery, and a
24 day later gives the battery back to the

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 customer, it could be -- could, in fact, be
2 empty?

3 A (Tebbetts) It could. And what will happen is,
4 there's two ways that this works. So, the
5 first way this works is, for customers without
6 solar, it will charge in the next off-peak
7 period, which, excuse me, it would be
8 programmed to charge at, let's say, midnight.

9 Q Right.

10 A (Tebbetts) And then, for customers with solar,
11 it would do the same thing. It would charge in
12 next off-peak period, so that, when they went
13 into the next day, they still had it. But
14 then, as they used it that next evening for
15 their normal load, then we'll say day two, the
16 solar would then start to charge it again. So,
17 they would walk in with a full battery, so they
18 wouldn't have to worry about that.

19 Q Okay. Even if that's more expensive than the
20 solar waiting till the Sun shines nine hours
21 later and recharges on its own, it will come
22 back full?

23 A (Tebbetts) Yes. That's correct. I guess, if
24 the customer requests we didn't do that, we

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 could change it. But I would hate to have the
2 customer having no battery backup, especially
3 in the wintertime.

4 Q All right. That is helpful. My next question,
5 and this is actually my second to last
6 question, and it may stir other questions,
7 someone has to explain to me how this Program
8 interacts with the wholesale market. Is there
9 any bidding in of the product into the
10 wholesale market?

11 A (Tebbetts) No.

12 A (Huber) So, let me take the first stab, because
13 this is something I'm passionate about.
14 There's really, as you sort of alluded to,
15 there's two ways to interface with the
16 wholesale market. There's a market participant
17 or what they call a "load modifier", a "load
18 reducer", right?

19 Q Yes.

20 A (Huber) And, you know, being a market
21 participant is somewhat risky, especially when
22 rules are always changing or up in the air,
23 especially with, you know, the capacity markets
24 and so forth. The metering and telemetry costs

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 add to the installation costs as well. And so,
2 this is really coming at the angle of the load
3 modifier, which means that you can't directly
4 monetize revenue streams from the wholesale
5 market. You're avoiding costs. But you're
6 avoiding costs in a way that, in my opinion, is
7 much lower risk, lower metering and telemetry
8 costs, lower policy risk to some degree, and
9 actually more value as well.

10 And so, that's sort of the angle of this
11 Program. You know, there's pilots in other
12 states that go with the market participant
13 route. But, you know, especially with
14 transmission being a top use case here and
15 value, you know, the load modifiers is
16 definitely the way to go to capture as much
17 benefit as possible.

18 Oh. And so, then, if you use it right,
19 though, it will eventually, you know, hit the
20 wholesale market, because the wholesale market
21 will have less peak load to respond to for
22 capacity auctions.

23 Q Right. And I -- I'm sorry?

24 A (Tebbetts) No. I just want to be clear, we're

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 not bidding these batteries into the market.
2 That's all. That's what I think you were
3 asking, that's what I answered. So, I just
4 want to make it very clear on the record, these
5 batteries are not getting bid anywhere.
6 They're behind the meter and for customer load
7 reduction, and putting it back onto our system.
8 That's it.

9 Q And is the reason why you would not bid those
10 into the market is the cost of telemetry that
11 Mr. Huber discussed? Is the risk too great?

12 A (Tebbetts) I think part of it for us is it's
13 not just risk, it's also we don't have
14 experience bidding generation into the market.
15 We don't bid generation into the market. And
16 that was not the design of this Program
17 whatsoever. So, it was never a consideration
18 when he designed the pilot to bid the batteries
19 into the market.

20 A (Below) I would add that, from my
21 understanding, when there's a generation
22 resource on the distribution grid that is a
23 wholesale market participant registered with
24 ISO-New England, that's where National Grid

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 puts in a meter, and there's telemetry to the
2 wholesale market, and that's the generation
3 that National Grid is reconstituting, in terms
4 of the transmission charges.

5 Whereas, it's my further understanding is
6 that Liberty is not taking any DG that's not a
7 wholesale market participant that they're
8 metering or that isn't metered, like
9 behind-the-meter solar today. And none of that
10 is being reported to National Grid for
11 reconstitution, and they're not asking for it.
12 So, you don't kind of -- you don't get the
13 avoided transmission values if these became
14 wholesale market participants.

15 And there's another subtle thing here,
16 which is that they have been taken at their
17 sort of retail output, in terms of kWh or kW
18 reduced. The actual kWh that has to be
19 procured at the wholesale meter point, there's
20 the line loss adjustment, which hasn't been
21 done here, in general. So, there may actually
22 be, in a sense, to the extent there's avoided
23 loss from the initial transformer, where you're
24 stepping down from transmission-level voltage

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 to distribution-level voltage, to the extent
2 that's avoided, there's some benefit to all
3 customers, because a little bit less power --
4 that that line loss factor is kind of
5 benefiting everybody by avoiding that extra bit
6 of line loss that otherwise would add to the
7 transmission and energy charges.

8 Q Okay. So, I think everyone probably
9 understands or appreciates where I'm coming
10 from. I just wanted a certain amount of
11 certainty that there isn't additional value out
12 there that could be utilized. And it sounds
13 like at least the panel is pretty convinced
14 that this is the best route, and other
15 challenges exist by taking a different route.
16 So, that's --

17 A (Tebbetts) Yes.

18 Q That's accurate. All right.

19 CMSR. GIAIMO: Thank you very much.

20 That's all the questions I have.

21 BY CHAIRMAN HONIGBERG:

22 Q The only thing that I have left that hasn't
23 already been hit on, Mr. Huber, you spoke a
24 little bit with just -- Commissioner Giaimo

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 about just now, with respect to the price
2 arbitrage. Can you talk a little bit more
3 about how much a customer needs to know or do
4 to take advantage of the price arbitrage?

5 A (Huber) Yes. A great question. And so,
6 there's a few -- there's a few dynamics around
7 this. The beauty with the storage is that,
8 technically, the customer doesn't have to know
9 anything. It will automatically do it for him,
10 all right, or her. And so, that is a benefit
11 of this new technology. Where before we could
12 only rely on behavioral change from a customer,
13 now we can automate it.

14 However, we still want to squeeze out
15 extra savings, and that requires the behavioral
16 response from the customer. Now that can still
17 manifest in other technology, such as a smart
18 thermostat that they could program. But, you
19 know, for the most part, you will need some of
20 that education to tell the customer "hey, these
21 are the peak hours now." You know, just so you
22 know, they're not on weekends, not on holidays,
23 but during the weekdays you really have to
24 watch those peak hours, and shift -- try to

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 shift your appliances over to lower price
2 times. And so, if a customer has an EV rate,
3 charge on the off-peak, all right, and then you
4 can, you know, and then you have a much lower
5 rate than the off-peak.

6 So, in a way, they're doing, in a sense,
7 an arbitrage off of their old standard rate in
8 a way. It's not as clear as like battery
9 arbitrage, where you're, you know, charging low
10 and selling high, in a way. But, in effect,
11 they're shifting load, and therefore sort of
12 arbitraging their energy costs by utilizing the
13 Time-of-Use rates.

14 Q Does that change, the last thing you said about
15 "charging low and selling high", does the
16 answer change for those who have DG, solar, for
17 example, attached to their homes?

18 A (Huber) Yes. And this is one of the benefits,
19 and we didn't get into it too deeply on the
20 "bring your own device" side of things, where
21 you can, if you're charging from the
22 renewables, you can also claim the investment
23 tax credit. And so there's a benefit there,
24 when you can couple the solar, plus the

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1 storage.

2 But that shift does change the economics,
3 and, you know, it depends on every state, in
4 this state, the off-peak price is lower than
5 the LCOE of the solar. So, you're still
6 getting a savings, just not as much from that
7 arbitrage. But you are basically harnessing
8 your own renewable electrons, in theory, and
9 then shifting them later into the night to help
10 with your peak. And so, there is -- there's an
11 arbitrage there from more of a mid-peak to the
12 critical peak that's happening. It might not
13 be as great a deal as, you know, the off-peak
14 timeframe in the middle of the night. But you
15 also have the ITC, and you have exports from
16 the solar and things of that nature that could
17 make it a better deal for coupling the two
18 together.

19 Q So, when this pencils out for prospective
20 customers, those additional benefits from
21 having DG can be shown to the customer as an
22 attractive feature in a sales pitch?

23 A (Huber) Yes. And it's going to take some
24 development with installers, you know, to make

[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 sure they can model, you know, they will have
2 to align the solar production with the TOU rate
3 to see the benefit there. And, you know, I
4 think the beauty of the rate that was designed,
5 since it's linked to the system, it will be
6 encouraging better -- beneficial, you know,
7 technology.

8 And so, it might be a west-facing or
9 southwest-facing solar array to really hit that
10 afternoon, you know, timeframe. And, so there
11 has to be a pretty, you know, strong
12 calculation to show "Okay, here's solar, you
13 know, here's this X size system solar and this
14 size system battery on the TOU rate, and here's
15 how they all interface."

16 So, there's a lot of complexity to it,
17 but, if you do it right, you can have a lot of
18 savings for a customer.

19 CHAIRMAN HONIGBERG: Thank you.
20 Thank you all for your testimony.

21 All right. Do counsel have any
22 redirect for their witnesses?

23 MR. SHEEHAN: I do not.

24 CHAIRMAN HONIGBERG: Mr. Kreis?

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[WITNESS PANEL: Tebbetts|Below|Huber|Nixon]

1 MR. KREIS: I do not either.

2 CHAIRMAN HONIGBERG: Mr. Wiesner?

3 MR. WIESNER: Neither do we.

4 CHAIRMAN HONIGBERG: All right. So,
5 I think the witnesses can return to their
6 seats, if they'd like.

7 There are no other witnesses we're
8 going to hear from today, correct?

9 *[No verbal response.]*

10 CHAIRMAN HONIGBERG: Off the record.

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

13 CHAIRMAN HONIGBERG: Let's go back on
14 the record.

15 All right. We will be taking a break
16 before we do public comment and closings.

17 But I'll finish up one aspect of
18 this, and strike ID on Exhibits 1 through 13,
19 15 through 20. Twenty-one 21 is reserved for
20 the record request.

21 All right. So, we're going to break
22 for ten minutes, and then do public comment and
23 closings.

24 *(Recess taken at 2:55 p.m.)*

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1 *and the hearing resumed at*
2 *3:08 p.m.)*

3 MR. WIESNER: Mr. Chairman, may I
4 just raise a quick point?

5 CHAIRMAN HONIGBERG: Sure.

6 MR. WIESNER: Since we have a
7 two-week deadline for legal memoranda of law, I
8 wonder if it might be possible to extend the
9 deadline for written closing statements by a
10 day or so?

11 CHAIRMAN HONIGBERG: Absolutely.

12 MR. WIESNER: To, let's say,
13 Wednesday?

14 CHAIRMAN HONIGBERG: Yes. That's
15 fine.

16 MR. WIESNER: Okay.

17 CHAIRMAN HONIGBERG: What is the date
18 Wednesday? What will that be?

19 MR. WIESNER: December 5th.

20 CHAIRMAN HONIGBERG: Fine.
21 December 5. That's my middle child's birthday.

22 All right. So, anything else before
23 we do public comment and closings?

24 *[No verbal response.]*

1 CHAIRMAN HONIGBERG: All right.

2 Representative Oxenham.

3 REP. OXENHAM: Thank you very much
4 for taking my remarks. I'll be very brief.

5 One thing that concerned me very much
6 in these proceedings was that the original
7 proposal spoke of 1,000 batteries, which was,
8 on the face of it, a fairly small number to be
9 representative for a test of this magnitude.
10 I'm particularly concerned now that we have
11 substantially reduced those numbers,
12 particularly, as Ms. Tebbetts has stated, that
13 it's going to be on a first come, first serve
14 basis. We are very likely to have a skewed
15 sample, something far from a representative
16 sample, and I think this could seriously lead
17 to a miscalculation of the benefits that
18 battery storage can provide, particularly for
19 peak reduction.

20 Ms. Tebbetts mentioned that many of
21 the people that she has spoken with are
22 interested in the program simply because they
23 won't have to reset their clocks. This does
24 not sound like an individual that's going to be

1 changing their behavior in order -- because of
2 demand response. I think we're going to have
3 to come up with another way of allocating these
4 positions.

5 So, firstly, I'm concerned that the
6 number is too small. We don't have a
7 representative sample. When I working at the
8 National Academy of Sciences, we would have
9 rejected this pilot out of hand for having
10 those kinds of unrepresentative numbers. We're
11 not making any effort at making this
12 representative by demographics. We're simply
13 taking -- it's a self-selected group that are
14 putting themselves forward.

15 This pilot could be really, really
16 useful. It could find information that would
17 be helpful for a number of different dockets,
18 including grid mod, including the future of net
19 metering, many, many things that could come
20 from this. And I think we're seriously in
21 danger of nickel-and-diming this to the point
22 that we're not going to get the information
23 that we need. We may even come up with a
24 conclusion that is directly the opposite of the

1 true reality, if we had only tested and sampled
2 appropriately.

3 So, I think that, in order not to
4 undermine the reliability and utility of this
5 project, we should go back, at a minimum, to
6 the original number of batteries and the
7 original number of participants. And we should
8 make sure that there are some demographic
9 milestones, to make sure that we're not getting
10 just the group that was around the water cooler
11 at the Hypertherm, when somebody said "hey,
12 I've got a great way not to have to reset my
13 clock."

14 The point that was made earlier, and
15 I apologize, I've forgotten who said it, that
16 what we're doing here is "approving the
17 methodology". I think this is a key element of
18 the methodology. And we should make sure that
19 we do the very best way we can, in order to
20 learn the most that we can, and provide the
21 greatest benefit to New Hampshire.

22 Thank you.

23 CHAIRMAN HONIGBERG: All right. Now,
24 we're going to take closings from the

1 intervenors. I don't have any particular
2 order, but we'll just go around the room.

3 Mr. Rauscher, do you want to say
4 anything orally or are you just going to submit
5 in writing?

6 MR. RAUSCHER: We have a written
7 statement. And the reason we were doing that
8 is we anticipated the hearing to be very short,
9 and we didn't want to take up time. And so, we
10 appreciate your flexibility in that.

11 CHAIRMAN HONIGBERG: Okay. Ms.
12 Birchard.

13 MS. BIRCHARD: Thank you. Yes, I do
14 have a short statement.

15 Proceedings with complex policy
16 issues and ratepayer impacts like this one are
17 never without challenges, but I view this case
18 as exemplary in a number of ways.

19 We have a utility coming forward with
20 an innovative proposal to lower costs and add
21 benefit to customers and to the state. We have
22 an effective municipality, a Consumer Advocate,
23 local and national private companies, and
24 stakeholders, such as Conservation Law

1 Foundation, that worked very closely together
2 to shape the program proposed by an uncontested
3 Settlement here today.

4 What we've collectively proposed is
5 well-founded in analysis, consistent with
6 trends in other states, and will show that
7 regulated utilities and third parties can work
8 together to lower costs and improve services.

9 I would supplement what Ms. Tebbetts
10 said on the stand, which is that Sunrun brought
11 to the attention of the parties the opportunity
12 for a "bring your own device" portion of the
13 pilot. While Sunrun and ReVision Energy did
14 jointly file testimony proposing a "bring your
15 own device" opportunity, in fact, the majority
16 of stakeholders in their testimony and
17 comments, including Mr. Huber's testimony at
18 Section 7, and Conservation Law Foundation's
19 testimony at Page three also proposed and
20 raised the benefits of a "bring your own
21 device" portion of this pilot.

22 CLF and others suggested that such a
23 "bring your own device" portion of the pilot
24 should be dedicated to a competitively,

1 nonutility-owned program that would add
2 additional benefit and provide for further
3 innovation.

4 This consistent shared position, and
5 Liberty's open cooperation on this subject, has
6 brought us to an agreement that positions us
7 very well to move forward with a competitive
8 portion of the pilot, subject to further
9 approvals.

10 CLF looks forward to the possibility
11 of more cooperative efforts around targeted
12 energy efficiency, demand response, and energy
13 storage, as cost savings -- cost-saving and
14 emissions-reducing solutions for the state.

15 With respect specifically to
16 emissions reductions, Ms. Tebbetts'
17 February 9th, 2018 supplemental testimony
18 describes some of the ways that this Program
19 can reduce emissions. The first is that
20 participating customers can use a cleaner
21 source of backup power during power outages.
22 The second is that the program will lower the
23 demand for gas and coal-generated power at peak
24 periods. As the Commissioners are aware, these

1 peak period emissions reductions are
2 particularly important, because peak hours are
3 when the region calls on the dirtiest
4 generators.

5 In addition, programs like these can
6 take better advantage of rooftop and
7 distributed solar. We expect this to be an
8 especially strong environmental benefit with
9 respect to the "bring your own device" portion
10 of the pilot, to the extent that it is likely
11 to incent solar, plus storage, through an
12 aggregator. In general, broader use of
13 Time-of-Use rates, like those proposed here,
14 will also help to incent emissions-reducing
15 solar, plus storage.

16 In addition, CLF is particularly
17 supportive of the term of this Agreement
18 whereby Liberty commits to provide a detailed
19 assessment of its distribution system needs and
20 its upcoming LCIRP case. We think every
21 utility should be doing this as a basic measure
22 to help bring important services to their
23 customers. And we urge the Commission to seize
24 this opportunity to bring value to the state in

1 that future proceeding, as well as in other
2 LCIRP proceedings.

3 In conclusion, we recommend that the
4 Commission approve this Settlement Agreement,
5 because it is very well substantiated,
6 cost-reducing, emissions-reducing, and it
7 brings New Hampshire customers services that
8 they deserve access to.

9 Thank you.

10 CHAIRMAN HONIGBERG: Thank you,
11 Ms. Birchard. Mr. Below.

12 MR. BELOW: Thank you. The City of
13 Lebanon supports the Settlement, and believes
14 it's a valuable pilot, and hopes it will be
15 complementary to what the City's working on
16 with developing a real-time pricing pilot that
17 can be used in conjunction with net metering
18 and give access for customers to real-time
19 pricing in conjunction with Time-of-Use rates
20 for transmission and distribution. So, the
21 City recommends approval of the Settlement.

22 Thank you.

23 CHAIRMAN HONIGBERG: Thank you, Mr.
24 Below. Mr. Emerson.

1 MR. EMERSON: We have no closing
2 remarks. Thanks.

3 CHAIRMAN HONIGBERG: Is Ms. Hawes
4 still here?

5 MS. MINEAU: She has left.

6 CHAIRMAN HONIGBERG: Mr. Kreis.

7 MR. KREIS: Thank you, Mr. Chairman.
8 I truly believe, on behalf of the residential
9 utility customers of Liberty, and indeed all of
10 the residential utility customers who use
11 electricity in New Hampshire, that this
12 Settlement Agreement and the proposal reflected
13 in it is really the best thing to happen to New
14 Hampshire since Manny Machado swung at strike 3
15 in Los Angeles, fell to his knee, and thereby
16 ended the 2018 World Series in favor of the
17 Boston Red Sox.

18 And the reason I'm thinking baseball
19 is that this docket has been a lot like a long,
20 162-game baseball series, with several rounds
21 of playoffs afterwards. I mean, when you think
22 about it, we started talking about this thing
23 before J.D. Martinez was even a member of the
24 Red Sox.

1 And the parties have worked together,
2 as I think has already been mentioned, in a
3 really intense, collaborative, and cooperative
4 way. It won't surprise you to hear that, you
5 know, there were moments of exasperation, as
6 there always are. But this was a very robust,
7 detailed collaboration, where lots of talent
8 and lots of analytical insight came to the
9 table and was able to collaborate in a way that
10 I think yielded something that is truly
11 innovative, and will, how can I put this, it
12 will leapfrog over what our friends in Vermont
13 are doing, and will truly deliver benefits to
14 all of Liberty's ratepayers by reducing the
15 Company's coincident peak demand.

16 And the reason I'm picking on Vermont
17 is that other states are trying to do the same
18 thing. And so, by doing this, we're keeping up
19 with those other states, and I think, in some
20 respects, getting ahead of them. And that
21 really is good public policy and it is good for
22 ratepayers.

23 There is one fairly insignificant
24 element of the Settlement that I want to draw

1 the Commission's attention to in particular.
2 And I think I want to start by referring to
3 the -- actually, the technical statement that
4 describes or analyzes the Settlement Agreement.
5 At Bates Page 003 of the Technical Statement of
6 Ms. Tebbetts, it says: "The parties have
7 agreed that, while there may be value in
8 utilizing distributed energy resources for the
9 purpose of deferring or eliminating the need
10 for distribution system investments, the
11 optimal venue for comprehensive analysis of an
12 electric distribution utility's planned capital
13 investments for evaluating NWA candidates is
14 the least cost integrated resource plan
15 docket."

16 And that statement from Ms. Tebbetts'
17 technical statement has its analogue on Page 17
18 of the Settlement Agreement itself, which says
19 "the optimal venue for analyzing an electric
20 distribution utility's planned capital
21 investments for NWA candidates would be the
22 review of its least cost integrated resource or
23 similar plan."

24 So, two points about that. (1)

1 "Optimal venue" does not mean "only venue"; and
2 (2), as reflected in Ms. Tebbetts' technical
3 statement, what's really meant by that is the
4 optimal venue for the "comprehensive analysis"
5 of NWA potential for a particular utility is
6 indeed the least cost integrated resource
7 planning context, when everything that the
8 utility does and all of the investments that it
9 is making or plans to make are considered in
10 relation to each other.

11 That said, I think it's no secret to
12 the Commission anymore, if it ever was, that
13 the OCA is a strong proponent of non-wires
14 alternatives. It was intriguing to see it
15 initially proposed by this company in this
16 docket. I think it came out of the Program as
17 part of the Settlement Agreement just to make
18 things a little more simple, and understandable
19 and straightforward, in something that's
20 already very complicated.

21 And to be frank, I don't want
22 anybody, you know, I don't want anybody to wave
23 this Settlement Agreement in my face and tell
24 me later that I have precluded raising issues

1 about non-wires alternatives in any docket that
2 is not an LCIRP docket. So, that's why I'm
3 highlighting that.

4 I think there are some elements of
5 the Program, as reflected in the Settlement
6 Agreement, that are especially laudable. One
7 is, and I guess I'm disagreeing slightly with
8 Representative Oxenham, I, too, was initially
9 drawn to the larger scope of the project as it
10 was originally proposed by the Company. But I
11 think scaling it down, and making it a more
12 limited pilot program, makes some sense for a
13 state that is very cautious and conservative.
14 We're doing something very innovative here.
15 And while it is true that the results that are
16 produced may not be statistically significant
17 in the scientific sense, it will nevertheless
18 yield a great deal of insight.

19 And the fact that the program is
20 phased means that there is a natural pause in
21 the process, where we can take stock, see
22 what's going right, see what needs to be
23 improved, and then making the necessary changes
24 before moving into Phase 2, or, alternatively,

1 potentially not even doing a Phase 2, if Phase
2 1 just doesn't really unfold the way that we're
3 hoping to.

4 I think that allowing people to use
5 batteries to conduct TOU arbitrage is just a
6 slam-dunk win for residential customers. I
7 can't see any downside to that. As we heard
8 today from the stand, it really allows
9 customers to do what all customers want to do,
10 which is take advantage of the new capabilities
11 of the grid without having to think about it.
12 And so, what you have here is the ability to
13 program these Tesla PowerWalls and the software
14 that will drive them and gateways that will
15 drive them, so that they can take advantage of
16 TOU arbitrage without really thinking about it.

17 We love it when utilities are willing
18 to share risks with us, the folks who pay their
19 bills. And there's a laudable component of
20 that in this Program. And Mr. Huber's
21 testimony, alongside Sunrun's, also brought to
22 the attention of the Commission and the parties
23 the potential for a BYOD or BYOB component to
24 this Program. And as this docket has unfolded,

1 I've become more and more attracted to the idea
2 that it is good public policy to place
3 alongside the utility investment in batteries
4 the possibility that competitive firms that
5 don't have a utility franchise, and aren't
6 operating as utilities with a captive rate base
7 or customer base, might be able to innovate and
8 potentially do this even better than Liberty
9 can. And so, I think it will be really
10 exciting to watch those two things happening
11 side-by-side.

12 I'm pleased by the opportunity that
13 the Commission has offered us to specifically
14 analyze the Settlement Agreement in the context
15 of RSA 374-G. We will definitely be doing
16 that, because that statute is very detailed,
17 and I think it's important to get it right.

18 So, subject to that filing, I urge
19 the Commission to approve this Settlement
20 Agreement. I think it is one of the best
21 things that you've heard in this hearing room
22 for quite some time.

23 CHAIRMAN HONIGBERG: Thank you, Mr.
24 Kreis. Mr. Wiesner.

1 MR. WIESNER: I wanted to echo the
2 Consumer Advocate's observation that a lot of
3 hard work by dedicated people went into
4 producing this Settlement over a long period of
5 time. It's been a year in the making, as Ms.
6 Tebbetts observed. It's come a long way in
7 that time.

8 Our original view was that it was too
9 big, it was too complex, and it was too
10 expensive. And our prefiled testimony reflects
11 that view. We perceived significant risks,
12 that the projected ratepayer savings would not
13 be realized, that the NWA component would not
14 succeed, and that excess costs potentially
15 would be shifted to nonparticipating customers.

16 The Settlement goes a long way toward
17 mitigating those risks and addressing those
18 concerns. In particular, the two-phase
19 approach permits the concept to be tested
20 during Phase 1, in a true pilot, with an
21 18-month study period, with a larger Phase 2
22 rollout conditioned on the Phase 1 success.

23 Phase 2 is conditional, and will only
24 proceed if the new benefit/cost analysis, using

1 real data from Phase 1 and updated assumptions,
2 shows positive net present value benefits to
3 Liberty and all of its customers.

4 We're also optimistic and
5 enthusiastic about the potential for the BYOD
6 Program. I would also echo the comments that
7 we've heard from others that this is an
8 opportunity to leverage private investment and
9 explore what the competitive market can bring,
10 in terms of ratepayer savings, at a lesser cost
11 in terms of Liberty's utility investment.

12 And in both cases, both the Liberty
13 part of the Program and the third party part of
14 the Program, we are optimistic that useful data
15 and information will be generated and
16 thoroughly analyzed by the EM&V consultant, and
17 that that information will prove most useful,
18 both in this context, and potentially in other
19 contexts before the Commission, such as grid
20 modernization, least cost resource planning,
21 and perhaps even the net energy metering tariff
22 design initiative.

23 And that's about all I have to say
24 about the Settlement. We support it and we

1 urge the Commission to approve it.

2 CHAIRMAN HONIGBERG: Thank you,
3 Mr. Wiesner. Mr. Sheehan.

4 MR. SHEEHAN: Thank you. Going last,
5 I have the luxury of having all of us having
6 listened to very many smart people sum this
7 case up, after having other very smart people
8 testify at length about the case. And, of
9 course, the four people who testified are
10 speaking on behalf of a dozen or more who also
11 worked on the case, both on Staff and the
12 Company and elsewhere, crunching the numbers,
13 thinking of new ideas, fine-tuning what our
14 proposal was, essentially what you see before
15 you now.

16 At the end of the day, the
17 Commission's job is to evaluate these facts,
18 this Program, and see if it meets the
19 requirements of 374-G. And, of course, our
20 filing will hopefully help you in that
21 analysis.

22 A reminder that that statute says two
23 things. One, you should take a "balanced
24 consideration and proportional weight" to nine

1 factors. And that's not a requirement that all
2 nine of them are checked. And so, if one of
3 them somehow comes up short doesn't mean it's a
4 failure of the Program. I think we can meet
5 all nine, some more strongly than others. But
6 I urge you to pay attention to that phrase,
7 that it is a "proportional and balanced
8 consideration" of all nine factors.

9 And the other overriding part is, the
10 lead-in to that section of the statute is to
11 ultimately make a "public interest" finding,
12 that this is in the public interest. And
13 everything you've just heard in the last
14 fifteen minutes shows that this has broad
15 public support, from a very diverse group of
16 people, as Ms. Birchard noted, from all walks
17 of the Public Utilities life, if you will.

18 So, we will make the filing in a
19 couple weeks that ties together how the facts
20 of this case do satisfy all the 374-G criteria.
21 And through that process, it will become
22 apparent that the Program, as presented to you,
23 is in the public interest. And we urge you to
24 approve it.

1 Thank you.

2 CHAIRMAN HONIGBERG: Thank you,
3 Mr. Sheehan.

4 I think that's all we will be doing
5 for today. We'll hold the record open for the
6 written closing from the one party, the record
7 request that will be Exhibit 21, and
8 post-hearing legal memos.

9 With that, we'll adjourn the hearing
10 and take the matter under advisement. Thank
11 you all.

12 ***(Whereupon the hearing was***
13 ***adjourned at 3:30 p.m.)***

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