In The Matter Of:

Eversource Energy Application for a Certificate of Environmental Compatibility and Public Need

> Continued Public Hearing September 5, 2017

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STATE OF CONNECTICUT 1 CONNECTICUT SITING COUNCIL 2 3 Docket No. 461A 4 Eversource Energy Application for a Certificate of 5 Environmental Compatibility and Public Need for 6 7 the construction, maintenance, and operation of a 115-kilovolt bulk substation located at 290 8 9 Railroad Avenue, Greenwich, Connecticut, and two 115-kilovolt transmission circuits extending 10 11 approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, 12 Greenwich, Connecticut, and Related substation 13 14 improvements. 15 16 Continued Public Hearing held at the 17 18 Connecticut Siting Council, Ten Franklin Square, 19 New Britain, Connecticut, Tuesday, September 5, 2017, beginning at 1:04 p.m. 20 21 22 23 Held Before: ROBERT STEIN, Chairman 24 25

1	Appearances:
2	
3	Council Members:
4	SENATOR JAMES J. MURPHY, JR.,
5	Vice Chairman
6	ROBERT HANNON
7	MICHAEL HARDER
8	LARRY P. LEVESQUE, ESQ.
9	DANIEL P. LYNCH, JR.
LO	ROBERT SILVESTRI
L1	
L2	Council Staff:
L3	MELANIE BACHMAN, ESQ.
L 4	Executive Director and
L5	Staff Attorney
L6	
L7	ROBERT MERCIER
L8	Siting Analyst
L9	
20	For EVERSOURCE ENERGY:
21	CARMODY TORRANCE SANDAK & HENNESSEY, LLP
22	195 Church Street
23	New Haven, Connecticut 06509
24	BY: ANTHONY M. FITZGERALD, ESQ.
25	MARIANNE BARBINO DUBUQUE, ESQ.
-	

		3
1	Appearances: (Cont'd)	
2		
3	For THE TOWN OF GREENWICH:	
4	COHEN AND WOLF, P.C.	
5	P.O. Box 1821	
6	Bridgeport, Connecticut 06601	
7	BY: DAVID A. BALL, ESQ.	
8	DAVID E. DOBIN, ESQ.	
9		
10	Intervenor:	
11	DWIGHT UEDA	
12	Field Point Estate Townhouses, Inc.	
13	172 Field Point Road, #10	
14	Greenwich, Connecticut 06830	
15		
16	Intervenor:	
17	CECILIA H. MORGAN	
18	3 Kinsman Lane	
19	Greenwich, Connecticut 06830	
20		
21		
22		
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24		
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THE CHAIRMAN: Good afternoon, ladies and gentlemen. I'd like to call to order a meeting of the Connecticut Siting Council on Docket 461A today, Tuesday, September 5, 2017, at approximately 1 p.m.

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My name is Robin Stein. I'm chairman of the Connecticut Siting Council. This evidentiary session is a continuation of hearings held on July 13th, July 25th, and July 29th of this year. It is held pursuant to the provisions of Title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act upon an application from Eversource Energy for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a 115-kilovolt substation located at 290 Railroad Avenue, Greenwich, Connecticut, and two 115-kV transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements.

On May 25, 2017, the Council, pursuant to a request filed by Eversource Energy and the provisions of the Connecticut General Statutes

- 4-181a(b), reopened the May 12, 2016 final 1 decision rendered in this matter. 2 A verbatim transcript will be made of 3 the hearing deposited with the Town Clerk's Office 4 in the Greenwich Town Hall for the convenience of 5 the public. 6 7 We will proceed in accordance with the 8 prepared agenda, copies of which are available.
- 9 And we'll start with the appearance of the intervenor, Parker Stacy.
- Would you please rise and take the oath?
- 13 PARKER STACY,
- called as a witness, being first duly sworn
 by Ms. Bachman, was examined and testified on
 his oath as follows:
- 17 MS. BACHMAN: Thank you.
- THE CHAIRMAN: We'll go through a series of questions just to verify the material.
- 20 You can stay seated.
- 21 DIRECT EXAMINATION
- 22 THE CHAIRMAN: Mr. Stacy, you've 23 offered administrative notice items marked as 24 Roman numeral IV, Items A1 and 2.
- 25 Does any party or intervenor object to

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the items which Mr. Stacy has requested for
1
    administrative notice?
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3
                (No response.)
               THE CHAIRMAN: Hearing and seeing none.
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5
                (Stacy Administrative Notice Items
    IV-A-1 and IV-A-2 received in evidence.)
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                THE CHAIRMAN: Mr. Stacy, you have
    offered the exhibit listed under the hearing
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9
    program as Roman numeral IV-B-1. Did you prepare
    or assist in the preparation of Exhibit IV-B-1?
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11
               THE WITNESS (Stacy): I don't know
    which one that is.
12
13
               THE CHAIRMAN: It's your prefile
    testimony.
14
15
               THE WITNESS (Stacy): I prepared and
16
    filed --
               THE CHAIRMAN: Dated July 10, 2017.
17
18
                THE WITNESS (Stacy): I prepared and
    filed that prefile testimony.
19
20
               THE CHAIRMAN: Okay. Thank you.
               Do you have any additions,
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22
    clarifications, or deletions, modifications to
23
    that exhibit?
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               THE WITNESS (Stacy): No.
25
               THE CHAIRMAN:
                               Okay. Is the exhibit
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true and accurate to the best of your knowledge?
1
               THE WITNESS (Stacy): Yes.
2
               THE CHAIRMAN: Do you offer this
3
4
    exhibit as your testimony today?
5
               THE WITNESS (Stacy): Yes.
               THE CHAIRMAN: Does any party or
6
7
    intervenor object to the admission of the exhibit?
8
                (No response.)
9
               THE CHAIRMAN: Hearing and seeing none.
                (Stacy Exhibit IV-B-1: Received in
10
11
    evidence - described in index.)
               THE CHAIRMAN: We'll start with
12
    cross-examination first by staff.
13
               Mr. Mercier?
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               MR. MERCIER: I have no questions.
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               THE CHAIRMAN: Okay. Council members.
               Mr. Harder is sitting there, so I don't
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18
    overlook you.
19
               MR. HARDER: No questions.
20
               THE CHAIRMAN: Mr. Silvestri?
               MR. SILVESTRI: Thank you,
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    Mr. Chairman.
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23
               CROSS-EXAMINATION
24
               MR. SILVESTRI: Good afternoon.
25
               THE WITNESS (Stacy): Good afternoon.
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1
               MR. SILVESTRI: How would you envision
    that a battery system such as Tesla's would be
2
    installed and be used in the Town of Greenwich?
3
               THE WITNESS (Stacy): I'm not sure how
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5
    I would envision it. I know how it has been
    envisioned in other jurisdictions by Tesla and
6
7
    other power companies. And the way that my
8
    understanding is, and I'm hoping to get more
9
    clarification from Eversource today, is that as
    the Powerwalls are installed, that they take power
10
    during the slack period of the demand overnight
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12
    and charge themselves up, and then during the more
13
    peak demand periods they are discharged by
    Eversource, or by the utility, in order to balance
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15
    those demand periods out. They also serve as a
16
    battery back-up in case of power outages. And I
    hope to talk about all of those things today.
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               MR. SILVESTRI: My understanding is
    that there's a backlog of orders from Tesla.
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20
    you know of any backlog, or how long the wait
    period would be to get these batteries?
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22
               THE WITNESS (Stacy): I don't.
23
               MR. SILVESTRI: Do you know the life
24
    span of the batteries?
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THE WITNESS (Stacy): My understanding

- 1 is that, according to the Vermont utility, that
- 2 they are installing them for a period of ten
- 3 years, and then they would be taken out, which is
- 4 what I believe Tesla has called them, their useful
- 5 life, and then they would be replaced.
- 6 MR. SILVESTRI: Now, judging from the
- 7 information that you had submitted, everything
- 8 that I see that's going to charge or power the
- 9 batteries is solar related. Is that correct in
- 10 what you've seen for the Tesla batteries?
- 11 THE WITNESS (Stacy): No, no. They are
- 12 stand-alone. However, they can be hooked into a
- 13 solar power system, but they are sold stand-alone
- 14 as well.
- 15 MR. SILVESTRI: That's all I have,
- 16 Mr. Chairman. Thank you.
- 17 THE CHAIRMAN: Mr. Hannon?
- 18 MR. HANNON: I have no questions.
- 19 Thank you.
- 20 THE CHAIRMAN: Mr. Lynch?
- 21 MR. LYNCH: Just one quick follow-up to
- 22 Mr. Silvestri's question. You said the battery
- 23 life, or the life of the system, would be ten
- 24 years. Now, Tesla and a lot of other companies
- 25 are still working on storage batteries. What is

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the inevitability that as this progresses in two
1
    years, five years, there's a more powerful system,
2
    would that be used as a replacement, would you be
3
    asking the utilities to replace the system?
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               THE WITNESS (Stacy): I can't speak to
5
    that because I'm not affiliated in any way with
6
7
    Tesla.
            The information that I have gotten has
8
    been through their web site and a brief phone call
9
    with one of their representatives, and a couple of
10
    emails that they have sent me. So I don't know
    the answer to that question.
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12
               MR. LYNCH:
                            Thank you, Mr. Chairman.
13
               THE CHAIRMAN:
                               Thank you.
               We'll now go to cross-examination by
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15
    the applicant.
               MR. FITZGERALD:
16
                                 No questions.
                THE CHAIRMAN: We'll just see who -- is
17
18
    there anybody from the Office of Consumer Counsel?
19
                (No response.)
               THE CHAIRMAN: Field Point Estate
20
21
    Townhouses?
22
                (No response.)
23
                THE CHAIRMAN:
                               Christine Edwards?
24
                (No response.)
25
                THE CHAIRMAN:
                               Richard Granoff?
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1
              (No response.)
              THE CHAIRMAN: Grouped intervenors,
2
    Bella Nonna Restaurant, Greenwich Chiropractic,
3
    Joel Paul Berger, and Meg Glass?
4
5
              (No response.)
              THE CHAIRMAN: Cecilia Morgan?
6
7
              MS. MORGAN: I have no questions.
8
              THE CHAIRMAN: Town of Greenwich?
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              MR. BALL: We have no questions.
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              THE CHAIRMAN: Morningside Circle
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    Association?
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              (No response.)
13
              THE CHAIRMAN: We'll now go to your
    turn, Mr. Stacy, to cross-examine the applicant.
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15
              MR. STACY: Thank you, Mr. Chairman.
16
    RONALD J. ARAUJO,
   FARAH S. OMOKARO,
17
18
   KENNETH
                  BOWES,
   JASON CABRAL,
19
    J O H N
20
             C. CASE,
    CHRISTOPHER P. SODERMAN,
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   MICHAEL LIBERTINE,
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23
        called as witnesses, being previously duly
24
        sworn, testified further on their oaths as
25
        follows:
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CROSS-EXAMINATION

MR. STACY: I'd like to begin with my
July 14, 2017 question. It's under Stacy 001. It
was the only question I had at that point.

THE WITNESS (Bowes): Yes, I have it.

MR. STACY: In Eversource's response to my question, it included the Town of Greenwich nontransmission alternative analysis of 12/12 of '16. And then in your response, the first line of the second paragraph says, "Eversource has worked with the Town of Greenwich during the past year on several energy efficiency initiatives and has identified a potential roadmap..."

And then if I go to the town, their supplemental prefile testimony of August 22nd of '17, I'll just read you the one little part, which was also repeated in response to a question by you, I believe, Attorney Fitzgerald. "The town does not agree with the conclusions reached by this analysis," referring back to your nontransmission alternative analysis.

My question is this: Has Eversource taken any steps since then to update this analysis and bring it into a place where the town can agree with it?

THE WITNESS (Bowes): Concerning the nontransmission alternatives outside of energy efficiency, I would say we have not. Energy efficiency discussions continue.

MR. STACY: And so the town therefore continues to disagree with the report?

THE WITNESS (Bowes): I believe that was their testimony last week, yes.

MR. STACY: Thank you.

On page 7 -- and I believe this was already referred to indirectly in the question to me -- you have estimated equipment -- sorry. On page 7 you have estimated equipment costs of 15 million, including site development costs. Where do these cost figures come from?

THE WITNESS (Bowes): So as part of enabling legislation that was passed by the Connecticut Legislature in 2015 --

MR. STACY: 2015 you said?

THE WITNESS (Bowes): In 2015. The legislature enabled both electric distribution companies, UIL and Eversource, to put forward a proposal for energy storage to DEEP. And they had a docket opened 15-5, which part of it dealt with energy storage. So in preparation for that

- docket, Eversource went out to 19 manufacturers
 and got information back from many of them, which
 included indicative pricing. So while it's not a
 firm commitment for pricing, it's certainly
- directional in nature for the cost for a system of this size.
- 7 MR. STACY: So this was as a result of 8 the IEP that you referred to later on?
 - THE WITNESS (Bowes): It was a request for information I think is how we termed it, yes.
- 11 MR. STACY: Right. And the graph that

 12 is on page 7, can you tell me what exactly it is

 13 intended to depict? I mean, I tried to respond to

 14 a question from the panel, but I suspect that you

 15 are in a much better position to explain what that

 16 means.
 - THE WITNESS (Bowes): Yes, I can. So along the horizontal scale are the hours of the day, starting at midnight, and going to midnight, then on the vertical scale is the output in megawatts.
 - MR. STACY: Okay.

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23 THE WITNESS (Bowes): And then there
24 are two lines. There's the original line, which
25 is in red, which would be what the system load

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would be. Again, this is just a hypothetical or a
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    typical example. And then using the energy
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    storage is the line in blue. So for offpeak hours
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    the system is charging and taking energy from the
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5
    grid, and then during peak hours it's providing
    energy to the grid. So therefore, the red line
6
    lowers during hours of peak operation, or peak
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8
    demand, and it goes up a little during hours while
9
    the battery system is charging
               MR. STACY: I'd just ask, is that a
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11
    better answer to the question you asked me?
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               THE CHAIRMAN:
                               That's really not --
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    you're cross-examining the applicant, not the
    Council.
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               MR. STACY: Okay.
                                   That's fine.
                               I understand though
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               THE CHAIRMAN:
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    but --
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               MR. STACY:
                           Moving onto my
    interrogatory of August 14 of '17, Stacy 001.
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20
    in that you refer in your response to the DEEP
    docket request demonstrating projections, and
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    you've listed a number of 19 vendors. Is this the
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    same request that you were referring to just a
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THE WITNESS (Bowes): Yes, it is.

moment ago?

MR. STACY: And so this request took place when again?

THE WITNESS (Bowes): It would be the second quarter of 2016.

MR. STACY: And then I just would like to reread my question because apparently at that time requests were made to Tesla employees, two people here, and additionally, a request was sent to the email mailbox. "I have previously submitted information about Tesla's products for battery storage systems and contact information for their representative, Mr. Hawari."

And I go on, "Please advise if anyone has contacted Mr. Hawari to see what Tesla might offer Eversource and the Town of Greenwich, who made the contact and when, and what were the results of that contact."

So I just repeat my question since your response didn't really answer the specifics of that question.

THE WITNESS (Bowes): As a public utility in the State of Connecticut, we use a procurement process approved by PURA that doesn't solicit input from a single vendor, but from multiple vendors. In this case, we'd already

- requested information from Tesla, including three different tries or attempts to get information from them. They did not respond to it. We typically do not reach out to a single employee at
- 6 MR. STACY: So the answer is that no one has tried to contact him?

a single company for information purposes.

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- 8 THE WITNESS (Bowes): That is correct.
- 9 MR. STACY: Okay. Moving onto my 8/14
 10 of '17, Stacy 002. I asked to project the number
 11 of Powerpack and Powerwall Systems needed to
 12 achieve 5 megawatt of energy storage, which was
 13 incorporated in your report.
 - And your response was, 2,667 units, and at a total cost of 18 to \$22 million, not including replacement of the batteries at the end of their useful life, which would require a similar investment, you say, every 10 years.
 - I just would like to pass these out.

 I've already given copies to the Siting Council.

 These come right off the web site that I put in my information on last Thursday, I think it was.
 - THE CHAIRMAN: Excuse me. So what is the question?
- 25 MR. STACY: I'm waiting for them to get

1 copies. If you look at the first of these, 2 which is the picture of a house --3 THE WITNESS (Bowes): This "Reliable 4 5 Power Day and Night"? MR. STACY: "Reliable Power Day and 6 7 Night." 8 THE WITNESS (Bowes): Yes, I have it. 9 MR. STACY: Is this -- and if you look at the second page, it says, "Order your 10 Powerwall," and talks about do you have a 1 11 12 bedroom, 2 bedroom, 6 bedroom home. And it lists 13 prices, 5,500, 700, 6,200, et cetera. Is this where you found the information 14 15 that you included in the response to me? 16 THE WITNESS (Bowes): I believe we just 17 used the information that you originally provided 18 in the attachments. I'm not sure if this was the -- it looks like to be the same information, 19 but it was either an email or an attachment to one 20 of the previous correspondence. 21 MR. STACY: I did not send you these 22 web pages. Let me just read your answer. 23 Ιt 24 says, "Per Tesla's web site, the cost for each

unit is..., " "700 for the supporting hardware and

- installation cost," et cetera, and you build that 1 up into a number of 18 to 22 million. 2 THE WITNESS (Bowes): Okay. 3 MR. STACY: So is this the source of 4 5 your response to me? THE WITNESS (Bowes): I believe it's 6 7 something either you provided or we got from the 8 web site. This response says it's from the web 9 site. MR. STACY: So it was not something I 10 11 provided, so it would be a response from the web 12 site? THE WITNESS (Bowes): I believe that's 13 14 what the interrogatory statement says, so I would 15 agree with that. 16 MR. STACY: Okay. And would you say --17 would you agree that, if you go on the web site, 18 that this page of information about the Powerwall is, in fact, aimed at an individual consumer, and 19 if you look at the second page, it says, inquire 20 about the Powerwall for your home? That's the 21
 - THE WITNESS (Bowes): I would say I would generally agree with that, yes.
- 25 MR. STACY: And if you look at the

second handout.

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dropdowns at the top, you'll see that they say 1 "Solar Panels, Powerwall, Solar Roof, Commercial," 2 and then the last one says "Utilities." And in 3 the Utilities section is the last handout. 4 5 are four pages to it. The first says "Distributed Energy 6 Products," and above that is "Request a call." 7 8 Second, "Learn about Powerpack." 9 The third, "Inquire about our utility products and services." 10 And the last says, "Request a call" 11 12 also. 13 Did anyone from Eversource request one of those calls? 14 15 THE WITNESS (Bowes): Not to my 16 knowledge, no. 17 MR. STACY: Okay. So moving onto my 18 Stacy 003 of 8/14 of '17. In the attachment that I sent you all, entitled "Green Mountain Power web 19 site," the first half of the -- the top half is 20 their home page. And if you click on the picture 21 22 of that house, the information on the bottom half 23 comes up. And one of the pieces of information 24 that comes up in that web site is that the

battery, or batteries, will provide 8 to 12 hours

1 of whole house back-up power. 2 Are you there? 3 THE WITNESS (Bowes): I am not there. I'm sorry. 4 5 MR. STACY: It was an attachment to an 8/31 submission. 6 7 THE WITNESS (Bowes): Okay. I didn't 8 have this submission. Sorry. I see it, yes. 9 MR. STACY: And in your previous 10 testimony Eversource has referenced outages in Greenwich, and I made note of three of them --11 12 there may have been others -- August 12th a tree fell on the transmission lines. Most customers 13 were back online in six hours. April 16, a 14 15 transformer went, and that took nine hours. 16 then the most recent one this summer you've talked about on July 20th, several hundred customers were 17 18 out of service for two hours. 19 And is it not true that anyone with 8 to 12 hours of whole house back-up power would 20 have avoided interruption and had power throughout 21 these and the majority, if I heard you correctly, 22 23 of recent power failures in Greenwich?

THE WITNESS (Bowes): Yes.

MR. STACY: Thank you. And then they

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go on to say that they will partner with

customers -- I'm just above there. I'll just read

the short line. "Partner with customers to

utilize the batteries during peak energy times to

directly lower costs for customers by reducing

transmission and capacity cost."

for customers?

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- And I'm understanding that this is the
 same idea that you depict in your graph on page 7,
 the same that was asked from the panel in your
 analysis as well. Is that correct, the idea of
 partnering with customers to utilize batteries
 during peak energy times to directly lower costs
- THE WITNESS (Bowes): Actually, no.

 The graph that I talked about before was for a

 grid side or utility battery storage system.
 - MR. STACY: Okay. And would it be correct to say that this would accomplish something similar to that?
 - THE WITNESS (Bowes): It could be used to accomplish something similar. There would have to be other enabling software and hardware control system to do that.
- MR. STACY: In other words, Eversource would need to control the draw of the power when

- it was needed and placement of the power when it's not. Is that correct?
- THE WITNESS (Bowes): That is correct.
- 4 MR. STACY: I'm referring now to the
- 5 New York Times Business Day article of July 29th.
- 6 I excerpted parts of that, and also included that
- 7 in an attachment entitled, "New York Times
- 8 Business Day, July 29, 2017 excerpts." Do you all
- 9 have that?
- 10 THE WITNESS (Bowes): It's a
- 11 single-page document?
- MR. STACY: It was a single page
- 13 attachment. And in the body of the submission I
- 14 also included the link to the article itself.
- 15 THE WITNESS (Bowes): I have the single
- 16 page attachment.
- 17 MR. STACY: Okay. Good. So in the
- 18 article -- or I should say as a consequence of the
- 19 article -- I may be a little out of bounds here --
- 20 but I did speak briefly with a representative of
- 21 the utility, Green Mountain Power, and they said
- 22 that "As a result of the article, many utilities
- 23 have contacted us" -- this is a quote -- "in
- 24 response to the newspaper article."
- 25 My question is, is Eversource one of

those utilities?

- THE WITNESS (Bowes): Yes, it is. I'm
- 3 not sure if it was in response to this article.
- 4 think it was before this article.
- MR. STACY: And going on in that
- 6 submission, it says in the article and also in
- 7 other submissions that I made that they will offer
- 8 the battery to as many as 2,000 customers,
- 9 Powerwall, for a one-time payment of \$1,500.
- 10 And my question is this: How does that
- 11 compare with the 22 to 24 million for Eversource?
- 12 I mean, is it just because this is commercial
- 13 versus -- how do you look at these two items
- 14 together? What do you make of it?
- 15 THE WITNESS (Bowes): I could speculate
- 16 and respond that I believe Green Mountain Power is
- 17 aggregating the energy savings and monetizing that
- 18 so they are able to buy down the initial costs of
- 19 the Powerwall units and the installation costs for
- 20 their customers. Eversource is not allowed to do
- 21 that in the State of Connecticut.
- MR. STACY: Okay. So we don't really
- 23 know how they make them available at that cost.
- 24 Is that correct?
- 25 THE WITNESS (Bowes): I do not know.

1 MR. STACY: Right. And yet, isn't it fair to say that that concept fits with one of the 2 Council's wishes -- I'm not sure who said it --3 that those that benefit carry the cost versus 4 increasing rates on all ratepayers statewide? 5 THE WITNESS (Bowes): I don't know 6 7 that. I don't know how Green Mountain Power is 8 charging or absorbing the costs for the program. I know what they're charging the end use customer 9 10 based on this newspaper article. I don't know how the remaining customers pay for that. 11 Is it true that even the 12 MR. STACY: 13 \$1,500 fits pretty well per customer -- would fit 14 pretty well in the concept that those who benefit 15 carry the costs? 16 THE WITNESS (Bowes): I don't know what -- based on the costs of being, in our 17 18 estimate, 5,500 plus the installation, so it would be quite a bit higher than that, so they're 19 20 getting a subsidy from the utility to install the Powerwall units. 21 22 MR. STACY: Okay. So you don't know? 23 THE WITNESS (Bowes): All I know is 24 what the list price is, and what, according to the

article, what the cost to the Green Mountain Power

customer is. It looks like it's about 25 percent of the actual cost of the unit.

MR. STACY: \$1,500?

THE WITNESS (Bowes): Correct.

MR. STACY: And if that were available at those types of costs, would that not be of interest to Eversource?

THE WITNESS (Bowes): Well, in this case it would appear that hypothetically the utility is giving a 75 percent subsidy for customers that sign up for this program. So that means the customers that sign up for it get the benefit of a reduced cost. They get the benefit of some period of uninterruptible power during emergencies. But the rest of the customers would be paying their 75 percent share. So I think it's a cost shifting. So it's not the person that's receiving the benefit is paying the entire cost. They're getting subsidized at about 75 percent.

MR. STACY: I appreciate the answer.

I'm gathering that that is just a hypothetical answer, though, that whoever has been in contact with Green Mountain Power doesn't know exactly how the thing works, how they interface with Tesla, how the money comes in, how it goes out, and what

the customer result is, all those factors are 1 really not known to Eversource. Is that correct? 2 THE WITNESS (Bowes): I would say 3 that's accurate. 4 5 MR. STACY: Elsewhere in the article --I won't belabor the thing -- it points out the 6 7 fact that Green Mountain Power is a B Corporation. Are you familiar with a B Corporation? 8 9 THE WITNESS (Bowes): I am not. 10 MR. STACY: In the newspaper article it says, "In 2014 the utility became a B Corporation. 11 That is a voluntary designation requiring 12 executives to take into account not just how 13 decisions will affect profit of the shareholders, 14 15 but also how they will affect the public, generally defined as society or the environment." 16 And if I may, if we look on the B 17 18 Corporation web site very briefly, "B Corps are for-profit companies certified by the nonprofit B 19 Lab to meet rigorous standards of social and 20 environmental performance, accountability, and 21 22 transparency." 23 Is there a question, THE CHAIRMAN: because I think the answer I heard was that they 24

are not familiar with that, so --

1 MR. STACY: My question was, is Eversource a B Corporation, or is planning to 2 become one? 3 THE WITNESS (Bowes): I don't believe 4 that we are, and I don't know what our future 5 plans are in that regard. 6 7 MR. STACY: Okay. Thank you. 8 So reading through the entire New York 9 Times article, which I referenced last Thursday, 10 isn't it true that all reported initiatives reported in that article come from the utility, 11 and there's no mention of any initiative on the 12 13 part of any municipality or jurisdiction? THE CHAIRMAN: And what's the relevance 14 15 of the question? I don't see a 16 THE WITNESS (Bowes): reference to any other utilities in this. 17 18 MR. STACY: That there has been a wish stated that the Town of Greenwich would do more, 19 and this article would imply that to do more in 20 21 Vermont is Green Mountain Power. That's the 22 relevance. 23 THE CHAIRMAN: Okay. In Vermont it's 24 But let's go on because we're not in relevant.

25

Vermont.

1 MR. STACY: Okay. As you said last 2 time.

In the article the executive says, "The opportunity for us is to lead the transformation of an electric system that depends on power sent along big transmission lines to a community home and business based energy system."

And when I go back to the quote that I originally referenced from your chairman -president, rather, Mr. Judge, that Eversource is going to be the leading -- I'm sorry, I don't have it. I have to dig it out.

THE WITNESS (Bowes): It's Stacy
Question 003?

MR. STACY: Yes. It's buried in a sea of paper here. That Eversource would be "the catalyst for change and opportunity in New England." And given what we see here, the stated intention to lead the transformation from big transmission lines to a community home and business based service, promoting a distributed energy storage system, becoming a B Corporation, isn't it fair to say that Eversource is up against serious competition for that designation in New England?

THE WITNESS (Bowes): So I can talk
about what Eversource does in this regard.

THE CHAIRMAN: I'd actually prefer if you just answer yes or no.

MR. FITZGERALD: The question asked for a comparison between Eversource --

THE CHAIRMAN: If you can do it briefly because --

THE WITNESS (Bowes): So we spend \$500 million a year in energy efficiency in New England. We have partnered with a supplier for renewable energy for 1,090 megawatts coming from Hydro-Quebec in Canada. We're preparing a bid right now for 800 megawatts of offshore wind in the State of Massachusetts. We're participating with the State of Massachusetts for the 600-megawatt energy storage proposal. In each one of these cases there has to be enabling legislation for a regulated utility to respond to that.

In 2015 we worked with the Connecticut Legislature to propose legislation that would allow utilities to own and operate energy storage. That translated into a DEEP proposal in Docket 15-5 where we, as well as United Illuminating,

submitted proposals for energy storage in the State of Connecticut. Both of those proposals were rejected by the state because we could not show a cost benefit for them. And furthermore, they challenged us to use traditional alternatives that were lower cost than energy storage. We are trying to rework our proposal now to lower the cost of energy storage and resubmit to that.

So I believe that we're very active in the states we're allowed to, and in the states where we're not allowed to yet, we seek legislation. For example, the Governor recently signed a bill for fuel cells that, again, would allow utilities to own and operate fuel cells in the State of Connecticut. We endorse that. We worked with the Legislature to write that bill. It was ultimately approved and signed by the Governor.

So where we're able to, we clearly strive to fulfill the requirements Mr. Judge has laid out.

MR. STACY: So to be the catalyst for change and opportunity in New England, what I hear you say is that you are doing the best you can under the circumstances that confront you, and

- 1 that if another utility in the State of Vermont is
- 2 giving you stiff competition, that it is because
- 3 they have a more user friendly environment in
- 4 their state legislature and elsewhere. Is that
- 5 correct?
- THE WITNESS (Bowes): That's not what I
- 7 said. And I don't think you characterized what
- 8 we're trying to do. Where the rules don't
- 9 presently exist, we work with the policymakers to
- 10 write new rules that will, again, enable clean
- 11 energy. And in the case of fuel cells in
- 12 Connecticut, it also has an economic development
- angle because we're the fuel cell capital of the
- 14 world with many jobs created here in Connecticut.
- 15 So it makes natural sense for us to push for that
- 16 renewable energy in the state. I can't speak to
- 17 the State of Vermont.
- 18 MR. STACY: I know. I know that. I
- 19 think that concludes my questions.
- 20 THE CHAIRMAN: Thank you.
- So we'll now go to staff, Mr. Mercier,
- 22 for additional cross of the applicant.
- MR. MERCIER: I just have a few
- 24 questions regarding the town's prefiled testimony
- 25 of July 18th. That was an additional distribution

- 1 slash reliability solution presented on pages 23
- 2 and 24. And in that item there was several
- 3 bulleted -- in that response there were several
- 4 bulleted items. So I just want to review each of
- 5 the items and ask your opinion as to what you
- 6 thought of the reliability benefits of each.
- 7 THE WITNESS (Bowes): I have the
- 8 testimony.
- 9 MR. MERCIER: Thank you. So bullet
- 10 one, obviously as part of the town's proposal
- 11 here, it's a new indoor substation at 281 Railroad
- 12 Avenue in place of the aged equipment at Prospect
- 13 Substation. So, first off, is Eversource in
- 14 agreement that, yes, a new substation would be
- 15 required, whether it's indoor or outdoor?
- 16 THE WITNESS (Bowes): Yes
- MR. MERCIER: And item two here is
- 18 reconductor and reconfigure all four of the
- 19 27.6-kV feeders. And I believe in the
- 20 cross-examination of Mr. Mailman, he specified the
- 21 use of the modern feeders. I'll just call them
- 22 that. That's the term he used. And what is your
- 23 sense of the reliability of replacing all four
- 24 feeders with these new type of feeders to provide
- 25 power to the new Greenwich Substation?

reduced insulation size or smaller conductor size for about 20 years in Connecticut. In this case the replacement of these feeders with larger conductors is not possible. We consulted both of our equipment suppliers, Okonite, as well as Kerite, and the dimensions that would be required to fit in a 4-inch duct bank would be -- the cables are too large to do that at a higher capacity than what we have today. So that would entail providing an alternate path and a new duct bank system.

Option 4 that we proposed to the town. We went through those limitations of that proposal which, while it's technically possible to do that, it is an inferior project. It does not solve the issues at Cos Cob Substation being a single point of failure, as well as the configuration of the 2X and 3X transformers and the potential for a bus fault on the 27-kV system at Cos Cob. It also was a more expensive project than what we had proposed, that entire solution. It was \$122 million, and that would be an entire distribution cost. There would be no costs borne by customers

outside of Connecticut, so it would be much more costly to the average customer in Connecticut than the proposed project we have.

So I would not agree that we could reconductor and reconfigure these feeders to solve the issue for this project.

MR. MERCIER: And I assume obviously associated with that was bullet three which was, as you just mentioned, reconfigure, so that wouldn't work is what you're stating, just because you can't fit the new type of technology in there. Is there a slightly larger cable that could fit into these existing duct banks or --

THE WITNESS (Bowes): Not as a standard size. You might be able to special order something. But again, to have an equipment manufacturer build and warranty that product, and then to have a unique system, or a unique type of conductor on the system, we don't think it's a prudent option, nor does it solve the issues at Cos Cob Substation.

MR. MERCIER: Regarding the chart you just mentioned as Option 4, this is similar to that one. There was -- I misplaced my chart.

Anyway, I have some notes. In the options on the

right-hand side, say for Option 3, it basically 1 said something to the effect that a new substation 2 would have to be constructed, and I believe you 3 say for Option 3 the cost was \$102 million for 4 5 that option. But on the right-hand side it said a new substation had to be constructed. Are you 6 7 stating that is for the replacement of the Prospect, or an additional substation? 8 9 THE WITNESS (Bowes): I was actually 10 referring to distribution Option Number 4, the 11 next one. 12 MR. MERCIER: I know. I understand 13 I just have a general question regarding that. that table. That statement, it's in several 14 15 options. I just want to confirm that. When you say a new substation, you're talking about a new 16 17 Greenwich Substation, not an additional one on top 18 of, say, the one that's proposed? 19 THE WITNESS (Bowes): Yes. If you look at the fourth bullet down, it says a new 20 substation on Railroad Ave. It could be either 21 22 location, but it would be a new Greenwich 23 Substation --24 Okay. Referring to that. MR. MERCIER:

THE WITNESS (Bowes): -- to replace the

- 1 Prospect Street Substation. MR. MERCIER: And do those costs that 2 are listed for all the options at the new 3 substation, is that new substation included in the 4 5 cost? THE WITNESS (Bowes): Yes, it is. 6 7 MR. MERCIER: All right. Thank you. 8 THE WITNESS (Bowes): It's an 9 equivalent project for the same capacity. 10 MR. MERCIER: Going back to the July 18th prefile testimony on page 23, we just talked 11 about the first three bullet items. And the last 12 13 bullet item on page 23 has to do with the Tomac Substation. And they're concerned about the 14 15 reliability of that station serving the customers. Now, would the proposed project do anything for 16 the Tomac Substation? 17 18 THE WITNESS (Bowes): It would not. 19 MR. MERCIER: So that's a whole 20 separate issue?
 - THE WITNESS (Bowes): And I spoke to some of that in the last meeting as well. We do have plans to convert the 4.8-kV system there, and provide a redundant backup at the 13.2-kV level, but it is outside of the scope of this project.

21

22

23

24

MR. MERCIER: What type of equipment is being installed to accomplish that redundant backup?

THE WITNESS (Bowes): In this case each of the distribution or customer transformers would be replaced with dual voltage transformers, 13.2 and 4.8 kV. So we would require an investment to replace that. The pole tops on the distribution side would probably have to be rebuilt as well. I believe we identified about 105 Frontier telephone poles or utility poles that would need to be replaced to be larger in size to allow the electrical clearances at 13.2 kV. And then the substation equipment could then remove the 4.8 kV transformer and 4.8-kV switchgear at the Tomac Substation.

MR. MERCIER: Just out of curiosity, do you have an anticipated timeline for that?

THE WITNESS (Bowes): I believe it's scheduled now in the 2018/2019 time frame.

MR. MERCIER: There was also some discussion regarding the single transmission tap to Tomac. Is there any plan to -- or is there any concern that there's just one tap there? Is there any plan to upgrade that to a two tap --

1 THE WITNESS (Bowes): There is. And this is a substation, along with many others in 2 the Connecticut service territory, that Eversource 3 has plans to upgrade. It's on a list and is 4 5 prioritized based on the number of customers and the cost to make those upgrades. But we would 6 7 intend to remove the three terminal line at this 8 location and have two two-terminal lines take its 9 place to alleviate the loss of any one transmission circuit taking out Tomac Substation. 10 MR. MERCIER: You just mentioned it's 11 12 on a list. Do you have any idea where on the 13 list? Is this like ten years down the road, 15? THE WITNESS (Bowes): Certainly within 14 15 the ten-year window. I can't say if it's three years or five years out. It would require, again, 16 planning studies and work with ISO New England. 17 18 And this, along with many others in the State of Connecticut, are things that we will ultimately 19 20 get to. MR. MERCIER: 21 I have no other 22 questions. Thank you. 23 THE CHAIRMAN: Thank you. 24 Any cross by the Council of the 25 applicant?

1 Mr. Harder.

MR. HARDER: I just have a couple of 2 questions. Last week I think the town was 3 questioning you, Mr. Bowes, about a lot of things, 4 but one of the issues concerned the different 5 feeders that exist on the system down in 6 7 Greenwich. And I think you had indicated -- one 8 of the questions concerned data that was 9 available, or not, and you were going to be 10 providing some data on feeders out of the Cos Cob Station. I think you said three years of data 11 12 would be provided for that. And I just wanted to 13 be sure. I wasn't sure of the specific question that was asked. Are there any other feeders? 14 15 think you had indicated there was no data for one particular feeder, maybe all feeders, out of the 16 Prospect Substation. 17 18 My question is, are there any other feeders besides the three out of the Cos Cob 19 Substation for which you do have information? 20 THE WITNESS (Bowes): So I believe we 21 22 talk about four feeders out of Cos Cob

MR. HARRINGTON: Four, okay.

23

25

Substation --

THE WITNESS (Bowes): -- that feed the

Prospect Substation. We did file that update for three years of data. I believe that data is available for all feeders out of Cos Cob, but not available from the other substations in Greenwich.

MR. HARDER: Okay. Thank you.

Also, just one other question. This is on the response to interrogatories dated August 22nd. Let's see. Council 02. A question about costs associated with the architectural treatment of 281 Railroad Avenue, and the town requested a pedestrian bridge. The question was, would it not be regionalized, but rather be borne by Connecticut ratepayers? The response is a little bit of -- I think it's a little confusing. Could you answer that more specifically? Is it going to be borne in each of those cases borne generally by the Connecticut ratepayers or locally or regionally in Greenwich?

THE WITNESS (Bowes): I will start, and John may be able to supplement what I'm saying as well, is that for the architectural treatment for the substation, that would be a distribution cost shared by all CL&P ratepayers. For the pedestrian bridge, it would be a local network service transmission cost. The allocation of those costs

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1
    are about 60 percent to Connecticut ratepayers,
    and about 40 percent to ratepayers outside of
2
3
    Connecticut.
               MR. HARDER: So none of it's going to
4
5
    be directed at the Greenwich ratepayers?
               THE WITNESS (Bowes): There's no --
6
7
               MR. HARDER: Excuse me.
                                         None of it,
8
    other than that which is covered by that 60
9
    percent figure, or generally by --
                THE WITNESS (Bowes): So I think I
10
    understand your question. None of those costs
11
12
    would be localized specifically to Greenwich
13
    customers, but Greenwich customers would pay their
    share of those costs for the distribution tariff
14
15
    for the architectural treatment, and they would
    pay their share of the 60 percent of the local
16
    network service transmission cost, but no more
17
18
    than their share.
19
               MR. HARDER: Okay.
                                    Thank you.
                                                No
20
    other questions.
21
               THE CHAIRMAN:
                               Thank you.
22
               Mr. Levesque?
23
                               No further questions.
               MR. LEVESQUE:
24
                               Mr. Silvestri?
               THE CHAIRMAN:
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MR. SILVESTRI:

Thank you,

Mr. Chairman.

Last week there was discussion with the town about splice vaults, and I believe they're on the Bruce Park area, that the number of splice vaults could be reduced. What's your opinion on reducing that number?

THE WITNESS (Bowes): So I know John has looked at this, so I'm going to direct it to John.

THE WITNESS (Case): Thanks. So the town request was to avoid vaults in Bruce Park. The length from Indian Field to the Davis Avenue underpass is roughly about 4,000 feet. So we don't believe it's feasible to avoid the entire park without a vault. It's too long of a pull.

MR. SILVESTRI: Different question.

Could you explain the role of firewalls within a substation?

THE WITNESS (Bowes): Yes. We place firewalls between transformers, power transformers, in substations to limit the impact of one transformer on the adjacent or other transformers within the substation. They also are very effective at attenuating sound levels.

MR. SILVESTRI: If I look at the

- diagram for the substation proposed at 290
 Railroad Avenue, it appears that both transformers
- 3 would be surrounded by firewalls. Is that
- 4 correct?
- 5 THE WITNESS (Bowes): Is there a
- 6 reference, just to make sure?
- 7 MR. SILVESTRI: This goes back to
- 8 volume two, and it's appendix 4, and it's the
- 9 drawing in red that's on the back page of the
- 10 substation location.
- 11 THE WITNESS (Bowes): So though the
- 12 diagram does show potentially four walls, there's
- 13 really three there. The connection for the 115 kV
- 14 to the -- well, it's on the top of the page --
- 15 that is actually open. So the firewall is
- 16 actually on three sides to the east, south and
- 17 west of each of the transformers, but it is open
- 18 or exposed back towards the 115-kV system or
- 19 towards Railroad Avenue.
- 20 MR. SILVESTRI: Got you. And at least
- 21 with the transformer on the east side, there's
- 22 also a potential for a removable firewall on that
- 23 side. Is that correct?
- 24 THE WITNESS (Bowes): Yes, there would
- 25 be to transport or replace the transformer.

Ι

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1
               MR. SILVESTRI: The reason I'm asking,
    Airgas is to the south, basically, of that
2
    proposed site at 290 Railroad Avenue. Would an
3
    additional firewall somewhere south of the
4
5
    transformer setup be another safety precaution?
               THE WITNESS (Bowes): That is actually
6
7
    proposed here. Do you see the wall around the
8
    substation? It is a wall, not a fence. So the
9
    wall just to the south of what says distribution
10
    switchgear, that rectangular building fed from two
    transformers, there is another 15-foot wall at
11
12
    this location just to the south.
13
               MR. SILVESTRI: I'm not sure if I
14
    really see that here.
15
               THE WITNESS (Bowes): So around the
16
    entire perimeter of the substation, and you can
    see there are various arrows that say A and B,
17
18
    there's a property line depicted with a dashed
    line, and then just inside that, a few feet,
19
    there's an entire wall around the substation.
20
               MR. SILVESTRI: And that wall would be
21
22
    acting as a firewall as well?
23
               THE WITNESS (Bowes): It would.
                                                 It's
24
    fireproof and 15 foot in height.
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MR. SILVESTRI: Got you. Thank you.

- don't have any further questions.
- THE CHAIRMAN: Mr. Hannon?
- 3 MR. HANNON: I do not have any
- 4 questions other than the fact that he just asked
- 5 the one I was going to ask. Thank you.
- 6 MR. SILVESTRI: Sorry about that.
- 7 THE CHAIRMAN: Mr. Lynch?
- 8 MR. LYNCH: No questions.
- 9 THE CHAIRMAN: I think I just have one
- 10 question. In Eversource's experience in
- 11 Connecticut, is it always the utility, in this
- 12 case Eversource, who takes the initiative
- 13 regarding energy efficiency and renewable
- 14 projects? Are there any -- and I don't need
- 15 examples -- cases where municipalities also not
- 16 only take initiatives but contribute to these
- 17 programs?
- 18 THE WITNESS (Bowes): Yes. I'll start,
- 19 and Mr. Araujo maybe can add as well. I would say
- 20 that there are many communities inside the State
- 21 of Connecticut that are very active with zero
- 22 energy or no carbon programs, and have taken
- 23 pledges to that effect. I also think the
- 24 Connecticut Green Bank, Connecticut DEEP, and the
- 25 | PURA are also, I would say, very progressive in

these programs. And I would say we have one of the leading programs in the country for energy efficiency in the State of Connecticut.

that, projects do come in from a variety of means. Eversource technical professionals do go out and visit customer sites to help identify opportunities and propose energy efficiency projects. We also have a vast vendor network that we meet with on a regular basis to make sure that they're out there exploring projects and bringing them to us, so that way we can get them done. And customers do identify them on their own and ask for help, and we'll either work with a contractor directly, or bring it to Eversource and we'll work with the customer directly.

THE CHAIRMAN: To make my question more specific. Municipalities, do they on occasion take the lead and also contribute and work with you?

THE WITNESS (Araujo): Yes, they do.

And the Town of Greenwich has taken the lead in a couple of instances of the projects we've worked with them in the past. And we've also worked with them to help identify projects.

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THE CHAIRMAN:
1
                               Thank you.
                Okay. We'll continue. Let's see who
2
    else wants to cross-examine the applicant.
3
               Office of Consumer Counsel?
4
5
                (No response.)
6
                THE CHAIRMAN: Field Point Estate
7
    Townhouses?
8
               MR. UEDA: We have no questions.
9
                THE CHAIRMAN: Christine Edwards?
    Richard Granoff?
10
11
                (No response.)
12
                THE CHAIRMAN: I'll get to the town.
                                                       I
    haven't gotten there yet.
13
               Richard Granoff?
14
15
                (No response.)
                THE CHAIRMAN:
16
                               The grouped intervenors,
    the restaurant, the chiropractic, Joel Paul
17
18
    Berger, and Meg Glass?
19
                (No response.)
20
                THE CHAIRMAN: Cecilia Morgan?
21
               MS. MORGAN: I have no questions.
22
                THE CHAIRMAN: Morningside Circle
23
    Association?
24
                (No response.)
                               Town of Greenwich?
25
                THE CHAIRMAN:
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1 MR. BALL: Thank you. MR. FITZGERALD: 2 Excuse me, Mr. Chairman. I have two matters, if you'd 3 indulge me. One is that Eversource filed a 4 supplemental response to one of the 5 interrogatories at your direction, and that has 6 not yet been adopted. So I would suggest that it 7 8 would be appropriate to do that at this time. 9 THE CHAIRMAN: Sure. Would you put that into the record? 10 MR. FITZGERALD: 11 Thank you. 12 Now, Mr. Bowes, directing your attention to item 15 under part II-B of 13 Eversource's exhibits, entitled Eversource 14 15 Energy's supplemental response to Town of 16 Greenwich Set Two Interrogatory No. 77, dated September 1, 2017. Is the information in that 17 18 response true and correct to the best of your knowledge and belief? 19 THE WITNESS (Bowes): Yes, it is. 20 MR. FITZGERALD: And so I'd offer that 21 as a full exhibit. 22 23 THE CHAIRMAN: Thank you. Is there any 24 objection from any of the intervenors? 25 MR. BALL: No.

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1
               THE CHAIRMAN: Seeing none, the exhibit
    is added to the record.
2
                (Applicant's Exhibit II-B-15: Received
3
    in evidence - described in index.)
4
5
               THE CHAIRMAN: Now we'll have
    cross-examination by the Town of Greenwich.
6
7
               MR. FITZGERALD: My other query --
8
               THE CHAIRMAN: I'm sorry.
9
               MR. FITZGERALD: -- is it's a little
    unusual. So is the Town of Greenwich's
10
    cross-examination that we're going to hear now, is
11
    it limited to the new matter that has been asked
12
13
    about today, or is it just a wide open opportunity
    to ask all the questions that they didn't think of
14
15
    before?
16
               THE CHAIRMAN: I would certainly hope
    that it is limited. We've already had ample time.
17
18
    Is that correct?
19
               MR. BALL: Yes, that is correct,
    Chairman. And I intend to cross-examine on the
20
21
    new information.
22
               THE CHAIRMAN:
                               Thank you.
23
               MR. BALL: Thank you.
24
               CROSS-EXAMINATION
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MR. BALL: Good afternoon, Mr. Bowes.

1 THE WITNESS (Bowes): Good afternoon. MR. BALL: In the new exhibit, which is 2 Exhibit 77, or it's the exhibit in response to 3 Town 77, that's what you just filed. 4 Right? 5 THE WITNESS (Bowes): Yes, it is. MR. BALL: Just so that I understand 6 7 what the exhibit purports to show, it is a graphic depiction in 2014, '15 and '16 of the actual loads 8 9 on the four feeders that go from Cos Cob to 10 Prospect during the 24-hour peak load in any given year. Is that accurate? 11 12 THE WITNESS (Bowes): The peak load 13 day, yes. MR. BALL: The peak load day. So if I 14 15 were to take 2015, we know from what you've given 16 us what Cos Cob's peak load was, and what you've done is shown the actual distribution of the load 17 18 across the four feeders on the day that the peak load occurred. Is that accurate? 19 20 THE WITNESS (Bowes): Yes, it's based on the Cos Cob. 21 22 MR. BALL: On the Cos Cob. Thank you for clarifying. That's what I meant, yes. 23 24 Now, one of the points, Mr. Bowes, that

the company has made to support the claim of a

need for this project is based on computerized 1 simulations of certain contingency events where 2 the 27.6-kV feeders from Cos Cob to Prospect are 3 shown to exceed their rating. Are you familiar 4 5 with that? THE WITNESS (Bowes): Yes, I am. 6 7 MR. BALL: And you provided those 8 single contingency scenarios in response to Siting 9 Council Question 1. Right? 10 THE WITNESS (Bowes): And it was also 11 in the prefile testimony. 12 MR. BALL: That's right. 13 So a single contingency scenario, Mr. Bowes, is where you assume one of those four 14 15 feeders going from Cos Cob to Prospect is out of service. 16 Right? THE WITNESS (Bowes): 17 Yes. 18 MR. BALL: And then you look at the peak load, and the computer simulation tells you 19 what the load would be on the remaining three 20 21 feeders that are in service. Is that basically 22 it? 23 THE WITNESS (Bowes): Yes. 24 MR. BALL: And that's how you plan.

You plan for that single contingency where one of

those four feeders is down to see how the other 1 three feeders can handle the load. That's part of 2 3 your planning process? THE WITNESS (Bowes): That's part of 4 5 the planning process, yes. MR. BALL: And part of your claim in --6 7 do we have CSC 1? 8 So CSC 1 -- this is what you provided 9 to us -- it shows some of the results of your 10 single contingency scenario simulations. 11 right? 12 THE WITNESS (Bowes): Yes, it is. 13 MR. BALL: All right. So if I were to look at 2015, let's just take 2015 -- there we go, 14 15 okay -- so the demand, it says 114.8 MVA, that was the peak load at Cos Cob for 2015. Right? 16 THE WITNESS (Bowes): Correct. 17 18 MR. BALL: And then you've run four different computerized simulations showing each of 19 the four feeders being out of service, and the 20 correlating increase in load on the other feeders? 21 22 THE WITNESS (Bowes): That is correct. 23 MR. BALL: So I'm just going to focus

on one of the computerized simulations, and then

I'm going to connect all this. 11R52, do you see

24

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1
    that second column, "OOS" where it's out of
    service?
2
               THE WITNESS (Bowes): I do see it.
3
               MR. BALL: When that happens, according
4
5
    to the computerized simulation, 11R51, the load
    goes to 135 percent of its normal cable rating?
6
7
               THE WITNESS (Bowes): Correct.
8
               MR. BALL: And that's presumably a
9
    concern for the company?
               THE WITNESS (Bowes):
10
11
               MR. BALL: And according to the
12
    simulation, 11R55 also exceeds the normal cable
13
    rating, 104 percent?
14
               THE WITNESS (Bowes):
                                     Yes.
15
               MR. BALL: And 11R58 is 65 percent, so
    it's within its normal cable rating.
16
                                           Right?
               THE WITNESS (Bowes): That is correct.
17
18
               MR. BALL: Now, let's take a look at,
    if we can, the new chart in response to Town 77.
19
    So this is what you just filed.
20
               All right. Now, let's take a look at
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22
    2015, because I just looked at it. Here we go.
23
    So if we look at 2015 at the peak load moment,
24
    there actually was a failure of one of those four
25
    feeders going from Cos Cob to Prospect.
                                              Am I
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1 right? I'm looking at 11R52, Mr. Bowes. 2 THE WITNESS (Bowes): So the failure occurred around 1700? 3 4 MR. BALL: Yes. THE WITNESS (Bowes): I'm not sure when 5 the actual peak load occurred. 6 7 MR. BALL: Okay. But it was on this 8 day? 9 THE WITNESS (Bowes): It was definitely 10 on this day. It may have been a little earlier in the day. 11 12 MR. BALL: Okay. Fair enough. But what we see is --13 14 THE WITNESS (Bowes): It was about 15 1530, I believe, is when the peak occurred. 16 MR. BALL: So at some point one of the four feeders goes out of service. Right? 17 18 THE WITNESS (Bowes): The 11R52, yes. 19 MR. BALL: Right. And then if you look at 1800 hours, you see an increase in the load 20 21 being carried by the other three feeders. Do you see that? 22 23 THE WITNESS (Bowes): Yes, I do. MR. BALL: So if I'm understanding the 24

chart, this is actual, this is not a computerized

1 simulation, this is actually what your data shows. 2 Right? 3 THE WITNESS (Bowes): Yes. MR. BALL: So let's just look at each 4 5 11R51, that's the blue one. It looks like at 1800 hours it's just shy of 30 MVA? 6 7 THE WITNESS (Bowes): I believe the number is 29.5. 8 9 MR. BALL: 29.5. 11R55, which is the 10 gray one, looks to be 25 MVA? 11 THE WITNESS (Bowes): Yes, 12 approximately. MR. BALL: And 11R58, which is the 13 yellow one, goes up to 15 MVA. Right? 14 15 THE WITNESS (Bowes): Yes, 16 approximately 15. 17 MR. BALL: So when 11R52, the orange 18 one, goes out of service, the load gets shifted to 19 the other three feeders, right, the load that would have been carried? 20 21 THE WITNESS (Bowes): Instantaneously, 22 yes. And then a switching can occur after that. 23 MR. BALL: Sure. So you're not 24 surprised to see an increase in the load being

carried by the other three feeders when 11R52 went

1 That's how the system is designed to work. Isn't that right? 2 3 THE WITNESS (Bowes): Yes, it is. MR. BALL: And because the system 4 worked -- in fact, there was no impact to 5 customers on that day in 2015. Right? 6 7 THE WITNESS (Bowes): Not for this 8 fault, no. 9 MR. BALL: So let's take a look at the 10 ratings of these feeders, what you call the normal rating. 11R51, based on your response to Town 11 Question 1, has a normal rating of 24.6 MVA? 12 THE WITNESS (Bowes): That is correct. 13 MR. BALL: And what you're showing here 14 15 is that it was at 30 MVA for that moment in time 16 at 1800 hours. Right? 17 THE WITNESS (Bowes): Yes. 18 MR. BALL: Okay. 11R55 has a normal 19 rating of 32.5 MVA? 20 THE WITNESS (Bowes): Yes. MR. BALL: And, as we just discussed, 21 22 when the load got shifted, it peaked at 25 MVA on 23 this chart. Right? 24 MR. FITZGERALD: I'm going to object to

that question. I don't think you meant to say

- when the load gets shifted. Do you mean when the 1 2 load redistributed? 3 MR. BALL: I'll accept your 4 terminology, Mr. Fitzgerald. 5 THE WITNESS (Bowes): Yes, that's 6 correct. 7 MR. BALL: So, just sticking with 8 11R55, when the load increased to 25 MVA on that 9 feeder, it was well within its normal rate of 32.5? 10 11 THE WITNESS (Bowes): For that feeder, 12 yes. MR. BALL: So that feeder did not 13 overload? 14 15 THE WITNESS (Bowes): That is correct. MR. BALL: And, in fact, it's -- unless 16 my math is wrong -- it was loaded to 76.9 percent 17 18 of its normal rating. Right?
 - MR. BALL: Good. And if we go back to your computerized simulation, 11R55, when 11R52 goes out of service, you projected would exceed its normal rating, it would have gone to 104 percent?

on the math, I'll agree with that.

THE WITNESS (Bowes): Subject to check

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               THE WITNESS (Bowes): That is correct.
               MR. BALL: But in actuality that's not
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3
    what happened?
               THE WITNESS (Bowes): Because we
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5
    shifted load.
               MR. BALL: Okay. Because you have the
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7
    ability to do that, you were able to shift load?
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               THE WITNESS (Bowes): Correct.
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               MR. BALL: 11R58, the yellow feeder,
    has 15 MVA at 1800 hours?
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11
               THE WITNESS (Bowes): Yes.
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               MR. BALL: That was the actual load on
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    the feeder. And its normal rating being 25.6 MVA.
    I'm sure you'll confirm that's true.
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15
               THE WITNESS (Bowes): Yes.
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               MR. BALL: So at that moment in time at
    1800 hours in 2015, 11R58 was loaded to 58.6
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18
    percent of its normal rating?
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               THE WITNESS (Bowes): Subject to check
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    on the math, I'll agree.
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               MR. BALL: However, your computerized
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    simulation shows a higher -- even though it was
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    within the rating, it shows that you projected a
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    load of 65 percent higher than in actuality?
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               THE WITNESS (Bowes): That is correct.
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MR. BALL: And similarly, I'll go 1 2 through the same exercise with 11R51, your projection of 135 percent against the normal 3 rating with 11R51 having a normal rating of 24.6, 4 5 it's closer to about 120 percent of its normal rating, in actuality, it didn't get as high as 6 7 your simulation? 8 THE WITNESS (Bowes): I'd say 9 approximately, yes. MR. BALL: So when the actual event 10 happened that 11R52 went out of service, you got a 11 12 real-life opportunity to see how the system 13 operated, as compared to a computerized simulation. Right? 14 15 THE WITNESS (Bowes): Yes. MR. BALL: And in actuality the system 16 17 worked in multiple respects, first of all, load 18 was redistributed to the other feeders. You agree with that? 19 20 THE WITNESS (Bowes): Yes, as well as 21 other feeders. 22 MR. BALL: Okay. And --23 THE WITNESS (Bowes): I'm not sure you 24 understood me when I said we redistributed load to

other circuits, not these four, but other

So the

circuits. 1 MR. BALL: Understood. I'm just trying 2 to understand what happened in this contingency. 3 In this contingency customers were not impacted by 4 5 the peak load that occurred that day? THE WITNESS (Bowes): That is correct. 6 7 MR. BALL: Under real-life conditions 8 customers did not lose power that day. Right? 9 THE WITNESS (Bowes): That is correct. MR. BALL: And in actuality, the loads 10 shown on the other three feeders that were in 11 service did not reach the loads that you projected 12 13 in your computerized simulation. Right? THE WITNESS (Bowes): I would say none 14 15 of the three circuits hit their projected loads. MR. BALL: 16 Right. 17 THE WITNESS (Omokaro): Okay. Can I 18 just make one statement about that? because the simulations that we do does not 19 include load shifting. So that's what Ken was 20 trying to make a distinction. 21 22 MR. BALL: Thank you. 23 THE WITNESS (Omokaro): It's 24 instantaneous. The minute you take an element out

of service, it redistributes the load.

- table is accurate based on that. So it's two
 different factors that you're looking at, before
 shifting and after shifting.
- MR. BALL: Right. So because the
 company has the ability to shift load, the concern
 about the cables reaching 135 percent of their
 rating in actuality doesn't come into play?
- 8 THE WITNESS (Omokaro): Agreed, but 9 that's after shifting.
- MR. BALL: Understood.
- 11 THE WITNESS (Omokaro): I just want to
 12 make sure you understood that.
- MR. BALL: Because you have the ability
 to engage in actions to avoid the contingency
 simulations that your computer shows?
- THE WITNESS (Bowes): Well, I would say
 that we can avoid the full extent of them.
- 18 MR. BALL: Fair enough.
- one circuit was still 20 percent overloaded. We made a conscious decision to shift load to the 11R53 and 54, and accept an overload on those two circuits to minimize the overload on these remaining three.
- MR. BALL: The effect of which was that

1 it worked, you would agree? THE WITNESS (Bowes): And that's the 2 whole idea of using short-term ratings to deal 3 with this type of situation. 4 5 MR. BALL: One last question, if I may, Mr. Bowes. These charts all assume a normal cable 6 7 rating. You gave us those ratings. We're all 8 working off of those numbers. They assume a 75 9 percent load factor? THE WITNESS (Bowes): They do. 10 MR. BALL: The higher the load factor, 11 12 the less the capacity of the feeder? 13 THE WITNESS (Bowes): Could you repeat that? 14 15 MR. BALL: Yeah. If I have a load factor of, let's say, 70 percent, instead of 75 16 17 percent, the feeder is going to have more 18 ampacity; is it not? 19 THE WITNESS (Bowes): So I wouldn't say 20 it has anymore ampacity. It just means how we would rate the cables differently. 21 MR. BALL: Okay. So you've chosen to 22 rate it at 75 percent load factor. Correct? 23 24 THE WITNESS (Bowes): Yes.

MR. BALL: If you had rated it, let's

- say, at 70 percent load factor, you might not have had a situation where the load to ratings is shown to be as great a percentage. Would you agree with
- 5 THE WITNESS (Bowes): So again, I'm not quite clear on the question.
 - MR. BALL: If you have a lower cable rating, if you rated them lower, right, you would have the ability to carry more load on that cable without there being a concern about overloads against rating?
- 12 THE WITNESS (Bowes): So you've asked a
 13 different question this time.
- MR. BALL: Okay. Go ahead.
 - THE WITNESS (Bowes): So you said lower cable rating. If the rating were lower, the overloads would be higher. If the capacity factors were lower, the overloads would be lower.
- MR. BALL: Okay.

that?

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- THE WITNESS (Bowes): But you mixed two different things.
- MR. BALL: Okay. Fair enough. So you would agree that, depending on how you rate the cables, that has an impact in determining whether the cable is overloaded when we use that term?

1 THE WITNESS (Bowes): Yes.

MR. BALL: And -- well, I'll leave it at that. I have nothing further.

4 THE CHAIRMAN: One follow-up question.

5 MR. HANNON: Thank you, Mr. Chairman.

I'm just curious, on the shifting that you were talking about. Is this done automatically, or is it manual, or a combination thereof?

shifting of load that takes place instantaneously is automatic. So when that cable faulted, the flows automatically redistribute around the system. Then the operators look at what overloads they have on the system and manually reconfigure the system. So that will take a series of either automatic switching steps, which can be directed by the control center, or in some cases manual switching steps where you have to dispatch someone to the field to make field switching to effect the change in flows around the system. Most of the work we can do in Greenwich is automatic in nature.

MR. HANNON: Okay. Thank you.

24 THE CHAIRMAN: Okay. Next we're going 25 to have the town come for cross-examination. But Attorney Fitzgerald, do you have any redirect at this point, or do you want to continue?

MR. FITZGERALD: Well, yes, just very quickly.

REDIRECT EXAMINATION

MR. FITZGERALD: Mr. Bowes, are these cable ratings and load factors assigned arbitrarily, or is there some underlying basis for them?

ratings on IEEE standards, AEIC standards, and industry accepted practices. We tend to be, as I mentioned before, we tend to use emergency ratings for equipment sometimes two hours, sometimes 22 hour, that most other utilities do not. And we've done that to avoid capacity additions over many decades. Our sister utility, NSTAR, does not use emergency ratings. United Illuminating does not use emergency ratings. Con Edison does not use emergency ratings. So we are reevaluating whether we should be using emergency ratings, especially locations, for example, at Cos Cob, where there's no other backup. Other locations on the system we can accept a two-hour or 22 hour, because we can

shift loads away from bulk substations. In Greenwich we don't have that opportunity.

MR. FITZGERALD: On the 2015 peak day you did shift some load?

THE WITNESS (Bowes): We thought the risk to the three remaining feeders from Prospect, or Cos Cob to Prospect, was a greater risk than the two feeders to North Greenwich. So we did shift the load. We could not sustain a second loss of one of those remaining three circuits, but we could sustain a loss of one of the circuits to North Greenwich. So it was a calculated risk that we took to minimize the loading on those three remaining circuits and only put one of them into a 20 percent overload.

MR. FITZGERALD: What was the consequence of shifting the load to the North Greenwich feeders, what was the consequence to those feeders?

THE WITNESS (Bowes): It's a consequence to any feeder that you overload, you sustain loss of life. And we project to take a 2 percent loss of life every time we do that. So the reliability of the 11R51, the 11R53, and the 11R54, we lost life on those cables by doing that.

MR. FITZGERALD: That's all I have. 1 2 THE CHAIRMAN: So we'll take a five-minute break while I guess Eversource and the 3 4 town shift seats. 5 (Whereupon, the witnesses were excused and a recess was taken from 2:28 p.m. until 2:36 6 7 p.m.) 8 THE CHAIRMAN: Thank you, everybody. 9 We'll now resume our cross-examination. First, Mr. Mercier. 10 11 MR. BALL: Chairman Stein, if I may, just a housekeeping matter. We do have a new 12 exhibit, a Late-Filed exhibit, that we should, 13 with your permission, I'd like to just put into 14 15 the record. THE CHAIRMAN: All right. Do you want 16 to go through the process of verifying it? 17 18 MR. BALL: Yes. Thank you, Chairman 19 Stein. 20 21 22 23 24 25

1 JAMES W. MICHEL, AMY SIEBERT, 2 J. 3 BRUCE SPAMAN, MITCHELL E. 4 MAILMAN, 5 KATHARINE A. DELUCA, DENISE M. SAVAGEAU, 6 7 called as witnesses, being previously duly 8 sworn, testified further on their oaths as 9 follows: DIRECT EXAMINATION 10 11 MR. BALL: And I'll just direct -- this is a Late-File exhibit, dated September 1, 2017. 12 13 Ms. Savageau, I'll just ask you. Exhibit 4 for identification is a Late-Filed 14 15 exhibit filed by the town September 1. Did you participate in the creation of that exhibit? 16 THE WITNESS (Savageau): Yes. 17 18 MR. BALL: Is the exhibit true and correct to the best of your knowledge and belief? 19 THE WITNESS (Savageau): Yes. 20 MR. BALL: With that, I'll offer it, 21 Chairman Stein. 22 23 THE CHAIRMAN: Is there any objection? 24 (No response.)

THE CHAIRMAN:

Hearing and seeing none.

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(Town Late-Filed Exhibit X-B-4:
1
    Received in evidence - described in index.)
2
               THE CHAIRMAN: I can't help but remark
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4
    that the installed renewable energy I see, New
5
    Haven, Bridgeport, Hartford, Waterbury, among the
    top ten. That's quite outstanding for cities
6
7
    which are either on the verge of or in bankruptcy.
8
    So I just couldn't help it. You submitted that.
9
    That struck me more than whoever placed 40 or
10
    another town that I was once upon a time involved
    with, which is way down the list. But okay.
11
               Mr. Mercier?
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13
               MR. MERCIER: I have no questions.
    Thank you.
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               THE CHAIRMAN: We'll go to the Council.
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    Mr. Harder?
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               MR. HARDER: No questions.
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               THE CHAIRMAN: Mr. Levesque?
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               MR. LEVESQUE:
                               No.
               THE CHAIRMAN: Mr. Silvestri?
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               MR. SILVESTRI: No, sir.
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               THE CHAIRMAN: Mr. Hannon?
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               MR. HANNON: No, I do not. Thank you.
24
               THE CHAIRMAN:
                               Mr. Lynch?
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               MR. LYNCH: No questions.
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1 THE CHAIRMAN: Mr. Stein. Okay. So we'll now go to cross-examination by 2 3 the applicant. MR. BALL: Chairman Stein, if I may, I 4 5 assume the same ground rules are going to apply to the town. We've just submitted a new exhibit. 6 7 Mr. Fitzgerald had substantial cross-examination last time. I assume his cross will be limited to 8 9 the new exhibit. 10 THE CHAIRMAN: I assume so. MR. FITZGERALD: I have no questions. 11 12 MR. BALL: That answers my question. 13 THE CHAIRMAN: Okay. Office of Consumer Counsel? They're right here in this 14 15 building, but they can't seem to -- okay. Field Point Estate Townhouses? 16 I think you can sit next to 17 Yes. 18 Attorney Fitzgerald. That shouldn't be a problem. 19 CROSS EXAMINATION MR. UEDA: All right. I've heard 20 people say that the town tried to influence the 21 22 Department of Transportation to reject the 23 Metro-North Railroad route. Can you tell me what 24 happened?

MR. FITZGERALD:

Objection.

This is

not a new matter that has been introduced. It's the last cross-examination.

THE CHAIRMAN: Well, he didn't have a chance to cross-examine before so --

MR. FITZGERALD: Oh.

THE CHAIRMAN: So I guess I'll allow it up to a point, as long as you're not going to -- so respond to that question.

THE WITNESS (Mailman): Mr. Ueda, I think you might be a little mistaken here. I don't think anybody specifically said that the town tried to influence DOT, because the truth of the matter is, there are only two people in this room who were in that meeting. Now, I tried to convey what happened last time. In fact, I asked the person questioning do you want to know what happened in that meeting, and that person said no I don't. But Mr. Michel was in the same meeting that I was at.

THE WITNESS (Michel): Yes. And the purpose of the meeting was for the town to get clarity on how the long-term maintenance and reliability and the replacement of our force main system would be handled, assuming that this project would be constructed. We went there

primarily to find out what the rights are that the town would have to access that through DOT, and find out what DOT -- how it may look if DOT planned to expand I-95 or the Metro-North

corridor.

- to remember, all right, that we had no way to know at that point the hybrid scheme wasn't approved. We couldn't believe, or couldn't even fathom that anybody would offer something to the Council for their approval that had not yet been vetted by DOT. So there was never, never any thought in our mind, all right, that this could be rejected.
- If you remember, in Docket 461 the utility testified that DOT did not want them in the Metro-North right-of-way. So as soon as they presented the hybrid route to us, we presumed that they had already gotten DOT to reverse their position.
- THE CHAIRMAN: Mr. Ueda, one thing I will not though permit. We had testimony at the last meeting on this. And if you weren't there, you weren't there, but I'm not going to allow you to go over testimony that we heard basically the same testimony. So you're going to have to -- you

know, you should have been there.

MR. UEDA: Okay.

THE CHAIRMAN: You're going to have to ask questions that are either on the Late-Filing, or somehow figure out what was not asked because we all heard this. We don't have to hear it twice.

MR. UEDA: Okay. So let me ask my questions. Then I can ask -- I'll leave it up to you as to whether you'll permit the question. Would that work?

THE CHAIRMAN: All right.

MR. UEDA: I appreciate that. Thank you.

Should Greenwich residents be concerned about the reliability of electric service if this project is not built? Are the lights about to go out if Eversource's application is denied?

THE WITNESS (Mailman): I certainly think that's probably the most relevant question asked ever, all right, if you don't build the project what happens. But I really don't want to answer yes or no, because I don't want to be in a situation where someone could take my words out of context. All right. But in truth, the answer is

- 1 yes and no. We've outlined numerous reliability 2 issues, numerous issues. I don't want to repeat 3 the testimony, but we heard how there are only two 4 5 circuits coming into Cos Cob, both of which are on the same structures, which in a lot of utilities 6 is known as zero contingency. All right. 7 8 heard Mr. Bowes testify that 11 of the top 100 9 worst distribution circuits, 13-kV circuits, are 10 in Greenwich 11 THE CHAIRMAN: Again, we heard all this. 12 THE WITNESS (Mailman): And by the 13 14 way --15 THE CHAIRMAN: You're going to have to 16 go -- no. We heard you before. 17 THE WITNESS (Mailman): I have --18 THE CHAIRMAN: No, we heard you already. 19 20 THE WITNESS (Mailman): What happens if
- 22 say it?

 23 THE CHAIRMAN: I'm the chairman. I'm

 24 sorry. I'm still the chair of this. That

 25 question, you answered it, and you gave detailed

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I have something more to say? Am I not allowed to

explanation at the last meeting. So I don't see any reason why we have to go over this.

So what's your next question?

MR. UEDA: Okay. I understand from your testimony last week that you disagree with certain data, such as the peak demand forecast provided by Eversource. Can you elaborate?

MR. FITZGERALD: I'm going to object.

This is clearly -- this may be why Mr. Mailman decided he could come back. This is a series of questions designed to throw softballs so that testimony that has already been given can be given again or repackaged or improved. It has nothing to do with the interests stated of Field Point Estates or stated in their prefile testimony.

THE CHAIRMAN: I'm sorry. You really should have been here. These are rehashing.

You're giving them an opportunity of -- we've had detailed answers. I don't quite understand why you were not here last week, and you're here today asking questions that somebody could have told you that we've already gone over in detail. I don't understand. I wish you'd explain why you're doing this.

MR. UEDA: Well, the reason why I'm

- doing this, as I said, I was unfortunately away
 with family --
- THE CHAIRMAN: That's unfortunate. But

 everybody else has spent hours here we spent on

 this, and I don't think -- it's not fair.
- MR. UEDA: But that said, a lot of
 these people are paid to be here as well. I had
 personal business as well.
- 9 THE CHAIRMAN: Well, I'm sorry. I'm
 10 not worried about those people. That's not the
 11 point. Obviously people who are sitting there are
 12 also paid to be here. That's definitely not the
 13 point. The point is --
- MR. UEDA: Right. But the question was directed at me as to why I'm here now.
- 16 THE CHAIRMAN: Okay. All right.
- 17 | Well --
- MR. UEDA: No. I apologize. I
- 19 understand your point that you want to be
- 20 expedient.
- 21 THE CHAIRMAN: Well, then you should
- 22 have been prepared to ask questions that are
- 23 germane and were not asked and answered in detail
- 24 at the last meeting.
- MR. UEDA: Okay.

- 1 MR. BALL: May I, Chairman Stein, address this one particular question that I heard? 2 Two things. One, I don't believe all the 3 intervenors had a chance to ask questions. 4 whether he was here or not, I still think he has a 5 right to ask questions. I think the question 6 7 related to data, I don't remember that question coming up in cross in the last hearing. So to me 8 it's an open question that hasn't been asked 9 10 before. 11 First of all, the THE CHAIRMAN: 12 intervenors have had ample opportunity. We've 13 gone, as we did today, gone through the list. And 14 if you're here, you get a chance. If you're not 15 here, what would you like me to do? MR. BALL: I was simply responding to 16 your point that I think -- I thought that 17 18 particular question happened to be something that hadn't been asked before. 19 20 THE CHAIRMAN: Okay. I'll allow that particular question, but I'm just telling you, I'm 21 22 not going to allow other questions that we've gone
- MR. UEDA: Okay. I appreciate that. I understand.

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through.

1 THE CHAIRMAN: Well, I hope you do.

MR. UEDA: Well, the problem is, I don't have the benefit of having been to the last meeting, so I don't know which questions have been asked. So I'll leave it up to you --

THE CHAIRMAN: And apparently you're not relying on the Chair to tell you. All right. Let's see if we can get a concise answer to that question.

THE WITNESS (Mailman): I believe the question is, have I questioned data. Right. We sat here today, and we heard the utilities say that they have maximum load data on all eight feeders coming out of Cos Cob, yet when we asked for it, we were only given four, and we were given it in chart form. So yes, I believe there's data out there, but understand something. If you go back to Docket 461, what was the most repeated number, 130.5 MVA. That was known as the maximum peak load sustained at Cos Cob in 2013. It just so happens, when you do the math, it doesn't equal 130.5, it equals 126.7 MVA. Right.

I got questioned last time as to why I carried on about one-tenth of an inch, and I explained that one-tenth of an inch makes a

difference between duct sizes that are 6 inch and 1 duct sizes that are 8 inch. In any event, the 2 number is critical is 130.5 MVA to have been wrong 3 by that high a percentage. And understand, from 4 5 an engineering standpoint, had it been reversed, had you added up the five loads and they came out 6 7 to 130.5, but the load at Cos Cob was 126, you 8 could explain that. What's being offered today is 9 simply unexplainable. Another situation. Mr. Case testified 10 last week that if you reduce --11 12 MR. FITZGERALD: Objection. The answer 13 is far beyond the question. THE WITNESS (Mailman): I don't think 14 15 so. MR. FITZGERALD: It's just a speech. 16 THE CHAIRMAN: It always is. But can 17 you wrap up your --18 19 THE WITNESS (Mailman): Yes. Mr. Case testified last week that if you save \$10 a foot on 20 the conductor, it would equal \$60,000 over the 21 22 cost of the project. By my math, there's over 23 70,000 feet of conductor needed to do the 115-kV 24 feeder from Cos Cob to Prospect. That's a savings

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of \$700,000.

- 1 THE CHAIRMAN: Thank you.
- 2 MR. UEDA: Can you explain why you
- 3 believe that Greenwich's outage problems can be
- 4 solved with a distribution solution, and why you
- 5 think Eversource has always pushed for a
- 6 transmission solution?
- 7 THE CHAIRMAN: You don't have to
- 8 object. That was discussed in detail. So that
- 9 question has already been --
- MR. UEDA: Okay. Can I ask, would you
- 11 consider the transmission solution to be an
- 12 example of gold plating or gilding the lily?
- 13 THE WITNESS (Mailman): Absolutely.
- 14 Absolutely. If you think about Con Edison --
- 15 THE CHAIRMAN: You got the answer. You
- 16 got the answer.
- 17 MR. UEDA: I got the answer. You're
- 18 right.
- 19 And then I also understand there was a
- 20 discussion about the failures of the 27.6-kV
- 21 cables. Do you believe that this can be addressed
- 22 easily and inexpensively?
- 23 THE CHAIRMAN: That was also dealt
- 24 with.
- 25 MR. UEDA: I have no other questions.

1 THE CHAIRMAN: Thank you. Okay. Next Christine Edwards? 2 3 (No response.) THE CHAIRMAN: Richard Granoff? 4 5 (No response.) THE CHAIRMAN: Grouped intervenors, 6 7 Bella Nonna Restaurant, Greenwich Chiropractic & Nutrition, Joel Paul Berger, and Meg Glass? 8 9 (No response.) 10 THE CHAIRMAN: Cecilia Morgan? Thank you. And, if I'm not mistaken, I 11 12 believe you were here last week, so we should not have the same issues I had with --13 MS. MORGAN: I didn't address anybody 14 15 last week. 16 THE CHAIRMAN: No, no, but you were 17 here, so you know what the questions were. 18 MS. MORGAN: Well, forgive me, I'm not a technical person, so sometimes my questions 19 20 might sound like somebody else had asked them. And I'll ask it, and if you don't allow it, then I 21 22 understand. 23 This is for Ms. Savageau because she's our conservation director. 24

Denise, I wonder how do you feel that

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- the town's efforts to conserve energy and reduce demand at town facilities have worked?
- THE CHAIRMAN: Ms. Savageau, whom I

 have a great deal of respect for, answered that

 question in full. And I thought your answer was

 fine. And I don't see any reason necessarily to
- MS. MORGAN: You're saying she answered it last week?
- THE CHAIRMAN: She's answered the question in one of the hearings.

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elaborate.

- MS. MORGAN: Okay. Because I don't recall seeing that in any transcript.
 - THE CHAIRMAN: Yes. And whatever didn't answer verbally, if you look at what was just submitted by the town, it's answered in considerable detail there. So I think we have the answer to that question.
- 19 MS. MORGAN: That's fine.
 - This is for Ms. Siebert. How could we expedite and improve progress toward energy conservation and demand reduction on the grid in town overall, residential, commercial, industrial?
- 24 THE CHAIRMAN: If you want to make 25 specific on how you can, I assume that means in

- the future beyond what you're doing, you can
 answer that question.

 MS. MORGAN: Thank you.
- THE WITNESS (Siebert): Okay. Well,

 I'll throw in my two cents then, and Denise, if

 you have anything you want to add.
- I think what we're trying to do moving
 forward, I think you're suggesting, Chairman

 Stein --
- THE CHAIRMAN: I think that was it,

 what can you do. So I assume what can you do is

 future.

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- THE WITNESS (Siebert): As we upgrade all our facilities, whether it's something as mundane as our treatment and collection facilities, as we deal with all our town buildings, we look at how to make them more energy efficient, we look at all the best lighting, we are looking at alternative energies, we're looking at whether we can use more solar, and so forth.
- 21 So everything we have available to us because, of 22 course, that would also lower our bills, in 23 addition to making us save energy.
- We also are very much looking forward
 to -- and I think Denise outlined it in

information that was given -- to do a lot more
work with Eversource. We'd love to, you know,
deal with those large clients that they alluded
to. We don't know who they are, but we'd love to
team up with them to try to help them see what we
can do to help them save energy, talk of all the
benefits of same.

What else am I leaving out there,
Denise?

THE WITNESS (Savageau): I think
there's two things when we're talking about energy
conservation and where we want to go with the
town. And one is what the town can do, and then
what the greater community within the town can do.
And with the information I provided you, one of
the things we looked at was what's the percent of
energy used by the town versus what's used
overall.

So the town is about 3 percent of the energy used, about 6 percent -- or, excuse me, about 12 percent of the large users. So obviously the town knew by example we needed to do that, but to solve -- and this is where all communities are working on it, or working on their clean energy community programs. When we talk about the town,

we talk about the town in general, and I think we really need people to understand that, that when you're talking about a municipality making a pledge to reduce its energy use, then it's about the town, but only as a leader, and not to really get where you need to go for net zero.

So I think when you're looking at this particular problem and how the town could address, for example, like, okay, that nagging issue, what about peak? Can we address it a different way?

Can we look at microgrids? Can we look at things?

So that's where I think is the opportunity. Amy alluded to working on the energy efficiency, and we are doing that. But the piece that's not being discussed, the piece that we really want to engage in, is how do we work on not only the energy efficiency, but how do we expand this conversation to the grid solution which is, I think, where we need to go. And I think there are opportunities.

Public Act 15-5, Section 103, not only starts working on wanting grids, but requires the public utility to submit proposals to Connecticut DEEP Energy Bureau. Under that they put out an RFP last year that was due October 2016. I think

it was a perfect opportunity for the town and

Eversource to engage in a larger discussion on

grids, so that we're talking in that energy

efficiency, but we're looking at the grids and how

do we get there.

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Grids are new solutions. They are something that needs to be planned, and you don't just jump on them right away. But I think we can certainly move there. I think there's opportunity. And, by the way, that RFP that went out in October 2016 is still open. It is not closed. There is an opportunity for the town and Eversource to meet this requirement of Public Act 15-5, and come up with a solution for a microgrid and the whole -- excuse me -- well, whether it be a microgrid or some type of a community grid, but basically the challenge. And it gets to the heart of the new energy plan that we submitted, the new draft energy plan that the State of Connecticut said can we find alternatives to substations.

So that's where I think we can go. I think the town has really worked hard on this saying do we need the energy? What's the nag? What else can we do? And I think the idea is that if in the back is like, well, what if we still had

that peak issue, how do we address the peak issue, and I honestly believe that requiring the town, or directing the town and Eversource to work cooperatively on all of this, not just energy efficiency, but on the grid, is a way forward that we could move forward, and we don't have to sit here, Robin, we can actually move this forward and think about a town like Greenwich.

I think you saw in some of the numbers with alternatives, and whatever, in the lower Fairfield County, they're not where they should be. So moving not only Greenwich, but lower Fairfield County to looking at modern grids and looking at more alternatives is a good place for us to go.

And I had just one comment on the chart I sent out is that the chart that says renewables, that's not renewables being installed by the town, but in the town. And that's why you see the large cities, because there's a lot of folks looking at all the opportunities with large cities, looking at performance contracting, and those type of things, on different facilities to move that forward. So I just want to make sure people understood that report is for all alternatives

- within a community, not by a community just on 1 town property. So I just wanted to make sure that 2 was clear. 3 THE CHAIRMAN: All the more reason why 4 5 the next time -- and actually I hope there won't be a next time, at least under these conditions --6 7 that we meet that Greenwich will be number 1, not 8 number 40. 9 THE WITNESS (Savageau): That's what 10 we're looking for. 11 THE CHAIRMAN: That should be your 12 challenge. THE WITNESS (Savageau): That's our 13 challenge. 14 15 THE CHAIRMAN: And then we might not 16 have to --THE WITNESS (DeLuca): We need 17 Eversource's help to do that. 18 19 THE CHAIRMAN: Okay. Any other 20 questions? 21 MS. MORGAN: No. Thank you. 22 THE CHAIRMAN: Thank you.
- I can't quite believe it, but the
 individual who really runs the Siting Council has
 just mentioned something about maybe we can go

- 1 home at some point. So I think we've given all
- 2 the intervenors a chance to do their cross. If
- 3 there's anybody else that I've missed, because I'm
- 4 about to close the hearing, unless --
- 5 MR. FITZGERALD: Is there an
- 6 opportunity for rebuttal?
- 7 THE CHAIRMAN: How long? I'm going to
- 8 ask both of you, because I'm sure if you rebut,
- 9 there might be somebody else who wants to rebut.
- 10 I'm going to ask you both how long -- first since
- 11 you -- how long is your rebuttal planned -- do you
- 12 plan to --
- MR. FITZGERALD: I wonder if we -- it's
- 14 3 o'clock. I wonder if we might take ten minutes
- so that I could consult with my panel, and then I
- 16 | could give you a more authoritative answer to that
- 17 question.
- 18 THE CHAIRMAN: And how many additional
- 19 minutes do you need to consult with your team
- 20 before --
- MR. BALL: I don't need any. When
- 22 Attorney Fitzgerald says "rebuttal," I'm not sure
- 23 exactly what he means, other than I assume he
- 24 wants to call his witnesses to ask them softball
- 25 questions, as he just criticized an intervenor for

doing, which was completely unfair.

If he opens up the door to more examination of his witnesses, I intend to cross-examine. It's entirely up to him. I don't think he should be allowed to.

MR. FITZGERALD: Well, it's --

THE CHAIRMAN: Yeah, I really hope you're not intending to open it up to that.

MR. FITZGERALD: Well, let me share my understanding with you, and maybe I'm wrong. It's been a while since I've done one of these proceedings but, in general, I thought that they operated the same way that a trial does, in that the applicant who has the burden of proof, in addition to -- each party presenting a witness has an opportunity at redirect of that witness. But the applicant, who has the burden of proof of the issue, generally is given an opportunity, after all of the evidence is otherwise in, to present affirmative testimony that responds to points that have been made in the course of the proceeding by the adversaries.

And in terms of there being rebuttal or surrebuttals, my recollection is that that's generally not been the case, but the mother of all

rules is that you make the rules. So it's
entirely up to you whether in this instance you're
going to allow the party that has the burden of
proof an opportunity for rebuttal, or not. And

we'll obviously be guided by that ruling.

- I will still need to, if there is a 6 7 consideration of giving us an opportunity for 8 rebuttal, I will need a couple of minutes to see 9 how I can skinny that down. I already left out half my cross because Mr. Mailman wasn't going to 10 be able to be here. But I have had some fairly 11 extensive rebuttal mapped out, but I see that in 12 13 the interest of expedition it should be cut back. So that's what I need to do, if there's to be an 14 15 opportunity at all.
- MR. BALL: May I respond, Chairman
 Stein?
- 18 THE CHAIRMAN: Go ahead.

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- MR. BALL: Two quick responses. One, a potshot at Mr. Mailman is below the belt. He cancelled his vacation to come back early at extraordinary inconvenience, so I don't appreciate Mr. Fitzgerald's comment.
- 24 The second point is that I happen to 25 try cases for a living, as I'm sure Mr. Fitzgerald

does as well, and he knows darn well that if this 1 were a courtroom and he wanted to present rebuttal 2 evidence, he would have to be prepared for me to 3 present rebuttal evidence. So what's good for the 4 5 goose is good for the gander. We can go around ad infinitum. But I expect the town to be treated as 6 7 fairly as Eversource, and it's up to him as to how 8 much he wants to drag this on.

THE CHAIRMAN: We're going to take a ten-minute break. I guess, to make sure, in fairness to everybody, we will give both the applicant a chance for, hopefully, a relatively brief rebuttal, and then the town will also have a chance, and then that will be it. We'll be back at 3:15.

16 (Whereupon, a recess was taken from 3:07 p.m. until 3:17 p.m.)

THE CHAIRMAN: Okay. We'll resume our meeting.

Attorney Fitzgerald.

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21 MR. FITZGERALD: Thank you.

Mr. Chairman. Well, cooler heads have prevailed, so we are not going to present a rebuttal case.

24 THE CHAIRMAN: Okay.

25 Attorney for the town?

MR. BALL: We have no further questions.

THE CHAIRMAN: Okay. So before closing this hearing, the Connecticut Siting Council announces that briefs and proposed findings of fact may be filed with the Council by any party or intervenor no later than October 5, 2017. The submission of briefs or proposed findings of fact are not required by this Council, rather we leave it to the choice of the parties and intervenors.

Anyone who has not become a party or intervenor, but who desires to make his or her views known to the Council, may file written statements with the Council within 30 days of today's date.

The Council will issue draft findings of fact, and thereafter the parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record. However, no new information, no new evidence, no argument, and no reply briefs without our permission, will be considered by the Council.

Copies of the transcript of this hearing will be filed at the Greenwich Town Clerk's office.

And I hereby declare the hearing adjourned. Thank you all for your participation. And drive home safely. (Whereupon, the witnesses were excused and the hearing adjourned at 3:19 p.m.)

1 CERTIFICATE

I hereby certify that the foregoing 95 pages 2 are a complete and accurate computer-aided 3 transcription of my original stenotype notes taken 4 of the Council Meeting in Re: DOCKET NO. 461A, 5 Application from Eversource Energy for a 6 7 Certificate of Environmental Compatibility and Public Need for the construction, maintenance and 8 9 operation of a 115-kilovolt bulk substation located at 290 Railroad Avenue, Greenwich, 10 Connecticut, and two 115-kilovolt transmission 11 circuits extending approximately 2.3 miles between 12 13 the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related 14 15 substation improvements, which was held before 16 ROBERT STEIN, Chairman, at the Connecticut Siting 17 Council, 10 Franklin Square, New Britain, 18 Connecticut, on September 5, 2017.

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Lisa Wally

Lisa L. Warner, L.S.R., 061

Court Reporter

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